

# INSTITUTE OF CHEMICAL TECHNOLOGY



ICT- IOC Bhubaneswar (IOCB) Campus



ICT- Marathwada Jalna (MARJ) Campus

# ANNUAL REPORT | 2022-23



## INSTITUTE OF CHEMICAL TECHNOLOGY

Mumbai | IOC Bhubaneswar | Marathwada Jalna

Category I Deemed to be University (MHRD/UGC)  
Elite Status and Centre of Excellence, Govt. of Maharashtra  
"National Rank 6 in Atal Innovation Ranking (ARIIA) 2021" by MHRD

<http://ictmumbai.edu.in>



## VISION

- We shall perennially strive to be a vibrant institute with continuously evolving curricula to brighten the future of the chemical, biological, materials and energy industries of the nation, and rank amongst the very best in the world through active participation and scholarship of our faculty, students and alumni.
- We shall be creators of sprouting knowledge and design cutting-edge technologies that will have the greatest impact on society and benefit mankind at large.

## MISSION

- We shall generate and sustain an atmosphere conducive to germinating new knowledge at every available opportunity.
- The education we shall impart will enable our students to devise new solutions to meet the needs of all segments of society with regard to material and energy, while protecting the environment and conserving the natural resources.
- Our endeavors, while extending well beyond the confines of the classroom, will aim to enhance public welfare and our attempts to dissipate knowledge will spread to a greater multi- and cross-disciplinary platform to conduct research, discovery, technology development, service to industry and entrepreneurship, in consonance with India's aspirations to be a welfare state. We will team scientists and engineers with professionals in other disciplines to arrive at better solutions.
- We will provide all our students with a strong foundation to encourage them to be our ambassadors in the professional activities that they choose to undertake in service of society at national and international levels.
- Through our vision, we will serve the profession and society and strive to reach the summit as a team, and ultimately serve as role models to the younger generation.

## PLEDGE

I AM ICTian. This is my institute, I take deep pride, but without vainglory; to it I owe solemn obligations that I am eager to fulfil. I Climb These steps into a grand shrine of knowledge and portal of excellence. I am privileged to be a part of a great tradition, rich culture and ethos built by selfless services of great many individuals. I take great pride in its achievements and eminence. I will be in a company of knowledge seekers, givers and servers. It will be my endeavor to protect its reputation and legacy. I will participate in none but honest enterprise. I shall shun prejudice of all kinds and perform actions that are deemed righteous morally, ethically, professionally and legally. To my fellow I pledge, in the same full measure I ask of them, integrity and fair dealing, tolerance and respect, and devotion to the repute and dignity of our institute; with the consciousness, always, that our special expertness carried with the obligation

TO SERVE ICT, INDIA AND MANKIND WITH COMPLETE SINCERITY.

# ANNUAL REPORT: 2022-2023



## INSTITUTE OF CHEMICAL TECHNOLOGY, MUMBAI

Mumbai | IOC Bhubaneswar | Marathwada Jalna

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Elite Status and Centre of Excellence, Govt. of Maharashtra

“National Rank 6 in Atal Innovation Ranking (ARIIA)- 2021” by MHRD

<http://ictmumbai.edu.in>

World Renowned for Quality of Education, Research and Connectivity with Industry

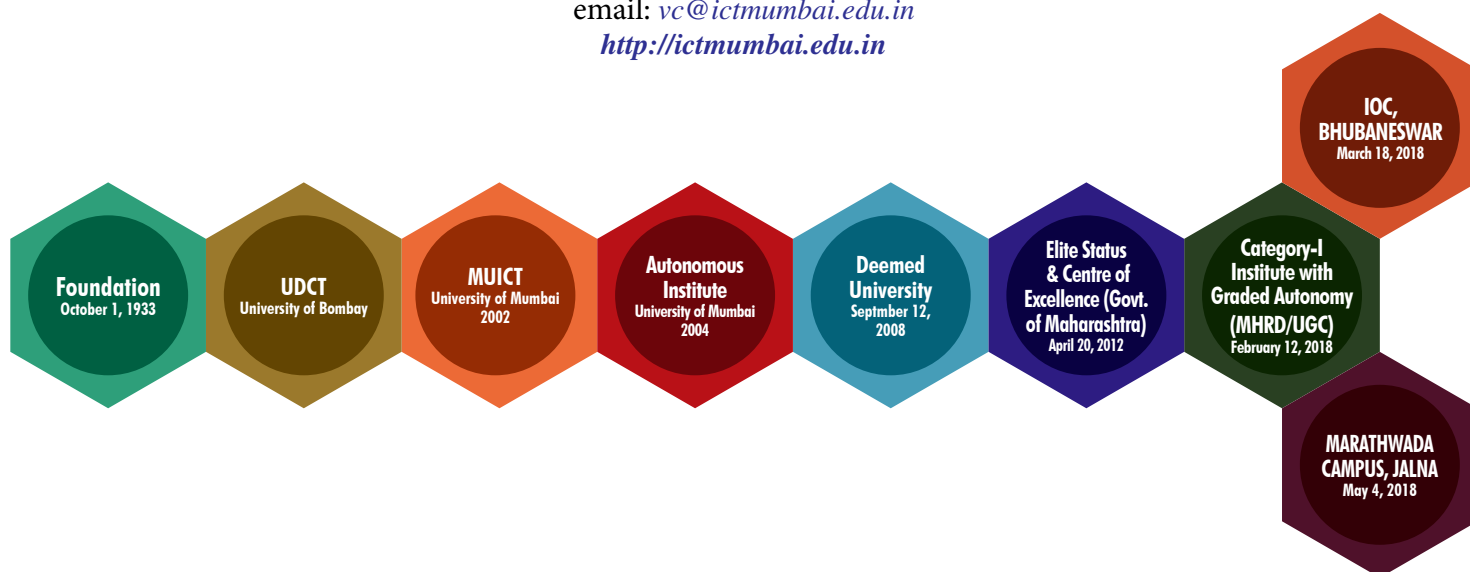
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#### Chancellor Institute of Chemical Technology, Mumbai

CSIR Bhatnagar Fellow and President Global Research Alliance

Former Director General CSIR and Secretary, DSIR, GOI

Padmavibhushan Awardee 2014



### Professor (Dr.) Aniruddha B. Pandit

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FNAE, FNASc, FIIE, FIIE, and FIETI

#### Member

Head Academic Institute/  
Organization of National Importance having  
International Standing

#### Director

NITIE, Mumbai



### Smt. Sandra Shroff

Chancellor's Nominee

#### Vice President

United Phosphorous Ltd.



### Shri U. Shekhar

#### Member

Nominated by the Board,  
Eminent Industrialist,

#### Chairman,

Galaxy Surfactants Ltd.



#### Member

#### Additional Chief Secretary

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Distinguished Alumni,  
CEO, Kotak Private Equity



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#### Dean (Academic Programmes)

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#### Member

Distinguished Alumnus,

#### Director,

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#### Senior Most Professor

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### Shri M. B. Parekh

#### Member

Distinguished Alumni,

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### Shri S.M. Vaidya

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#### Chairman,

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#### Member

Distinguished Alumni,  
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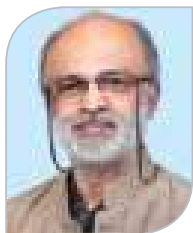
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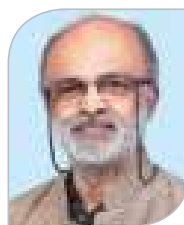
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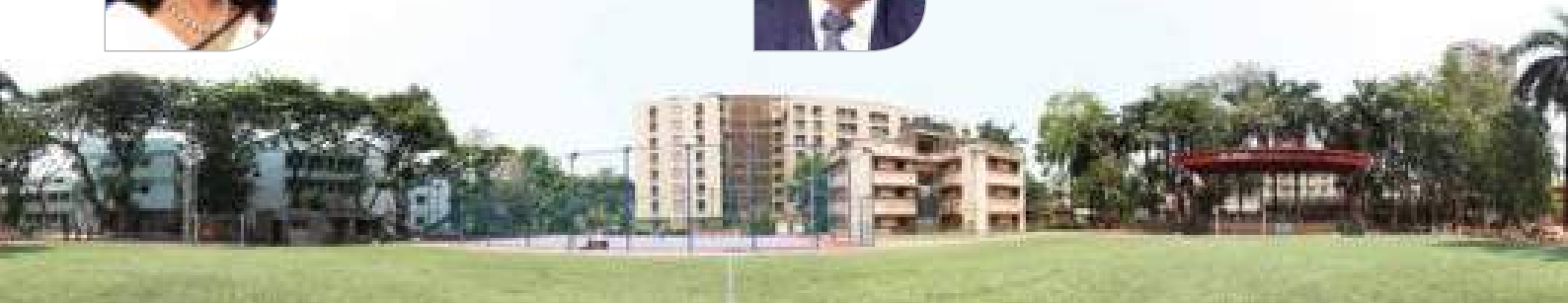
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 Advisor for Transformational  
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# TECHNOLOGICAL ASSOCIATION

Technological Association or TA as it is well known among the students is one of the oldest student run body for the welfare of Institute of Chemical Technology, dating its inception in 1931.

There are 8 Clubs, 1 Intra-College Festival and 3 Inter-College Festivals in the Technological Association.

Since Years TA's motto has always been Student Welfare through activities ensuring overall personality development. TA ensures that every student at the institute learns in a healthy environment giving them opportunity to showcase their talents.

The 8 Clubs of the TA are Art Club, Music Club, Manthan Club, Literary Club, Entrepreneurship Cell, Bombay Technologist, Sports Club, TEDx ICTMumbai.

The Intra-College Festival is called the FUNTECH. The 3 Inter-College Festivals are Vortex - The Chemfest (Technical Festival), Manzar (Cultural Festival), Sportsaga (Sports Festival).

The tentative dates for the Inter-College festivals are as follows:  
 Manzar 2019: Jan 31 to Feb 03 2019  
 Sportsaga 2019: Mar 7 to Mar 17 2019  
 Vortex 2019: Oct 17 to Oct 20 2019



INSTITUTE OF CHEMICAL TECHNOLOGY  
Mumbai









# NATIONAL AND INTERNATIONAL CERTIFICATION







Ministry of Education  
Government of India



# Certificate

## NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2021

**Institute of Chemical Technology, Mumbai  
Ranked 27 in Overall Category**

CHAIRMAN, NIRF

MEMBER SECRETARY, NIRF



Ministry of Education  
Government of India



# Certificate

## NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2021

**Institute of Chemical Technology, Mumbai  
Ranked 15 in University Category**

CHAIRMAN, NIRF

MEMBER SECRETARY, NIRF



Ministry of Education  
Government of India



# Certificate

## NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2021

**Institute of Chemical Technology, Mumbai**  
**Ranked 5 in Pharmacy Category**

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Ministry of Education  
Government of India



# Certificate

## NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2021

**Institute of Chemical Technology, Mumbai**  
**Ranked 15 in Engineering Category**

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Ministry of Education  
Government of India



# Certificate

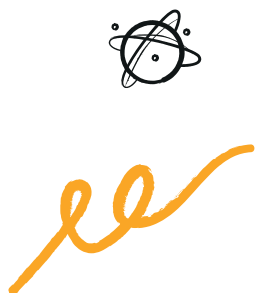
## NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2021

**Institute of Chemical Technology, Mumbai**  
**Ranked 21 in Research Category**

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



QS Asia University Rankings | 2022

qs.com



Institute of Chemical Technology (UDCT), Mumbai

**# 183=**

in QS Asia University Rankings 2022

November 2021

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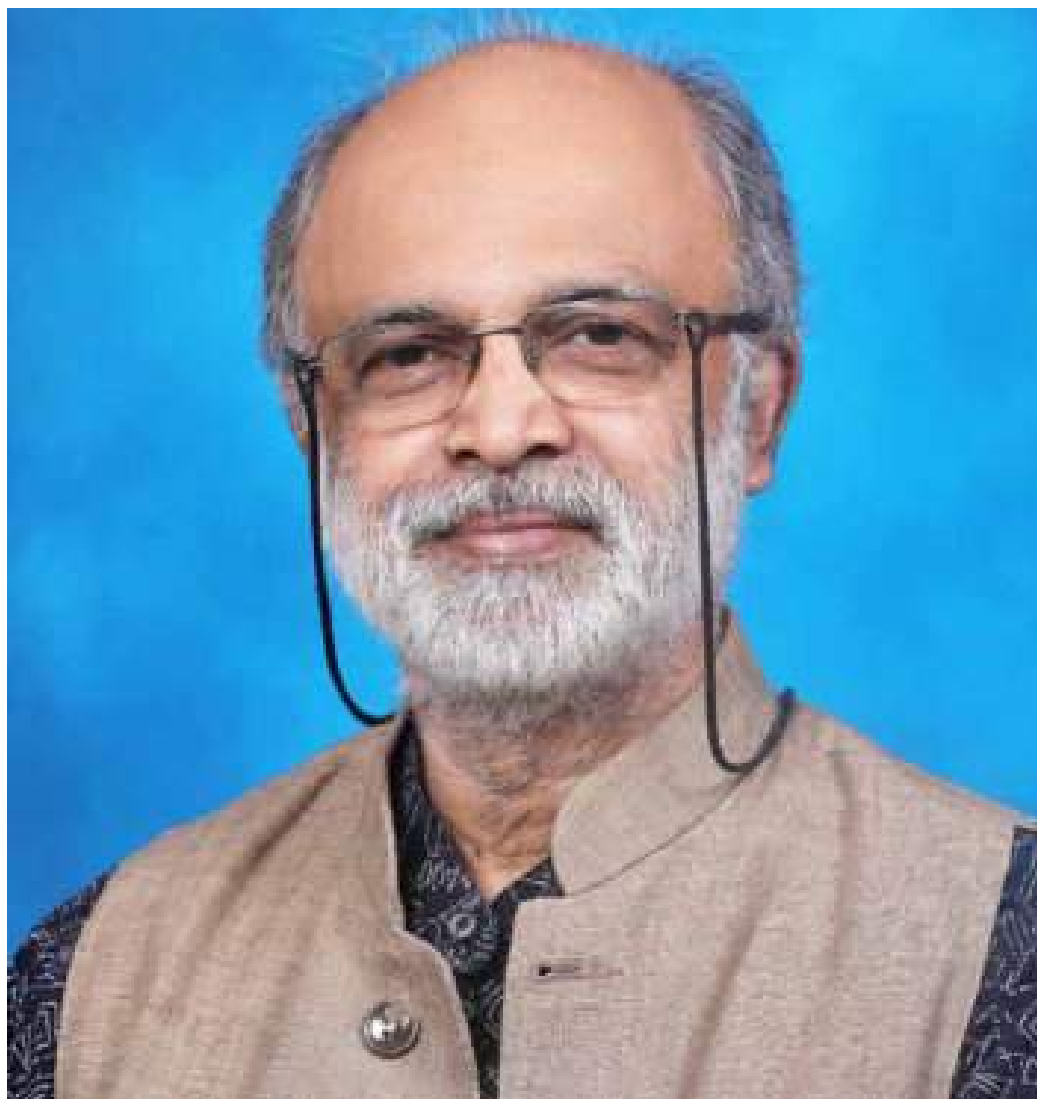








# INSTITUTE AUTHORITIES AND PROFILES OF DEPARTMENTS



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*U.G.C. Research Scientist 'C'*

## **PREAMBLE**

The Institute of Chemical Technology (ICT), Mumbai is a unique Institute which was established on 1st October 1933 as a University Department of the Bombay University (UDCT), completing 88 years of glorious past. ICT has created its own brand over the years which has been recognized by several prestigious awards and accolades to the faculty, students and alumni individually and also as an institute. Under the World Bank's Technical Education Quality Improvement Program (TEQIP), ICT was granted full autonomous status in 2004 and declared as Deemed-to-be University on September 12, 2008 by the MHRD under Section 3 of the UGC Act of 1956. It was bestowed an Elite Status and Centre of Excellence on par with IITs, IISc and IISERs in the State Assembly on April 20, 2012 by the Government of Maharashtra based on its stellar performance, on par with the institutes of national importance. The genesis of ICT Mumbai is truly educative and its achievements are inspirational. It has now three campuses: main (Mumbai), and two off-

campuses, Bhubaneswar, Odisha and Marathwada, Jalna. The later were opened during 2018-19 with innovative Integrated Master's degree and research programmes. We are just about coming out of a huge Global crisis due to the pandemic and as a leading Technological and Engineering Institute, ICT has to play an exemplary and a leading role as it has done in the past in the time of every national and Industrial demand. This time the situation is different though, as in addition to the technological contribution, we have to address the clarion call of Atmanirbhar Bharat, as a priority.

ICT, Mumbai is housed on 16 acres of land in Mumbai and is running 9 UG (Chemical Engineering; 7 branches of Chemical Technology; 1 Pharmacy), 18 PG (9 inter-disciplinary) and 29 Ph D programmes (11 interdisciplinary), 1 PG Diploma in Chemical Technology Management for doctoral students and 1 PG Certificate Course in Chemical Safety and Risk Management for all UG and PG students. ICT is governed according to special Statutes which go beyond Deemed University concept as approved by the Government of Maharashtra. In a historic decision on February 12, 2018, the University Grants Commission declared Category I Deemed to be University status to ICT which has maintained high academic standards (NAAC grade of A++ CGPA 3.77 out of 4). The Minister of Human Resource Development, The Central Government is striving hard to introduce a liberalized and social relevant academic regime in the education sector with emphasis is on linking autonomy with quality and societal relevance. The recently declared National Education Policy (NEP 2020) coupled with Science, Technology and Innovation Policy (STIP) has charted out a clear path of implementation of both the programs with emphasis on and innovation in the Education of Chemical Sciences and ICT has to play a leading role by setting the trend as a torch bearers. In the middle of this unprecedented crisis, this academic freedom needs to be used for the betterment of the society and associated education using innovative teaching and knowledge dissemination methods, along with the creation of socially relevant knowledge having wider acceptance and ease of implementation.

## TWO OFF-CAMPUSES

On March 18, 2018 marked a unique milestone in the chequered history of ICT which crossed for the first time the confines the State of Maharashtra and entered the beautiful and benevolent State of Odisha. ICT is indeed fortunate that the launching of the Institute of Chemical Technology, Mumbai Indian Oil Odisha Campus (ICT Mumbai-IOC), Bhubaneswar was done at the auspicious hands of Hon'ble Shri Ram Nath Kovind, the President of India in the august presence of Hon'ble Shri S.C. Jamir, Governor of Odisha; Hon'ble Shri Dharmendra Pradhan, then Union Minister for Petroleum and Natural Gas, Skill Development and Entrepreneurship, now Minister of Education and a galaxy of bureaucrats, distinguished academics and citizens, stalwarts from industry and well-wishers from across the country. Now, the Government of Odisha has sanctioned a land over 73 acres for the ICT-Mumbai Odisha campus which has now been taken in possession with the marking of the boundary. All modern research facilities are created over there through the support of IOC and this activity pursued and followed by top echelons of IOCL and the Honourable Minister Shree Pradhan personally.

Furthermore, on May 4, 2018 Foundation Stone of the Marathwada campus was laid on 203 acres land at Siraswadi, Jalna at the hands of then Chief Minister of Govt. of Maharashtra, Shri Devendra Fadnavis, Shri Raosaheb Danve, M.P. and President, Maharashtra BJP, Shri Babanrao Lonikar, Gaurdian Minister and Shri Arjun Khotkar, Minister of State among many others. The State cabinet had sanctioned a budget of Rs 397.00 crore in its meeting held on 24th April 2018 and the utilization and infrastructure creation at both the campuses has started in the right earnest. The places for the campus development have been finalised and have started with the

engagement of all the stake holders through discussion. The final plan of Phase I with a financial outlay of nearly 63 Crores has been approved by the Government of Maharashtra and work is expected to begin soon for the construction of the new campus as per AICTE, recommended norms.

All the three campuses and the programmes have been approved by the AICTE and the UGC, Government of India.

## AWARDS TO ICT IN ACADEMIC YEAR 2021-2022

ICT has been receiving awards, recognising its technological and societal contributions every year and in the academic year 2021-2022, the notable awards received are as stated below:

- 1) ICT was ranked 27th in overall NIRF 2021 rankings, 4th in Pharma, 15th in Engineering in September, 2021.
- 2) The survey carried out by Research.com ranked Professor A.B. Pandit as the number ONE scientist in India in area of Engineering and Technology, closely followed by Professor Parag Gogate at number TWO and Professor J.B. Joshi at number FOUR in March, 2022. These rankings are based on a thorough study of the h-index, publications and citations values of over 10,785 scientists from Google Scholar and Microsoft Academic Graph. <https://research.com/scientists-rankings/engineering-and-technology/in>
- 3) Professor A.B. Pandit has also been conferred with Eminent Engineer Award 2021 of Engineering Council of India.
- 4) Padma Shree Professor G.D. Yadav, former Vice Chancellor has been elected to the US National Academy of Engineering: For research, innovation, and education in green chemistry, catalysis, nanotechnology, and chemical engineering leading to clean and green technologies.
- 5) This is a really big honour and international recognition. This year's list also includes Satya Nadella and Elon Musk along with Professor Yadav. This is second year in succession where ICT has been recognised. Last year, Padma Bhushan Prof J B Joshi was honoured with the same recognition. Out of 18 such Fellows of NAE, USA who are Indian Nationals, alive today, 5 are from ICT.
- 6) Prof. G.D. Yadav has been selected as the National Science Chair (Mode 1) by the Science and Engineering Research Board (SERB) of the DST, Govt of India, for the period of 3 years.
- 7) Prof. G. D. Yadav, former Vice Chancellor, ICT and Emeritus Professor of Eminence, ICT has been conferred the "Prof. Jai Krishna Memorial Award 2021" by the Indian National Academy of Engineering (INAE) for his outstanding contributions in the field of Engineering. The Award will be conferred in the Award Ceremony to be held virtually during the INAE Annual Convention scheduled on December 15-17, 2021.
- 8) Prof. Rekha Singhal, Professor and Head, Department of Food Engineering and Technology has been elected Fellow of the prestigious Indian National Science Academy (INSA) in November, 2021. She received this honour owing to her exceptional research in the fields of food and lipid chemistry, food product development, downstream processing of biomolecules and allied fields.
- 9) Dr. A.R. Kapdi has been selected as a fellow of the Royal Society of Chemistry under the 'Leaders in field' category. He has also received the India mobility award, which will enable him to collaborate with the institutes in South African countries.
- 10) Prof. Shreerang Joshi, Head, Department of Pharmaceutical Sciences and Technology received the Vividhlaxi Audyogik Samshodhan Vikas Kendra (VASVIK) Award 2020 in July 2021.

- 11) ICT has been selected for the 7th FICCI Higher Education Excellence Award for Excellence in Enabling Research Environment to ICT.
- 12) ICT Vice Chancellor, Prof. A. B. Pandit has been decorated with prestigious ICC D. M. TRIVEDI LIFE-TIME Achievement Award for contribution to Education and Research on August, 2021.
- 13) Dr. V.H. Dalvi was felicitated by AICTE-Visvesvaraya Best Teacher Award in September, 2021.
- 14) Prof. Vandana B. Patravale, Department of Pharmaceutical Sciences and Technology was awarded the Abdul Kalam Technology Innovation National Fellowship from the Indian National Academy of Engineering in September, 2021.
- 15) Dr. Manoj Gawande was elected Fellow of the Maharashtra Academy of Sciences in November, 2021.
- 16) Professor R. R. Deshmukh, Professor S.V. Joshi, Professor R.D. Kulkarni, Professor P.S. Kharkar and Dr. Prakash Vaidya were elected as Fellow of Indian Chemical Society in December, 2021.
- 17) Professor G. S. Shankarling, Professor S.V. Joshi and Dr. Amit Pratap were elected as Fellow of Maharashtra Academy of Science in December, 2021.
- 18) Professor Padma Devarajan and Professor Rekha Singhal were selected as UAA-ICT Distinguished Alumnus Awards in December, 2021.
- 19) Professor Parag Gogate, Department of Chemical Engineering has been conferred with Dr. K. Anji Reddy Innovator of the Year Award of IChE for 2021 during CHEMCON held in December, 2021.
- 20) Professor R.R. Deshmukh, Registrar was bestowed with 'Professor M.M. Sharma Science and Technology Award' by the Marathi Vidyan Parishad on December 11, 2021.
- 21) S4S technologies Pvt. Ltd, promoted by 4 ICTians led by Dr. Vaibhav Tidke and ably supported and promoted by Professor Bhaskar N. Thorat, Professor of Chemical Engineering, Dept of Chemical Engineering, has bagged this year's "Zayed Sustainability Award" on 21st January, 2022. The award consists of 6,00,000 USD (Six Lakh US dollars). Out of 4000 total entries from 151 countries, S4S Technologies was the winner from amongst 1201 entries in Food Sector.
- 22) The British Council every year invites applications for the UK Education Alumni Awards from those who have completed at least one degree from UK. For the year 2021- 22, one of our ICT faculty, Prof. Anant R. Kapdi who did his doctoral studies (Ph.D.) from The University of York in 2008 was selected as one of the 3 finalists amongst thousands who had applied from India under the Science and Sustainability category.
- 23) Dr. Prajakta Danadekar Jain, Department of Pharmaceutical Sciences and Technology has been selected for the award "Savitribai Phule Stree Gaurav Puraskar" instituted by the Maharashtra Seva Sangh at Mulund, Mumbai. The award function will be held on 30th April, 2022.
- 24) Professor N. Sekar has been elected as Fellow of the Textile Association of India in April, 2022.
- 25) ICT – IOCB has been selected for Outstanding Institute Award presented by ODISHA Education Leadership Awards 2022 in April 2022.
- 26) Professor S. V. Joshi received Best Article Award in Review Paper Category from Indian Drug Manufacturer's Association (IDMA) in April 2022.



## ICT CONNECTIVITY WITH INDUSTRY

The role of industry in promoting education and research at ICT has its roots in its foundation. Leading industrial magnates from textile and chemicals industry and philanthropists donated funds to establish many faculty positions (amounting 19 such endowments) and laboratories right from its humble beginning and research started from the inception keeping faculty engaged in development of industry. Faculty used to offer free consultation to industry until 1955 for its growth and many new industries were started by ICT graduates, contributing to the industrial growth of the nation. This interaction and collaboration is even more today.

With almost 100 research projects from the Government and industry, names laboratories, creation of additional infrastructure, ICT is striving hard to meet the aspirations of all the stake holders.

ICT has been closely working with industry ever since and government in the interest of the nation. Currently several active MOUs with many national and international renowned universities in USA, Canada, UK, Germany, France, Australia, Finland, Spain, and multinationals such as Mitsubishi, Huntsman, Unilever, Biorad, Coka Cola, Pepsico, Reliance, etc. are in place ([www.ictmumbai.edu.in](http://www.ictmumbai.edu.in)). Bestowed with numerous awards and accolades, ICT has created a niche for translational research and technology development and transfer and is often cited as an role moel for Academia and Industrial connect.

## ICT : CULTURE, CREATIVITY AND CONNECTIVITY

- Three campuses from 2018-19
- 3 Padma Vibhushan, 8 Padma Bhushan, 8 Padma Shri awardees; 2 Fellows of Royal Society (among 5 engineers from India); Several Fellowships- FNA, FNASc, FNAE, FRSC, FTWAS, MUSAE, 6 faculty and Alumni as US National Academy of Engineering
- Over 500 first generation entrepreneurs, some owners of Fortune 500 Companies;
- 640 ongoing Ph D Students
- Masters (331 First Year +225 Second Year)
- 360 UG Scholarship
- 41 Ph Ds during Eleventh interim Convocation (virtual) on August 24, 2021 and 35 Ph Ds during Eleventh Convocation (virtual) on March 24, 2022
- 100+ UG Summer Researcher Fellows
- Highest citation per faculty
- Annual citations more than 10,000
- SCOPUS Awards: 4 faculty in top 10 Chem Engg and 2 in top Chemistry faculty in India: 20th March 2018
- 7 Fellows of INSA, 4 Fellows of TWAS, 3 JC Bose Fellows
- 23 Endowment Chairs; 15 UGCFR, 8 INSPIRE, 2 Ramanujam, 2 Ramalingaswami fellows
- 49 Endowment Visiting Fellowships; 11 endowments for library
- India's first five Ph Ds in Engineering and from ICT in 1941-42
- 406 Patents filed in last 10 years and more than 400 international publications /year, highest Publications/faculty
- 104 Projects including those from multinational industries
- Many technologies transferred to industry and start-up incubated in ICT
- Highest number of Prime Ministers Ph.D. Fellowships



ICT is not just a Chemical Technology Institute but covers all branches of Chemical Sciences, Engineering and Technology; Product Engineering; Biological Sciences, Engineering and Technology; Materials Sciences and Engineering; and Energy Science and Engineering.

Whatever is designated by Nano, Bio and Green Technologies are researched in all departments of ICT.

**A recent Sci-Val data analysis (Elsevier) shows the ICT, despite its being a State funded institute, is highly productive and recognised institute (Feb. 2019) and is among top 4 among all disciplines in the country and number 1 in Chemical Engineering.**

*a) Benchmarking in All Disciplines among Leading Indian Institutes and Universities*

Name	Scholarly Output	Field-Weighted Citation Impact	Outputs in Top 10 citation percentile (%)	Collaboration (%)
Indian Institute of Science, Bangalore	26271	1.07	13.1	26.1
Indian Institute of Technology, Bombay	20617	1.1	12	26.6
Indian Institute of Technology, Delhi	19297	1.12	13.1	20.8
Indian Institute of Technology, Kanpur	14162	1.03	12.2	25.2
Indian Institute of Technology, Kharagpur	22111	1.06	12.5	19.7
Indian Institute of Technology, Madras	19640	1.02	11.4	28
<b>Institute of Chemical Technology</b>	<b>4145</b>	<b>1.07</b>	<b>19</b>	<b>13.7</b>
University of Pune	6312	0.99	10.6	20.7

*b) Bench-marking in Chemical Engineering Discipline*

Name	Scholarly Output	Field-Weighted Citation Impact	Outputs in Top 10 citation percentile (%)	Collaboration (%)
Indian Institute of Science, Bangalore	1834	1.4	24.8	21.1
<b>Institute of Chemical Technology</b>	<b>1336</b>	<b>1.26</b>	<b>19.1</b>	<b>15.2</b>
Indian Institute of Technology, Kharagpur	2113	1.17	20.5	17.7
Indian Institute of Technology, Kanpur	1477	1.15	19.8	25
Indian Institute of Technology, Bombay	1982	1.09	18.1	22
Indian Institute of Technology, Delhi	1642	1.08	18.2	20.5
Indian Institute of Technology, Madras	2000	0.97	15.3	18.4
University of Pune	544	0.95	16.6	22.8

## WHY ICT IS IN ODISHA?

The economy of Odisha is one of the fastest growing economies amongst various States in India. According to recent economic survey, Odisha's gross state domestic product (GSDP) is expected to grow at around 8.5% during current fiscal year. Education is the key enabler of economy of any State; in particular, higher technical education along with related research and innovation. In order to develop any State as preferred destination for industrial services, R&D, it is necessary to invest in training high-quality manpower and develop indigenous technology. This shall enable the State to seize the emerging opportunity and ensure a rate of satisfactory growth.

The primary industries in Odisha are manufacturing; mining & quarrying; electricity, gas and water supply & construction along with considerably less explored Agri-processing industry. The industrial sector's contribution to the state's GSDP by almost 35%. Most of Odisha's industries are mineral-based. Odisha has 25% of India's iron reserves. It has 10% of India's production capacity in steel. Odisha is the top aluminium producing State in India. Two of the largest aluminium plants in India are located in the state. Odisha is the first State in India to reform its power sector and become surplus power generating state.

Similar to Maharashtra in the past, recent years have witnessed large projects in Odisha like Indian Oil's 11th Refinery at Paradip, envisioned as the Energy Gateway to Eastern India, the 15 MMTA Refinery has been set up at an estimated cost of Rs. 34,555 crore. Other mega-projects include large Coal Gasification Plant at Angul, World's Largest Phosphatic Fertilisers Plant at Paradip, Vegetable Oil Plant at Paradip to name a few. Govt. of India's PSUs, RCF and GAIL are embarking a large scale Fertiliser Plant at Talcher using gasification of coal. Based on Petroleum Refinery at Paradip, Govt. of India has also approved setting up a Petroleum, Chemical, Petrochemical Investment Region (PCPIR) for which Govt. of Odisha has earmarked 250 sq. km of

land. Indeed all these sectors are linked to ICT's educational and teaching/training portfolio and strength. Therefore, it was felt by ICT and endorsed by Hon'ble Minister the need of a World Class Centre of Excellence in Chemical Engineering and Technology in Odisha to catalyse structured and focused growth of petro-chemical, chemical, polymer, textiles and fibres, herbal and pharmaceuticals, pesticide, Speciality Chemical and fine chemicals, perfumers and flavours, rubber chemicals industry in Odisha. All of these For SEZ, PCPIR and Innovation hubs in Pharmaceuticals, Govt. of Odisha needs extensive and innovation input from Institute like the ICT, Mumbai. The Govt. of Odisha has been kind enough to allot over 73 acres of land to start our own campus and the plan and the grand vision has already been discussed at the highest level with a proactive participation of Hon. Minister Shree Dharmendra Pradhan and the Chief Minister Hon, Shree Naveen Patnaik.

## INNOVATIVE PROGRAMMES AT ICTM-IOC BHUBANESWAR AND COLLABORATION WITH IIT-KHARAGPUR

As a consequence to the MOU between IOC and ICT on 16th November 2017, a proposal was submitted to the IOC Board giving the details of plan to promote several activities including setting up of campus at Bhubaneswar.

1. Integrated M. Tech. after 12th Standard (HSSC) of 5 years duration consisting of 15 trimesters with alternate term in industry, with major in Chemical Engineering and minor in 6 different disciplines. To ensure improved quality and industry relevance in curricula development for integrated M. Tech. (6 trimesters in industry and 9 in institute) in the field of Chemical Engineering as major branch with minor in Petrochemicals, Textiles, Polymers and Materials, Foods and Pharmaceuticals, and Energy Engineering. The last two trimesters will be for promotion of experimental and design project to promote entrepreneurship and start-up companies.
2. Executive M. Tech. (1 month in classroom followed by 2 months in parent company for 2 years) for industrial personnel
3. Ph. D. programmes in various disciplines.

All these programmes are new and were introduced in India for the first time and are currently in its third year of running. During the industrial internship the industry will be requested to offer stipend making the education affordable to one and all. IIT Kharagpur has signed an MOU with ICT for running the Executive M. Tech. (e-M.Tech.) together whereby the student will spend time on both campuses and also they will partner in creation of Centres of Excellence in Research and Innovation. Currently the IIT-KGP extension Centre in Bhubaneswar is currently made available for ICT-IOC programmes. The campus is equipped with modern and sophisticated instruments for carrying out high class research and innovation at these proposed Centres of Excellence to develop technology and to support Research & Development in industry and Skill Development in Chemical Engineering, Petrochemicals, Textiles, Polymers, Pharmaceuticals, Energy, etc. for the country and especially the region.

**Executive M. Tech. Degree (e-M.Tech.) Programme:** (Two Years with Alternate Short Terms in Class Room (1 month) and Parent Industry (2 months))

Executive MBA programmes are run for working professionals by various management institutes which typically cater to management of business, finance, and administration. This programme is different from them. The idea behind launching this programme is to train executives having industrial experience with managerial experience or responsibilities who could rise to the top of the organisation with training and research in technical field in an industrial set up. The programme is of two years duration.

The executive M Tech program (e-M.Tech.) is thus geared at giving training in research, innovation industrial practices, law, sustainability and management to experienced and senior

professionals who want to continue to work without losing continuity in the work place and also be a student pursuing a degree. There is a subtle difference in this program in comparison with other programs. These executives are many times involved in issues related to research, innovation, business expansion, environment, law and human resources, plant operation, design and development, marketing. In many PSUs, it is found that some are transferred to R and D or plant operations, without having any idea of the field resulting into considerable loss of time and resources.

The executive from all process industries are eligible for this programme. These industries range from all large scale industries to small scale industries – Refinery, Coal, Energy, Chemicals, Polymer, Materials, Steel, Pharmaceuticals, Food Processing, Biotechnology, Fertilizers and the like. They will study in the class room on the campus for a short term of 4 weeks during which s/he will undergo course work in different subjects as well as start literature search and plan for research. They will continue to carry out the research activities in the parent industry during alternate terms. During the parent industry term (PIT), s/he will continue the research work, home assignments, and other related course work. The student is continuously monitored and participates in classroom discussions, home assignments and research project. The e-M. Tech. student is also supposed to mentor one-two students from the Integrated Master's degree programmes during their industrial internship. The student will be co-guided by two faculty members, each from ICT and IIT.

## ICT IN MARATHWADA

The economy of Maharashtra is one of the fastest growing economies amongst various States in India and the Marathwada region needs a lot of development from the view point of high quality education and industrial development. ICT was therefore asked by the State Government to set up an off campus site there which was enthusiastically supported by ICT Alumni from the region. According to current economic survey, gross state domestic product (GSDP) is expected to grow at around 8.5% during current fiscal year inspite of the current pandemic. Education is the key enabler of economy of any State; in particular, higher technical education along with related research and innovation. In order to develop any State as a preferred destination for industrial services, R&D, it is necessary to invest in training high-quality manpower and develop indigenous technology. This shall enable the State to seize the emerging opportunity and ensure a rate of satisfactory growth. Jalna region has been identified as region of Mosambi, under the programme of one product one region. MOU has been signed with Praj Industries Ltd., Pune to develop and process the products coming out of Mosuambi.

## INNOVATIVE PROGRAMMES AT ICT MUMBAI MARATHWADA CAMPUS JALNA

The programmes similar to those conducted at ICT IOC Bhubaneshwar campus will be conducted. The executive M. Tech. programme will be taken up later.

1. Integrated M. Tech. after 12th Standard (HSSC) of 5 years duration consisting of 15 trimesters with alternate term in industry, with major in Chemical Engineering and minor in 6 different disciplines. To ensure improved quality and industry relevance in curricula development for integrated M. Tech. (6 trimesters in industry and 9 in institute) in the field of Chemical Engineering as major branch with minor, (i) Petrochemicals, (ii) Foods Engineering & Technology, (iii) Pharmaceuticals Engineering, (iv) Lipid Technology, (v) Polymers and Materials Engineering & Technology, (vi) Speciality Molecules Engineering, and (vii) Energy Engineering
2. Ph. D. programmes in various disciplines.

Centres of Excellence will be created in collaborative mode as stated above and the first one will

be COE in Cellular Agriculture with participation of industry and an MOU is signed with Good Food Institute in this regard and also Praj Industries Ltd., Pune.

### Engineering Challenges and Social and Industrial Relevance of programmes

If you are admitted to this grand institution, which is strictly based on merit, it is assured that the education you receive will be of the highest order and, in the years to come, will place you at the cutting-edge of science and technology where you will develop products and services that greatly improve the lives of those around you. Do you wonder as to what relevance these programmes have vis-a-vis 'white collared' engineering programmes and are these programmes as rewarding? No virtual world can be created without materials produced by niche and eco-friendly sustainable technologies. We all live in the world of chemicals, molecules and products, which are transformed to give quality and longevity to life. In this context, let me direct your attention to the "Grand Challenges", as they are referred to by the US Academy of Engineering though very global in nature and these are:

- |  |                                    |
|--|------------------------------------|
| 1. Advancing health informatics                    | 2. Engineering better medicines    |
| 3. Making solar energy more affordable             | 4. Providing access to clean water |
| 5. Reverse-engineering the human brain             | 6. Advancing personal learning     |
| 7. Engineering tools for scientific discovery      | 8. Managing the nitrogen cycle     |
| 9. Providing clean energy from fusion              | 10. Securing cyberspace            |
| 11. Preventing nuclear terror                      | 12. Enhancing virtual reality      |
| 13. Developing new methods of carbon sequestration |                                    |
| 14. Restoring and improving urban infrastructure   |                                    |

All these challenges are uniquely physicochemical in nature and an education in chemical engineering or chemical technology particularly, empowers and enables you to tackle these. There is a confluence of chemical sciences and engineering with biological sciences and engineering. The technologies related to producing advanced materials, clean energy generation and storage, medicines, high-end drugs, nutraceuticals, food products, fertilizers, agrochemicals, polymers, surface coating materials, laser dyes, colorants, pigments, adhesives, textiles, fibres, oleochemicals, surfactants, lubricants, water treatment and purification, air pollution abatement, bio-processing, downstream processing and a myriad of related issues involve high degree of science and engineering. How are we going to feed billions of people, remain in harmony with nature, and develop sustainable processes and technology? What will be their energy and material needs? Life expectancy is getting extended. Addressing these challenges requires a multifaceted effort that traverses the fields of chemistry, engineering, biotechnology, information technology and nanotechnology, engineering mathematics, environmental engineering and the curriculum and courses offered in various programmes at the Institute have judiciously incorporated subjects from all these disciplines. Our programmes directly allow being on the forefront of these rewarding careers. The new challenge in the form of COVID 19 has prompted us to come up with new and an innovated thought processes which has to be evolved with new priorities to be listed out, coupled with the directives suggested by the National Educational Policy (NEP), 2020.

More importantly, you will be tutored and mentored by some of the nation's most eminent scientists and engineers who themselves are the vanguard of research in these fields, thereby ensuring that the knowledge passed onto you is pertinent, real experience and updated. Teaching without research is barren and our planners thus were visionary in bringing research component in our teaching to solve real problems. These researcher-cum-teachers are always on their toes

and work longer hours to be on the forefront. This invigorating atmosphere is witnessed in my institute. There is no nine-to-five culture; working extended hours is a habit here imbibed by students and teachers alike. Besides, a large number of members the ICT faculty acts as consultants/ advisors to industry with a strict condition that no institutional material facility is used for these industrial consultations. Research projects investigated in our labs are of both academic sanctity and industrial relevance. So the proverbial 'Practise what you preach' is indeed executed by the faculty members, which also gets translated in their teaching; many of them actually earn their salaries through the one-third share of the consultation fees paid to the institute.

The Institute's strong multi-disciplinary research programmes have helped create a unique learning environment that places great emphasis on synergizing knowledge from several sources to develop creative and effective solutions to many of the problems faced in industry and society. This eclectic combination of a rigorous and up-to-date curriculum, excellent laboratory and demonstration facilities, world-renowned faculty and a conducive learning environment brimming with the next generation of great minds that sets the Institute apart. The ICT is held in high esteem by other premier institutes, industry and government for many of its unique characteristics and achievements. All of them deem that ICT is different; distinctly and significantly different! Outsiders always wonder how a small university department, with poor funding has managed to excel and that too without any public glare or publicity? The magic mantra for our success is a concoction of dedicated faculty, meritorious students, admirable support staff, distinguished alumni, strong connect with industry, and assistance to all needy students, a grand alumni association and above all relevance of our programmes in national wealth creation.

## CLOSING REMARKS

"I am sure by now you would have realized as to why the ICT is held in high esteem and its uniqueness and heritage among all institutes of higher learning in India and looked to lead the new initiatives proposed by NEP 2020. Great institutes are not built overnight. All the academics of ICT, who act as researcher, consultants to industry, member of several important professional bodies and government committees since its inception and based on the interactions with alumni, government officials, faculty from leading institutes in India and abroad, can reveal a trend- that is- quality of education, the brand name of institute and future prospects, far outweigh any other consideration on the minds of students and employers, foreign universities admitting ICT's UG students for PG courses alike, while choosing an institute, than the cost of education. Indian parents sacrifice many things to educate their off-springs in the best of schools and colleges; many times not fully knowing about the institute or the courses they offer.

If you get selected through our admission process, which is transparent and strictly on merit, with all government policies in place, my congratulations and best wishes to you. I hope I have convinced you, to join this great institute. The opportunities that lie in store for you during your years with us and once you graduate will truly be enormous, if you are sincere, committed and motivated to learn. If you are unlucky this time because you fall short of the cut-off criteria at undergraduate level, try again for master's and Ph.D. programmes after your graduation. Should your destination be some other place for whatever compelling reasons, let me wish you the very best for all your future endeavours.

The Rich. The Poor. The Marginal. The Privileged. The Underprivileged They studied here. They made it BIG. Do not ask how to do. Do it. Underestimate NOT, who you could be. Think Big. Dream Big. Do not dismiss your dreams and see, how you can contribute to the nation and the society. To be without dreams is to be without hope; to be without hope is to be without purpose.

*The very best to you; wherever you go.*

**Prof. Aniruddha B. Pandit**





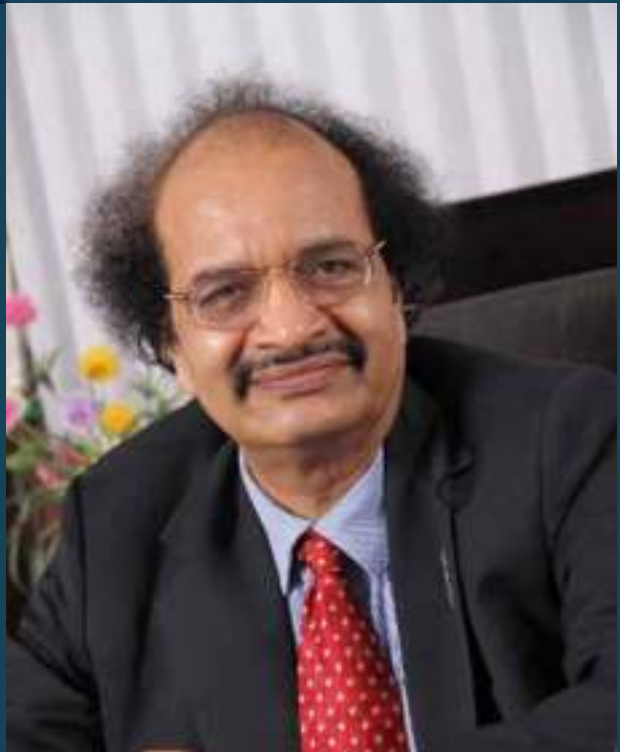
# DISTINGUISHED FACULTY

**PADMA VIBHUSHAN**  
**PROF. M. M. SHARMA**  
Emeritus Professor of Eminence  
Former Director, UDCT (ICT)



**PADMA BHUSHAN**  
**PROF. J. B. JOSHI**  
Emeritus Professor of Eminence  
Former Director, UICT (ICT)

**PADMA SHREE**  
**PROF. G. D. YADAV**  
Emeritus Professor of Eminence  
Former Vice Chancellor, ICT





## VICE CHANCELLOR

# PROF. ANIRUDDHA PANDIT

*Ph.D. (Tech.), B. Tech. (Chem.)*

*(FTWAS, FNA, FASc, FNAE, FNASc, FMASc)*

Professor, UGC Research Scientist,

"C" (Professor's Grade)

J. C. Bose National Fellow (DST, Govt. of India)

## RESEARCH INTERESTS:

Physical and Chemical Processing applications of Cavitation phenomena, Sonochemistry, Ballast Water Treatment, Mixing in Mechanically agitated contactors: Experimental and CFD Investigations, Modeling of Stoves, Use of non-conventional energy sources, Synthesis of Nanomaterials Biotechnology: Protein modification, Cell disruption and Microbial fuel cell.

**A**niruddha B. Pandit was born on 7<sup>th</sup> December 1957 in Mumbai, Maharashtra. He earned his B. Tech (Chem) degree from Indian Institute of Technology (IIT), Banaras Hindu University in 1980 and earned his Ph.D. (Tech) degree from University Department of Chemical Technology (now ICT), in 1984. From 1984 till 1990 he worked in the Department of Chemical Engineering, University of Cambridge, United Kingdom as a Research Assistant & then as a Research Associate with Prof. J. F. Davidson, working in the area of bubble break-up and design of multiphase reactors. He developed many novel designs of gas-liquid contactors and also developed new impeller designs.

**ACADEMIC & RESEARCH CONTRIBUTIONS:** After returning to India in 1990, he joined ICT as a UGC Research Scientist 'B' and was subsequently promoted to Scientist 'C' (Professor's Grade) in 1996. He was instrumental in starting a major activity & program in the area of Hydrodynamic Cavitation for intensification of physical and chemical processing applications. He has successfully exploited the cavitation phenomena for a variety of operations such as crystallization, emulsification, nano-particle synthesis and processes such as esterification, oxidation etc on industrial scale. He has been an active industrial consultant for many large size national and international companies.

A unique creative approach of using fundamental knowledge, coupled with simple, elegant experiments has resulted into novel cavitation reactors. Prof. Pandit has authored over 400 publications, 5 books and over 12 chapters (with over 21700

**Subjects Taught:** Environmental Engineering and pollution control Chemical Project Economics, Design of Multiphase Reactors

**Recognized Research guide for**

Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green Technology, Ph.D. (Science) in Chemistry

**Guided students:**

Ph.D. : 58, Masters : 94

**Total Research Publications :**

National/International : Total Publications: 422 (SCOPUS), Citations: 21722 (SCOPUS)(April 2022), H-Index: 78 (SCOPUS) (April 2022)

**Patents (granted in last 5 years): 41**

**AWARDS:**

Indian National Academy of Science (INSA), Best Teacher Award, 2012; Sir J. C. Bose Fellow of the Department of Science and Technology, Government of India, 2015; Vishwakarma Medal, Indian National Academy of Science (INSA), 2015; Fellow The World Academy of Sciences (TWAS), 2015

**Awards:**

- ISTE National award for outstanding research, 1995
- Prof. R.A. Rajadyaksha Best Teacher award, on 15 occasions in the past 20 years
- VASVIK award, 1996
- Fellow, Maharashtra Academy of Science 1997
- IChE - Herdilia award for excellence in basic research, 2001
- Distinguished Alumnus award, Institute of Technology-Banaras Hindu University, 2004
- Distinguished Alumnus award, UICT, 2008
- INSA, Best Teacher award, 2012
- Vishwakarma Medal of Indian National Science Academy 2015
- Fellowships of, Maharashtra Academy of Sciences, 2000
- Indian National Academy of Engineering, 2006, Indian Academy of Sciences, 2008
- Indian National Science Academy, 2009
- National Academy of Sciences in India, 2009
- Fellow of TWAS 2015

(SCOPUS) and has 33 applied and granted patents & is on the Editorial board of five International Scientific Journals. He has guided 58 PhDs and 94 Masters students so far.

**OTHER CONTRIBUTIONS :** In addition to his research contribution, Prof. Pandit has contributed to innovation in teaching, at graduate and undergraduate levels, demonstration experiments for elaborating the physical principles of many chemical engineering operations. He is actively involved in working with committees in the area of harnessing solar energy & with tribal population in extending the chemical engineering principles for drying of farm/ forest product & water disinfection for potable water. He is a president of a NGO named Land Research Institute dealing with the Energy and Town planning sector.

**Administrative Contributions:** Prof. Pandit has taken over the charge as Vice Chancellor of Institute of Chemical Technology on November 29, 2019. Prior to this, he has acted as a Dean in his capacity of Human Resource and earlier as Dean of Research Consultancy and research Mobilization. He has been the coordinator of ICT-DAE center for Chemical Engineering Education and Research since its inception in 2008. He is on the editorial board on 5 international journals and is an associated editor of Ultrasonic Sonochemistry. He has successfully guided and completed international science collaborations with Universities from France, Australia and The Netherlands. He is also on the project appraisal and evaluation committees of the DST and UGC, Govt of India. He is currently serving as a member of the BOG of the IIT Bombay. He has been an active industrial consultant to many national and international industries.



## EMERITUS PROFESSOR OF EMINENCE

### PROF. M. M. SHARMA

*B. Chem. Eng., M.Sc. (Tech.) (Bombay), Ph. D. (Cambridge), D.Sc.(h.c.) (I.I.T., Bombay; Delhi; Kharagpur; B.H.U.; Roorkee) (Calcutta) (Kanpur) (Bundelkhand) (Lucknow) (h.c.), LL.D. (Mumbai) (h.c.), FEng, FRS, FNA, FASc, FNASc, FTWAS, C Chem, FRIC (U.K.), C. Eng., FIChE (U.K.), FIChE, FICS, FBRS*  
*email: [profmmsharma@gmail.com](mailto:profmmsharma@gmail.com)*

**M**an Mohan Sharma FEng (born May 1, 1937 in Jodhpur, Rajasthan) is an Indian chemical engineer. He was educated at Jodhpur, Mumbai and Cambridge. At the age of 27 years, he was appointed Professor of Chemical Engineering in the Institute of Chemical Technology (UDCT), Mumbai. He later went on to become the Director of Institute of Chemical Technology (ICT/ UDCT/ UICT), the first chemical engineering professor to do so from ICT.

In 1990, he became the first Indian engineer to be elected as a Fellow of Royal Society, UK. He was awarded the Padma Bhushan (1987) and the Padma Vibhushan (2001) by the President of India. He has also been awarded the Leverhulme Medal of the Royal Society, the S.S. Bhatnagar Prize in Engineering Sciences (1973), FICCI Award (1981), the Vishwakarma medal of the Indian National Science Academy (1985), G.M. Modi Award (1991), Meghnad Saha Medal (1994), and an honorary Doctor of Science degree from Indian Institute of Technology, Delhi (2001). Man Mohan Sharma obtained Bachelor of Chemical Engineering (1958) from UDCT (ICT) and subsequently MSc (Tech.) in 1960. He obtained Ph.D. (Chemical Engineering) (1964) at Cambridge University with PV Danckwerts. In 1964, he returned to India as Professor at the University of Bombay, and later became Director of the University Department of Chemical Technology (UDCT), now ICT (Institute of Chemical Technology - A Deemed to be University). He served the institute for 33 years. He has been honored by several universities including IITs by honorary doctorates.



### **Awards**

Professor Sharma is a recipient of a number of prestigious academic honours and awards. He is a Fellow of the Indian Academy of Sciences, Bangalore, Honorary Fellow of the National Academy of Sciences (India), Allahabad, Fellow of the Royal Society, London. Subsequently he was elected Honorary Fellow by the Royal Academy of Engineering and is Foreign Associate of the US National Academy of Engineering. He is recipient of Padma Bhushan and Padma Vibhushan.

### **Academic Career**

Professor Sharma made contributions to chemical engineering science and technology. His studies on Bronsted based catalysis in  $\text{CO}_2$  hydration (published in the Transactions of Faraday Society) and subsequently kinetics of COS absorption in aqueous amines and alkanolamines brought out linear free energy relationship between  $\text{CO}_2$  and COS absorption in solutions of amines and alkanolamines. He has contributed extensively on the role of microphases in multiple reactions which he pioneered. He also became an independent Editor of Chemical Engineering Science at a young age. He taught different subjects in chemical engineering and encouraged his doctoral students, from the very beginning, to publish independently their work in renowned journals.

Under his stewardship, UICT got autonomy of UGC. He brought about all-around improvement in all the departments of the Institute leading to exceptionally high number of Ph.D.s each year based on the number of faculty members. He served in Petroleum and Natural Gas as Chairman of the SAC and in the SAC to Cabinet and PM. He was INSA Council Member (1980-82) and Vice President (1987-88).



## **EMERITUS PROFESSOR OF EMINENCE PROF. J.B. JOSHI**

*B.Chem.Eng., M.Chem.Eng., Ph.D. (Tech.)*

*FNA, FTWAS, FASc, FNAE, FMASc*

Emeritus Professor, Homi Bhabha National Institute;

Adjunct Professor, Department of Chemical

Engineering; Louisiana State University, USA and

Curtin University, Australia

Former Director, ICT Mumbai.

Professor Jyeshtharaj Bhalchandra Joshi is an outstanding chemical engineering professional who has developed novel processes, designs, products and implemented in large, medium and small-scale industry including design of more than 1000 reactors for commercial operation. He has developed efficient designs of cookers and stoves and held more than 300 workshops for promoting science awareness among school going students. As President of Marathi Vidnyan Parishad, he has been actively driving the task of improving scientific temper of the society through different activities. Professor Joshi has done truly outstanding work in the area of multiphase reactors which has been widely acclaimed. He has succeeded admirably in developing design procedures for multiphase sparged and mechanically agitated reactors, which form heart of the chemical process industry. He was Director of ICT (1999-2009). Professor Joshi has guided 91 Ph.D. and 60 Masters thesis. He has published more than 500 papers in international cited journals and more than 60 state of the art reviews/ monographs/ book chapters. He has more than 17000 citations and h-index of 64. He has been honoured with Padma Bhushan by the President of India. He has passion to interact with students and young professionals for mutual inspirations and service to society.

The list of prominent awards includes: Fellowship of TWAS, INSA, IASc, INAE; S.S. Bhatnagar Prize 1991 (CSIR), Young Scientist Award 1981 (INSA), Amar-Dye-Chem Award 1983 (IChE), Young Associate 1983 (IASc), Fellow Maharashtra Academy of Sciences, 1987, Herdillia Award 1989 (IChE), Maharashtra State National Award 1991 (ISTE), VASVIK Award 1992, Diamond Award 1994 (UDCT), Dr. K.G. Naik Gold Medal 1995 (MS University Baroda), Chemtech Foundation Award, Goyal Foundation Award 1998 (Kurukshetra U), Vishwakarma Medal 2000 (INSA), 2000; State Best Teacher Award 2004 (Maharashtra), Dr. Anji Reddy Innovator of the year Award 2005 (IChE), Diamond Award 2007 (IChE), J. C. Bose Fellow, 2008 (DST), Life Time Achievement Award (Indian Chemical Council), Sayed Husain Zaheer Medal 2008 (INSA), ICT Superstar 2012 (ICT Mumbai), Eminent Engineer Award 2018 (Engineering Council of India), Lakshya Distinguished Leadership Award 2018 (NITIE Mumbai).

### **AWARDS:**

**Padma Bhushan** (Govt. of India, 2014),

**Shantiswarup Bhatnagar Prize** (Engineering Sciences, 1991),

**Eminent Engineer Award**

(Engineering Council of India, 2018). Elected to the US National Academy of Engineering: For research, innovation, and education in green chemistry, catalysis, nanotechnology, and chemical engineering leading to clean and green technologies.

### **Subjects Taught:**

Fluid Mechanics, Multiphase Reactor Design

### **Research Interests:**

Fluid Mechanics, Multiphase Reactor Design, Computational Fluid Dynamics, Atomic Energy, Solar Energy, Bio-Energy.

**Recognized Research Guide for:** Ph.D. (Tech.) in Chemical Engineering, Nuclear Engineering, Ph.D. (Science)

**Guided students:** Ph.D. 86, Masters: 60

Post Doctoral: 24

**Total Research Publications -**

National : 25

International: 500

**Current Students:**

PhD. 10

Masters: Nil

Post-Doctoral: 4

**Citations: 16203** (according to Scopus)

**H-index: 62** (according to Scopus)



## **EMERITUS PROFESSOR OF EMINENCE PROF. G. D. YADAV**

*B. Chem. Eng. Ph.D. (Tech.), D.Sc. (Hon. Causa, DYPK),  
FTWAS, FNA, FASc, FNASc, FNAE, FRSC (UK),  
FISTE, FIChemE (UK), FIChE, FICS*

Former Vice Chancellor and R.T. Mody Distinguished Professor

Tata Chemicals Darbari Seth Distinguished Professor of Innovation and Leadership

J.C. Bose National Fellow (Govt. of India)

Adjunct Professor, RMIT University, Melbourne, Australia

Adjunct Professor, University of Saskatchewan, Saskatoon, Canada

Conjoint Professor, University of New Castle, Australia

Padmashri by President of India (Fourth Highest Civilian Honour)

### **Research Interests :**

Green Chemistry and Technology (Fundamental and applied aspects of green chemistry and engineering, particularly in the design and development of benign and eco-efficient processes in the chemical and allied industries such as bulk chemicals, intermediates, pharmaceuticals, fine chemicals, perfumes and flavours, and inorganics); Catalytic Science and Engineering (New catalytic materials, phase transfer catalysis, ionic liquids, reactions in supercritical carbon dioxide, catalysis modelling and simulation, biocatalysis in non-aqueous media, synergism of chemical catalysis with microwaves and ultrasound, and cascade engineered catalysis, renewable materials as feedstock for value added chemicals, biorefinery); Nanomaterials and nanocatalysis (Solid acids, superacids and bases, supported metals as nanocatalysts, sulphated zirconia, UDCaT series of novel catalysts, ion exchange resins, heteropoly acids, clays, and zeolites, novel redox materials, carbon nanotubes); Biotechnology (Enzyme catalysis in pharmaceutical transformations in non-aqueous media, chiral separations, biomass conversion, biorefinery, Synergism of Microwaves and Enzymes); Energy Engineering (Petroleum Engineering, Flow through porous media, Network modelling, Novel methods of enhanced oil recovery; Coal conversion, Hydrogen generation and storage)

**P**rofessor G.D. Yadav was conferred Padmashri By the President of India in 2016. He has won over 125 national and international honours, awards, fellowships, editorships, etc. Several Life Time Achievement Awards have been bestowed on him by prestigious organizations. He is an elected Fellow of all National Science and Engineering Academies in India which is rare: Indian National Science Academy (INSA), Indian Academy of Sciences (IASc), National Academy of Sciences, India (NASI), Indian National Academy of Engineering (INAE) and The World Academy of Sciences, Trieste (TWAS). He is a Fellow of Royal Society

of Chemistry, UK, Institution of Chemical Engineers, UK, Indian Institute of Chemical Engineers, Indian Chemical Society, and Indian Society for Technical Education, among others. He is one of the topmost engineering scientists and academicians in India, who despite being an administrator, is still actively involved in guiding Ph.D., patenting, publishing, consulting and transferring technologies to industry. He has given more than 670+ talks including prestigious orations, plenary lectures, keynote addresses and seminars across the world in his illustrious career. He has been an active consultant to industry with more than 70 assignments and over 70 sponsored research projects for past 30 years. He has been involved in many policy making prestigious committees of central and state governments, UGC, AICTE, NBA, CSIR, DBT, MHRD, NAAC, CII, FICCI, etc. He has provided inspiring leadership to the Institute of Chemical Technology (ICT), the Indian Institute of Chemical Engineers (IICChE), Catalysis Society of India, and Maharashtra Academy of Sciences. As President of IICChE in 2001, he changed the face of IICChE and made it a vibrant body. Under his dynamic leadership, ICT has established two new campuses, ICT Mumbai Indian Oil Odisha Campus Bhubaneswar with complete support of Indian Oil Corporation and partnership of IIT Kharagpur for research and innovation and Marathwada Jalna campus. Both these campuses will have innovative programmes of education and innovation which will create entrepreneurs and are unparalleled example in India and demonstrate Prof Yadav's vision and leadership of academia. ICT has won many awards under his leadership including the University of the Year Award by FICCI (2018). Five documentaries are available on YouTube on his life and vision.

Prof. Yadav was elected to the US National Academy of Engineering: For research, innovation, and education in green chemistry, catalysis, nanotechnology, and chemical engineering leading to clean and green technologies. 1) This is a really big honour and international recognition. This year's list also includes Satya Nadella and Elon Musk along with Professor Yadav. This is second year in succession where ICT has been recognised. Out of 18 such Fellows of NAE, USA who are Indian Nationals, alive today, 5 are from ICT.

Prof. G.D. Yadav has been selected as the National Science Chair (Mode 1) by the Science and Engineering Research Board (SERB) of the DST, Govt of India, for the period of 3 years.

Prof. G. D. Yadav has been conferred the "Prof. Jai Krishna Memorial Award 2021" by the Indian National Academy of Engineering (INAE) for his outstanding contributions in the field of Engineering. The Award will be conferred in the Award Ceremony to be held virtually during the INAE Annual Convention scheduled on December 15-17, 2021.

**Subjects Taught:** Fundamentals of Green Chemistry and Technology

**Recognized Research guide for**  
Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green Technology, Ph.D. (Science) in Chemistry

**Guided students:**

Ph.D.: 97, M. Tech.: 107, Postdoc: 34

**Total Research Publications**

National: 8, International: 439

h-Index: 64; i-10 index 316,

Citations: 15,000+

**Patents:**

Total Patent Application Filed: 102;

Total Patents Granted: 62;

(a) Total Indian Filed: 58;

(b) Total Indian Granted: 36;

(c) Total International Filed: 44;

(d) Total International Granted: 26

**AWARDS and Recognitions : (Over 125)**

- Padmashri (Govt. of India, 2016),
- D.M. Trivedi Life Time Achievement Award by Indian Chemical Council,
- Dr B.P. Godrej Life Time Achievement Award by Indian Institute of Chemical Engineers,
- Professional Award (100 Rotary Clubs),
- Founding Chair, ACS India International Chapter
- President Indian Chemical Society
- President, Maharashtra Academy of Sciences
- Former President, Catalysis Society of India
- Former President, Indian Institute of Chemical Engineers
- Council Member, Indian National Science Academy (2019-)
- Independent Director: Godrej Industries Ltd, Aarti Industries Ltd, Meghmani Organics Ltd, Bhageria Chemicals Ltd, Clean Science & Technology Pvt Ltd.



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### **Dr. RAJIV PADHYE**

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### **Dr. PRASAD POTLURI**

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## ADJUNCT FACULTY



**PROF. R. P. IYER**

Ph.D. FRSC.

Vice President and

Chief Scientific Officer

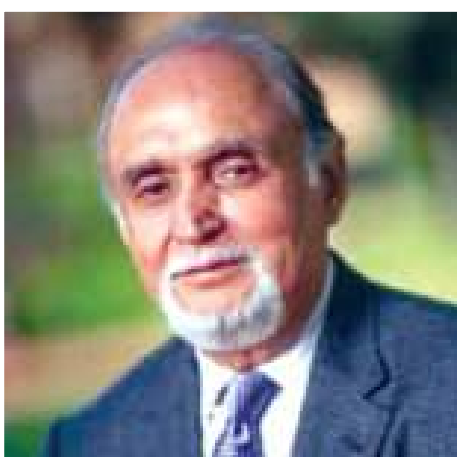
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**Dr. DHIREN R. THAKKER**

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**Dr. PRAKASH D. TRIVEDI**

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**Dr. JEEWAN PRAKASH GUPTA**

Chairman Environmental

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Ministry of Environment,

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**PROF. RIITTA KEISKI**

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## ADJUNCT FACULTY



### **PROF. INMACULADA ORTIZ**

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AV. de los Castros, s/n, 39005, Santander, Cantabria, España  
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email: ortizi@unican.es



### **PROF. ANGEL IRABIEN**

Department of Chemical and Biomolecular Engineering, University of Cantabria, Spain  
AV. de los Castros, s/n, 39005.  
Tel: 34942201597  
Mob: 34629560552  
Fax: 34942201591  
email: [angel.irabien@gmail.com](mailto:angel.irabien@gmail.com)



### **PROF. ABHAYA K. DATYE**

Distinguished Regents Professor and Department Chair, Chemical and Biological Engineering, Department, University of New Mexico, MSC 01 1120  
Albuquerque, NM 87131-0001  
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Tel: (505) 277-0477 (direct);  
email: [datye@unm.edu](mailto:datye@unm.edu)



### **PROF. R. S. VARMA**

U.S. Environmental Protection Agency, ORD National Risk Management Research Laboratory, Water Systems Division/ Water Resources Recovery Branch  
26 West M.L.K. Dr., MS 443, Cincinnati, Ohio 45268, USA  
Tel: (513)-487-2701  
Fax: (513)-569-7677  
email: [Varma.Rajender@epa.gov](mailto:Varma.Rajender@epa.gov)



### **PROF. MUKUND V. KARWE**

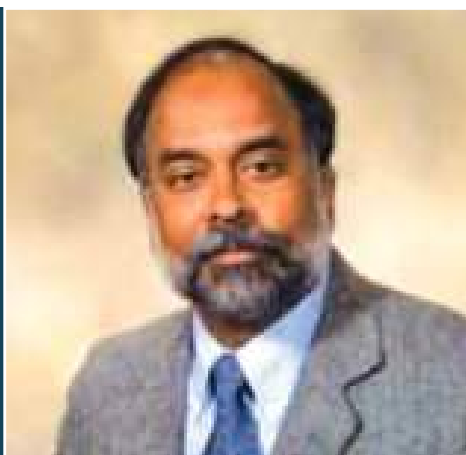
Professor and Chair, Department of Food Science  
65 Dudley Road, School of Environmental and Biological Sciences, Rutgers University,  
New Brunswick, NJ 08901-8520  
Tel: (732) 2-5487 / Lab 2-5560  
Fax: (732) 932-6776  
email: [mkarwe@sebs.rutgers.edu](mailto:mkarwe@sebs.rutgers.edu)



### **PROF. SHYAM S. SABLANI**

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Fax: 509-335-2722  
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## ADJUNCT FACULTY



**PROF. RAMASWAMY C. ANANTHESWARAN**

Professor of Food Science  
Director for Education by  
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Chair of the Cocoa, Chocolate,  
and Confectionery Research Group  
305 Rodney A. Erickson Food  
Science Building,  
University Park, PA 16802  
email: [swamy@psu.edu](mailto:swamy@psu.edu)  
Work Phone: 814-865-3004



**Dr. KALIDAS SHETTY**

Professor of Plant Science and  
Founding Director of Global Institute  
of Food Security and International  
Agriculture,  
Associate Vice President for International  
Partnerships and Collaborations,  
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Blvd., Fargo, ND 58102, USA  
Tel: (701) 231-5058  
email: [kalidas.shetty@ndsu.edu](mailto:kalidas.shetty@ndsu.edu)  
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Food Processing Technology  
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**KESHUN LIU, Ph.D.**

Research Chemist, Grain Chemistry  
and Utilization Lab,  
National Small Grains and  
Potato Germplasm Research Center  
U.S. Dept. of Agriculture,  
Agricultural  
Research Service, Aberdeen,  
Idaho 83210, USA  
email: [Keshun.Liu@ars.usda.gov](mailto:Keshun.Liu@ars.usda.gov)



**PROF. V. A. JUVEKAR**

Professor of Chemical Engineering,  
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**PROF. R. V. CHAUDHARI**

School of Engineering - Chemical  
and Petroleum Engineering  
Deane E. Ackers  
Distinguished Professor  
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University of Kansas,  
1530 West 15th Street  
Lawrence, KS 66045  
Tel: 785-864-1634  
email: [rvc1948@ku.edu](mailto:rvc1948@ku.edu)

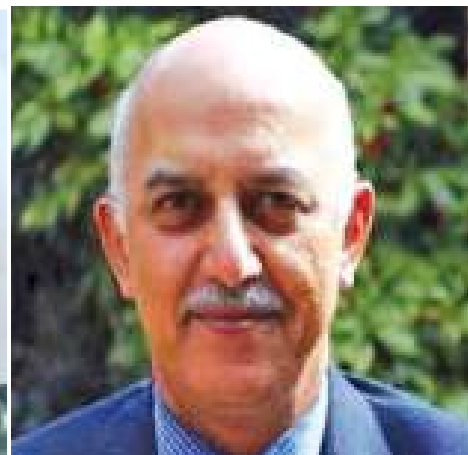
## ADJUNCT FACULTY



**PROF. BALA SUBRAMANIAM**  
School of Engineering - Chemical  
and Petroleum Engineering,  
Dan F. Servey  
Distinguished Professor  
Learned Hall, Room 4156  
University of Kansas,  
1530 West 15th Street,  
Lawrence, KS 66045  
Tel: 785-864-2903  
email: [bsubramaniam@ku.edu](mailto:bsubramaniam@ku.edu)



**Dr. SANJEEV S. TAMBE**  
Former Head Chemical  
Engineering division  
NCL Pune  
B-32, Sylvan Retreat,  
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Shivajinagar, Pune 411020, India  
Tel: +91 9850030789  
email: [tambe.sanjiv@gmail.com](mailto:tambe.sanjiv@gmail.com)



**Dr. V PRAKASH**  
Distinguished Scientist of  
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Former Director of CFTRI-INDIA  
Mysore 570 002 INDIA.  
Tel: 9845048854  
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**Dr. VIJAY G. HABBU**  
Senior Vice President (Chemicals),  
PETCHEM Sector, Reliance  
Industries Ltd.,  
Ghansoli, Mumbai - 400 701.  
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[vijayhabbu@ril.com](mailto:vijayhabbu@ril.com)



**Dr. CRK REDDY**  
DBT Energy Biosciences Chair  
DBT-ICT Centre for Energy  
Biosciences, ICT,  
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Mob:9429641246  
email: [crkcsmcric@gmail.com](mailto:crkcsmcric@gmail.com)



**Mr. SWAPAN K. RAY**  
A-1004,Tharwani Rosabella,  
Sector - 35 D, Kharghar,  
Navi Mumbai - 410 210.  
Tel: 9867609116  
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[Swapan.Ray@ril.com](mailto:Swapan.Ray@ril.com);

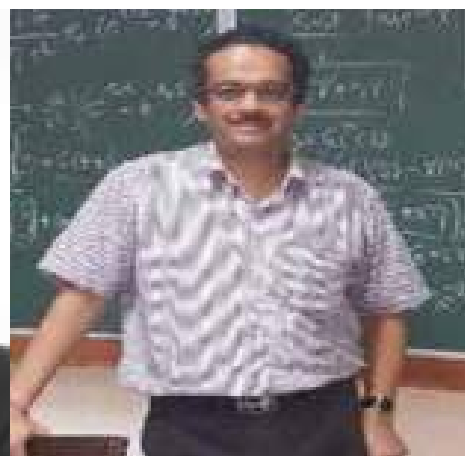
## ADJUNCT FACULTY



**Dr. SUDHAKAR Y. MHASKAR**  
5, Amar Prabha, Plot no 25,  
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**PROFESSOR P. RAMESH BABU**  
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Department of Chemical  
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Indian Institute of Technology  
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Kanpur – 208 016.  
Tel. : 512 259 7993 {M}/ (F) 512 259  
0104  
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**DR. RAMAN P. YADAV**  
Professor, Department of Medical  
Biotechnology, MGM School of  
Biomedical Sciences, & Technical  
Director, MGMIHS OMICS  
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### Additional Adjunct Faculty

1. **Mr. Adnan Ahmad**,  
Sainik Farm, New Delhi.
2. **Professor Radha V. Jayaram**,  
Retired Professor, Institute  
of Chemical Technology,  
Mumbai.
3. **Prof. K.V. Ramanujachary**  
Department of Chemistry  
and Biochemistry Rowan  
University, Glassboro, USA.
4. **Prof. Daniel J. Sweeney**,  
Massachusetts Avenue  
Cambridge, Massachusetts.
5. **Prof. Sanjay V. Deshmukh**  
*M.Sc., Ph.D, DSc(hc), LLB, DSc(hc)*,  
Former Vice-Chancellor,  
University of Mumbai,  
Professor of Life Sciences,  
University of Mumbai 98.
6. **Dr. Nishigandha Naik**  
Assistant Director and  
Director (Addl. Charge) –  
Superannuated Mumbai 63
7. **Dr. Mukund Keshao Gurjar**  
Director (R&D) & Chief  
Scientific Officer, Emcure  
Pharmaceuticals Limited,  
Pune.
8. **Dr. M. G. Kulkarni**,  
Emeritus Scientist, Formerly  
Head Polymer Science  
and Engineering Division,  
CSIR National Chemical  
Laboratory, Pune
9. **Dr. C R K Reddy**, DBT  
Energy Biosciences Chair,  
DBT- ICT Centre For Energy  
Biosciences ICT, Matunga,  
Mumbai 57
10. **Dr. K. V. Seshadri**,  
Navi Mumbai -400706.





## DISTINGUISHED ADJUNCT FACULTY (2019-2023)



**PROF. RYOJI NOYORI,  
NOBEL LAUREATE**

Director-General of CRDS,  
Japan Science and Technology Agency  
(JST)  
Director of Science Museum,  
Japan Science Foundation  
RIKEN Fellow, RIKEN University  
Professor, Nagoya University, JAPAN  
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RAMKRISHNA**

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## DISTINGUISHED ADJUNCT FACULTY (2019-2023)



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Tel: (020) 2590-8434 (O),  
4120-5731 (R), 98-607-99954 (M);  
Email [s.sivaram@iiserpune.ac.in](mailto:s.sivaram@iiserpune.ac.in);



**PROF. DAMODAR ACHARYA**

Formerly Director IIT, Kharagpur,  
Formerly Chairman, All ICTE,  
New Delhi and Formerly Vice  
Chancellor,  
Biju Patnaik University of Technology,  
Bhubaneswar,  
Chairman Advisory Board,  
SOA University, Khandagiri Square,  
Bhubaneswar – 751 030.  
Tel: 06742350885  
Email: [acharyadamodar94@gmail.com](mailto:acharyadamodar94@gmail.com)



**PROF. CHENNUPATI JAGADISH**

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**Shri. VIJAY B. SAMANT**

President and CEO  
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Email: [VBSamant@vical.com](mailto:VBSamant@vical.com)



**PROF. SANJOY BANERJEE**

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Mechanical Engineering,  
The City College of New York  
Tel: (212) 650-5728  
Fax: (212) 650-6660  
Email: [banerjee@che.ccny.cuny.edu](mailto:banerjee@che.ccny.cuny.edu)

## D.SC. (HONORIS CAUSA)

**Third  
Convocation,  
March 8,  
2014**



**BHARAT RATNA  
Professor C.N.R. Rao**  
National Research  
Professor  
Linus Pauling Research  
Professor & Honorary  
President Jawaharlal  
Nehru Centre for  
Advanced Scientific  
Research, Bangalore  
[http://www.jncasr.ac.in/  
cnrrao](http://www.jncasr.ac.in/cnr Rao)



**PADMAVIBHUSHAN  
Professor M.M.  
Sharma**  
Distinguished  
Professor of  
Eminence and  
Former Director of  
ICT  
(then UDCT)

**Fourth  
Convocation,  
February 16,  
2015**



**Professor George  
Whitesides**  
Harvard University,  
USA  
[http://gmwgroup.  
harvard.edu](http://gmwgroup.harvard.edu)



**Shri Mukesh D.  
Ambani**  
Chairman and  
Managing Director  
Reliance Industries  
Ltd.

**Sixth  
Convocation,  
February 8,  
2017**



**Nobel Laureate  
Professor Jean-Marie  
Lehn**  
Professor at Collège  
de France in Paris  
[https://isis.unistra.  
fr/laboratory-of-  
supramolecular-  
chemistry-jean-  
marie-lehn/](https://isis.unistra.fr/laboratory-of-supramolecular-chemistry-jean-marie-lehn/)



**Nobel Laureate  
Professor Robert H.  
Grubbs**  
Victor and Elizabeth  
Atkins Professor of  
Chemistry  
California Institute of  
Technology, USA  
[https://grubbsgroup.  
caltech.edu/](https://grubbsgroup.caltech.edu/)

**Seventh  
Convocation,  
February 23,  
2018**



**Nobel Laureate  
Professor Ryoji Noyori**  
Director-General of CRDS,  
Japan Science and Technology Agency (JST),  
Director of Science Museum, Japan Science Foundation,  
RIKEN Fellow, RIKEN University Professor, Nagoya University, Japan  
[http://noy.chem.nagoya-u.ac.jp/R\\_Noyori-E/](http://noy.chem.nagoya-u.ac.jp/R_Noyori-E/)

**Ninth  
Convocation,  
September 2,  
2020**



**PADMAVIBHUSHAN  
Dr. Anil Kakodkar**  
Chairman, Rajiv  
Gandhi Science,  
and Technology  
Commission, Former  
Chairman, Atomic  
Energy Commission



**PADMASHRI  
Dr. K.H. Gharda**  
Chairman and  
Managing Director,  
M/s. Gharda  
Chemicals Ltd.



# Department of **CHEMICAL ENGINEERING**





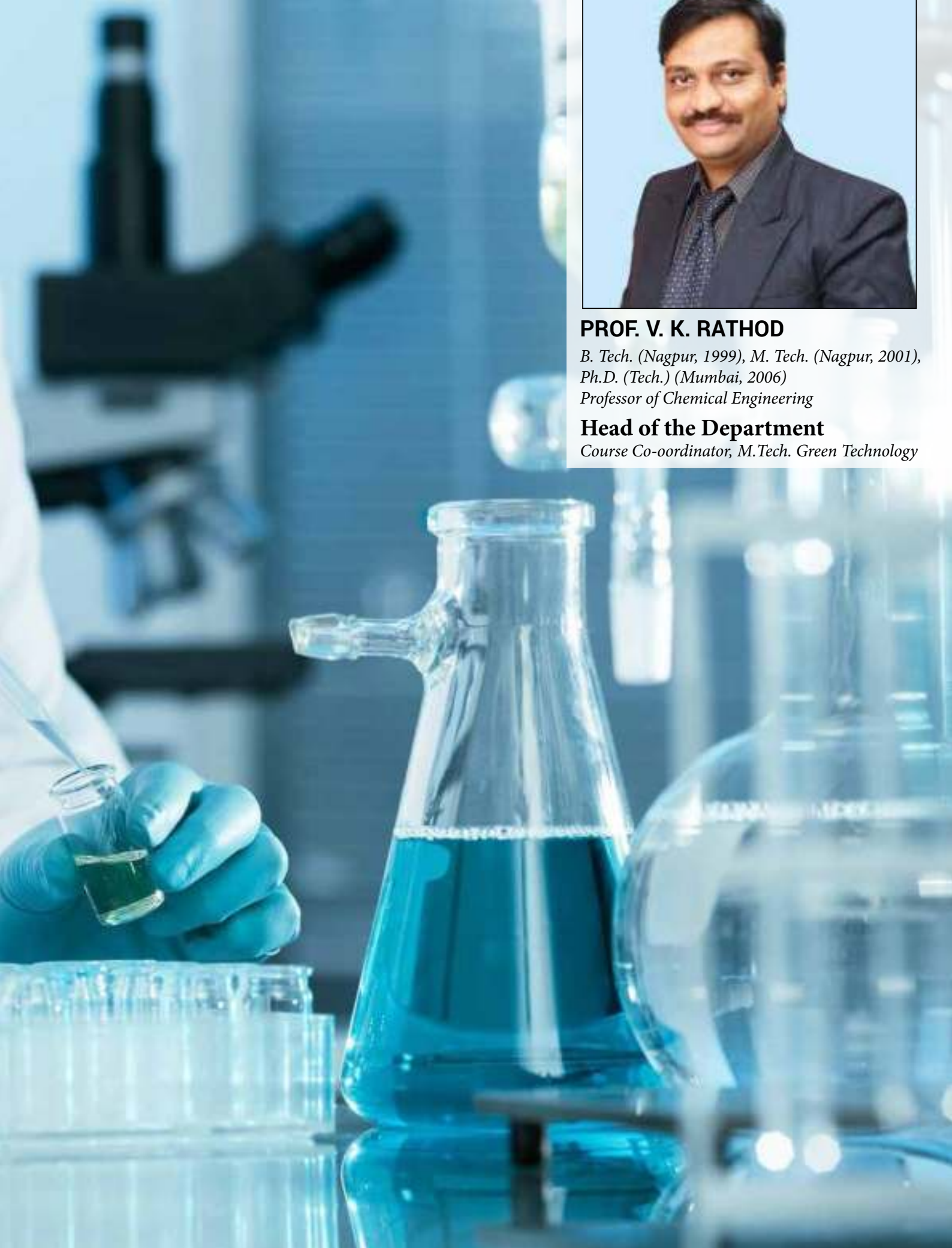
**PROF. V. K. RATHOD**

*B. Tech. (Nagpur, 1999), M. Tech. (Nagpur, 2001),  
Ph.D. (Tech.) (Mumbai, 2006)*

*Professor of Chemical Engineering*

**Head of the Department**

*Course Co-ordinator, M.Tech. Green Technology*





### PROF. V. K. RATHOD

B. Tech. (Nagpur, 1999), M. Tech. (Nagpur, 2001), Ph.D. (Tech.) (Mumbai, 2006)  
Professor of Chemical Engineering

### Head, Department of Chemical Engineering

Course Co-ordinator, M.Tech. Green Technology

#### SUBJECTS TAUGHT:

Heat Transfer,  
Advance heat  
transfer, separation  
processes, Fluid flow  
and Heat transfer,  
Multiphase Reactor,

Chemical Reaction Engineering, Material & Energy  
Balance calculation, pharmaceutical Engineering,  
Chemical Engineering Laboratory, Unit operations  
in Biotechnology, Bioreactor Design and Industrial  
Bioprocess Automation

#### RESEARCH INTERESTS:

Separation process, Extraction of Natural ingredients,  
Enzyme catalyzed reactions, Waste Treatment, Catalysis,  
Separation of biomolecules, Enzyme Preparation,  
modification and separation, Nanomaterial synthesis

**Recognized Research guide for** Ph.D. (Tech.) in  
Chemical Engineering, Bioprocess Technology, Green

Technology, Ph.D. (Science) in Chemistry

**Guided students:** Ph.D.: 31, Masters: 112

PDF: 12

Total Research Publications-

National: 01 International: 242

Patents: 01 H-Index: 50, Citations: 8100+

#### NATIONAL AND INTERNATIONAL AWARDS:

Fellow, Maharashtra Academy of Sciences, 2015

Hindustan Lever Biennial Award for the Most

Outstanding Chemical Engineer of the Year Under The

Age of 45 Years of Indian Institute of Chemical Engineers,  
2018;

Outstanding Professor Award given by Indian Specialty  
Chemicals Manufacturing Association, 2019.

Prof. M M Sharma award for Science and Technology  
given by Marathi Vidnyan Parishad, Mumbai, 2019

Best Professor contributing in Research award by C. B.  
Murarka charitable trust in 2019-20.

### PROF. S. S. BHAGWAT

B. Chem. Eng., M.Chem.Eng., Ph.D. (Tech.)

### Professor of Chemical Engineering

### Dean, Academic Programmes

#### SUBJECTS TAUGHT:

Chemical Engineering Thermodynamics I, Chemical  
Engineering Thermodynamics II, Interfacial Science and  
Engineering.

#### RESEARCH INTERESTS:

Interfacial Science and Engineering, Microemulsions,  
Energy and Exergy Engineering, Absorption Cycles,  
Utilization of lowgrade energy, applications of artificial  
neural networks

**Recognized Research guide for** Ph.D. (Tech.) in Chemical  
Engineering, Bioprocess Technology, Ph.D. (Science) in  
Chemistry

**Guided students:** Ph.D. 39, Masters: 85

**Total Research Publications-**

National: 10, International: 89

Patents: 11 H-Index:

22, Citations: 1793

#### AWARDS:

IICChE NOCIL

Award for excellence

in design or

Development of

Process Plant or

equipment in 2012

Bry-Air asia award for the HVAC 2013

INSA Best teacher award, 2016

UDCT Alumni Association Distinguished Alumnus Award  
2019

Fellow, Maharashtra Academic of Sciences 2007







**DR. V. H. DALVI**

*B.Chem. Eng., M.S., P.D.ENG. ( Enschede, The Netherlands), Ph.D.( Austin, USA)*

**R.A. Mashelkar Assistant Professor.**

**Co-coordinator, DBT-ICT Centre for Energy Biosciences**

**SUBJECTS TAUGHT:** Process Simulation Laboratory, Advanced Mass Transfer, Mathematical Methods in Chemical Engineering, Optimization Methods in Chemical Engineering, Data analysis

**RESEARCH INTERESTS :** Molecular Simulations, Process Modeling and Simulations, Solar Thermal Systems, Renewable energy

**Recognized Research guide for**

Ph.D. (Tech) in Chemical Engineering

Total Research Publications- 31

**Guided students:** Ph.D. : 3 (ongoing:7) Masters: 13 (ongoing:6)

**National: Nil, International: 31**

**Patents:** 5 applied 3 granted

**PROF. V. G. GAIKAR, F.N.A.E**

*B.Chem.Eng , M.Chem.Eng., Ph.D. (Tech.)*

**Bharat Petroleum Distinguished Professor of Chemical Engineering and Former First Vice Chancellor, Dr. Babasaheb Ambedkar Technological University (Maharashtra-ATU)**



**SUBJECTS TAUGHT:** BioReaction Engineering, BioSystem Engineering, Chemical Process Control

**RESEARCH INTERESTS:** Renewable Energy Resources, Molecular Simulation, Biochemical Engineering, Chemical Process Development and Engineering.

**Recognized Research guide for** Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green Technology and Ph.D. (Science) in Chemistry, Green Technology

**Guided students:** Ph.D. 50, Masters: 84

**Total Research Publications-** National: 04, International: 184

Patents:11 H-Index:33 (Scopus), 37 (Google Scholar)

Citations: 3656 (Scopus), 4947 (Google Scholar)

**AWARDS:**

- Fellow, Maharashtra Academy of Sciences, (2004)
- Fellow, Indian National Academy of Engineering (2008)
- Eminent Engineer, Institution of Engineers (India), (2019)
- Acharya PC Ray Memorial Lecture, Institution of Engineers (India), (2019)
- UAADistinguished Alumnus Award, ICT (2016)
- IICHE-D.O.S.T.Dr.S.K.Sharma Medal (2014)
- IICHE-CHEMCONDistinguished Speaker Award (2014)
- IICHE-Herdillia Award for Excellence in Basic Research in Chemical Engineering (2004),
- Best Teacher Award, University of Mumbai (2002) UGCCarrer Award, 1994
- UGC Carrer Award, 1994



### DR. PARAG R. GOGATE

*B. Chem. Eng., M. Chem. Eng., Ph.D. (Tech.)*

**Professor of Chemical Engineering**

**Course Co-ordinator, Certificate course on Practice of Chemical Technology,  
Controller of Examinations**

#### **SUBJECTS TAUGHT:**

Chemical Reaction Engineering,  
Cavitation for Green Processes  
Processes, Process Calculations,

Asian Researcher and Engineer given by The Society of Chemical Engineers, Japan, 2013; Hindustan Lever Biennial Award for the Most Outstanding Chemical Engineer of the Year Under The Age of 45 Years of Indian Institute of Chemical Engineers, 2013; Fellow, Maharashtra Academy of Sciences, 2014; Outstanding Professor Award given by Indian Specialty Chemicals Manufacturing Association, 2015, 2018; Maharashtra State National Award for Best Research work done by teachers of engineering colleges, Indian society for technical education, New Delhi-2016; Prof. M M Sharma award for Science and Technology given by Marathi Vidnyan Parishad, Mumbai, 2017; Most Outstanding Faculty Research Award in the Chemical Engineering Discipline, Careers 360, 2018; Rajib Goyal Prize, 2018; Fellow, Indian National Academy of Engineering, 2019; Invitational Research Fellowship of Japan Society for the Promotion of Science (JSPS), 2020; Fellow, Institution of Chemical Engineers, UK, 2020; UGC Mid Career award by University Grants Commission, New Delhi, 2020; Mention in the Top 2% Scientists in the world in the area of Chemical Engineering (first in India) in analysis by Stanford University, 2020; IICChE Anij Reddy Innovator of the year award 2021; Outstanding Professor Award given by Indian Specialty Chemicals Manufacturing Association, 2021

Engineering Applications of Digital Computers,

**RESEARCH INTERESTS:** Sonochemistry, Hydrodynamic Cavitation, Process Intensification, Water and Wastewater Treatment, Enzymatic Reactions, Polymer Chemistry, Advanced Oxidation Processes

**Recognized Research Guide for:** Ph.D. (Tech.) in Chemical Engineering, Green Technology, Bioprocess Technology; Masters in Chemical Engineering, Green Technology, Bioprocess Technology

**Guided students:** Ph.D. 21, Masters: 61

**Total Research Publications-** National: 17, International: 365

Citations as per Scopus: 19500 H-index : 74

#### **AWARDS:**

Anil Kumar Bose Medal of the Indian National Science Academy (INSA), 2011; The SCEJ Award for Outstanding

### DR. SACHIN JADHAV

*Ph.D. (Tech.) in Chemical Engineering*

**ASSISTANT PROFESSOR IN CHEMICAL ENGINEERING**

**SUBJECTS TAUGHT:** Chemical Process Control, Chemical Engineering Operations, Chemical Engineering Laboratory

**RESEARCH INTERESTS:** Water and Wastewater Treatment, Membrane-based Separation, Nanomaterials Synthesis and their Applications, Adsorption-based Separation, Waste Valorization, Petrochemicals, Chemical and Enzymatic Kinetics, Process Dynamics and Control, Drying, Crystallization, Sustainability Analysis

**Recognized Research Guide for:** Chemical Engineering

**Guided students:** Ph.D.: (ongoing 1); Masters: (5 completed + 3 ongoing)

**Total Research Publications-**

National: 01, International: 14

Citation : 630+; H-Index: 08





**Dr. Ratnesh Jain (AvHumboldt Fellow)**

*M.Pharm, Ph.D.(Tech) Pharmaceutics*

**UGC Assistant Professor and Ramalingaswami Fellow**

**Course Coordinator, M.Tech Bioprocess Technology**

**Dy-Coordinator, DST PURSE and Coordinator, DST-STUTI**

**Innovation Ambassador ICT**

**SUBJECTS TAUGHT:**

Biopharmaceutical Engineering, Introduction to Biopharmaceutical Manufacturing, Research Methodology, Biomaterials

**RESEARCH INTERESTS:**

Biosimilar/Biologics Characterization, Biopharmaceutical/ Pharmaceutical Product Development, 3D Printing Technology, Nanomedicine

**Recognized Research Guide for** Ph.D. (Tech.) in Bioprocess Technology, Pharmaceutics, Green Technology, M.Tech in Bioprocess Technology, Green Technology; M Chem Engg in Chemical Engineering

**Guided students:** Ph.D. 8, Masters: 19

**Total Research Publications-**

National:2, International: 71

Citations: 1733, H-Index: 21, Cumulative impact factor: 155

**Patents (granted in last 5 years) 4**

**AWARDS:**

BIRAC Bioinnovator Award 2021

**PROF. LAKSHMI KANTAM MANNEPALLI**

*B.sc., MSc., Ph.D (Chemistry)*

**(FNA, FTWAS, FNASc, FRSC, FMASc)**

**Dr. B. P. Godrej Distinguished Professor of Green Chemistry and Sustainability Engineering;**

**(Former Director, CSIR-IICT, Hyderabad)**



**SUBJECTS TAUGHT:**

Nanotechnology, Green chemistry

**RESEARCH INTERESTS:** Catalysis, Materials and Process Chemistry, Nanotechnology.

Recognized Research Guide for: Chemistry and Chemical Engineering

**GUIDED STUDENTS:** Ph.D. : 41

Recognized Research Guide for: Chemistry and Chemical Engineering

Guided students: Ph.D. : 41

**TOTAL RESEARCH PUBLICATIONS:**

National:22, International: 352

Citations : 16920; H-Index: 70

Patents : 52

**AWARDS:**

- 2019- Goyal Award, Applied Sciences, Kurukshetra University, Kurukshetra
- 2019- ICC -D.M.Trivedi Life time Achievement Award
- 2018-TWAS Fellow,

- 2015- Dr. Burjor P. Godrej Distinguished Professor of Green Chemistry and Sustainability Engineering;
- 2015-J.C.Bose Fellow (SERB-DST)
- 2015- Eminent Scientist Award Catalysis Society of India;
- 2014-Fellow of the Indian National Science Academy; India,
- 2013 Fellow of The Royal Society of Chemistry, UK;
- 2011- Vasvik Award;
- 2011 - Lifetime Achievement Award, Indian Chemical Society;
- 2010 - Platinum Jubilee Lecture Award, ISC-2010;
- 2008 Fellow of National Academy of Sciences, India;
- 2006- Fellow of Andhra Pradesh Academy of Sciences, Hyderabad



**DR. KUMUDINEE V. MARATHE**  
B E and M Tech in Metallurgical Engg  
Associate Professor in Metallurgical Engg.

**SUBJECTS TAUGHT:** Material Science & Engg, Material Technology, Advanced Materials, Ind. Engg. Chem.

**RESEARCH INTERESTS:** Waste water treatment, membrane separation, ground water treatment, membrane bioreactor, electrochemical membrane bioreactor, sustainability assessment, exergy analysis.

**Recognized Research Guide for Ph.D. in Chemical Engineering and Green Technology**

**Guided students:** Ph.D. 03, Masters: 40

**Total Research Publications-** National: 06, International: 37

H Index: 7, Total Citations: 182, Impact factor (Scopus): 39.644

**PROFESSOR ANIRUDDHA BHALCHANDRA PANDIT**

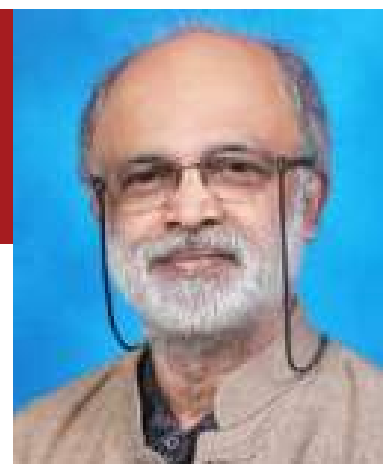
F.N.A., F.T.W.A.S., F.A.Sc., F.N.A.E., F.N.A.Sc., F.M.A.Sc.

Sir J. C. Bose National Fellow, Gol (2015-2020; 2020-2025)

UGC Research Scientist 'C'

Vice Chancellor

Institute of Chemical Technology



**SUBJECTS TAUGHT:** (past 2 years) Chemical Project Engineering and Economics, Separations Processes (jointly with Prof. A. V. Patwardhan)

**Research Interests:** Physical and Chemical Processing applications of Cavitation phenomena, Sonochemistry, Study of opportunities in industrial wastewater treatment and its reuse applications, Mixing in Mechanically agitated contactors: Experimental and CFD Investigations, Design of nozzles for hydrodynamic cavitation: Experimental and CFD Investigations, Modeling of Stoves, Optimization of cooking devices, Pyrolysis of biomass for value-added products, Microbial disinfection using hydrodynamic cavitation, Protein modification, Cell disruption, Selective recovery of intracellular biomolecules at the cell disruption stage.

**RECOGNIZED RESEARCH GUIDE FOR:**

- 1) Ph.D. (Tech.) in Chemical Engineering
- 2) Ph.D. (Tech.) in Bioprocess Technology
- 3) Ph.D. (Science) in Chemistry
- 4) M.Chem. Engg. in Chemical Engineering
- 5) M.Tech. in Bioprocess Technology

**Guided students:** Completed: Ph.D. : 57, Masters : 92

Ongoing: Ph.D. : 10, Masters : 06

**Total Research Publications:** 419 (Scopus; 21-04-2022)

Citations: 21627 (Scopus; 21-04-2022) H-Index: 78

Patents: Granted: 4 Applications Filed: 26

**AWARDS (SINCE PAST ONE YEAR):**

1. Secured First Position as the Best Scientist in India by Research.com, 2022
2. Eminent Engineer Award 2021 of the Engineering Council of India (ECI) for the Research and Consultancy Category, 2022
3. ICC D. M. Trivedi Lifetime Achievement Award for Contribution to Indian Chemical Industry (Education & Research) For the Year, 2020



### PROF. B. N. THORAT

*B.Chem. Eng, M.Chem. Eng, D.H.S.T., Ph.D. (Tech)*

Senior Professor of Chemical Engineering  
(Former Director, ICT - IOC, Bhubaneswar)

#### SUBJECTS TAUGHT:

Basic Course in Entrepreneurship & Advanced course in Entrepreneurship, Chemical Engineering Operations, Perspective of Society, Science & Technology,

Separation Processes in Chemical Engineering

#### RESEARCH INTERESTS :

Drying Technology and Particle Handling, Process Development, Multiphase Reactors, Industrial Crystallization and Filtration, Food Processing, sustainability

**Recognized Research guide for** Ph.D. (Tech.) in Chemical Engineering, Biotechnology, Ph.D. (Science) in Chemistry.

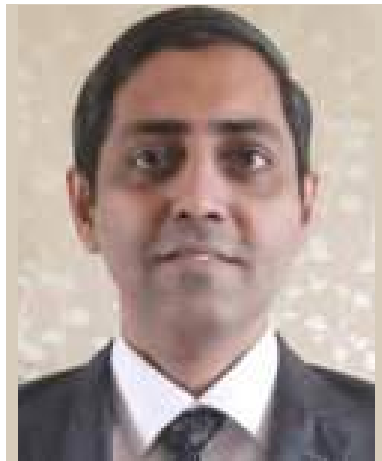
**Guided Students:** Ph.D. 36, Masters: 65; PDF:07

**Total Research Publications-** National: 03, International: 141 (Google Scholar), Patents: 5 granted, H-Index:26, Citations: 2461

#### AWARDS:

- Zayed Sustainability Award, UAE's pioneering global Award, 2021 for startup

- Gunther Oertel Startup Innovation Award for Microbot Innovation, Covestro, (Former Bayer Material Science, Germany), 2017.
- Millennium Alliance Award by UKAID (DFID) and FICCI: Solar Conduction Dryer Scale-up in Nepal, 2016
- Millennium Alliance Award by UKAID (DFID) and FICCI: CassavaTech scale up in Kenya, 2016
- Lifetime Achievement Award for Outstanding Contribution to Drying and Dehydration, given by atADC-2019.
- NOCIL AWARD for excellence in design of new equipment and process, 2015.
- The VASVIK Award for the year 2012 in the field of Chemical Sciences and Technology, 2015
- Bill and Melinda Gates Foundation Award of USD 100,000 (One Lakh US Dollar) each for Innovative Cassava Dryer, and Solar Grain Dryer 2013
- Dell Social Innovation Award of USD 60,000 for developing "Solar Conduction Dryer" 2013.
- Vocational Excellence Award, for his valuable contribution to Science and Society for making Solar Conduction Dryer for the Agricultural Sector, Rotary Club of Mumbai Cuffe Parade, 2013.



### PROF. PRAKASH D. VAIDYA, FMASC, FICS

*B. E. (Chem. Engg.), M. Chem. Engg., Ph.D. (Tech.) in Chem. Engg.*

Nodal Officer and RCF Professor of Chemical Engineering

#### SUBJECTS TAUGHT:

Separation Processes, Process Development and Engineering, Environmental Engineering, Fuels Engineering

#### RESEARCH INTERESTS:

Energy transition to a low carbon economy (carbon capture

and recycling; hydrogen production by reforming processes; biofuels)

**Recognized Research Guide for:** Ph.D. (Tech.) in Chem. Engg., Ph.D. (Tech.) in Green Tech., Ph.D. (Sci.) in Chemistry. **Guided students:** Ph.D. 24, Masters: 48

**Total Research Publications** - International: 110, H-Index: 31, Citations: 4500, Patents (granted in last 5 years): 03

#### AWARDS:

Fellow, Maharashtra Academy of Sciences (2019)  
Life Fellow, Indian Academy of Sciences (2021)  
Dr. Naresh J. Suchak Innovation Award (2021)

### DR. MANISH YADAV

*B. Chem. Eng., M. Chem. Eng., Ph.D. (Tech.) in Chemical Engineering*

Assistant Professor of Chemical Engineering

#### SUBJECTS TAUGHT:

Transport Phenomena, Chemical Engineering Laboratory

#### RESEARCH INTERESTS:

Chemical Reaction Engineering, Nanotechnology, Crystallization

Recognized Research guide for M.Chem. Engg., PhD (Tech) in Chem. Engg.

#### TOTAL RESEARCH PUBLICATIONS:

National: 01, International: 12

Citation: 164; H-Index: 07







# Department of SPECIALITY CHEMICALS TECHNOLOGY





**PROF. N. SEKAR**

*B.Sc (Hon), B.Sc (Tech), Ph.D (Tech),  
B. A. (Music), M.A. (German). M.Music*

**Professor of Tinctorial Chemistry**

**Head of the Department**



### PROF. N. SEKAR

*B.Sc (Hon), B.Sc (Tech), Ph.D (Tech),  
B. A. (Music), M.A. (German). M.Music*

**Professor of Tinctorial Chemistry**

#### SUBJECTS TAUGHT:

Ph. D. / M. Tech. (Course Work): Fluorescent Colorants in Bio-imaging, Chemistry and Technology of Agrochemicals, Chemistry and Technology of High Performance Pigments Chemistry and Technology of Functional Dyes, Proton Transfer Reaction. B. Tech.: Mechanisms of Organic Reactions, Chemistry of Substrates, Color Chemistry: an Introduction, Chemistry of Heterocyclic Compounds, Chemistry and Technology of Direct, Acid, and Sulphur Dyes, Analytical Instruments in Colorant Industry.

#### RESEARCH INTERESTS:

Computational Colour chemistry (DFT and TD-DFT computations), greener synthesis of multistep heterocyclic and fused heterocyclic compounds, process development of intermediates, fluorescent colorants for bio-sensors, security applications, molecular imprinting, synthesis of perfumery and flavor compounds, laser colorants, NIR absorbing, fluorescing and reflecting colorants, tinctorially strong photostable disperse dyes, colorants for DSSCs.

**Recognized Research guide for Ph.D. (Tech.) in Speciality Chemical Technology, Green**

**Technology, Ph. D. (Science) in Chemistry, Ph.D in Textile Chemistry**

**Guided students:** Ph.D. 42, Masters: 24

**TOTAL RESEARCH PUBLICATIONS :** National : 16 International: 324

**Cumulative impact factor:** 205, **H-Index:** 29, **Citations:** 3873

**Patents (granted in last 5 years):** 07

#### AWARDS:

- Fellow of Society of Dyers and Colourists, (UK)
- Fellow of Indian Chemical Society
- Fellow of Maharashtra Academy of Sciences

### PROF. GANAPATI SUBRAY SHANKARLING

*B. Sc. (Hon), B. Sc. (Tech), M. Sc. (Tech), Ph.D. (Tech.)*

**Professor of Speciality Chemical Technology,  
Co-ordinator, Perfumery and Flavor Technology**

#### SUBJECTS TAUGHT:

Chemistry and technology of benzene intermediates I and II, Chemistry and technology of specialty organic intermediates and fine chemicals, Chemistry and technology of dyes and pigments, Chemistry of functional dyes, Introduction to green chemistry, Analysis of intermediates, dyes and fibres, Tinctorial chemistry lab, Experimental dyeing; Chemistry of functional colorants, Chemistry and technology of agro chemicals, Analysis and development of green industrial processes, Chemistry of perfumes and flavors

#### RESEARCH INTERESTS:

Green Chemistry and Technology (Homogeneous catalysts, green solvents and alternative cost effective energy sources like concentrated solar radiation and cavitation technology) Oxidation Chemistry, Functional colorants: Thermo and Photochromic, Metal sensors, Chemosensor for anions, Cucurbiturils chemistry, Process developments in Intermediates, dyes and specialty chemicals.

**Recognized Research Guide for Ph.D. (Tech) in Speciality Chemical Technology, Green Technology, Perfumery and Flavours; Ph.D. (Sci) in Chemistry and Biotechnology**

**Guided students:** Ph.D.20, Masters: 30

**TOTAL RESEARCH PUBLICATIONS:**

National: 20, International: 147

H-Index: 25, Citation : 2565

**Patents (granted in last 5 years) : 20**







**Dr. SURAJIT SOME**  
*Ph.D (IIT-Kharagpur)*  
**UGC-FRP Assistant Professor**

of benzene intermediate-I, Experimental Dyeing, Preparation of Intermediates, Preparation of Dyes, Statistical Design of Experiments, Analysis of Intermediates and Dyes and Fibers.

#### RESEARCH INTERESTS:

Design and Synthesis of graphene derivatives and their applications; Flame retardants, Energy storage materials, Bio-probes, Waste stream treatment, Advanced catalysts, Semiconductor materials, Anticancer materials, Sensors and Surfactants.

**Recognized Research Guide for** Ph.D. (Sci) in Chemistry

Guided students: Ph.D.: 3 (Ongoing: 04), Masters: 01 (Ongoing: 04), Postdoc: 04  
Total Research Publications- International: 52

**Cumulative impact factor:** 250.92 (5.018 per publication), **H-Index:** 23, **Citation:** 1955 (37.6 per publication), **Patents (granted in last 5 years):** 19

#### AWARDS:

- Research Professor Award 2020 from POSTECH, South Korea.
- Research Professor Award 2020 from GIST, South Korea.
- Research Fellow Award 2013 from National Research Foundation (NRF), South Korea.
- Best Researcher Award 2012, Sungkyunkwan University, South Korea.
- Fellowship of Creative Research Initiative (CRI) 2011, South Korea.
- Fellowship of National Research Foundation (NRF) 2009, South Korea.
- Fellowship of Postdoctoral Research Program of Sungkyunkwan University 2009, South Korea.
- Dr. D. S. Kothari Fellowship Award 2008.
- Qualified GRADUATE APTITUDE TEST IN ENGINEERING – 2004, with all India Rank 204.
- Qualified CSIR- NET for UGC fellowship and Lecturership in Chemical Sciences, Council of Scientific and Industrial Research, New Delhi, held in June 2003.

#### SUBJECTS TAUGHT:

M.Tech Course: Mechanism of Organic Reactions, Specialty Chemicals Chemistry and Technology, Organic Materials for Electronics. B.Tech Course: Chemistry of Heterocycles, Color Chemistry – An Introduction, Use of Analytical Instrument in Synthetic Organic Chemistry, Chemistry of Agrochemicals, Mechanism of Organic Reactions, Chemistry and Technology

**Dr. SATYAJIT SAHA**

*Ph.D. (Chemistry)*

**UGC-Assistant Professor**

#### SUBJECTS TAUGHT:

Crop Protecting Chemicals, Advances in Colorants, Introduction to Green Chemistry, Analytical Chemistry and Quality Control Techniques, Azo colorants, Heterocyclic intermediates in colorants, Reaction Mechanism and Reagent Chemistry, Chromatographic Techniques and Preparation of dyes and intermediates, Analysis of inorganic raw materials used in Speciality Chemical industry, Chemistry and Technology of Pigments, Preparation, analysis of dyes, intermediates, optical brighteners and functional colorants, Chemistry and Technology of Benzene Intermediates-I and II, Experimental Dyeing

#### RESEARCH INTERESTS:

Organocatalytic transformations to synthesize bioactive molecules and molecules of industrial relevance, Enantioselective organocatalytic transformations, Molecular engineering via supramolecular non-covalent interactions to design AIE-active molecules for applications

in sensing, imaging, and optoelectronics, Development of covalent organic polymers (COPs) for environmental remediation, gas storage, sensing, and catalysis, Diversity oriented synthesis of annelated N-heterocycles, Synthesis of organic sensitizers for Dye Sensitized Solar Cell applications and luminescent molecules for Organic Light Emitting Diodes, etc, Green chemistry and implementation of sustainable technologies in the synthesis of specialty molecules, Synthesis and development of novel molecules for fragrance and flavor industry.

**Recognized Research Guide for:** Science (Chemistry)

**Guided students:** Ph.D. : 1, Masters : 2

**TOTAL RESEARCH**

**PUBLICATIONS:** International: 25, H-Index: 12; Citations data: 801

#### AWARDS:

- Fellow of the Indian Chemical



Society-2020

- Life Member of Chemical Research Society of India (CRSI)-2020
- Editorial Board Member of Current Organocatalysis, Bentham Science (2020-2022)
- Research Excellence Award from Indian Chemical Society-2020
- ACS Journal award-2020
- SERB Young Scientist Research grant- 2015
- FWO Visiting Postdoctoral Fellowship from Belgium, 2011



**Dr. NABANITA SADHUKHAN**

*Ph.D.*

**UGC-FRP Assistant Professor**

**SUBJECTS TAUGHT:**

- Technology of Intermediates - I
- Technology of Intermediates - II
- Chemistry of Functional Dyes
- Analysis of Inorganic Raw Materials used in Speciality Chemical Industries
- Fluorescent Colorants
- Chromatography Techniques and Preparation of Intermediates and dyes.

**RESEARCH INTERESTS:**

Synthesis functional amphiphilics based on of monodisperse polyethylene glycols and their application in biology, Biological important functional colorants, Coordination chemistry, Synthesis of organometallic molecules for functional application like OLED, Synthesis of molecular motor based fluorescent dyes for biological application namely suppression of protein aggregation and protein folding, Low molecular weight Poly Ethylene Glycols based gel for functional application and exploiting underlying supra-molecular interaction for the gelation.

**Recognized Research Guide for:** Science (Chemistry)

**Guided students:** Master : 02

**TOTAL RESEARCH PUBLICATIONS-** National : 02

International: 15, H-Index: 10; Citations : 314

**AWARDS:**

DST -Young Scientist Start-Up Research Grant, 2014.

**DR. SUBRAHMANYAM V. GARIMELLA**

*B. Sc., B. Tech, MS., PhD (Engineering)*

**UGC-Assistant Professor**

**SUBJECTS TAUGHT:**

Formulations in Fine Chemicals Industry (currently teaching), Materials Chemistry, Advanced Applications of Nanotechnology, Composites and Nanocomposites, Non-Ferrous Materials Technology, Introduction to Nanotechnology, Advanced Materials Technology, Materials Science, Micro and Nano Material Characterization, Engineering Materials

**RESEARCH INTERESTS:**

Matter Under Extreme Conditions of Pressure, Temperature and other fields; Synchrotron Sciences and Engineering; Materials Sciences and Chemical Technology

**Recognized Research Guide for:** Sciences & Engineering

**Guided students:** PhD (01)

**Master :** Nil

**TOTAL RESEARCH PUBLICATIONS :** National : Nil

**International:** 11

**H-Index:** 5 Citations: 117









# Department of **FIBRES & TEXTILE PROCESSING TECHNOLOGY**





**PROF. RAVINDRA D. KALE**

*Ph.D. (Tech.)*

Professor of Textiles Chemistry

**Head of the Department**

**PROF. RAVINDRA D. KALE**

*Ph.D. (Tech.)*

**Professor of Textiles Chemistry**

**Head of the Department**



**SUBJECTS TAUGHT:**

Technology of Textile Polymers, Polymer Chemistry, Testing and Analysis of Fibres, Testing of Textile Materials, High tech and Industrial Fibres, Technology of non-wovens, Dyeing of Natural and Synthetic fibres, Lab Testing of Textiles and Garments, Fastness Lab

**RESEARCH INTERESTS:**

Effluent treatment using nanoparticles, Application of nano emulsions in Textiles, Synthesis and application of nanoparticles, Use of Polyelectrolytes Multilayers for imparting Novel Properties to Textile Polymers, Green Composites Self Reinforced Composites, Biodegradable packaging films and foams, Functional Finishes for Natural and Synthetic Fibres, Processing of Polyester fibres at room temperature, Modification of Synthetic Fibres by Melt Spinning, Hydrophilic polyester using natural biopolymers, Green Synthesis of nanoparticles, Effluent treatment using natural materials, Electrospinning, **Recognized Research Guide for** Ph.D (Tech.) Fibres and Textile Processing Technology, Ph.D (Sci.) Textile Chemistry.

**Guided students:** Ph.D.: 6, Masters: 37

**TOTAL RESEARCH PUBLICATIONS:** 70

National: 08 International: 62

H-Index: 1 Citations: 497, ilo-index-11

Patents (Filed in last 5 years): 3

Granted (1), 02(Filled)



**PROF. (Dr.) RAVINDRA V. ADIVAREKAR**

*B.Sc., B.Sc. (Tech.), M. Sc. (Tech.), Ph.D. (Tech)*

**Professor in Fibres Chemistry and**

**Dean HRD**

**SUBJECTS TAUGHT:**

Technology of Printing, Theory of Textile Colouration, Biotechnology in Textiles, Pretreatment of Textiles, Water and Energy Conservation in Textile Processing, Sustainable Processing of Textiles, Technology of Dyeing, Management of Textile Process House, Advanced Textile Processing, Chemistry of Natural Fibres.

**RESEARCH INTERESTS:**

Textile colouration, Green Processing of Textiles natural, Medical Textiles, Enzyme manufacturing and application, Natural dyes for textiles and cosmetics, Textile composites, Novel Processing Techniques. Microbial Colourants, Multifunctional finishing of textiles, Flame retardancy of textile, Graphene nanotechnology **Recognized Research Guide for** Ph.D (Tech.) Fibres and Textile Processing Technology, Ph.D (Sci.) Biotechnology, Ph.D (Sci.) Textile Chemistry.

**Guided students:** Ph.D. : 22, Masters: 55

**TOTAL RESEARCH PUBLICATIONS:** 146

**National:** 66 **International:** 80, **H-Index:** 17 **Citations :** 930,

**Patents:** 01 (Granted), 02 (filed) H. Index = 17, ilo Index = 34





**Dr. KEDAR S. KULKARNI**  
*B.Sc. (Chemistry), B.Sc. (Tech.),  
M. Sc. (Tech.), Ph. D. (Tech)*  
**Assistant Professor (Temporary)**

**SUBJECTS TAUGHT:**

Textile wet processing machinery, Continuous processing of textiles  
Technology of pre-treatments, Garment Processing, Evaluation of  
performance textile.

**RESEARCH INTERESTS:**

Textile colouration, Finishing, Green Processing of Textiles, Natural  
dyes for textiles, Development of Textile wet processing machinery.

**TOTAL RESEARCH PUBLICATIONS:**

National :04 International : 03  
h-Index: 03; Citations: 127

**Dr. ARANYA MALLICK**  
*B.Tech., M.Tech., Ph. D. (Tech.)*  
**Assistant Professor (Temporary)**

**SUBJECTS TAUGHT:**

Basics of Colouration Technology, Yarn and Fabric  
Formation Technology, Testing of Textile Materials,  
Evaluation and Analysis of Textile Chemicals, Fibres and  
Fabrics, Chemicals Finishing.

**RESEARCH INTERESTS:**

Chemical Modification of Bipolymers, Dyeing and  
Finishing with Natural Colourants, Sustainable Wet  
Processing, Waste Water Treatment

**TOTAL RESEARCH PUBLICATIONS:**

National :10 International : 04  
h-Index: 5; Citations: 63



**PROF. (Dr.) ASHOK R ATHALYE**  
*B.Sc., B.Sc. (Tech.), M. Sc. (Tech.), Ph. D. (Tech)*  
**Professor in Textile Chemistry**  
**VP - Technological Association and**  
**Dean - Student and Alumni Affairs**

**Subjects Taught:** Technology of Finishing, Sustainable  
Textile Processing, Theory of Textile Colouration, Wet Processing  
of Textiles, Laboratory Management Systems, Advanced Textile  
Processing, Finishing and Evaluation of Textiles, Advanced Textile  
Materials Environmental Aspects in Textile Processing

**Research interests:**

Sustainable textile processing, Automotive Textiles, Recycling and  
Upcycling of Textile Waste Material, Agro Textile, Reducing Water  
Carbon Footprint.

Total Research Publications: 85  
National: 71 International: 14  
h-Index: 10; Citations: 303







**Dr. SANDEEP MORE**

*B.Sc., M.Sc. (Organic Chemistry), Ph.D.*

**Scientist**

**SUBJECTS TAUGHT:**

Chemistry and Applications of Textile Auxiliaries, Smart Textile, Chemistry of Colorants and Its Applications, Environmental Aspects and Advances in Textile Processing, Chemistry of Textile Auxiliaries, Green Chemistry in Textile, Advanced Textile Characterization Techniques, Synthesis and Analysis of Dyes and Intermediates, Testing and Applications of Auxiliaries, Evaluation of Dyes and Specialty Chemicals.

**RESEARCH INTERESTS:**

Molecular Machines, Singlet Fission, Organic Electronics, Smart Textile, Novel Auxiliaries

**Recognized Research Guide for Ph.D. (Sci.) Chemistry.**

Guided students: Ph.D.: 04, Masters: 13

**TOTAL RESEARCH PUBLICATIONS: 18**

National : 6, International : 12

H-Index : 09, Citations : 416

**AWARDS:**

DST INSPIRE Faculty Award

Early Career Research Award

**Dr DIPAK V. PINJARI**

*B.Tech. M.Tech. Ph.D. (Tech) Chemical Engg*

**UGC Assistant Professor (Engineering Sciences) and  
DST Inspire Faculty Fellow, Associate Dean - HRD**

**SUBJECTS TAUGHT:**

High Polymer Chemistry, Introduction to Polymer Science, Introduction to Nanotechnology, Environmental Science and Technology

**RESEARCH INTERESTS:**

Cavitation Engineering and Technology, Fiber Science, Cellulose Chemistry and Application, Synthesis of Nanomaterials, Polymer Engineering and Technology, Surface Coating and Technology and Sustainable Development

**Recognized Research Guide for Ph.D. (Tech.) in Chemical Engineering**

**Guided students:** Ph.D.: 04, Masters: 15

**TOTAL RESEARCH PUBLICATIONS: 100**

**National: 05 International: 95 h-Index: 36**

**Citations: 4798**

**Book Chapters: 09, Patents: 07**

**AWARDS:**

- Member, The National Academy of Sciences, Allahabad, India (NASI) 2020 – till date
- Member, Early Career Advisory Board,



Chemical Engineering and Processing: Process Intensification, an Elsevier Journal.

- Expert Member of the Department of Science and Technology (Multilateral Department) for the first SCO Young Scientist Conclave 2020 (to be organized in India). Shanghai Cooperation Organization (SCO) consists of 8 countries.
- SPS Young Scientist Award 2019 by Scientific Planet Society, Dehradun, India

- BRICS Young Scientist Award 2019 by Ministry of Science and Technology of BRICS Countries (Brazil, Russia, Indian, China and South Africa).
- Member, Principle Scientific Advisor's Consultative group, Government of India.
- Accolades from Qingdao International Academy Park (QIAP), Government of China for work in the area of Material Science and Chemical Engineering. The QIAP has requested to join the park.
- Member, Global Young Academy, Germany (2019-2024)
- Awarded Infosys Social Innovation Award 2018-2019 by Infosys Foundation, Bengaluru, India.
- INAE Young Associate 2017 by The Indian National Academy of Engineers, New Delhi, India
- INAE Young Engineer Award 2016 by The Indian National Academy of Engineers, New Delhi, India
- Finalist, INSA Medal for Young Scientist 2015 and 2016
- Finalist, NASI Young Scientist Awards 2014 and 2015
- Awarded Fulbright OLF Award 2015 by OIE and CIES (State Departments, US Federal Government, Washington, USA)
- Awarded Young Engineers Award 2014-2015 by The Institution of Engineers (India)
- Awarded Wipro Earthian Award 2013 by Wipro foundation, Bangalore (India)
- Young Associate, Maharashtra Academy of Science (2013)
- Awarded M. P. Chary Memorial Award 2013 by Indian Institute of Chemical Engineers (IICChE), India.
- Selected for the Swiss Government Excellence Scholarship program 2013-2014.
- Awarded Dr. K. H. Gharda Best PhD Thesis Award 2013.
- Awarded Ambuja Cement Best Thesis Award 2013.
- Awarded Department of Science and Technology Inspire Faculty Award 2013-2018.
- Awarded University Grant Commission, Government of India D S Kothari Postdoctoral Fellowship 2013-2016.
- Fulbright Nehru Science Postdoctoral Program 2013-2014. (Place: Georgia Institute of Technology, Atlanta (USA))

**DR. SANTOSH SHIVAJI BIRANJE**

*B.Text., M.Tech., Ph.D. (Tech)*

**Assistant Professor (Temporary)**



**RESEARCH INTERESTS:**

Sustainable textile wet processing, Fibre Science, Extraction and modification of biopolymers, Electrospinning of biopolymers, Biocomposites (thin films, hydrogels, and aerogels) based on nanocellulose and polysaccharides for potential tissue engineering and wound healing, 3D Printing.

**TOTAL RESEARCH PUBLICATIONS: 18**

**National: 03   International: 15   Conference Proceedings: 01**

**Book chapters: 02**

**Citations: 155, h-index: 07, i10-index: 06**



# Department of **FOOD ENGINEERING AND TECHNOLOGY**





**PROF. REKHA S. SINGHAL**

*Ph.D (Tech) (Food Technology)*

Professor of Food Technology

**Head of the Department**





**PROF. REKHA S. SINGHAL**  
*Ph.D. (Tech) (Food Technology)*  
**Professor of Food Technology**  
**Head of the Department**

#### **SUBJECTS TAUGHT:**

Food Additives and Ingredients, Principles of Food Analysis, Technology of Dairy, Animal and Plantation Products, Comprehensive Techniques in Food Analysis, Food Safety and Toxicology

#### **RESEARCH INTERESTS:**

Food Science and Technology, Carbohydrate Chemistry and Technology, Fermentative Production and Downstream Processing of Biomolecules, Supercritical Carbon Dioxide Extraction of Biomolecules, Food Biotechnology

**Recognized Research Guide for** Ph.D (Tech) (Food Engineering and Technology), Ph.D (Tech) (Food Biotechnology), Ph.D (Tech) (Bioprocess Technology), Ph.D (Biotechnology), Ph.D (Food Science)

**Guided students:** Ph.D. 42, Masters: 105

#### **TOTAL RESEARCH PUBLICATIONS:**

**National:** 44, **International:** 375+

**H-index** as per scopus/google scholar: 54/72;

**Citations** as per scopus/google scholar: 13932/22201

#### **AWARDS:**

- Young Scientist Award, Association of Food Scientists and Technologists (I), Mysore, for the year 1995;
- Fellowship, Maharashtra Academy of Sciences for significant contributions to Engineering Sciences and Technology for the year 2007;
- Fellowship, Association of Food Scientists and Technologists (I), Mysore, for the year 2009.
- Fellowship, Biotech Research Society of India, for the year 2011;
- Malaviya Memorial Award (senior faculty), Biotech Research Society of India, for the year 2011;
- C. G. Memorial Award, XVIII Carbo Conference, Forest Research Institute, Dehradun, December 20, 2014;
- ISCMA Award for the year 2013-2014 instituted for 'Outstanding Professor', September 2, 2014;
- Prof. Man Mohan Sharma Award for the year 2015, 2016.
- Recipient of the Best Teacher Award (Professor D.V. Rege-AFST Mumbai Chapter-2011 Endowment) 2016-17, 2018-19 and 2020-21
- Fellow (FIBA) award of the International Bioprocessing Association- An International Forum on Industrial Bioprocesses, for the block years 2017-2018, conferred on May 2, 2019.
- Fellow, Indian National Science Academy, 2022
- Distinguished Alumnus Award, UDCT Alumni Association, 2021.





**PROF. UDAY S. ANNAPURE**  
*B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)*  
**Professor of Food Chemistry**  
**Director, ICT - MARJ (on deputation)**

**SUBJECTS TAUGHT:**

Food Chemistry, Technology of Fruits, Vegetables and Tubers, Principles of Food Preservation.

**RESEARCH INTERESTS:**

Extrusion Processing, Non-thermal processing of food-Cold Plasma Processing, Carbohydrate Chemistry and Technology - Plant Gums, Traditional Foods, Nutraceuticals, Fermentative production and downstream processing of industrially important secondary metabolites.

**Recognized Research Guide for:** Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci.) in Food Science, Biotechnology

**Guided students:** Ph.D: 16, Masters: 76

**TOTAL RESEARCH PUBLICATIONS:**

National: 08, International: 110

H-Index: 26 (Scopus); 28 (Google Scholar),

Citations: 1845 (Scopus); 2740 (Google Scholar)

**AWARDS:**

Fellow of Maharashtra Academy of Science (2017)

BOYSCAST Fellow (DST Govt. of India) – 2010

Recipient of the Best Teacher Award (Professor D.V. Rege–AFST Mumbai Chapter–2011 Endowment) 2014 and 2016.

**PROF. LAXMI ANANTHANARAYAN**  
*B.Sc., B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. (Tech.)*  
**Professor of Applied Biochemistry and**  
**Coordinator, Food Biotechnology**

**SUBJECTS TAUGHT :**

Chemistry of Food Constituents; Nutrition; Food Packaging; Food Biotechnology; Nutraceuticals and Functional Foods; Basics of Human Nutrition, Advances in Nutrition; Food Packaging Science and Technology.

**RESEARCH INTERESTS :**

Fermented Foods, Traditional Foods, Nutritional Food Product Development, Extruded Foods, Food Allergens, Bioactive Peptides, Novel Food Preservation Techniques, Problems of Small Scale Food Industries, Plant Biochemistry and Fruit Ripening, Natural Pigments, Protein Purification, Enzyme Production and Downstream Processing, Protein Hydrolysates, Detection of Adulteration/ Contamination, Food Safety, Nutritional Biochemistry.

**Recognized Research guide for** Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci) in Food Science, Biochemistry, Biotechnology

**Guided students:** Ph.D. 15+, 2 as co-guide (awarded), 2 (ongoing), Masters: 84 (completed) 3 (ongoing)

**TOTAL RESEARCH PUBLICATIONS:**

National: 02, International: 62, Book Chapters: 2, Book: 1

**AWARDS:**

"Dupont NutriScholar Award" Most Nutritious Food Idea 2017





### DR. SHALINI S. ARYA

*B. Tech, M. Tech., PhD (Food Engineering and Technology)*

**Associate Professor of Food Technology**

#### SUBJECTS TAUGHT :

Food Microbiology, Chemistry of Food Constituents, Technology of Cereals, Legume and Pulses, Technology of Plantation Crops, Basics of Food Science and Technology, Biotechnology of fermented foods, Technical Analysis I and II(P), Food Microbiology (P), Food Chemistry (P), Food Analysis (P), Food Processing I and II (P)

#### RESEARCH INTERESTS :

Indian Traditional Foods, Chemistry and Preservation of Foods, Product Development and Processing, Staling Studies in Cereal and Cereal products, Starch Chemistry and Technology, Preservation of Foods, application of newer technologies in preservation of traditional foods, Food Biotechnology, production and Downstream Processing of Biomolecules, Fermented Foods, Diabetic Foods, Functional Foods, Nutraceuticals, Fruit and Vegetable Preservation and Processing, Indian Flat Breads.

**Recognized Research guide for** Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci.) in Food Science

**Guided Students:** Ph.D. 4 (awarded) 4 (ongoing), Masters: 40

**TOTAL RESEARCH PUBLICATIONS:** International : 98 National 15, Book chapters : 04, H index: 24 ; Citations – 1981. Google scholar profile: (<https://scholar.google.com/citations?user=u85ThpEAAAAJ&hl=en>)

#### AWARDS:

- CNPq-TWAS post Doctoral Fellowship (2019), Indian National Young Academy of Science, INSA Member (2019)
- Global Young Academy (GYA), Halle, Germany member award (2018),
- Young Scientist award, AFST, India (2017), best paper award, Elsevier,
- Florida (2017), Malaspina international scholar award, ILSI, USA (2016),
- Innovative Research Idea award, CAS TWAS, China (2014).

### DR. SNEHASIS CHAKRABORTY

*B. Sc., B. Tech., M. Tech., Ph.D.*

**Assistant Professor of Food Technology**

#### SUBJECTS TAUGHT:

Introduction to Food Systems, Principles of Food Preservation, Food Engineering, Food Process Engineering, Advances in Food Technology, Advances in Food Engineering, Experimental Design and Optimization in Food Processing

#### RESEARCH INTERESTS:

Food Process Engineering, Non-thermal processing of food, Kinetics modeling, Shelf-life extension, Sensory analysis, Process optimization and Product development

**Recognized Research Guide for:** Ph.D. (Tech) and M.Tech. in Food Engineering and Technology, Food Biotechnology.

**Guided students:** Ph.D: 8 (ongoing), Masters: 10

**TOTAL RESEARCH PUBLICATIONS:** National: 01, International: 46, H-Index: 15, Citations: 875

#### AWARDS:

Best PhD thesis in Agricultural Engineering by ICAR, 2017.  
DAAD Fellowship under Re-invitation program of former DAAD scholarship holders 2018;  
Recipient of the Best Teacher Award (Professor D.V. Rege-AFST Mumbai Chapter-2011 Endowment) 2017-18 and 2019-20.





**Dr. JYOTI SONTAKKE-GOKHALE**

*Ph.D. in Bioprocess Technology*

**Assistant Professor**

**SUBJECTS TAUGHT:**

Nutrition; Waste Management in Food Processing; Food Biotechnology; Design and Analysis of Experiments; Biotechnology of Fermented Foods; Bioprocess Engineering and Technology; Nutraceuticals and Functional Foods; Enzymes in Food and Feed Industry; Technical Analysis Lab; Biochemistry lab; Microbiology Lab; Food Analysis Lab II; Food Biotechnology Lab

**RESEARCH INTERESTS:**

Enzymes in Food Processing; Biocatalysis; Extraction; Waste management; Fermentation Technology; Green Technology; Nutraceuticals and functional foods; Plant-based foods

**Recognized Research Guide for PPh.D. (Tech.) in Bioprocess Technology and Food Biotechnology**

**Guided students:** Ph.D.: 2 (ongoing), Masters: 15 (Completed) and 6 (ongoing)

**TOTAL RESEARCH PUBLICATIONS:**

International: 11 Book chapters 7

H-Index: 7; Citations: 140



# Department of OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY



**PROF. A. P. PRATAP**

*B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. (Tech.)*

Professor of Oils, Fats and Waxes  
Technology

**Head of the Department**





**PROF. A. P. PRATAP**  
*B.Sc. (Tech), M.Sc. (Tech), Ph.D. (Tech.)*  
**Professor of Oils, Fats and Waxes Technology**  
**Head of the Department**

**SUBJECTS TAUGHT :**

Technology of Oil and Fat Production and Edible Oil Processing, Processing of Oils, Fats and Waxes, Processing of Oleochemicals and Cosmetics, Processing of Soaps, Surfactants and Detergents and triboapplications laboratory, Functional Fluids and Performance Chemicals, Byproducts Utilization and Waste Management

**RESEARCH INTERESTS :**

Tribo applications of oils and fats, structural modifications of oils, fats and fatty acids, microbial Biosurfactants

**Recognized Research guide for** Ph.D. (Tech.) in Oils, Oleochemicals and Surfactants Technology, Ph. D. Tech. in Green Technology, Ph. D. (Sci.) in Chemistry, Ph. D. Tech. in Bioprocess Technology, Ph. D. (Science) in Biotechnology

**Guided students:** Ph.D. 15, Masters: 70;

**TOTAL RESEARCH PUBLICATIONS:** 66

National: 16; International: 50, H-Index: 10, Citations: 406

**Ongoing students :** Ph. D. 09, Masters 16

**PROF. R. D. KULKARNI**  
*B.Sc.(Tech), M.Tech., Ph.D. (Tech.)*  
**Professor of Oil Technology**  
**Pro-Vice Chancellor, Mumbai University**  
**(on deputation)**

**SUBJECTS TAUGHT:**

Surface Active Agents, Production and Applications of Surfactants, Soaps and Detergents, Chemistry of Oleochemicals and Surfactants, Chemistry of Oils and Fatty Acids

**RESEARCH INTERESTS:**

Green Surfactants, Surfactant mediated synthesis and Microheterogeneous Systems, Chemical Modification of Lipids, Biolubricants, Lipid Excipients, Utilisation of Vegetable Oil Refinery Byproducts, Nanopigments and Polymer Nanocomposites, UV cure Multifunctional Monomers and Polymers, High Performance and Functional Coating Systems, Reaction Engineering and Nanocatalysis

**Recognized Research Guide for** Ph.D. (Tech.) in Oils, Oleochemicals and Surfactants Tech., Ph. D. (Sci.) in Chemistry

**Guided students:** Ph.D. : 12, Masters: 44

**TOTAL RESEARCH PUBLICATIONS :**

National: 18, International: 45

(H-Index 15, Citations : 544,

Patents (granted): 2





**Dr. PINTU K. KUNDU**

*B.Sc. (Science), M.Sc. (Science), Ph.D. (Science)*

**UGC Assistant Professor**

**SUBJECTS TAUGHT:**

Supramolecular Chemistry of Nanomaterials; Structural Elucidations by Advanced Spectroscopy; Chemistry of Oils and Fatty Acids; Technology of Perfumery Chemicals; Organic Reactions; Principles of Environmental Science.

**RESEARCH INTERESTS:**

Azobenzene- and spiropyran-based functional molecules, materials and gels; Organic molecular switches; Organic photochromism and acidochromism; Photoswitchable catalysis; Synthetic organic chemistry; Nano-structured materials; Dynamic materials, etc.

**Recognized Research Guide for:** Ph.D. (Science, Chemistry) in Oils, Oleochemicals and Surfactants Technology

**Guided students:** Ph. D: 2 (ongoing),

Masters: 1, B. Tech: 2 (ongoing)

**TOTAL RESEARCH PUBLICATIONS:**

International: 16, H-Index: 10; Citations: 514

**RESEARCH PROJECTS (GOVT. AND PRIVATE INDUSTRY SPONSORED) AND AWARDS:**

Early Career Research Award (ECRA) by Science and Engineering Research Board (SERB) (status - ongoing)

Personal Website: <https://sites.google.com/site/kundupintu09122014/home>

**Dr. CHANDU S. MADANKAR**

*M. Tech, Ph.D.*

**J.G. Kane Assistant Professor in Oils, Oleochemicals and Surfactants Technology**

**SUBJECTS TAUGHT:**

Chemistry and Technology of Castor and Nonconventional Oils; Technology of Oleochemicals; Chemistry of Oils, Lipids, Essential oils and their applications; Cosmetics Science; Microbiology and Biochemistry Lab; Technology and Science of Essential Oils.

**RESEARCH INTERESTS:**

Processing of Oleochemicals, Biolubricants, Enzymatic applications, Supercritical fluids processing, Essential Oils, Cosmeceuticals, Surfactants, Green catalysis.

**Recognized Research Guide for:** PhD (Tech) in Oils, Oleochemicals and Surfactants Technology

**Guided students:** PhD: 01 (Ongoing) Masters: 10

**TOTAL RESEARCH PUBLICATIONS:**

National: 03, International: 10

Citations-268, H Index- 5

**AWARDS:**

S.R. Bhatnagar Memorial Research award, 2013 by the Oil Technologist Association of India

Canadian Commonwealth Scholarship by the Canadian Bureau for International Education (CBIE) on behalf of Foreign Affairs and International Trade Canada (DFAIT) in Department of Chemical Engineering, University of Saskatchewan, 2011-12.





**Dr. PARAG R. NEMADE**  
*B. Chem. Eng., M. S. and Ph.D. (University of Colorado)*  
**UGC Assistant Professor,**  
**Deputy Director, Infrastructure and Lab Development,**  
**ICT - MARJ Campus**

**SUBJECTS TAUGHT:**

Advanced Membrane Separations, Nanotechnology, Advanced Momentum Transfer, CE Lab, Introduction to Chemical Engineering, Materials and Energy Balance Calculations, Chemical Engineering Thermodynamics I

**RESEARCH INTERESTS:**

My group works on membrane separation processes, on development of new polymeric and graphene based materials for membranes, catalysts, and sensors applications. We also work on sustainability engineering, in areas such as sustainable sanitation, development of new applications for industrial wastes, etc.

**Recognized Research Guide for** Guided students: Ph.D. 4, Masters: 28

**TOTAL RESEARCH PUBLICATIONS:**

International: 15, H-Index: 11; Citations: 608

**AWARDS:**

3. DAE Young Scientist Award, 2013, Reinvent the Toilet Challenge 2013 (Bill and Melinda Gates Foundation)  
 Chevening Rolls - Royce science, Innovation and Leadership Fellowship 2016, Newton-Bhabha Fellowship 2017.

**Dr. J. T. WAGHMARE**  
*B.Sc. (Tech), M.Sc.(Tech), Ph. D.*  
**Associate Professor of Oils, Fats, and Waxes Technology**

**SUBJECTS TAUGHT :**

Analysis of oleochemicals and surfactants, Analysis of oils, fats and waxes, Technology of edible fat production, Evaluation and testing of soaps and detergents, Analysis of raw materials of Oils, Science and Technology of essential Oils, Advances in Technology of Oils and Fats Production, Nutraceuticals.

**RESEARCH INTERESTS :**

Nutraceuticals, oxidation studies, structural lipids, designer lipids. application of surfactant, Cosmetics, perfume, flavor and fragrances, enzymology.

**Recognized Research guide for** Ph.D. (Tech.) in Oils, Oleochemicals and Surfactants Technology  
 Guided students: Ph.D 4 (completed) 2 (ongoing), Masters: 30

**TOTAL RESEARCH PUBLICATIONS-**

National: 05, International: 75









# Department of PHARMACEUTICAL SCIENCES AND TECHNOLOGY



**PROF. SHREERANG V. JOSHI**

*B.Sc., B.Sc. (Tech.), Ph.D., D.I.M.*

**Professor of Pharmaceutical Chemistry  
Head of the Department**







**PROF. SHREERANG V. JOSHI**

*B.Sc., B.Sc. (Tech.), Ph.D., D.I.M. FMAS, FICS*

**Professor of Pharmaceutical Chemistry**

**Head of the Department**

Biological Importance, Process Development of Drugs, New Methodologies in Organic Synthesis, Synthesis of Drug-Polymers Conjugates

Guided Students: Masters: 04,

Recognized Research Guide for: M.Tech., M. Pharm.

Ph. D. (Sci.), Ph. D. (Tech.)

**TOTAL RESEARCH PUBLICATIONS:**

International : 12

Patents: 31

H-Index : 6 Citations: 121

**SUBJECTS TAUGHT:**

Pharmaceutical Organic Chemistry, Spectroscopy, Chemistry of Natural Products, Retrosynthesis, Catalysis and Catalytic Processes

**RESEARCH INTEREST:**

Synthesis of Natural Products of

**AWARDS**

1. Vividhlaxi Audyogik Samshodhan Vikas Kendra (VASVIK) Award 2019 (May 2022)
2. Best Paper Award in Review Article Category by IDMA (2020-21)(April 2022)
3. Fellow of Maharashtra Academy of Sciences (2021)
4. Life Fellow, Indian Chemical Society (2022)

**PROF. P. D. AMIN**

*B. Pharm. (Mumbai, 1982), M. Pharm. (Mumbai, 1984),*

*Ph.D. (Tech.) (Mumbai, 1988)*

**Professor of Pharmacy**



**SUBJECTS TAUGHT :**

Pharmaceutics, Pharmaceutical Technology, Dispensing Pharmacy, Hospital Pharmacy.

**RESEARCH INTERESTS :**

Exploration of Hot Melt Extrusion Technology in Innovative Drug Delivery system, Development and evaluation of Fixed Dose Combinations, Improvisation Techniques for Manufacture and Evaluation of Solid Dosage Forms, Release modification designs for drug delivery system Design and Fabrication of Pharma machinery (R and D), Development of Added Functionality Excipients, ophthalmic drug delivery systems, modification in excipients, exploring the use of excipients.

**Recognized Research guide for Ph.D.(Tech) in**

Pharmaceutics, Pharmaceutical Technology, Bioprocess Technology

Guided students: Ph.D. 27; Masters: 64;

Patents : Granted - 4

**TOTAL RESEARCH PUBLICATIONS:**

National: 5, International: 51

**AWARDS:**

Fellow of Maharashtra Academy of Sciences

H-Index :13, Citations : 502.



**PROF. GANESH U CHATURBHUUJ**  
*M. Pharm. Sc., Ph.D. (Pharmaceutical Chemistry)*  
**Professor of Pharmacy**

various bronsted and Lewis solid acid catalyst for chemical reactions. Development of synthetic route for the API, Agrochemicals and fine chemicals and intermediates thereof. Synthesis and spectral characterization of impurities of the API, Agrochemicals and fine chemicals. Recent fields of green chemistry like flow chemistry and electrochemistry for efficient and pollution free organic transformation useful in drug synthesis.

**Recognized Research Guide for** M. Pharm., M. Tech. (Pharma), M. Tech. (Bioprocess Technology, Ph.D. (Pharmaceutical Chemistry) Ph.D. (Sci.)

Guided students: Ph.D.: 07, Masters: 20

**TOTAL RESEARCH PUBLICATIONS-**

International 43 Citations 708 and H-index 18

**SUBJECTS TAUGHT:**

Pharmaceutical Analysis

**RESEARCH INTERESTS:**

Design, Synthesis and evaluation of the new chemical entities as Anti-inflammatory, Anti-diabetic and anti-cancer agent through rational drug design. Development of

**AWARDS:**

Best Teacher award by B Pharm ICT, Mumbai, Awarded with UGC Indo-US Raman Post-Doctoral Fellowship to visit Northeastern University, Boston, MA, USA for 2013-2014.

**Dr. HEMCHANDRA KESHAV CHAUDHARI**  
*M. Pharm. (Medicinal Chemistry), Ph. D. (Tech.) (Pharmaceutical Chemistry)*  
**Assistant Professor in Pharmacy**



**SUBJECTS TAUGHT:**

Pharmaceutical Chemistry, Medicinal Chemistry

**RESEARCH INTERESTS:**

Design of bioactive novel molecules using Computer Aided Drug Design. Synthesis of designed novel molecules by conventional or novel routes and evaluation of synthesized molecules.

**Recognized Research Guide for:** Pharmaceutical Chemistry

Guided students: Ph.D. : 01, Masters: 03

**TOTAL RESEARCH PUBLICATIONS-**

International: 07

Citations : 74, H-Index- 4





**PROF. MARIAM S. DEGANI**  
B.Pharm, M.Pharm, Ph.D. (Tech)  
Professor of Pharmaceutical Chemistry

#### RESEARCH INTERESTS:

Drug design including ligand, structure and fragment based drug design. Synthesis of focused libraries of potential bioactive molecules for infectious techniques including parallel synthesis and microwave assisted synthesis. Exploration of natural products as therapeutic leads. Fluorine chemistry, process development of drug and drug intermediates, green chemistry using ionic liquids and newer catalytic system development.

**Recognized Research Guide for** Ph.D. (Tech), Ph.D. (Science), Ph.D.(Biotech), Guided students: Ph.D.: 32, Masters: 80

#### TOTAL RESEARCH PUBLICATIONS-

National: 7, International: 89

H-Index: 24, Citations: 1525

#### SUBJECT TAUGHT:

B.Pharm, B.Tech Pharm, M.Pharm  
(Pharmaceutical Chemistry, Medicinal Chemistry, Rational Drug Design, Organic Chemistry and Spectroscopy)

#### AWARDS:

1. Fellow of Maharashtra Academy of Sciences
2. Best Teacher Award of ICT (2012-13, 2014-15)
3. Gharda award 2008-2009 for research publications.
4. Distinguished Alumni Award conferred by C. U. Shah College of Pharmacy, 2007 Mumbai

**PROF. PADMA V. DEVARAJAN**  
Ph. D (Tech) (Pharmaceutics)  
Professor of Pharmacy  
Dean (Research and Innovation)



#### SUBJECTS TAUGHT:

Pharmaceutics, Technology of Solid Dosage Forms, Technology of Sterile Dosage Forms, Drug Delivery Systems, and Targeted Drug Delivery Systems (DDS).

#### RESEARCH INTERESTS:

Nano drug delivery systems(DDS) : Veterinary Drug Delivery Systems (DDS), Nano drug delivery systems (DDS), Targeted delivery in cancer and infectious diseases (tuberculosis, malaria, veterinary infections), New targeting ligands; Engineering nanoparticle shape, Innovative manufacturing approaches for nano system-bypassing scale up challenges, Transmucosal DDS: Nasal and Sublingual DDS for non-invasive delivery of peptide/protein/biotech molecules; Controlled release and Bio-enhanced DDS: NDA and ANDA.

Recognized Research Guide for M.Tech Pharmaceutical Biotechnology, Ph.D

Guided students: Ph.D.: 41, Masters: 69

#### TOTAL RESEARCH PUBLICATIONS-

National: 5, International: 72

Citations : 1335, H-Index- 20

#### AWARDS:

- Awarded IPA ACG INNOVATIVE SOLID DOSAGE FORM Award 2017 at 4<sup>th</sup> IPA ACG – SciTech Innovation Awards for “N’hance-SDF Bioenhanced Solid dispersion film based technology” by Indian Pharmaceutical Association at Chandigarh on 23<sup>rd</sup> Dec 2017.
- Awarded BENGALURUNANO INDIA INNOVATION AWARD 2017 for BU’ANTRAP In situ solid lipid nanoparticles for veterinary infection at the 9th Bengaluru India Nano, organized by Karnataka Science and Technology Promotion Society (KSTePS), DST-Nano

Mission in association with Jawaharlal Nehru Centre for Advanced Scientific Research Centre (JNCASR) Bangalore, on 8th December 2017, at The Lalit Ashok, Bangalore, India.

- Won the EUDRAGIT AWARD 2015 for the research publication under the category of “best paper” title “Controlled release floating multiparticulates of metoprolol succinate by hot melt extrusion” published in International Journal of Pharmaceutics 2015;491(1):345-51 from Evonik India Pvt. Ltd. 21<sup>st</sup> September, 2016.
- PROF. N. R. KAMATH BOOK AWARD AS EDITOR of Book titled “Targeted Drug Delivery Concepts and Design” Edited by Padma V. Devarajan, Sanyog Jain, Published by Springer Publication on 5th April 2016 ICT Annual Day, at Institute of Chemical Technology, Mumbai.
- PROF.C.J. SHISHOO AWARD for Research in Pharmaceutical Sciences, conferred by the Association of Pharmaceutical Teachers of India(APTI), 2013.



### Dr. PRAJAKTA DANDEKAR JAIN

*B. Pharm. (Mumbai, 2003), M. Tech. (Mumbai, 2006),  
Ph.D. (Tech.) (Mumbai, 2009)*

**UGC FRP Assistant Professor of Engineering Sciences**  
**Coordinator, M.Tech. Pharmaceutical Biotechnology**

#### TOTAL RESEARCH PUBLICATIONS:

National: 01, International: 92, Citations: 1727, H-Index: 13

#### AWARDS:

1. Savitribai Phule Stree Gaurav Puraskar by Maharashtra Seva Sangha, Mulund, Mumbai, for work related to organ-on-chip technology, April 2021
2. N. R. Kamath Book Award for book entitled 'Targeted Intracellular Drug Delivery by Receptor Mediated Endocytosis', AAPS Advances in the Pharmaceutical Sciences Series, Springer, September 2020
3. M.V. Deshpande Young Scientist Award at the 11th Asia Pacific Chitin and Chitosan Symposium, October 2016
4. N. R. Kamath Book Award for book entitled 'Nanoparticulate Drug Delivery: Perspectives on the Transition from Laboratory to Market', Woodhead Publishing Series in Biomedicine, Woodhead Publishing, July 2014
5. DAE Young Scientist Research Award, 2012
6. Young Associate of Maharashtra Academy of Sciences for the contribution and Engineering and Technology, 2012
7. Ramanujan Fellowship, DST, 2012 Fellowship, DST, 2012

#### SUBJECTS TAUGHT:

Pharmaceutical Biotechnology

#### RESEARCH INTERESTS:

3D Cell Culture, Electrospun Nanofibers and Tissue Engineering; High-throughput cellular models for toxicity, efficacy and bioassays; Bioprinting; Green Biotechnology and Green Chemistry

**Recognized Research Guide for Ph.D.**  
(Tech.) in Bioprocess Technology and Green Technology, M.Tech in Bioprocess Technology, Green Technology, Pharmaceutical Biotechnology

**Guided Students:** Ph.D.: 09, Masters: 31



### PROF. K. S. LADDHA

*B. Pharm. (Mumbai, 1982), M. Pharm. (Mumbai, 1985), Ph.D. (Tech.) (Mumbai, 1994)*

**Professor of Pharmacognosy**

#### SUBJECTS TAUGHT :

Pharmacognosy, Phytochemistry and Medicinal Natural Products

#### RESEARCH INTERESTS :

Extraction, isolation and characterization of phytoconstituents, Development of large scale extraction technologies, Standardization of herbal drugs and formulations, Development of herbal drug formulations, Chemical Modification of phytoconstituents.

**Recognized Research guide for Ph.D. (Tech) in**  
Pharmacognosy, Pharmaceutical Technology, Bioprocess Technology, Ph.D (Sci) Chemistry  
Guided students: Ph.D. 21, Masters: 77

Patents : 12

#### TOTAL RESEARCH PUBLICATIONS-

National: 72, International: 04,  
Citations : 958, H-index : 17

### PROF. VANDANA. B. PATRAVALE

*B. Pharm. Sci. (Mumbai, 1985), M. Pharm. Sci. (Mumbai, 1987),  
Ph. D. (Tech.) (Mumbai, 1992)*

**Professor of Pharmaceutics**

#### SUBJECTS TAUGHT:

Pharmaceutics III, Cosmeticology, Advanced Pharmaceutics, Targeted Drug Delivery systems, Cosmeticology Laboratory, Pharmaceutics Laboratory I, Pharmaceutical Formulation Technology Laboratory I, Pharmaceutics VI

#### RESEARCH INTERESTS:

Novel nanocarriers for cosmeceuticals and other pertinent areas of national relevance with major emphasis on malaria, cancer and neurodegenerative disorders.

Specific research interest include

1. Nanotechnology based drug and gene delivery systems (lipid, polymeric, micellar nanocarriers, nanosuspensions, micro/nanoemulsions and self-micro/nano emulsifying systems) for bioavailability enhancement and/or targeting.
2. Vaccines and adjuvants
3. Nanodiagnostics,
4. Tissue engineering and scaffolds
5. Medical devices viz. coronary stents, intrauterine devices etc.
6. Novel carriers for solubilization and formulation development thereof
7. New polymer and lipid conjugates, surfactant synthesis
8. Exploring potential of indigenous excipients
9. Modified release dosage forms for all routes of administration

**Recognized Research Guide for Ph.D. (Tech.), Ph.D. (Sci.)**

Guided students: Ph.D.: 27, Masters: 70

#### TOTAL RESEARCH PUBLICATIONS:

National: 11, International: 100, H-index: 49, Citations: 9469

**Patents (granted in last 5 years): 21**



#### AWARDS: (last 5 years):

- Top Most Healthcare Leaders (Global) organized by World Health and Wellness congress award (2022)
- Abdul Kalam National Innovation Fellowship from Indian National Academy of Engineering (INAE) (2021)
- Gandhian Young Technological Innovation (GYTI) Award (2020)
- Kukreja Oration Award by the India Section of International Academy of Cardiovascular Sciences (2020)
- Dr. Manjushree Pal Memorial Award for the best Pharmaceutical Scientist-2019 (2019)
- Prof. Indira Parikh 50 women in education leaders award by 7th World Education Congress (2018)
- Shri Amrut Mody Distinguished Researcher Award by Indian Pharmaceutical Association Maharashtra State Branch's Amrut Mody Research Fund Committee (2018)
- UGC-BSR Mid-Career Award, 2018;
- Gandhian Young Technological Innovation (GYTI) award 2018 to two teams.



### PROF. SADHANA SATHAYE

*Ph.D (Tech)*

**Professor of Pharmacy**

#### SUBJECTS TAUGHT:

Anatomy, physiology and pathophysiology-I, Anatomy, physiology and pathophysiology-II, Anatomy, physiology and pathophysiology laboratory-I, Pharmacology-I

#### RESEARCH INTERESTS:

Neurological/neurodegenerative disorders like epilepsy, Parkinson's disease and Alzheimer's disease, Diabetes mellitus and diabetic complications, Isolation of phytoconstituents from herbal extracts and their investigation as a promising therapy for disorders mentioned above.

**Recognized Research Guide for: Ph.D. (Tech)**

Guided students: Ph. D. : 19, Masters: 60

#### TOTAL RESEARCH PUBLICATIONS-

National: 27, International: 81

H-Index: 20, Citations: 1722

#### AWARDS:

Fellow, Maharashtra Academy of Sciences;



**PROF. V. N. TELVEKAR**

*B. Sc. (Mumbai, 1992), B. Sc. (Tech.) (Mumbai, 1995), M. Sc. (Tech.) (Mumbai, 1997), Ph. D. (Tech.) (Mumbai, 2003)*

**Professor of Pharmaceutical Chemistry**

**SUBJECTS TAUGHT :**

Medicinal Chemistry, Pharmaceutical Chemistry, Pharmaceutical Engineering, Process Technology of Drugs and Intermediates

**RESEARCH INTERESTS :**

Invention of new reactions and reaction, Design and synthesis of novel bioactive molecules using Computer aided drug design, total synthesis of bioactive natural products, process development.

**Recognized Research guide for Ph.D. (Tech) in Pharmaceutical Technology, Pharmaceutical Chemistry, Bioprocess Technology, Ph.D (Sci) in Chemistry**

Guided Students: Ph.D. 14, Masters: 44

**TOTAL RESEARCH PUBLICATIONS-**

International: 72

Citations : 1092, H-index : 18

**PROF. P. R. VAVIA**

*B. Pharm., M.Pharm., Ph.D. (Tech), FIPA, FMASc*

**Director ICT-IOCB Campus on deputation and Professor of Pharmaceutics**

**SUBJECTS TAUGHT:**

Pharmaceutics, Drug Delivery systems, Advanced Pharmaceutics, Biopharmaceutics and Pharmacokinetics

**RESEARCH INTERESTS:**

Cyclodextrin based drug delivery systems, Nanosponge based drug delivery system, Transdermal drug delivery system, Protein and Peptide drug delivery system, Lipid based colloidal formulations, Polymer synthesis for drug delivery, Modified release films, Melt extrusion technology, Oral liquid dosage forms, Oral modified release systems, Techniques in solubilization, Soft gelatin capsules, Bio-conjugates for active targeting, gene delivery.

**Recognized Research Guide for Pharmaceutics**

Guided students: Ph.D. 43, Masters: 56

**Total Research Publications (Scopus):**

National: 21, International: 116,

H-Index : 28, Citations: 2806

**Patents:** International: 3 [PCT (Granted: 1; Applied: 2)]

National: Granted: 8, Applied: 30



**AWARDS:**

Best Teacher's Award 2018, Global RESOMER Award 2017 for developing the "Novel bilayer dissolving microneedle arrays with concentrated PLGA microparticle to targeted intradermal delivery: Proof of concept", Best Teacher's Award 2016, VASVIK Award in the category of Biological Sciences and Technology, for developing the Novel Drug Delivery Systems, Synthesis and application of novel polymers and excipients and targeted drug delivery in cancer treatment, January 2015



**PROF. PRASHANT S. KHARKAR FICS**

*B. Pharm. (Pune, 1998),*

*M. Pharm. Sci. (Pharmaceutical Chemistry) (Mumbai, 2000),*

*Ph. D. (Tech.) (Pharmaceutical Chemistry) (Mumbai, 2004)*

**Associate Dean - Academic Programmes, Coordinator -  
ICT NICE (Incubator Venture Centre), and  
Professor of Medicinal Chemistry**



**Subjects Taught:**

Medicinal Chemistry, Pharmaceutical Organic Chemistry,  
Pharmaceutical Analysis and Green Chemistry,  
Biopharmaceutics and Pharmacokinetics

**Research Interests:**

Design and Development of New Chemical Entities  
(NCEs) as Anticancer Agents, Cancer Stem Cell (CSC)  
Inhibitors; Computer-Aided Molecular Design; Synthesis  
of New Materials and their Biomedical Applications; Drug  
Repurposing

**Recognized Research guide for :** Ph. D. (Tech.) in  
Medicinal Chemistry, Pharmaceutical Chemistry,  
Biotechnology and Ph. D. (Sci.)

**Guided Students:** Ph. D.: 05; Masters: 38

**Total Research Publications:** International 69; National 04  
H-Index: 19, Citations: 1278

**Patents (Last five years):**

International: Granted: 01 (US), Published: 07; Filed: 06  
National: Published: 04, Filed: 06

**AWARDS Received**

- Best Research Output of the Year 2017-18 given by SVKM's NMIMS (Deemed to be University), Mumbai (August 11, 2018)
- DST Foreign Travel Grant for presenting research work at Gordon Research Conference on Computer Aided Drug Design, West Dover, USA. (July 2017)
- Best Poster Award at International Conference on Pure and Applied Chemistry (ICPAC)-2016, Mauritius (July 2016)
- Indian National Science Academy (INSA) deputation under International Collaboration and Exchange Programme to University of Mauritius, Mauritius (2016)
- Best e-Presentation Award at the Virtual Conference on Computational Chemistry (VCCC)-2014 organized by University of Mauritius, Mauritius (August 1-31, 2014)
- Best Poster Award at International Conference on Pure and Applied Chemistry (ICPAC)-2014, Mauritius (June 2014)
- Newton Bhabha Researcher Links Workshop 2019 (In collaboration with University of Birmingham, Birmingham, UK)
- Life Fellow, Indian Chemical Society (2022)







# Department of **POLYMER AND SURFACE ENGINEERING**





**PROF. SHASHANK T. MHASKE**

*Ph.D. (Tech.) (Polymer Technology)*

Professor of Polymer Technology

**Head of the Department**





**PROF. SHASHANK T. MHASKE**  
*Ph.D. (Tech) (Polymer Technology)*  
**Professor of Polymer Technology**  
**Head of the Department**

Development of Thermoplastics Vulcanizates, Development of Resins from renewable Sources, Synthesis of Polyamide based Hot Melt Adhesives, Functional Modification of Resin for coating Application, Development of Water-based or VOC free Coatings for Industrial Applications.

**Recognized Research Guide for:**

M. Tech./ Ph.D. (Tech.) in Polymer Engineering & Technology  
M. Tech./ Ph.D. (Tech.) in Surface Coating Technology  
M. Tech./ Ph.D. (Tech.) in Green Technology  
Ph.D. (Science) in Chemistry

**Guided Students:**

Guided students: Ph.D.: 19, Masters: 78

Ongoing students: Ph.D.: 17, Masters: 13

**Total Research Publications:**

International: 127, Total Citations: 1960, h-index: 21

Patents: Granted 06, Applied 02

**SUBJECTS TAUGHT:**

Compounding and Polymer Processing, Evaluation and characterization of polymers, Polymer Processing & Technology, nanotechnology and Their Application, Polymer Blends and Alloys.

**RESEARCH INTERESTS:**

Rheological of polymers, Nanoparticle Synthesis, Impact Modification of Polymers,

**AWARDS**

**National and International Awards:**

- Fellow, Maharashtra Academy of Sciences, Govt. of Maharashtra
- Award for Technology innovation in 'Green Polymeric materials and products' by Dept. of Chemical and Petrochemical, Ministry of Chemicals and Fertilizers, Govt. of India.

**PROF. R. N. JAGTAP**

*B.Sc., B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. Tech.*

**Professor of Paint Technology**

**SUBJECTS TAUGHT:**

Advanced Surface Coating Technology II, High-Performance Coatings, specialty plastics, High-performance Coating, Paint Processing and Characterization, Technology of Printing Inks.

**RESEARCH INTERESTS:**

Living Radical Polymerization for Tailor-made Polymers i.e. ATRP, RAFT, NMP Nano composite, Recycling of polymers and e-waste, Antimicrobial Polymer and Paints, Heat reflective coatings, Corrosion, Flame Retardant Coating, U.V Radiation Polymerization, Sustainable Polymers and Coatings, Microencapsulation, Biodegradable Polyolefins, Green Catalyst, Technical Textiles, Autodeposition coating.

**Recognized Research Guide for:**

M.Tech., Ph.D. for Surface Coating Technology, Polymer Engineering and Technology, Green Technology, Chemistry

**Guided Students:**

Guided students: Ph.D.: 13, Masters: 70

Ongoing students: Ph.D.: 12, Masters: 14

**Total Research Publications:**

International: 56 Total Citations: 593, h-index: 14

Patents: Granted 03, Applied 01





**PROF. PRAKASH A. MAHANWAR**

*B.Sc., B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. (Tech.)*

**Professor of Polymer Technology**

**RESEARCH INTERESTS:**

Polymer Blend, Bio-Polymers, Polymer Composite, green additives, synthesis of Nano-materials and fibres, conducting polymers.

**Recognized Research Guide for:**

Ph. D (Tech) Polymer and Surface Engineering.

Ph. D (Science) in Chemistry

**Guided students:** Ph.D.: 22, Masters: 76

**Ongoing students:** Ph.D.: 07, Masters: 14

**Total Research Publications:**

**International:** 89 **Total Citations:** 895, h-index: 17

**Patents:** Granted 05, Applied 02

**SUBJECTS TAUGHT:**

Structure-Property Relationship, High Polymer Chemistry, Polymer Rheology, Polymer Processing and Technology-1, Polymer Blends and Alloys

**AWARDS**

National and International Awards

- Fellow of Maharashtra Academy of Science
- Member, Technical Advisory Committee Ministry of Science and Technology, Government of India, New Delhi

**Dr. ANAGHA SHAMSUNDAR SABNIS**

*B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. (Tech.)*

**Associate Professor in Technology of Plastics and Paints**

**SUBJECTS TAUGHT:**

Analysis and characterization of raw materials and polymers-I, Pigments and additives for polymers, Paint Technology-I, Processing of Paints-I, Insulating and Intumescent coatings, Processing of Paints-II, Analysis and Testing of Paints, Processing of Paints-IV, Advance polymer science-I, Additives for coatings.

**RESEARCH INTERESTS:**

Coatings based on renewable resources materials, Recycling of polymer waste and coatings thereof, Advancement in anticorrosive coatings Flame retardant coatings, Non-isocyanate polyurethane coatings etc..

**Recognized Research Guide for:**

Ph. D (Tech) Polymer and Surface coating technology

**Guided Students:**

Guided students: Ph.D.: 04, Masters: 44

Ongoing students: Ph.D.: 03, Masters: 12

**Total Research Publications:**

**International:** 53 **Total Citations:** 1149, h-index: 19

**Patents:** Granted 00, Applied – 02

**AWARDS:**

National and International Awards:

- CRISP fellowship by Cherening (UK Govt.) and Rolls Royce.
- Super Achiever Award for Excellence in research in Polymers and Paint Technology, (WISE)(UNESCO)



**Dr. A. R. RAO**

*B.Tech., M.Tech., Ph.D. (Tech.)*

**Assistant Professor of Polymer Technology**



**SUBJECT TAUGHT:**

Technology of Thermoplastics Identification and Analysis of Polymer, Polymer Processing-II, Chemistry and Technology of Plastics, Synthesis and Characterization of Polymers.

**RESEARCH INTERESTS:**

Polymer Blends and Alloys, Polymer Nanocomposites, controlled radical Polymerization, Recycling of Polymers Biodegradable Polymers.

**GUIDED STUDENTS:**

Guided students: Ph.D.: 00, Masters: 12

Ongoing students: Ph.D.: 02, Masters: 12

**TOTAL RESEARCH PUBLICATIONS:**

International: 07 Total Citations: 20, h-index: 03

**NATIONAL AND INTERNATIONAL AWARDS:**

- Recipient of AICTE-RPS Research Grants



**DR. A. P. MORE**

*B.Tech., M.Tech. Ph. D (Tech)*

**Assistant Professor in Plastics and Paints**

**SUBJECTS TAUGHT:**

Identification of Resins and Polymers Lab, Advanced Characterization of Polymers and Composite, Synthesis, processing and characterization of colorants & Analysis and Testing of Paints.

**RESEARCH INTERESTS:**

Nanoparticles, Anticorrosive coating, Polymer recycling, Polymer composites.

**RECOGNIZED RESEARCH GUIDE FOR:**

M. Tech/ Ph. D (Tech) in Surface Coating Technology & Polymer Engineering and Technology.

**GUIDED STUDENTS:**

Guided students: Ph.D.: 00, Masters: 00

Ongoing students: Ph.D.: 01, Masters: 12

**TOTAL PUBLICATIONS:**

International: 23, Citations: 109, h-index: 06

**NATIONAL AND INTERNATIONAL AWARDS:**

- DST Inspire Fellowship Govt. of India.

**Dr DIPAK V. PINJARI**

*B.Tech. M.Tech. Ph.D. (Tech) Chemical Engg*

**UGC Assistant Professor (Engineering Sciences) and DST Inspire Faculty Fellow**



**SUBJECTS TAUGHT:**

High Polymer Chemistry, Introduction to Polymer Science, Introduction to Nanotechnology, Environmental Sci. & Tech.

**RESEARCH INTERESTS:**

Cavitation Engineering and Technology, Fiber Science, Cellulose Chemistry and Application, Synthesis of Nanomaterials, Polymer Engineering and Technology, Surface Coating and Technology and Sustainable Developments

**RECOGNIZED RESEARCH GUIDE FOR:**

Ph.D. (Tech.) in Chemical Engineering.

**GUIDED STUDENTS:**

Guided students: Ph.D.: 00, Masters: 07

Ongoing students: Ph.D.: 06, Masters: 05

**TOTAL PUBLICATIONS:**

International: 89 Total Citations: 3747, h-index: 33

Patents: Granted 06, Applied 01

**NATIONAL AND INTERNATIONAL AWARDS:**

- Member, The National Academy of Sciences, Allahabad, India (NASI) 2020 till date
- Member, Early Career Advisory Board, Chemical Engineering and Processing: Process Intensification, an Elsevier Journal.
- Expert Member of the Department of Science and Technology (Multilateral Department) for the first SCO Young Scientist Conclave 2020 (to be organized in India). Shanghai Cooperation Organization (SCO) consists of 8 countries.
- SPS Young Scientist Award 2019 by Scientific Planet Society, Dehradun, India
- BRICS Young Scientist Award 2019 by the Ministry of Science and Technology of BRICS Countries (Brazil, Russia, India, China and South Africa).
- Member, Global Young Academy, Germany (2019-2024)





# Department of CHEMISTRY

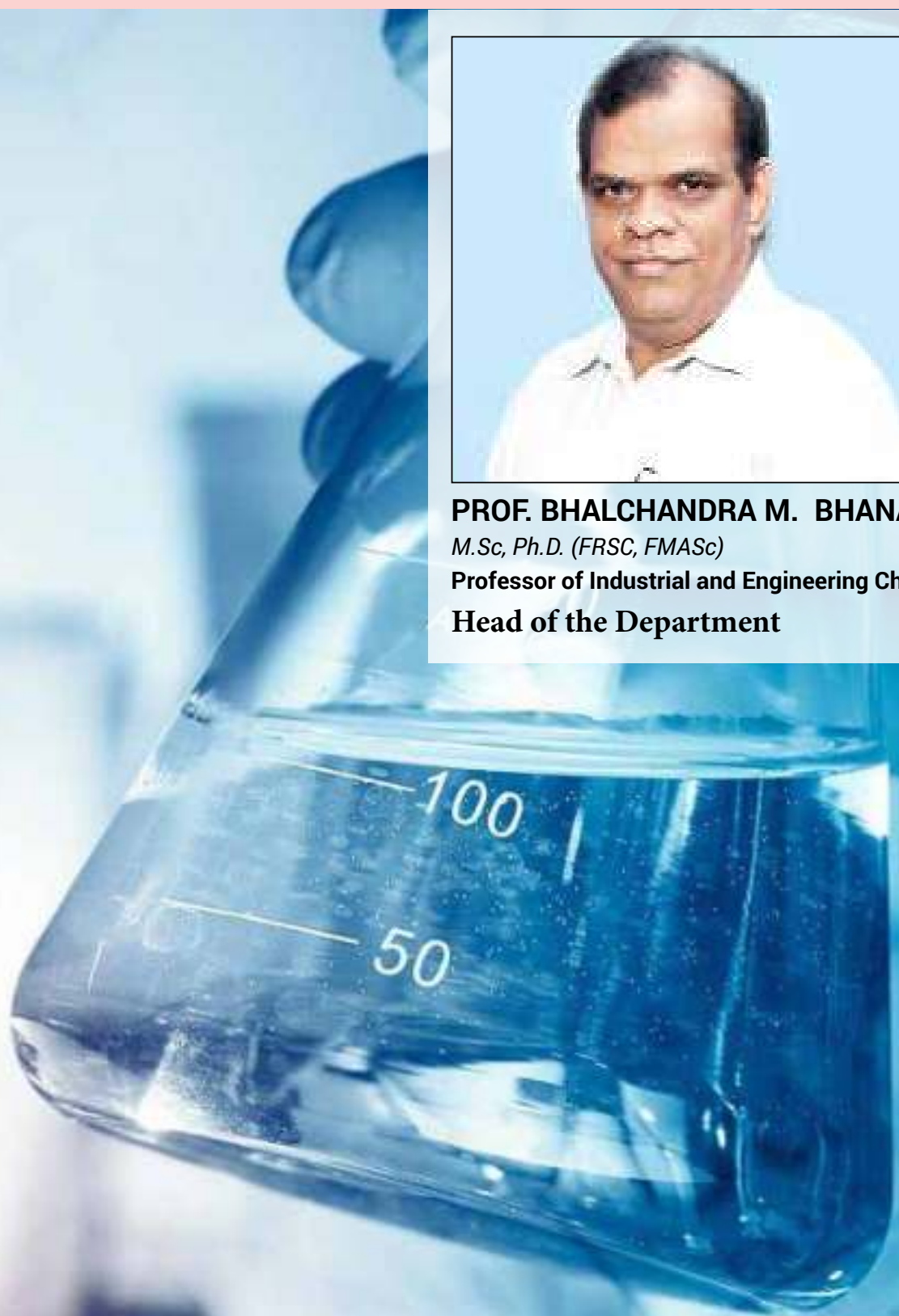


**PROF. BHALCHANDRA M. BHANAGE**

*M.Sc, Ph.D. (FRSC, FMASc)*

**Professor of Industrial and Engineering Chemistry**

**Head of the Department**





**PROF. BHALCHANDRA M. BHANAGE**

*M.Sc, Ph.D. (FRSC, FMASc)*

**Professor of Industrial and Engineering Chemistry**  
**Head of the Department**

Guided students: Ph.D. 48, Masters: M.Sc. 23; M.Tech. 19

**TOTAL RESEARCH PUBLICATIONS:**

National: 02, International: 431, Edited Books: 2; Book Chapters: 26

Citations: 14548; H-Index : 62

**PATENTS :** Granted: 27; Filed: 10

**AWARDS:**

- Fellow of the Royal Society of Chemistry, UK (FRSC)
- Fellow of the Biotech Research Society of India (FBRSI).
- Fellow of the Indian Chemical Society (FICS)
- Fellow of the Maharashtra Academy of Sciences (FMASc)
- Dr Sarojini Devi Memorial Award, by Higher Education Forum, 2018
- ISCMA Outstanding Professor Award by Indian Specialty Chemical Manufacturer Association for excellence in academic field for the year in 2016
- South Indian Education Society's "Best Teacher Award 2017-2018"
- ISCMA Outstanding Professor Award by Indian Specialty Chemical Manufacturer Association for excellence in academic field for the year in 2015
- Prof. M.M. Sharma Science and Technology Award (Rs 1 lakh and Citation) for contributions in research by Marathi Vidyan Parishad, 2014
- Bronze Medal for Contributions in Research by Chemical Research Society of India, 2012; RSC-PTG best paper award by Royal Society of Chemistry 2011

**SUBJECTS TAUGHT:**

Organic Chemistry, Organometallic Chemistry, Catalysis

**RESEARCH INTERESTS:**

Catalysis, Ionic Liquids, Nanomaterials, Enzymatic Catalysis, Coupling Reactions, Amination, Reactions using CO, CO<sub>2</sub> and hydrogen.

**RECOGNIZED RESEARCH GUIDE**

**FOR:** Chemistry, Green Chemistry and Technology, Biotech Sciences, NanoScience and Nanotechnology.

**Dr. VIJAY KUMAR A.**

*Ph.D.*

**Assistant Professor in Organic Chemistry**

**SUBJECTS TAUGHT:**

Biochemistry (MSc), Organic Synthesis (MSc), Organic Chemistry Laboratory (MSc), Organic Chemistry (F.Y. B.Tech.), Organic Chemistry Laboratory II, (B.Chem Eng and B.Tech), Organic Chemistry (M.Sc.)

**RESEARCH INTERESTS:**

Biomimetic Synthesis, Aerobic oxidation, Surrogate Green Reagents for Organic Synthesis, Drugs and Natural products Synthesis, Catalysis for Total Synthesis, Carbon /Carbon supported catalysts for Organic Transformations, Biogenesis of Natural products.

**Recognized Research Guide for:** Chemistry

Guided students: Ph.D. 03; Masters: M.Sc. 13

**TOTAL RESEARCH PUBLICATIONS:**

International: 40, Book Chapters: 01

Citations: 2225; H-Index : 23

Patents: Granted: 01

**AWARDS:**

- M.Sc. Chemistry Best Teacher Award, CMP Endowment (2019-2020)
- B.Tech. Best Teacher Award (2015-16 & 2014-15)
- INSPIRE Faculty Award, Department of Science and Technology (DST) (2012)



- Postdoctoral Fellowship at Department of Chemistry, BenGurion, University of the Negev, Israel (2012)
- Sri Gopal Kishan Rao Vepachedu Memorial Best Senior Research Fellow Award in Organic Chemistry, Indian Institute of Chemical Technology, Hyderabad, India (2011)
- CSIR-UGC Research Fellowship Award (2006)





**Dr. SANGHAMITRA CHATTERJEE**

*M.Sc., Ph.D.*

**DST INSPIRE Faculty**

**RESEARCH INTERESTS:**

Organic Electrochemistry, Biomedical applications of nanomaterial modified sensors, Materials science and Nanotechnology, Electrochemical sensing techniques for clinical diagnostics and environmental monitoring, Development of sensors for biomolecules, drugs and doping agents, Electrochemical catalysis, Biosensors and arrays.

**Recognized Research Guide for:** Chemistry

**Guided students:** Ph.D. 03; Masters: M.Sc. 11

**TOTAL RESEARCH PUBLICATIONS:**

International: 33

Book Chapters: 03

Citations: 2806; H-Index : 21

**SUBJECTS TAUGHT:**

Advanced Spectroscopy, Pericyclic Reactions, Analytical Chemistry, Physical/Analytical Chemistry Laboratory, Inorganic Chemistry Laboratory, Analytical Chemistry Laboratory, Organic Chemistry Laboratory and Organic Chemistry.

**AWARDS:**

- DST-Inspire Faculty Scheme Award, Piscopia Marie Curie Fellowship Programme for Postdoctoral Research
- Post-Doctoral Fellowship for Women by University Grants Commission
- Emerging Scientist Award in the 7th Annual Research and Innovation Week, Ontario, Canada
- Post-Doctoral Fellowship from Natural Sciences and Engineering Research Council (NSERC) Discovery Grant

**Dr. S. G. DAWANDE**

*M. Sc., Ph. D.*

**Assistant Professor of Organic Chemistry**



**SUBJECTS TAUGHT:**

Organic Chemistry (B. Pharm), Organic Chemistry (Chem. Eng.), Free Radicals and Photochemistry (M. Sc. Chem.), Organic Chemistry Laboratory (B. Pharm), Organic Chemistry Laboratory (Chem. Eng.), Organic Chemistry Laboratory (B. Tech.), Organic Chemistry Laboratory (M. Sc. Chemistry).

**RESEARCH INTERESTS:**

Mainly focused on Organic synthesis, Catalysis and Medicinal Chemistry through; Transition Metal Catalysis, Organocatalysis, Asymmetric Synthesis, Natural Product Synthesis, Green Chemistry

**Recognized Research Guide for:** Chemistry

**Guided students:** Ph.D. --; Masters: M.Sc. 10

**TOTAL RESEARCH PUBLICATIONS:**

International: 08

Citations: 154; H-Index : 06

**AWARDS:**

- Young Scientist Research Grant by DST-SERB (2015)



### PROF. RADHA V. JAYARAM

*M.Sc., Ph.D.*

**UGC BSR Professor**

#### SUBJECTS TAUGHT:

Chemical kinetics and phase equilibria, quantum chemistry, catalysis, surface and interfacial chemistry, solid state chemistry.

#### RESEARCH INTERESTS:

Heterogeneous Catalysis, Green Chemistry, Multi-component

Reactions, Structurally Ordered Materials, Functional Polymers and Adsorption Techniques for Removal of Water Pollutants, Recovery of Spent Metals, Enzyme Catalysis

**Recognized Research Guide for:** Chemistry and Green Technology

Guided students: Ph.D. 28; Masters: M. Sc.: 31; M.Tech.: 17

#### TOTAL RESEARCH PUBLICATIONS:

**International:** 107, **Citations:** 3243; H-Index : 33

**Book Chapters:** 02, **Patents :** Granted: 01

#### AWARDS:

- UGC– BSR Faculty Fellowship (2021)
- Elected Fellow of Maharashtra Academy of Sciences (F.M.A.Sc.);



- Member, Scientific committee, 48th International Chemistry Olympiad, July 2016(Tbilisi, Georgia)
- CMP Endowment Best Teacher Award 2014-15,
- Best Woman Teacher award by the Association of Chemistry Teachers India 2015-16
- Dr. K. H. Gharda Reward for “Excellence in research” (2009)



### DR. ANANT R. KAPDI

*M. Sc.; M. Sc. By Research (University of York, UK), Ph. D. (University of York, UK)  
(FRSC, AVH Fellow)*

**UGC FRP Assistant Professor**

**Former Deputy Director, ICT-IOC Bhubaneswar**

**Central Placement Coordinator**

#### Recognized Research Guide for Chemistry

**Guided students:** Ph.D. 10, Masters: 40

**TOTAL RESEARCH PUBLICATIONS**

National: 02, International: 94

Book Chapters: 14; Books: 02 (Edited)

H-Index: 30, Citations: 6174

#### AWARDS:

- Alexander von Humboldt Fellowship 2008
- Alexander von Humboldt Return Fellowship 2013
- DAAD Fellowship for Scientists 2014
- Young Associate of Maharashtra Academy of Sciences
- Fellow Maharashtra Academy of Sciences 2016
- Associate Editor of Royal Society of Chemistry Journal RSC
- Advances 2015-17
- Prof. N. R. Kamath book award 2018
- C. B. Murarka Best Assistant Professor award 2019

#### SUBJECTS TAUGHT:

Organic Chemistry, Natural Products, Heterocyclic Chemistry, Analytical Chemistry, Organic Chemistry Practicals

#### RESEARCH INTERESTS:

Palladium catalysis, Nucleoside modification, Heteroarene modification, Commercial scale process optimization, Drugs synthesis, New product development

**Dr. P. M. MORE**

*M.Sc., Ph.D.*

**Assistant Professor of Analytical Chemistry**



**SUBJECTS TAUGHT:**

Analytical Chemistry, Analytical and Physical Chemistry Lab, Physical Pharmacy Lab., Instrumental Methods of Analysis, Physical Chemistry Lab., Nanochemistry

**RESEARCH INTERESTS:**

Heterogeneous Catalysis, Synthesis of various mixed metals based catalysts using different methods for selective oxidations and environmental application. Total oxidation of volatile organic compound using non-noble metal based catalyst. Development of non-noble metal based diesel exhaust oxidation catalyst.

**RECOGNIZED RESEARCH GUIDE FOR CHEMISTRY**

Guided students: Ph.D.: --, Masters: M. Sc.:

**TOTAL RESEARCH PUBLICATIONS**

National: 01; International: 18

H-Index: 08, Citations: 205

**PATENTS: 01**



**Dr. SHRAEDDHA TIWARI**

*M. Sc. Ph. D.*

**Assistant Professor in Physical and Inorganic Chemistry**

**SUBJECTS TAUGHT:**

Physical Chemistry, Physical Pharmacy, Analytical Chemistry, Instrumental Methods of Analysis, Surface and Interfacial Chemistry, Computational Chemistry

**RESEARCH INTERESTS:**

Neoteric solvents (ionic liquids / deep eutectic solvents), Mechanistic studies of Organic Reactions, Vibrational Spectroscopy, Chemical processes in confined media, Interfacial processes / "on water" processes

**RECOGNIZED RESEARCH GUIDE FOR CHEMISTRY**

Guided students: Ph.D.: 03, Masters: M. Sc.: 12

**TOTAL RESEARCH PUBLICATIONS**

International: 19

H-Index: 09, Citations: 340

**AWARDS:**

- Best Teacher Award, CMP Endowment (2017)
- Best Teacher Appreciation Award, CMP Endowment, Department of Chemistry (2014)
- DST INSPIRE Faculty Award (2013)
- Postdoctoral Research Fellow at Department of Chemistry, School of Science, The University of Tokyo



# Department of **GENERAL ENGINEERING**



### PROF. VIVEK R. GAVAL

*B.E(Production)(Mumbai,1987), M.E  
(Plastic Engg) (Mumbai,1991), Ph.D(Tech)  
(Mumbai,2012)*

Professor and Associate Dean (Academic  
Programme)

**Head of the Department**



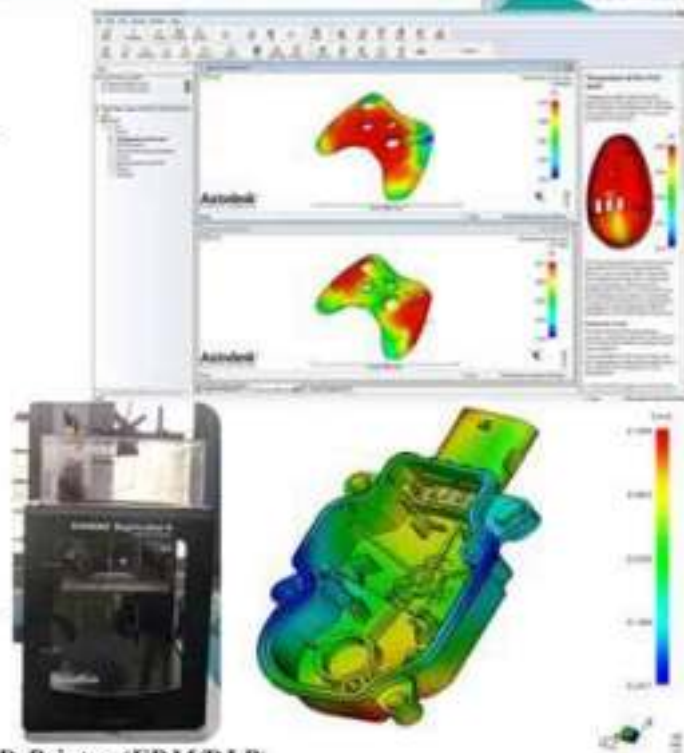
### Equipment's Available in Laboratories

### CAD/ CAM/CAE Lab



#### Softwares Available

- Solidworks
- Moldex3D
- AutoCAD 2020
- ANSYS
- Minitab 18.1
- Hypermesh
- Unigraphics-NX
- 3D-Printer (FDM/DLP)



- 3D-Printer (FDM/DLP)





**PROF. VIVEK R. GAVAL**

*B.E (Production) (Mumbai 1987), M.E Plastic Engg. (Mumbai 1991), Ph.D. (Tech) (Mumbai 2012)*

**Professor in General Engineering and Head of the Department**

**SUBJECTS TAUGHT:**

Energy Engineering, Equipment Design and Drawing, Engineering Graphics, Design and fabrication of moulds, Finite Element Analysis, Processing of plastics laboratory, Research Methodology.

**RESEARCH INTERESTS:**

Particulate filled polymer composites, conversion of Metal parts into plastic using design software's, Tribology, Mold flow analysis

**Recognised guide for:** Ph.D. (Tech) in Mechanical Engineering and Plastic Engineering.

**Guided students:** Ph.D.: 02, Ongoing 11, Masters: 40 (guided), 7 ongoing.

**RESEARCH PUBLICATIONS:** International: 22 , H Index 4, citations 74 , Patent information: National: 01 one design patent registered , 01 (filed)

**PROF. SURESH P. DESHMUKH**

*D.M.E. (Mechanical) (Ratnagiri 1983), B.E. (Production) (Mumbai 1986), M.E Production (Mumbai 1992), Ph.D. (Tech) (Mumbai 2009)*

**Professor of Mechanical Engineering And Workshop Superintendent**

**SUBJECTS TAUGHT:**

Equipment Design and Drawing-I, Engineering Graphics, CAD/CAM/CAE.

**RESEARCH INTERESTS:**

Polymeric Composites, Engineering Materials, Plastic Processing, Design of Molds, Analysis of Plastic component using CAD, CAE tools. Solar Hybrid Energy, Refrigeration Air Conditioning, **HEAT TRANSFER RECOGNISED GUIDE FOR:** Ph.D. (Tech.) in Mechanical Engineering, Plastic Engineering, Electrical Engineering, Electronic Engineering

**GUIDED STUDENTS:** Ph.D.: 07, Masters: 20

**RESEARCH PUBLICATIONS:** National: 07, International: 50, h-index: 9, i-10 Index: 9, Citations: 305



**PROF. DILIP D. SARODE**

*B.E (Civil) (Mumbai 1986), M.E (Structural) (Mumbai 1989), Ph.D. (Tech) (IIT Bombay 2010), PGD Const Mgt (NICMAR 1987), DCST (Mumbai 1999)*

**Professor of Civil Engineering and Hostel Head Warden**

**SUBJECTS TAUGHT:**

Concrete Technology, Construction Chemicals, Risk Analysis and its mitigation, Recycling of wastes, Water and wastewater treatment, Recycling of agricultural and industrial waste.

**RESEARCH INTERESTS:**

Concrete Technology Construction Chemicals - Risk Analysis and its mitigation. Recycling of wastes. Recycling of agricultural waste and improving soil fertility.

**Recognised guide for:** M.E. (Plastic), Ph. D. (Tech) in Civil Engineering and Plastic Engineering.

**Guided students:** Ph.D.: 02, Ongoing: 08, Masters: 11, Ongoing: 7

**RESEARCH PUBLICATIONS:** National: 14, International: 12, h-index: 4, i10 Index: 2, citations 238

**Patent Information:** National: (granted) 02, International: 01 (Applied)





**SHRI. M.A.K. KERAWALLA**

*B.E (Electrical) (Mumbai 1981), M.E. Electrical (Mumbai 1984)*

**Associate Professor of Electrical Engineering**

**SUBJECTS TAUGHT:**

Electrical Engineering and Electronics

**RESEARCH INTERESTS:**

Power Systems

**RESEARCH PUBLICATIONS:**

National: 6, International: 12

**DR. PRERNA GOSWAMI**

*B.E (Electrical), M.E. (Instrumentation and Control), Ph.D. (Tech) (Electrical Engg.) (Mumbai 2018)*

**Associate Professor in General Engineering (Electrical)**

**SUBJECTS TAUGHT:**

Electrical Engineering and Electronics (Theory and laboratory),  
Basic Electrical and Electronics (Theory and laboratory)

**RESEARCH INTERESTS:**

Sustainable Energy and MATLAB simulations

**Recognised guide for:** Ph.D. (Tech.) in Electrical Engineering,

**Guided students:** Ph.D. Students Ongoing 11

**RESEARCH PUBLICATIONS:** National: 10, International: 25, H index 5, i10 index 2, Citations 81



**PROF. R.S.N. SAHAI**

*B.E (Mechanical Engg.), M.E (Plastic Engg.), Ph.D. (Tech) (Mechanical Engg.) (ICT Mumbai 2013)*

**Professor of Mechanical Engineering and Associate Dean (ICD)**

**SUBJECTS TAUGHT:**

Engineering Graphics I and II, Energy Engineering, Processing of Plastics, Principle of Plastic Machinery Design, Advance Polymer based Materials in Engineering Applications

**RESEARCH INTERESTS:**

Polymer Composites, Nanocomposites and its applications in Mechanical Engineering, Mould design, Energy Engineering.

Recognized Research Guide for: Ph.D. Tech in (Mechanical Engg.), M.E (Plastic Engg.), and Ph.D. Tech in (Plastic Engg.), Ph.D. (Ongoing): 8, M.E – 18 (Guided) 7 (ongoing)

**RESEARCH PUBLICATIONS:** International: 15, citations 46



**DR. DEEPANKAR BISWAS**

*B.E. (Mechanical) (Mumbai 2012), M.E Mechanical-Thermal Engg. (Mumbai 2014), Ph.D. (Tech) (Mechanical Engg.) (ICT Mumbai 2020)*

**Assistant Professor of Mechanical Engineering (Temporary)**

**SUBJECTS TAUGHT:**

Energy Engineering, Engineering Graphics-I, CAD/CAM/CAE, Plastic Product Design and Testing of Plastics, Finite Element Analysis, Equipment Design and Drawing-II

**RESEARCH INTERESTS:**

Renewable energy, Solar Thermal, Heat Exchanger, Heat Transfer, Polymer composites

**RESEARCH PUBLICATIONS:** International: 04, National: 03, h-index: 04, Citations 15

**DR. VIKRAMSINHA S. KORPALE**

*B.E. (Mechanical) (2011), M.E. Plastic Engg. (Mumbai 2013), Ph.D. (Tech) (Mechanical Engg.) (ICT Mumbai 2021)*

**Assistant Professor of Mechanical Engineering (Temporary)**

**SUBJECTS TAUGHT:**

Engineering Graphics I and II, Mold Designing Laboratory, CAD/CAM/CAE and Design of Molds, Plastic Product Design and Testing of Plastics, Structural Mechanics Laboratory, Equipment Design and Drawing-I

**RESEARCH INTERESTS:**

Thermal design of equipment, Plastic products design and analysis, computational fluid dynamics, Equipment design and analysis, powder-flow equipment designs.

**GUIDED STUDENTS:** Ph.D.: 07, Masters: 20

**RESEARCH PUBLICATIONS:** International: 04, National: Nil, h-index:03, i10 Index:03, Citations: 38









# Department of MATHEMATICS





**DR. AJIT KUMAR**

B.Sc., M.Sc., Ph.D.

**Professor and Head**

**Department of Mathematics**



**Dr. AJIT KUMAR**

*B. Sc. Hon. (Patna University, 1995), M. Sc. (Mumbai University, 1997)*

*Ph. D. (Mumbai University, 2002)*

**Professor and Head,  
Department of Mathematics**

**SUBJECTS TAUGHT:**

UG: Applied Mathematics I, II and IV, Computer Programming

PG: Applied Linear Algebra, Advance Calculus, Numerical Methods, Computer Programming, Software Lab – I and II Optimization Techniques

**RESEARCH INTERESTS:**

Optimization Techniques, Statistical Analysis, Mathematical Pedagogy

**Recognized Research guide for Ph.D. (Sci.) in Mathematics**

Ph. D. Guided: 02

On Going Ph.D. students: 04

Masters Projects Guided: 23

**TOTAL RESEARCH PUBLICATIONS:**

National: 02, International: 10

Books Published: 05

Book Chapters: 06

**Dr. AMIYA R. BHOWMICK**

*B.Sc. (University of Calcutta, 2006), M.Sc. (IIT Bombay, 2008)*

*Ph.D. (University of Calcutta, 2015)*

**Assistant Professor of Mathematics**

**SUBJECTS TAUGHT:**

UG: Applied Mathematics I, Applied Mathematics II, Engineering Application of Computer

PG: Probability Theory, Machine Learning, Applied Statistics-I, II, III, Mathematical Biology, Stochastic Process, Software Lab.

**RESEARCH INTERESTS:**

Statistics and Machine Learning methods in Ecology, Species distribution models, Statistical inference on growth curve models

**Recognized Research Guide for Ph.D. (Sci.) in Mathematics**

**Guided students:** On Going Ph.D.: 04, Masters: 18

**TOTAL RESEARCH PUBLICATIONS:**

National: 2, International: 27,

Conference Proceedings: 1

Citations: 349; H-Index: 11





**Dr. AKSHAY S. RANE**

*B.Sc. (University of Mumbai, 2005), M.Sc. (University of Mumbai, 2007), Ph.D. (IIT Bombay, 2013)*

**UGC Assistant Professor**

**SUBJECTS TAUGHT:**

UG: Applied Mathematics – I, II and III, Engineering Application of Computer.

PG: Advanced Calculus, Applied Functional Analysis, Complex Analysis and Mathematical methods, Differential Equations, Applied Linear Algebra, Advanced Real Analysis, Partial Differential Equations

**RESEARCH INTERESTS:**

Numerical Functional Analysis especially Spectral Approximation of Integral operators, Assymmetric functional Analysis

**Recognized Research guide for Ph.D. (Sci.) in Mathematics**

Guided students: Masters: 9

**Total Research Publications:** International: 9

Citations: 18; H-Index: 3





# [ Department of PHYSICS ]



**DR. MOHAN NARAYAN**

*B.Sc., M.Sc., Ph.D.*

Associate Professor of Physics

**Head of the Department**



**Dr. MOHAN NARAYAN**

*B.Sc.(Mumbai, 1988), M.Sc.(Mumbai, 1990), Ph.D.(Madras, 1999)*

**Associate Professor of Physics  
Head of the Department**

**SUBJECTS TAUGHT:**

PG – Quantum Mechanics, Classical Mechanics, Molecular Quantum Mechanics and UG Lab

**RESEARCH INTERESTS:**

Theoretical High Energy Physics, Chemical Engineering Thermodynamics, Molecular dynamics

**Recognized Research Guide for Ph.D. (Sci.) in Physics**

Guided students: Ph.D.: 01, Ongoing: 01

**TOTAL RESEARCH PUBLICATIONS:**

National: 03, International: 23

H-Index: 10; Citations: 361

Impact factor-range: 1.0 to 6.11

**PROF. V. D. DESHPANDE**

*M.Sc. (Delhi, 1978), M.Phil. (Delhi, 1980),  
Ph.D. (Delhi, 1986)*

**Emeritus Professor of Physics**

**SUBJECTS TAUGHT:**

Lasers and Fibre optics, Ultrasonics, Colour Physics (UG and PG) and Colour Physics Lab

**RESEARCH INTERESTS:**

Polymer nanocomposites, Polymer blends: Crystallization kinetics, Mechanical and optical properties, study of dielectric behavior, Orientation behavior, structure-property relationship; Colour Physics: Colour assessment of dyed textiles; Assessment of the effect of the background on the colour perception; Polymer embedded nano-drug delivery; background on the colour perception; Polymer embedded nano-drug delivery;

**Recognized Research Guide for Ph.D. (Sci) in Physics**

Guided students: Ph.D. : 07

Masters: 05

**TOTAL RESEARCH PUBLICATIONS :**

National: 06, International: 27

h-Index: 06 Citations: 25

Patents (granted in last 5 years): 01





**PROF. R. R. DESHMUKH**

*B.Sc. (Pune, 1991), M.Sc. (N. M. U. Jalgaon, 1994),  
B.Ed. (Mumbai, 1995) Ph.D. (Mumbai, 2002)*

**Registrar of ICT and Professor of Physics**

**SUBJECTS TAUGHT:**

Solid State Physics, Electricity and Magnetism, Analytical Techniques (PG).

**RESEARCH INTERESTS:**

Plasma Technology, Polymer Physics, Functionalisation of nanoparticles, Molecular tailoring of surfaces using plasma for biomedical applications, textile physics, Electro-optical properties of Polymer Dispersed Liquid Crystals, Polymer nanocomposite materials

**Recognized Research Guide for Ph.D. (Sci) in Physics, Chemistry**

Guided students: Ph.D.: Guided : 08, Ongoing : 05

Post Doc Fellow: 1, Masters: 02

**TOTAL RESEARCH PUBLICATIONS:**

National: 05, International: 125

Book Chapter-10, Citations: 4050

H index: 38, i10 index: 85

Highest Impact Factor: 13, Cumulative Impact Factor: 3.64

**Dr. NEETU JHA**

*B.Sc. (Calcutta Univ, 2002), M.Sc. (BHU, 2004), Ph.D. (IIT-Madras, 2009)*

**UGC-FRP Assistant Professor**

**SUBJECTS TAUGHT:**

Nanoscience and Technology, Introduction to Nanoscience, UG Physics Lab

**RESEARCH INTERESTS:**

Carbon Nanomaterials, Supercapacitors, Fuel Cell Electrocatalyst, Capacitive Desalination, Photothermal materials.

Recognized Research Guide for Ph.D. (Sci.) and Ph.D. (Tech.): Physics and Green Technology

**Guided students:**

Ph.D. : 02, Masters: 06

**TOTAL RESEARCH PUBLICATIONS :**

National : 02 International : 46

H-Index: 15; Citations: 1092

Patents (granted in last 5 years): 01

AWARDS (last 5 years):

DST Young Scientist Award 2013; DST Inspire Faculty Award 2012; BRNS Young Scientist Research Award 2014.





**Dr. ASHWIN MOHAN**

*B.Sc. (Mumbai, 2007), M.Sc. (Mumbai, 2009), Ph.D. (Germany, 2014)*

**Associate Dean, IQA before Assistant Professor of Physics**



**SUBJECTS TAUGHT:**

Quantum Mechanics, Optics, Color Physics (UG) and General Physics (PG) Laboratory

**RESEARCH INTERESTS:**

Materials Physics, Quantum Magnetism, Thermal Transport, Crystal Growth

**Recognized Research Guide for Ph.D. (Sci) in Physics**

**TOTAL RESEARCH PUBLICATIONS:**

National: 1 International: 13

h-Index: 5, Citations: 86



**Dr. PARESH H. SALAME**

*M.Sc. (Condensed Matter Physics, 2005), Ph.D. (IIT Bombay, 2014)*

**Assistant Professor in Physics**

**SUBJECTS TAUGHT:**

Introduction to Ceramics (PG), Analytical Techniques (PG), Polymer I and II (PG), FY BTech Lab (UG), General Physics Lab (UG).

**RESEARCH INTERESTS:**

Rechargeable Secondary Batteries (Na-ion batteries), Supercapacitors, Colossal Dielectric Materials, Multiferroic Materials, Electro-ceramics, Polymer Nanocomposites

**Recognized Research Guide for Ph.D. (Sci) in Physics**

Guided students: PhD ongoing 1:

Masters: 3 completed 2 ongoing

**TOTAL RESEARCH PUBLICATIONS:**

International: 13, h-Index: 05, Citations: 169

Edited book: 01, Book chapters: 05, Publications: 13

**Dr. ARCHANA S. KALEKAR**

*M.Sc. Ph.D. (Physics)*

**Assistant Professor in Physics**

**SUBJECTS TAUGHT:**

Material Science, Material Synthesis, and Applied Physics.

**RESEARCH INTERESTS:**

Photovoltaics, Quantum Dot Sensitized Solar Cells (QDSSC), Photocatalytic Hydrogen generation, Photocatalytic dye degradation, Gas Sensors Supercapacitors, Chemical synthesis of semiconductor nanostructures.

**Recognized Research Guide for**

Ph.D. (Sci) in Physics

Guided students: Ph.D.: 2 (Ongoing)

Masters: 04

**TOTAL RESEARCH PUBLICATIONS:**

National: 00, International: 34

h-Index: 18 Citations: 922

Total publications 38











# DBT-ICT CENTRE FOR ENERGY BIOSCIENCES



**DR. ANNAMMA ANIL ODANETH**

*B.Sc. (Microbiology),  
M.Sc. (Biotechnology),  
P.G. Diploma in Bioinformatics, Ph.D.  
Applied Chemistry  
Co-ordinator, DBT-ICT Center for Energy  
Biosciences*

**Associate Professor**

**Head of the Department**





**Dr. ANNAMMA ANIL ODANETH**

*B.Sc. (Microbiology), M.Sc. (Biotechnology),  
P.G. Diploma in Bioinformatics, Ph.D. Applied Chemistry*

**Coordinator & Associate Professor**

**DBT-ICT Centre for Energy Biosciences**

**SUBJECTS TAUGHT:**

Biological Sciences, Protein and Enzyme Engineering; Biocatalysis & Enzyme Technology.

**RESEARCH INTERESTS :**

Proteins for food, feed and industrial applications, Molecular modelling and High-throughput screening for target identification and modifications, Protein engineering for aminotransferases, Enzymes in aqueous and organic synthesis and transformation, Enzymes in lipid, protein, and carbohydrate modification

**Recognized Research guide for Ph.D. (Sci.) in Biotechnology, Ph.d. (Sci.) in Chemistry, Ph.D. (Sci.) in Bioprocess Technology, Masters in Bioprocess Technology, Masters in Green Technology**

**Guided students:** Ph.D (Guided) – 10, M.Tech -(Guided)- 17  
Ph.D. (Ongoing) – 13, M.Tech - (Ongoing) – 3

**TOTAL RESEARCH PUBLICATIONS:** 42; National: 1;

International: 45, Patents (granted in last 5 years): 37; National: 2;

International: 35

**Dr. VISHWANATH H. DALVI**

*B. Chem. Eng. (UDCT, Mumbai)*

*M.S., P.D.Eng in Process Engineering (University of Twente, NL), Ph.D. in Chemical Engineering (University of Texas at Austin, USA)*

Co-coordinator, DBT-ICT Center for Energy Biosciences

**R.A. Mashelkar Assistant Professor**



**SUBJECTS TAUGHT:**

Industrial Engineering Chemistry, Chemical Process Control, Advanced Mass Transfer, Process Simulation Laboratory, Chemical Engineering Laboratory, Mathematical Methods in Chemical Engineering.

**RESEARCH INTERESTS:**

Renewable Energy, Solar Thermal Technology, Anaerobic Digestion, Process Simulation, Molecular Simulations, Applied Thermodynamics, Process Scaleup

Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Masters in Chemical Engineering

Guided students: Ph.D. 3 (coguided), (7 ongoing);  
Masters: 17

**TOTAL RESEARCH PUBLICATIONS:** National: 3,  
International: 32

Patents (granted in last 5 years): National: 3



**Dr. GUNJAN PRAKASH**

*M.Sc. (Plant Sciences), Ph.D. (Plant Biotechnology and Fermentation),*

**Associate Professor**

**SUBJECTS TAUGHT:**

Fermentation and Cell Culture, Fundamentals of Food Biotechnology, Genetics, and Cell Culture Technology, Microbiology

**RESEARCH INTERESTS:**

Genetic Engineering of Microalgae, Nuclear and Chloroplast Engineering, Algal Biotechnology and Biofuels, Diatom Biotechnology, Microbial Fermentation for Bio-Based Chemicals, Process Intensification  
**Recognized Research Guide for:** Ph.D (Sci) Biotechnology, Ph.D (Tech) Bioprocess Technology, Master.Tech Bioprocess Technology, M.Tech Food Biotechnology

**Guided students:** Ph.D.: Guided 1, Ongoing 2,  
M.Tech: Guided 12; Ongoing 8

**TOTAL RESEARCH PUBLICATIONS:** National: 2, International: 29  
**Patents:** 2

**Dr. MANJU SHARMA**

*B.Sc. Biosciences; M.Sc. Microbiology; Ph.D Microbiology*

**Assistant Professor**

**SUBJECTS TAUGHT:**

General & Food Microbiology

**RESEARCH INTERESTS:**

Waste Valorization: waste to fuel and biobased chemicals, Biomass to Biogas, Anaerobic/ aerobic fermentation for biobased chemicals, Fermentation of algal biomass for bioactives and value added chemicals, Consortium design & microbiome studies, Bioprospecting of industrially important microbes, Thermophilic enzymes, Industrial Microbiology and Microbial Biotechnology

**Recognized Research guide for** Ph.D Biotechnology (Science) and M.Tech. Bioprocess Technology

**Guided students:** Ph.D: 2 (Co-guided), Masters: 2 (Co-guided)  
Ongoing: Ph.D (Ongoing): 3, M.Tech (Ongoing) – 2, Masters: 1

**TOTAL RESEARCH PUBLICATIONS :**

International: 12, Patents: 1



**Dr. Nitin Trivedi**

*B.Sc. Microbiology*

*M.Sc. Microbiology*

*Ph.D. Biological Science*

**DST INSPIRE FACULTY**



**SUBJECTS TAUGHT:**

Microbiology

**RESEARCH INTERESTS:**

Macroalgal biofuel & biochemicals, Macroalgal growth engineering and biorefinery, Value addition of macroalgal bioproducts for industrial applications, Macroalgal bioremediation, Bioprospecting of marine microbes for industrially important products

**Recognized Research guide for MTech Bioprocess Technology**

**TOTAL RESEARCH PUBLICATIONS:**

M.Tech (Ongoing) – 1, Publication – 28

International: 21, Patents : 2



**Mr. DEEPAK SARDA**

*M.Tech. (BPT), LLB*

**Research Associate (IP)**

**(Intellectual Property Management & Technology Commercialization Unit)**

**SUBJECTS TAUGHT:**

Intellectual Property Rights

**RESEARCH INTERESTS:**

Patent search, drafting, filing and prosecution, other IP such as Trademark, Copyright, Legal documents such as NDA/MoU

**TOTAL RESEARCH PUBLICATIONS: NA**



**Dr. HITESH PAWAR**

*M.Sc. (Organic Chemistry), Ph.D. (Science) Chemistry*

**Assistant Professor**

**SUBJECTS TAUGHT:**

Analytical techniques in Bioprocessing, Unit Operation (M.Tech Bioprocess Technology)

**RESEARCH INTERESTS:**

Conversion of bio-based sugars to value added chemicals, Photocatalytic hydrogen production, Novel homogeneous, heterogeneous and transition metal catalysis, Synthesis of ionic liquids, deep eutectic solvents, Study of reaction kinetics and reaction mechanism, Designing and development of industrial catalyst, Process intensification and integration, Process development, characterization and scale –up, Chromatographic separation and purification of small molecules, Computational chemistry and molecular modeling Effluent treatment.

**Recognized Research guide for** M Tech. Bioprocess Technology, Ph.D. (Chemistry) (Tech.) and M Tech. Bioprocess Technology, Ph.D. (Chemistry)

**Guided students:** Ph. D 4 (Ongoing) Masters 3 (Ongoing)

**TOTAL RESEARCH PUBLICATIONS:** International: 17, Patents: 10

**Dr. SHAMLAN M. S. RESHAMWALA**

*B.Sc. (Microbiology and Biochemistry), M.Sc. (Biochemistry), Ph.D. (Molecular Biology)*

**Assistant Professor**

**SUBJECT TAUGHT:**

Biosystems and Bioprocess Engineering, Molecular Biology and Biotechnology, Applied and Synthetic Biology, Intellectual Property Rights

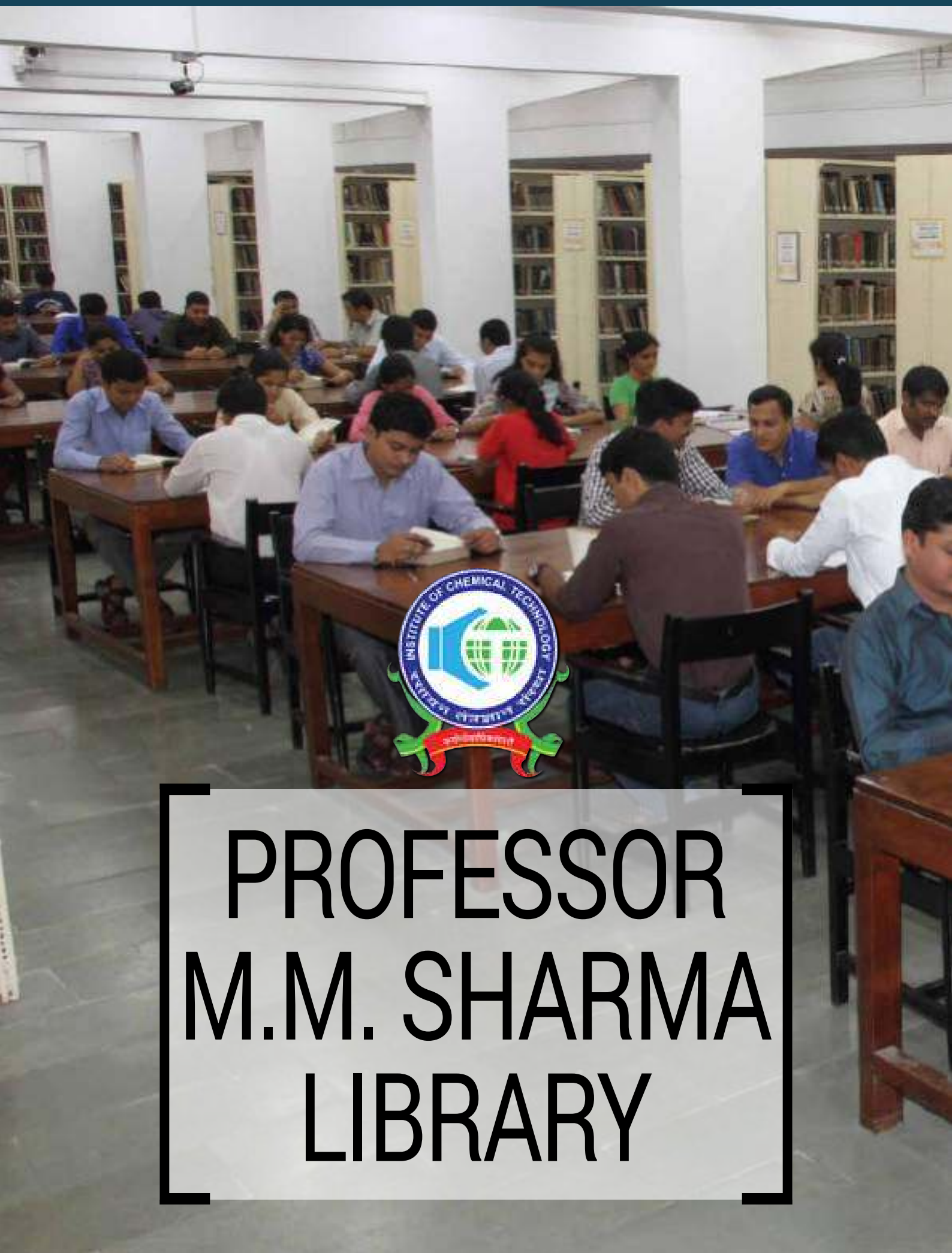
**RESEARCH INTERESTS:**

Molecular and synthetic biology, recombinant protein expression in prokaryotic and eukaryotic host cells, enzyme engineering for improved catalysis and robustness, metabolic and pathway engineering to design novel biosynthetic routes for high-value chemicals, valorization of abundant feedstocks, bioprospecting to explore metabolic diversity, science communication and pedagogy, IP policy

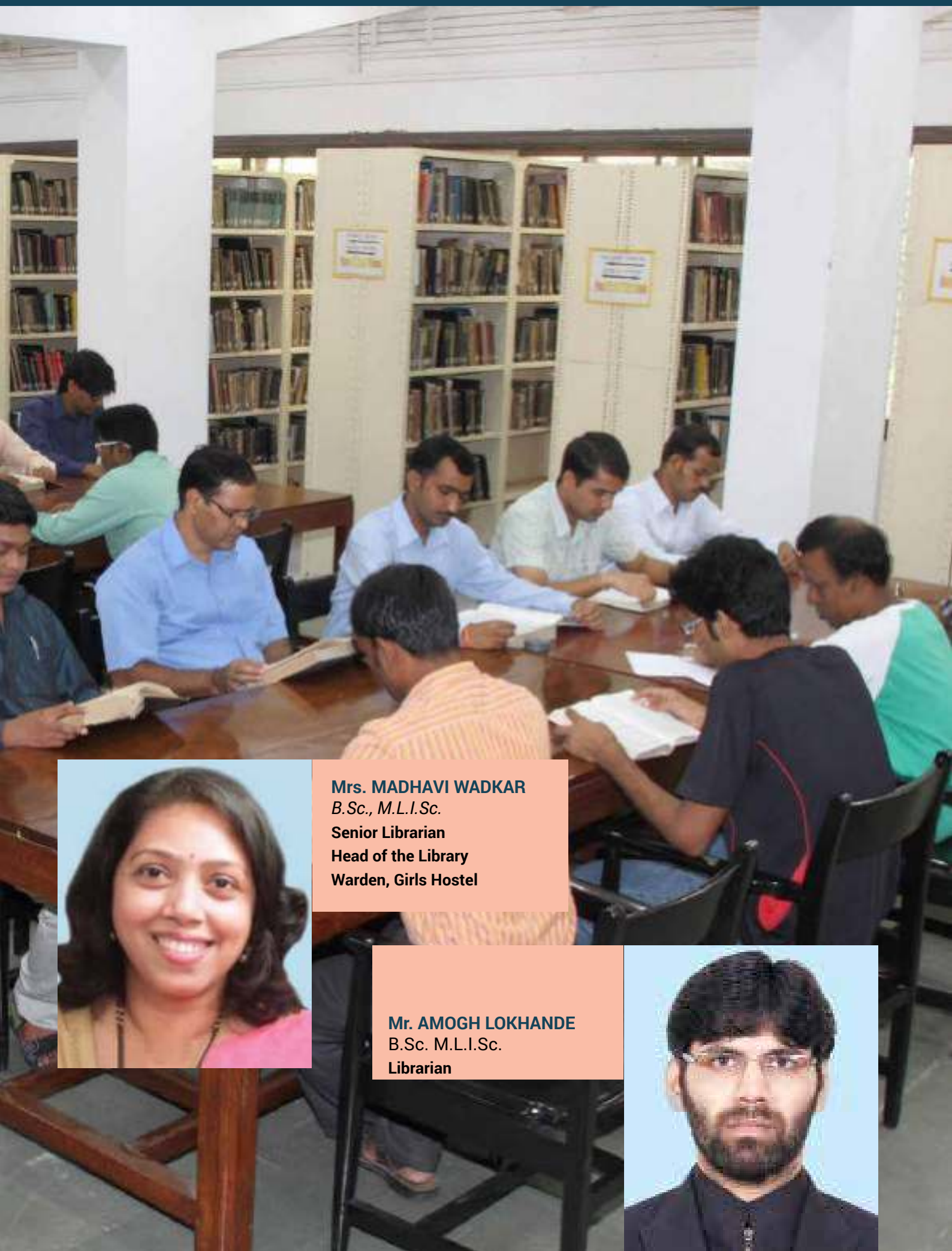
**TOTAL RESEARCH PUBLICATIONS:** International: 10, Patents: 1







# PROFESSOR M.M. SHARMA LIBRARY



**Mrs. MADHAVI WADKAR**  
*B.Sc., M.L.I.Sc.*  
**Senior Librarian**  
**Head of the Library**  
**Warden, Girls Hostel**

**Mr. AMOGH LOKHANDE**  
*B.Sc. M.L.I.Sc.*  
**Librarian**





## PROFESSOR M. M. SHARMA LIBRARY

### INTRODUCTION:

Established in the year 1934, Prof. M M Sharma Library functions as the central library of the institute and can be called one of the best special libraries in the country. It performs a dual role of an Academic Library as well as a Research Library, catering to the information needs of the in-house students and faculty, in particular, and, the academic and research community, in general. It is housed in a separate Ground Plus two-storied building and follows a completely open-access concept. It has a specialized collection in Chemical Engineering, Chemical Sciences, Chemical Technology and Pharmacy and its allied fields. The library can boast of rich heritage collection of old classic books and bound volumes dating back to 1930s. But along with the traditional collection it has a significant digital collection as well. Currently has access to more than 500 electronic journals. Has access to databases such as Reaxys, Sci-Finder, Scopus, Web of science, etc. The library is fully computerized using the library management software called Koha. It can be termed as a hybrid library with best collection of printed and digital documents. The library is also a member of E-Shodh Sindhu Consortium.

### LIBRARY TIMINGS:

On Working days : 8:30 a.m. – 8:30 p.m.

On 2<sup>nd</sup> and 4<sup>th</sup> Saturdays, Sundays and holidays : 11.00 a.m.– 6.00 p.m.

Throughout the year the library remains closed only on four days, viz. Independence day, Republic day, Ganesh Chaturthi, and Dassera.

### LIBRARY LAYOUT:

The Library is a ground plus two storied building. The layout is as follows:

First Floor	Book Collection and Circulation counter
Second Floor	Current Journals (latest issues), Reference Book Section, Theses Section, Book Bank Section
Ground Floor	Bound volumes (Back Issues) of Journals, Photocopying Section

### MEMBERSHIP:

The bonafide students and faculty of the institute have book lending facility. Book borrowing facility can be availed against ID card.

### LIBRARY PORTAL:

Library portal is hosted on the internet at <http://ictlibrary.firstray.in/>

### LIBRARY COLLECTION:

#### Printed Resources

##### • Books:

The library has a very rich collection of books. The spectrum of the book collection ranges from as old as dating back to 1930s to the latest. The collection has few rare and classic books which is regularly updated with the latest updated books in the area of Chemistry, Applied Chemistry, Chemical Technology, Chemical Engineering, Pharmacy, Energy and Environmental Engineering, Biotechnology, Food Technology and Fermentation, Polymer Science and Technology, Textile Science and Technology, Oils and Surfactants, Speciality Chemical Technology.

**Book Bank** collection is a special collection of Text Books which are issued to students for a longer period.

**Access:** Books can be searched through the computerized catalogue at

<http://ictlibrary.firstray.in/>

Also two terminals are available on every floor to search through the computerized catalogue.

- **Printed Journals:**

The library subscribes to a number of scholarly journals in different specialized areas from various renowned publishers like Elsevier, Wiley, Sage, Thieme, RSC, ACS, Springer, etc.

**Access:** Journals can be searched through the computerized catalogue at <http://ictlibrary.firstray.in/>. Also two terminals are available on every floor to search through the computerized catalogue.

- **Theses:**

A collection of all the Theses submitted by PhD and Master's students are stored in the library and are available for reference to students.

**Access:** Theses can be searched through the computerized catalogue at <http://ictlibrary.firstray.in/>. Also two terminals are available on every floor to search through the computerized catalogue.

- **Reports:**

This collection comprises of Bios, Cios and Fiat reports and various other research reports.

**Access:** Reports can be searched through a computerized catalogue. Two terminals on every floor are available to search through the computerized catalogue.

- **Bound Volumes:**

The older issues of journals are bound into volumes and are available for reference.

**Access:** Printed catalogue of all the bound volumes is available at the ground floor in the Bound Volume section.

## DIGITAL RESOURCES

- **Databases**

The Library subscribes to a number of indexing and abstracting and informative databases

**Scopus:** Scopus is the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings. Delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, and arts and humanities, Scopus features smart tools to track, analyze and visualize research.

**Access:** IP based access is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal. <https://www.scopus.com/>

**Reaxys:** Reaxys is a web-based tool for the retrieval of chemistry information and data from published literature, including journals and patents. The information includes chemical compounds, chemical reactions, chemical properties, related bibliographic data, substance data with synthesis planning information, as well as experimental procedures from selected journals and patents. It is licensed by Elsevier.

**Access:** IP based access is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal. <https://www.reaxys.com/>

**Sci-Finder:** SciFinder is a research discovery application that provides unlimited access to the world's most comprehensive and authoritative source of references, substances and reactions in chemistry and related sciences. SciFinder offers a one-stop shop experience with flexible search and discover options based on user input and workflow.

**Access:** IP based access is available throughout ICT campus. Registration is mandatory for access. For registration you require email id of the institute. Link is accessible through the library portal. <http://www.cas.org/products/scifinder>

**Web of Science:** Web of Science is an online subscription-based scientific citation indexing service now maintained by Clarivate Analytics that provides a comprehensive citation search. It gives access to multiple databases that reference cross-disciplinary research, which allows for in-depth exploration of specialized sub-fields within an academic or scientific discipline.



**Access:** IP based access is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal. <https://login.webofknowledge.com>

- **eJournals**

The library subscribes to a number of electronic journals from renowned publishers like Elsevier (Science Direct), Wiley, Thieme, Springer, Taylor and Francis, RSC, ACS, Begell, Bentham Science, Springer Nature, etc. Also has access to a huge number of ejournals through Infilbnet eShodhsindhu consortium.

**Access:** IP based access to all the ejournals is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **eReference Sources**

**eReference Module in Chemistry, Molecular Sciences and Chemical Engineering**

Elsevier Reference Modules include thousands of cross-references and links to the related book chapters and journal articles available to you on ScienceDirect, providing the full spectrum of the subject on one easy platform.

**Access:** IP based access to the eReference Module is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

**Begell Heat Exchanger Design Handbook (HEDH) – Multimedia edition**

Reference source for heat exchanger design and associated technologies. The print edition has been converted to a fully searchable interactive web-based multimedia product. The content is presented in an exciting interactive HTML format with in-text unit conversion and references, widgets for key heat transfer calculations, wizards to guide heat exchanger selection and 3D interactive visualization of equipment.

**Access:** IP based access to multimedia handbook is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **eBooks**

Access to a collection of electronic Books published by RSC, ACS, Elsevier, Begell, T&F and Pearson eTextbooks is available.

**Access:** IP based access to all ebooks is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **eVideo Journal**

Access to eVideo Journal published by Jove is available.

**Access:** Link is accessible through the library portal. <https://www.jove.com/journal>

- **eTheses**

The eTheses of ICT as well as other universities are available on infilbnet consortia eShodhganga.

**Access:** Link is accessible through the library portal. <http://shodhganga.infilbnet.ac.in/>

- **ePatent Database**

Library subscribes to electronic patent database called Derwent Innovation (DI).

**Access:** Contact the library to access this database.

- **Plagiarism check facility**

Similarity check or plagiarism check through software is available for PG students.

- **eWriting Assistant**

Access to Grammarly is available which assists you in writing and checking grammar and with better vocabulary.

**Access:** For access registration is mandatory. For registration write an email to library@ictmumbai.edu.in. The details for registration and how to use would be sent through email. You require institutional email id for registration.

**Services:**

Every student has to sign an undertaking (copy of which is available in chapter 9) at the time of taking library membership.

Circulation Service	Reference and Referral service
Current awareness Service	Bibliographic Service
Photocopying service	User Orientation programs
E-resources Training Programs	Book Bank Service

**Facilities:**

Reading Hall • e-Library • Wi-Fi

Remote access facility to access the e-resources off campus is also available. Please write to [library@ictmumbai.edu.in](mailto:library@ictmumbai.edu.in) for login credentials. Institutional email id is mandatory for remote access.

**Events/Training Programs:**

Training programs for the usage of e-resources are organized by the library regularly. Such programs and events are announced through emails & library blog <https://mmslib.wixsite.com/ictlibraryblogpost>. Please subscribe to blog for event notifications.

**Contact:** Tel: +91-22-33611127-29, email: [library@ictmumbai.edu.in](mailto:library@ictmumbai.edu.in)







# PROFILE OF DEPARTMENTS AND CENTRES OF EXCELLENCE

Masters  
of the  
Nano Age



## Department of ChemiCal engineering



### VISION :

We will strive to be a vibrant department, with continuously evolving curricula and programmes that will charter the future of chemical, biological, materials and energy industries of the nation and be on par with the very best in the world through the participation and scholarship of our faculty, and students who will be torch bearers in education and research and have great impact in solving societal needs for the benefit of mankind at large.

### MISSION :

We will create an atmosphere conducive to generate new knowledge at every opportunity for our students at large. Our education will enable new chemical engineering solutions to meet the need of all segments of society with regard to material and energy, while protecting the environment and conserving the natural resources. Our endeavors will enhance the public welfare. Our activities will not be limited to class-rooms but will extend to a greater multi and cross disciplinary platform to conduct research, discovery, technology development, service to industry and entrepreneurship in consonance with India's aspiration to be a welfare state. We will team chemical engineers with professionals in other disciplines to arrive at better solutions. We will provide all students with a strong foundation in chemical engineering and applied sciences to encourage them to be our ambassadors at national and international level, in whatever professional activity they undertake to serve the society. Through our vision, we will serve the chemical engineering profession and society and strive to reach the summit as a team and stake-holders and as role models to the younger generation.

### What is Chemical Engineering?

Chemical engineering is one of the most versatile branch of engineering that applies scientific and mathematical principles to design and develop processes by which available chemicals can be converted into a variety of useful products. Chemical Engineering is applicable to a wide range of technologies, including the production of energy, materials, electronics, and pharmaceuticals, the processing of food, and environmental protection as well as remediation. The development of high quality materials, products and large scale processes is the testimony

of an industrialized nation and every nation tries to build its foundation on the strong pillars of Chemical Engineering profession which cuts across several chartered and unchartered territories of human civilization. Thus Chemical engineering is practised from nano scale to mega scale, from food / pharma to nuclear engineering from mineral/ mining to silicon (high purity grade). The subjects of energy, environment and sustainability are very much integral part of Chemical Engineering as Chemical engineering fundamentals are used to solve problems related to pollution, hunger and sustainable living (housing and modern farming).

## MODERN CHEMICAL ENGINEERING

The modern discipline of chemical engineering encompasses much more than just process engineering. Chemical Engineering is highly science based discipline and is the most versatile and accommodative branch of engineering among all. Chemical Engineering work on scales from atom to atmosphere and are involved in all possible human activities which process materials and energy. Human body is the best example of applications of principles of Chemical Engineering. Kitchen uses all sorts of unit operations familiar to Chemical Engineering. All transport phenomena are unified due to Chemical Engineering. Chemical engineers are now engaged in the development and production of a diverse range of products, as well as in commodity and specialty chemicals. These products include high performance materials needed for aerospace, automotive, biomedical, electronic, environmental, and space and military applications. Examples include ultra-strong fibres, fabrics, adhesives and composites for vehicles, bio-compatible materials for implants and prosthetics, gels for medical applications, pharmaceuticals, and films with special dielectric, optical, or spectroscopic properties for opto-electronic devices. Additionally, chemical engineering is often intertwined with biology and biomedical engineering. Many chemical engineers work on biological projects such as understanding biopolymers (proteins) and mapping the human genome.

A new paradigm of “borderless chemical engineering science” is emerging. The demands from the society on ‘cleaner’ technologies rather ‘clean-up’ technologies, the emergence of ‘performance chemicals and materials,’ etc., is driving the profession towards achieving a symbiotic relationship



with other disciplines. It has always been dealing with pollution prevention, atom economy, recycle, as the Solvay process would suggest. The term 'green chemical engineering' as a mantra for sustainable development and responsible care is at the centre-stage for all activities related to chemical engineering. Future course of an engineering discipline is reflected in current research areas within its folds. The expedition ahead for Chemical Engineering, based on the research profile of Chemical Engineering schools world over suggests that it is embracing biology, bio-engineering, tissue engineering, bio-processing, green chemistry and green engineering, and material science and nanotechnology in a big way and has been a truly working on scales from atom to atmosphere. Readily available computing power is changing the nature of research activity forever. A high level of mathematics and computational methods are intertwined with chemical engineering. The advent of new measurement techniques is reducing the length scale of investigation to nano and molecular scales irreversibly in many cases. Chemical Engineering thus appears poised for a major expansion. Chemical engineers are getting directly involved in development of new products and new technologies which improve the quality of life which requires highly interdisciplinary work, new ways of treating diseases-a domain of medical practitioners only till very recently, and development of application specific materials and fluids with complex structure at various length scales.

Chemical Engineering is not just Chemistry but a discipline itself with own characteristics. A proficiency in basic sciences such as Chemistry, Physics, Biology, Mathematics and their applications is necessary to effectively conduct the molecular transformations at scales varying from thousands of tonnes to few kilograms per day in economically attractive and environmentally safe manner. Each reaction with unique characteristics gives challenging

### Department of Chemical Engineering Upgradation of CE Lab & Safety Audit



Through the generous donation of Batch of 1968, Chem Engg lab has been upgraded. Safety Audit was conducted in various laboratories in Chem. Engg. Dept. on Dec 13, 2019 by Mr. Nilesh Vani, Safety Officer and Dr. Hubert Fernandes, Head R&D, Fevicol Adhesives, Pidilite Industries



opportunities to conduct it at profitable scale to produce increasingly purer products as per market demands with minimum energy input in shortest time without producing waste or by-products. Each combination of Reaction and Reactor is, therefore, a challenge to the Chemical engineer to make it faster, simpler and cheaper.

### **Borderless and Versatile Engineering Profession**

Over the few decades, Chemical Engineering has evolved developing interfaces with newer areas, including Biochemical Engineering, Nano Technology, and Energy Engineering taking advantage of developments in High performance computations, Electronics and Instrumentations and Information Processing. Although the basic responsibility of a Chemical engineer remains in design, testing, scale-up, operation and control of chemical plants, the interface helps the Chemical Engineers to enter into these newer areas at ease. Large Manufacturing facilities such as cements, petroleum refineries, oil and natural gas exploration and semiconductor Industries, biofuels and biotransformations, nuclear reactors, all involve Chemical engineering operations. Chemical engineers find good job opportunities in a wide spectrum of industries involving specialty chemicals, pharmaceuticals, drugs, polymers, textiles, paints, dyes, vegetable oils and foods.

Because of excellent analytical skills Chemical Engineers(CE) can work in areas from chemoinformatics to bioinformatics, drug delivery systems, molecular modelling, to handling systems from nanoscales to global scales for environmental impact and climate change. The versatility of Chemical Engineering education, therefore, makes a wide choice of career options available to the CE candidates. There is a huge scope for higher studies in Chemical Engineering because of highly science based discipline and requirement of RandD in the country. All B.Tech. courses in ICT have much wider base in Chemical Engineering including subjects like Material and Energy Balance, Separation Processes, Heat and Mass Transfer, Chemical Reaction Engineering, Thermodynamics, Process Control, Chemical Process Industries, Chemical Process Economics. Consequently, at Masters level ICT B.Tech. students from all specialisation are accepted for admissions in Western Universities and within ICT itself.

The Integrated Master of Technology with a major in Chemical Engineering and minor in other branches was thus conceived which also includes trimester system and two year's industrial/research internship. These innovative programmes will be offered at the IOC Bhubaneswar and Marathwada Campus at Jalna.

### **International Standing of Department**

The Department of Chemical Engineering is the number one Chemical Engineering Department in the Country by all the standards: teaching, research and industrial relationship, as has been rated by the international surveys conducted by Professor Jude Sommerfield of Georgia Tech., USA since 1964 for every five year period as well as every year and also during the 5-year period during 2014 which included all IITs and IISc. Besides it is among top 10 Departments in the world and in terms of productivity as measured by papers per faculty per dollar spent, it is number one in the world. The number of papers published in peer reviewed journals per faculty is also the highest in India. The FIST programme of DST has revealed that the Chemical Engineering Department is the Best Department in all engineering Departments in India.

This is again the record which has been held due to the research contributions of faculty in international journals of repute. The value and impact of our research is reflected in highest number of papers per faculty member, highest impact factor per paper, and highest number of citations for papers of Chemical Engineering Department. The Department is recognized as the UGC Centre for Advanced Studies for a record time since 1989 and as UGC Networking Resource Centre in Chemical Engineering, since 2008; only one of its kind and further supported by DST-FIST programme with state-of-the-art research facilities.

The faculty has been acting as consultants to industry and the earnings are the highest for any engineering Department in India.



### **Connectivity with Industry**

Collaborative Academic Programs have been initiated with international institutes such as Purdue University, Kansas University, University of Saskatchewan, ICGEB, and, CSIR labs. Many foreign universities have shown interest in collaborating with Chemical Engineering faculty, and the most striking is a string of Canadian Universities desirous of signing MOUs with this Department. The dual Ph.D. degree programme in Chemical Engineering with Michigan State University, USA is the highlight of this year.

### **Accolades and Awards**

The last three Vice-Chancellors / Directors of ICT have been bestowed upon with Padma awards with Prof. Yadav being awarded Padmashree in Jan' 16. Two former Directors of CSIR labs are currently Distinguished Professors in Chemical Engineering Department which is also unique. A number of awards have come to the faculty members in Chemical Engineering including Jagdish Chandra Bose National Fellowship, fellowships of Indian National Science Academy, Indian Academy of Sciences, National Academy of Sciences in India, Indian National Academy of Engineering and Indian Institute of Chemical Engineers. Not only faculty members but students also have bagged a number of awards. Even home paper or design papers of the final year students have been repeatedly rated as the best by the Indian Institute of Chemical Engineers and the Ambuja Cement and Sir P. C. Ray Awards have come several times to ICT which itself is a record. All these awards recognize excellence in the field of Chemical Engineering. The ICT has also received the award for being 'The Best Industry Related Institute in Chemical Engineering' from the confederation of Indian Industries and the All India Institute of Technical Education.

### **Employment Opportunities**

Our graduates, numbering over 30-35 per year are accepted with full fellowships in leading universities including MIT, Minnesota, UCB, Caltech, Wisconsin-Madison, Princeton, Stanford, Texas A and M, University of Texas, University of Delaware, Purdue University, and many more. All students are placed in some of the leading industries in India, with salaries ranging from Rs. 3.5 lakhs to Rs. 15.5 lakhs per annum and these are hard core industries and not the software companies. Several leading industrialists and owners of fortune-500 company owners are our graduates, including top planners and policy makers, who have been bestowed with Padma awards.

### **Research Interests of Faculty**

The Chemical Engineering faculty has been well known for their publications in peer reviewed high impact factor journals, patents and industrial consultations in a variety of research interests.

Major Thrust of Research Areas : Development of Novel Reactors, Reactions and Separation Processes Analysis of Multiphase Phenomena, Computational Fluid Dynamics for Multiphase Systems, Novel Catalytic Materials and Processes, Surfactant Science and Hydrotrophy, Organic Chemical Processes Development, Biotechnology and Downstream Processing, Adsorptive and Chromatographic Separations, Green Chemistry, Engineering and Technology, Cavitation Phenomena, Sonochemistry, Membrane Based Separation Processes, Bio-Technology and Bio-medicines, Environmental Protection and Safety, Nanoscience and Nano-Technology, Nano Technology, Materials Technology

In the global context, the priority research areas as identified by the Chemical Engineering Department are:

Multiphase reactions, multiphase reactors and separation processes

Energy engineering with an emphasis on the renewable energy resource

### **Laboratory and Research Facilities**

All Chemical Engineering laboratories and faculty offices have been remodeled during past 5 years. The labs are equipped with state-of-the-art instruments and have gone a total face-lift. UG students are provided computational facility in the main laboratory, including latest software required for modeling and simulation. Some of the sophisticated equipment which have been

acquired and used continuously are: GC-MS, LC-MS, SEM, TEM, AFM, IC, FTIR, HP-TLC, HPLC, GC, XRD, DSC, DTA/TGA, AAS, Laser-Doppler anemometer, image analysers, pore and particle size analysers, autoclaves of different sizes and MOCs, catalyst screening bench-top autoclave assembly, supercritical fluid phase monitor and reactor, microwave reactors, computer workstations, laminar flow apparatus, fermenters, and many others. Advanced instrumental facilities have been created under industry sponsored projects as well. The new campuses will also be provided with sophisticated instrumental facilities including Ph.D. fellowships.

### **Fellowships**

Twenty Ph.D. fellowships under ICT-DAE Centre for Chemical Engineering Education and Research. Several projects are secured by the faculty in the areas of expertise from central agencies such as DST, DBT, CSIR, including Indian and foreign companies; this number varies from year to year. Interested candidates must appear for the entrance examination for a Ph.D. degree, whether funded government or industry. For GATE qualified students fellowships are offered at the UGC rate and others as per the provision of the funding. No student is admitted to any Ph.D. programme.

Apart from Master of Chemical Engineering programme, the department also participates in two interdisciplinary M.Tech. courses - Perfume and Flavour Technology, Green Technology and Bioprocess Technology. At least 19 Masters fellowships offered for GATE qualified students in the first round and typically this number is around 30+ when the admissions are closed. Besides, about 10-15 M. Tech. students in Bioprocess Technology (with a special reference to downstream processing), Food Biotechnology, Pharmaceutical Biotechnology, Perfumery and Flavour Technology work under the guidance of Chemical Engineering faculty.

### **Interdisciplinary and Cross Disciplinary Programmes**

Several faculty members guide Ph.D. students in all disciplines of Chemistry and Biotechnology, as well as in all branches of Chemical Technology on inter-disciplinary topics and several chemistry graduates have benefitted by their training in the Department of Chemical Engineering.

### **Visiting Faculty Endowments**

There are several endowments created to invite the best of professionals and academics to the ICT. Some eminent faculty from institutes such as MIT, Purdue, Cambridge, Monash University, University of California, Berkeley, University of California, Santa Barbara, National University of Singapore, Montreal, University of Michigan, Michigan State University, University of Alberta,



RMIT Australia, IIT-Chicago, Cambridge University, University of Manchester, IIT-Bombay, IIT-Kanpur, IIT-Madras, National Chemical Laboratory, have taught UG and PG courses in ICT under these endowments.

These lectures form part of audit courses for research students. Besides, public lectures are organized under each endowment.

## **HOMI SETHNA ICT-DAE CENTRE FOR CHEMICAL ENGINEERING EDUCATION AND RESEARCH**

### **Preamble:**

The Institute of Chemical Technology (ICT) and the Department of Atomic Energy (DAE) signed a Memorandum of Agreement (MOA) in 2006 having far reaching benefits for Indian S and T, which was based on the excellent relation between these two organizations and successful completion of projects by ICT faculty of Chemical Engineering. The MOU covers the following activities.

- (A) Instituting an interdisciplinary Ph.D. programme in Chemical Engineering.
- (B) Undertaking RandD projects in the areas of common interests and related to nuclear fuel cycle and advanced technologies.

DAE Research Institutions, namely, Bhabha Atomic Research Centre (BARC) and Indira Gandhi Centre of Atomic Research (IGCAR) are premier multidisciplinary RandD organizations engaged in research with the objective of generating knowledge and techniques for nuclear power production, advancement of science, use of radioisotopes in industry, health and agriculture as well as research in frontier areas of science and technology. BARC and IGCAR have multi-disciplinary groups of experts who have contributed to the development of processes and technologies related to thermal and fast nuclear reactors, fuel cycle and related areas. BARC and IGCAR have pursued research and development in chemical engineering in a rigorous way for many years in the areas defined by DAE's mission oriented programmes as well as projects of national interest. BARC and IGCAR support academic programmes within the DAE and also in the academic institutions and research centres in various parts of the country.

ICT is one of the foremost academic institutions in India, and has the necessary infrastructure in terms of trained manpower (including students) and a long tradition of research and development in Chemical Engineering and Chemical Technology. ICT has also had long and fruitful experience of working with BARC and other units of DAE on research projects related to Chemical Engineering and process technologies and have completed them meeting the high standards expected by DAE. On the national level, ICT is a major resource Institution in terms of technology development and fundamental research at the cutting age on the global scale. They have also entered into an MoU with Homi Bhabha National Institute (HBNI) for collaborating on academic programs especially suited to the requirements of DAE institutions.

In the Xth and XIth Five Year Plan, BARC and ICT had undertaken a joint research programme encompassing several DAE research projects in the Chemical Engineering field. Through the Virtual Centre, called, DAE-ICT Centre for Knowledge Based Engineering, BARC scientists and ICT faculty have collaborated and very successfully completed several projects. In view of the success of the collaborative programme through the Centre for Knowledge Based Engineering, BARC and IGCAR proposed to enlarge the scope of collaboration by establishing the DAE-ICT Centre for Chemical Engineering Education and Research that will synergise the strengths of both these organisations. On the one hand, ICT has proven track record in training high quality manpower and in conducting research in Chemical Engineering and technology, on the other hand BARC and IGCAR have demonstrated over decades their ability to conduct multi-disciplinary, mission oriented RandD leading to a large number of indigenous and innovative chemical engineering processes, equipment and instruments, and technologies.

DAE has to develop several innovative technologies to tackle the problems of efficient nuclear fuel utilisation in the second and third stages of nuclear power programme. This requires a pool of qualified, motivated and talented young research scientists with multidisciplinary expertise. The number of Ph.D. level chemical engineers is small in this country and the number of chemical engineers entering DAE is even less. Thus, the number of Ph.D. scholars working on energy related programmes needs to be increased. Further, these scientists need to have wider knowledge of both basic sciences and allied engineering subjects besides chemical engineering, which is essential for the development of innovative technologies. However, the present education system imparts expertise only in selected areas. To satisfy the need of greater number of Ph.D. scholars well versed in basic sciences and chemical engineering, DAE and ICT wish to take an initiative for imparting doctoral education in chemical engineering with multidisciplinary character.

### **Scope of Collaboration**

1. To provide doctoral degrees to promising candidates with talent and aptitude for carrying out advanced research and development activities in science and technology.
2. To furnish a multidisciplinary, flexible and innovative Ph.D. research programme in Chemical Engineering with special emphasis on :
  - (a) Acquisition of proficiency in research, knowledge, data generation and analysis, mathematical modeling, and management with sharpening skills in innovative experimental methods and problem-solving capabilities;
  - (b) Creation of a pool of young talented, dedicated and committed individuals with passion and involvement in pursuing research and development as a career;
  - (c) Inculcation of attitude, temper, and outlook for developing social commitment as well as high level of scientific ethics and integrity.
3. To evolve a symbiotic relationship between the ICT and DAE Institutions in such a way that it enables the Collaborative Programme to grow and develop, and in turn ensures that research projects of relevance to the objectives of DAE research institutions are integrated with creative and innovative content.
4. To select students on the basis of an all-India test and subsequent interview jointly conducted by ICT and BARC/IGCAR.
5. To promote effective linkages on a continuing basis between ICT, BARC and IGCAR and the Industry for joint research projects and training programmes and other academic activities related to these Institutes. The expertise and experience so gained shall be shared with other Universities in the country at large.
6. To disseminate the new knowledge in the form of publications, theses, seminars and conferences.

### **Ph. D. Programme in Chemical Engineering**

#### **Induction of Students**

It is proposed to introduce a Ph.D. programme with an initial intake of about 20 students per year, drawn from Chemical Engineering, Metallurgical and Mechanical Engineering disciplines at the Bachelors and Masters Levels, and also from Chemistry, Physics and Mathematics streams with Masters degree. The Masters Degree holders in Engineering will have to spend a minimum duration of 3 years, the Bachelors degree holder in Engineering 4 years and M.Sc. degree holder in science stream 5 years for earning the Ph.D. degree. The students will be selected on the basis of all India written test and interview conducted jointly by ICT and DAE.



### **Course Work, In-Plant Training and Research**

#### **a) Course Work**

The proposed curriculum will have a fine balance of basic and engineering sciences. The curriculum will contain adequate fundamental and core courses to equip the students adequately to make them practising chemical engineers, as enumerated below. At the same time, they will have a background for starting independent research career.

### **Areas of teaching and research**

- |                          |                                      |
|--------------------------|--------------------------------------|
| (a) Chemical Engineering | (c) Bio-technology                   |
| (b) Process Technology   | (d) Materials Science and Technology |

### **Typical List of courses to be taken by the Post Graduates in Science**

- (a) Material and Energy Balance Computations
- (b) Industrial and Engineering Chemistry
- (c) Generation and Transmission of Power
- (d) Electrical Engineering and Electronics
- (e) Applied Mechanics and Strength of Materials.
- (f) Momentum Transfer
- (g) Heat Transfer
- (h) Mass transfer
- (i) Unit Operations
- (j) Chemical Reaction Engineering
- (k) Engineering Graphics
- (l) Project Engineering Management and Economics
- (m) Biochemical Engineering
- (n) Advanced Separation Processes
- (o) Process simulations
- (p) Materials Processing and fabrication technology
- (q) Nuclear Reactor Theory
- (r) Nuclear Chemical Engineering
- (s) Statistical Methods of Analysis
- (t) Instrumental methods of analysis
- (u) Nuclear chemistry
- (v) Radiation chemistry
- (w) Chemical Engineering Thermodynamics
- (x) Process Hazard Analysis and Safety

### **Typical List of courses to be taken by the Engineering Graduates/ Post Graduates**

- (a) Quantum Mechanics
- (b) Structure - Property Relationships
- (c) Materials Physics and Chemistry
- (d) Advanced Chemical Engineering Thermodynamics
- (e) Nuclear Reactor Theory
- (f) Nuclear Chemical Engineering
- (g) Process simulation and optimization
- (h) Transport phenomena
- (i) Advanced Reactor Engineering
- (j) Advanced Mass Transfer

- (k) Statistical methods of analysis
- (m) Nuclear chemistry
- (n) Radiation chemistry
- (o) Process Hazard Analysis and Safety

### **In-Plant Training**

All the students before starting Ph.D. research will undergo in plant training for a period of one to three months in the process industry. Some students will undergo training in DAE.

### **Research Projects**

The Ph.D. scholars will take up research projects primarily defined by BARC and IGCAR. However, there will be a certain degree of flexibility for selecting research projects outside the areas of relevance to DAE. To take advantage of the excellent laboratory and library facilities at the DAE institutions, the faculty and students will be provided access to conduct experiments and use of the library and computational facilities at the DAE institutions.

## **COLLABORATION WITH HOMI BHABHA NATIONAL INSTITUTE**

### **Preamble**

There was a dire need to recognize the common interests of ICT and HBNI constituent institutions (CIs) in pursuit of knowledge through doctoral and master's programmes. There is a possibility of the candidates admitted in some of the CIs of HBNI may study at the ICT and carry out the projects under the joint supervision of the faculty members from the ICT and the scientists and faculty members from the CIs of HBNI. It will be mutually beneficial to have lectures by the ICT faculty members at the HBNI, and by the HBNI faculty members and scientists at the CIs of HBNI at the ICT. For the purpose of academic programmes, the following units of DAE are the Constituent Institutions (CIs) of the HBNI are included:

1. Bhabha Atomic Research Centre (BARC), Mumbai
2. Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam
3. Raja Ramanna Centre for Advanced Technology (RRCAT), Indore
4. Variable Energy Cyclotron Centre (VECC), Kolkata
5. Saha Institute of Nuclear Physics (SINP), Kolkata
6. Institute of Plasma Research (IPR), Gandhinagar
7. Institute of Physics (IOP), Bhubaneswar
8. Harish-Chandra Research Institute (HRI), Allahabad
9. Tata Memorial Centre (TMC), Mumbai
10. Institute of Mathematical Sciences (IMSc), Chennai

The two Institutes shall recognize each other's research guides in the disciplines of common interests. The identified faculty members of each Institute may function as Honorary Professors of the other Institute and may participate in the teaching programmes of the other Institute in honorary capacity, as per the Rules of the respective institute. The Honorary professors will enjoy the library facilities of each other's institutes like regular faculty. However, a separate request must be made to avail of book-borrowing facilities. In order to share expertise, some seats may be given on priority basis to the faculty and students of the other Institute in the academic/research programmes of one Institute, which are mainly for the in-house persons and where limited access is available for persons coming from outside, such as training programmes, seminars, workshops, etc. The research facilities at one Institute should be made available to the students/scientists/faculty of the other Institute through the involvement of research supervisors or the technology advisors, as per the norms of the respective institute, as follows:

1. A student registered for a post-graduate course in one Institute shall be governed by the Rules of that Institute and will earn the credits of the course as per the prescribed norms. However, a student from one Institute will be permitted to enroll for equivalent courses in the other Institute and earn the credits by attending the courses and clearing the respective evaluation procedures, provided such courses are duly approved by the parent Institute. Thus, the two Institutes shall recognize the credits earned by the students in the institute other than the one where they are enrolled.
2. To facilitate the process of a student attending the course work in the partner Institute, the supervisor of the student in the Parent Institute shall put up a proposal (in consultation with the appropriate academic bodies of the Institute concerned) to the Dean (HBNI)/ Dean(ICT), as the case may be.
3. A research guide in one Institute may select a faculty member from a partner institute as a co-guide for guiding a Master's or doctoral student working under his/her guidance; provided such a declaration is recorded at the time of registering the student, with consents from the Heads of both the Institutes. However, collaboration among faculty of each institute, without any such formal arrangement will be within the frame-work on the MOU. This may be required for joint publications.
4. A student with a co-guide should be permitted to work in the specified laboratories of the organization to which the co-guide belongs and avail the facilities there from, and the organization should have no objection to the inclusion of the outcome of the research under this programme in the thesis of the student.
5. Any liability arising out of the work done by a student in the co-guide's organization shall be the responsibility of the co-guide and the parent Institute of the student shall not be responsible for the same.
6. Any patent emerging out of the research work under such a programme shall be with the authorship of candidate, guide, co-guide, and the parent Institute and shall be filed as per the respective ordinances, regulations and rules of the Institute.
7. In case the co-guide leaves his organization, or retires the guide may accept a co-guide from the same organization, provided the new co-guide is recognized. In case such a co-guide is not available, the entire responsibility of successful completion of the programme shall lie with the guide. If the retired person remains with the institute or with other institute of HBNI, as an emeritus scientist, he/she will be permitted to continue as co-guide till the period of his/her new assignment.
8. In addition to the recognized research supervisor, a student may be advised by a Technology Advisor, who need not be recognized Ph.D. Guide, from the other Institute. The Technology Advisor shall be a person of high repute in the area of research being pursued by the student. The Technology Advisor shall be chosen by a research guide, with consent of the Director, ICT and Director of the respective constituent Institution of the HBNI.

## DEPARTMENT OF ATOMIC ENERGY (DAE) -DGFS PROGRAMME FOR M.Tech DEGREE

Institute of Chemical Technology (ICT) is one of the Institutes recognized by the Department of Atomic Energy for its DGFS programme. It is a Two-Year DAE Graduate Fellowship scheme for Engineering Graduates and Post-Graduates in Physics for joining M. Tech. in specified specializations

Qualifying Degrees and Disciplines:

B.E/ B. Tech. in Mechanical, Chemical, Metallurgical, Civil, Electrical, Electronics, Computers, Instrumentation and Engineering Physics.

OR

M. Sc. in Physics, Chemistry, Biosciences, Geology, and Geophysics.

A minimum of 60% (aggregate) of a CGPA of 7.01 in the qualifying degree is an essential requirement. Science candidates are further required to have secured a minimum of 60% (aggregate) in B.Sc. also. Screening and Selection of candidates is through a written test or on the basis of valid GATE score. Applications for the programme are to be submitted to DAE as per advertisement in National newspaper and Employment News. (for details visit website: <http://oces.hbni.ac.in>)

### Qualification Criteria for Admission and Registration for Ph.D. (Tech.) in Chemical Engineering and the Course Requirements

Category	Basic Qualification for Admission	Course requirement
1	B. E. in Chemical Engineering / B. Tech. in Chemical Engineering / B. Chem., Eng. / B. Tech. in Chemical Technology (ICT) in first class or equivalent	Course work for M. Chem. Engg. (credit courses) (to be completed in 2 semesters from the date of admission) and courses related to nuclear Engineering (to be completed in 3 semesters from the date of admission) Nuclear and Reactor Physics Nuclear Chemical Engineering Chemistry of Radionuclides Material Science in Nuclear Engineering
2	Bachelors degree in Chemical Engineering or Chemical Technology in first class or equivalent + Course work in BARC training school	5 courses including one seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 2 semesters from the date of admission)
3	Bachelors degree in Mechanical / Metallurgical Engineering (except Chemical Engineering / Technology) I first class or equivalent + Course work in BARC training school	10 courses and one Seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 4 semesters from the date of admission)
4	Masters degree in Chemical Engineering / Masters degree in Chemical Technology (ICT) in first class or equivalent	courses related to nuclear Engineering (to be completed in 2 semesters from the date of admission) Nuclear and Reactor Physics Nuclear Chemical Engineering Chemistry of Radionuclides Material Science in Nuclear Engineering
5	M. Tech. Degree in Chemical Engineering from HBNI + Course Work in BARC training school	Minimum number as required by UGC guidelines.
6	M. Tech. Degree in any branch of Engineering (except Chemical Engineering / Chemical Technology) from HBNI + Course Work in BARC training school	4 - 5 courses and one seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 2 semesters from the date of admission)
7	M. Sc. Degree in Physics / Chemistry / Mathematics in first class or equivalent + Course work in BARC training school	8 - 10 courses and one seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 4 semesters from the date of admission)



Category	Basic Qualification for Admission	Course requirement
8	M.Sc. Degree in Physics / Chemistry / Mathematics in first class	14 Credit courses and one seminar in Chemical Eng. courses (to be completed in 4 semesters from the date of admission) courses are listed below in category 3.3
9	M. Sc. Degree in Physics / Chemistry /Mathematics in first class (Rank in top 3 in University)	(i) Typically 20 courses comprising of: (to be completed in 4 years from the date of admission) B. Chem. Eng. Level courses (Credit courses) Applied Mathematics - I, II and III M. E. B. C. Momentum and Mass transfer
		Energy Engineering Chemical Engineering Operations Heat Transfer Chemical Reaction Engineering Design and Analysis of Experiments M. Chem. Eng. Level Courses (Credit courses) Advanced Momentum transfer Advanced Heat Transfer Advanced Mass Transfer Advanced Reaction Engineering Thermodynamics of Phase Equilibrium Advanced Separation Processes Advanced Reactor Engineering Nuclear Engineering Level courses (courses) Nuclear and Reactor Physics Nuclear Chemical Engineering Chemistry of Radionuclides Material Science in Nuclear Engineering

## UGC NETWORKING RESOURCE CENTRE IN CHEMICAL ENGINEERING

### Preamble

The spectacular and consistent performance of the Department of Chemical Engineering, having been rated as number one for past several decades, including 2009-10, which has been revealed by the international surveys, has earned it much recognition, accolades and awards. Apart from the Centre of Advanced Studies, the UGC has recognized it further by awarding the first ever Networking Resource Centre in Chemical Engineering, in October 2008, to undertake following activities:

1. Research, training and skills development of the faculty and research scholars through periodic discussion, workshop and summer/winter schools
2. Capacity building by adopting faculty and Departments for augmenting their research skills and to mentor them
3. Hosting and facilitating researcher from other institutes/universities to carry out key experiments
4. Augmentation of information resource facility of the Department to provide quality research information to other institutes/researchers
5. To enhance and build state of the art in-house research infrastructure and other research facilities in the Department.

The rapidly changing face of research in chemical engineering offers new opportunities for integrating new research areas within its fold and several workshops, courses, demonstration experiments, regular experiments and seminars have been organized by the Centre. The objective of many of these activities is to acquaint the Chemical Engineering community especially from academic institutions with the emerging face of our discipline, and the how to meet the new challenges that it poses to contribute at the leading edge. The idea is also to train the academic fraternity so that overall research and development in chemical engineering is promoted. The interactive workshops also aim at initiating a dialogue on how the new face of Chemical Engineering can be used to address problems, specific to us as a growing nation. The vacation periods, long weekends and week-long programmes are undertaken which are publicized on the homepage of the institute and also communicated to all chemical engineering Departments. Not only the ICT faculty but experts from other institutes, industries, and visiting professors from foreign universities have delivered lectures and interacted with young faculty.

### **Rules and Guidelines for Registration of Teachers from UGC and/ Or AICTE Approved Colleges for Ph. D.**

Under this programme the Centre is required to generate human resource and keep on organizing seminars, workshops, and laboratory sessions for the benefit of teachers and students. One of the primary requirements is to create qualified doctoral degree holding teachers who in turn will generate quality students. Following are the salient points of this programme proposed by the Centre.

1. Teachers who have been in the services of any Engineering and Technology Colleges approved by the UGC/AICTE are entitled for registration for Ph D with Chemical Engineering faculty of the ICT.
2. A minimum service of two years and permanent placement in the concerned college will be the basic criterion.
3. The teacher must have a consistently good academic record with minimum first class in bachelors and/or masters degree from a reputed university.
4. The college management should undertake the responsibility of releasing the person for experimental work or discussions with the concerned research guide from time to time. A proper time table should be prepared by the concerned teacher and his supervisor, which will be approved by the Co-ordinator of the Centre. A bond in this regard should be signed and approved by the Director, ICT.
5. Teachers can work in the ICT labs during vacations and holidays and after their office hours if they come from colleges in the city or nearby. They must indicate on which date they will avail of the research facilities in ICT. A proper log book must be maintained by the candidate duly signed by his supervisor which will be authenticated by the Co-ordinator of the Centre.
6. A maximum period of 5 years extendable by 1 year will be allowed in case of teachers who are part time but put in at least 3 months full time work in a year in the labs. In such cases, part of the experimental work could be allowed to be done in their premises for which their management will provide them with necessary facilities. The characterization and other sophisticated analysis must be done in ICT. Exclusive theoretical work should be discouraged as much as possible to give the teacher a hands-on experience and bringing them into an environment of research. However, this will be left to the individual supervisor's discretion, who should take abundant precaution to avoid unethical practices.
7. The registered candidates will be required to publish or patent some part of their work within two years of the registration otherwise this registration will not be continued. The publication must be done in international journals with decent impact factors. Multi-authored papers without much input from the teacher should be avoided. Conference proceedings which are not peer reviewed will not be considered as publications.

8. The registered teachers as Ph D students should not register any Masters students with themselves in his/her own college to avoid research by proxy. The candidate as well as his/her supervisor must give an undertaking, with a counter signature of the concerned principal to this effect to avoid degeneration of this novel concept into a Ph D by unscrupulous means.
9. If the teacher intends to join the ICT on leave without pay for a period of three years, then the candidate could be eligible for the UGC fellowship under our SAP programme.
10. Teachers with Masters Degree will be allowed to undertake benefit of this scheme. Those who have got Bachelor's Degree ought to take leave from their colleges in order that they complete the theory part of the Masters Programme for direct Ph.D.
11. All regular admissions criteria are applicable to these candidates and they must also do the course work required for Ph.D. programme.

## **CENTRE OF EXCELLENCE FOR PROCESS INTENSIFICATION (CoE-PI)**

The Centre for Process Intensification for Process Industries (CoE-PI) under TEQIP in the Institute of Chemical Technology (ICT), Mumbai, aims to be a world leader in the field of conceptual process design, Process Integration and Process engineering. The methodologies will allow environmentally friendly process design with the most efficient use of raw materials and energy with affordable cost. The Centre shall be dedicated to the development of design methodologies in the field of process intensification and process integration. The Centre aims to change process design practice, by developing and disseminating new process design and integration methods for clean and efficient use of raw materials and energy at lower cost. The process intensification and integration will be based on interactions between elements of the chemical and physical processes that take into account during the process design the material and energy flows. The resulting integrated processes exploit synergies between the system components, leading to processes with superior performances, in terms of their raw materials consumption, energy demand, process economics, environmental impact and sustainability. The centre has identified 13 research projects which have great relevance with present industrial practice.

## **DEPARTMENT OF CHEMISTRY**

### **VISION:**

To be a nationally recognized chemistry resource centre, making noteworthy academic contribution and undertaking contemporary and relevant research.

### **MISSION:**

- To induct and retain competent and committed personnel
- To produce quality publication and proficient man power
- To collaborate with Industry and academic centres of excellence
- To undertake sponsored projects of national and social relevance
- To participate in state and national level educational programmes
- To conduct relevant and contemporary M.Sc. and Ph.D programmes

### **PROFILE:**

Department of Chemistry was established in 1951 to cater the responsibility of teaching basic chemistry. The department shoulders the responsibility of conducting chemistry courses, theory as well as practical for undergraduate programmes of all the three branches, viz., B.Chem.engg., B. Tech. and B. Pharm. The Department also offers admission to Ph.D. (Science) Chemistry, Ph.D. (Science) Biotechnology, Ph.D.(Tech.) chemical engineering programme and the intake

of students varies based on the vacancies with the faculty members. Department has started M.Sc. (Chemistry) two years course by papers with an intake capacity of 20 from Academic Year 2010-2011. The programme is accredited by the Royal Society of Chemistry, UK in 2014.



The Department is active in teaching, research and industrial collaborative work. Considering the contributions the department has been recognised by the university Grant Commission, under special Assistance Programme (SAP), Departmental Research Support (DRS-II) and DST-FIST Programme. Through this programme the Department has 10 Ph.D. fellowships to offer. The faculty members

are actively engaged in research areas of current relevance. The research work carried out in the department is funded by the research projects sponsored by funding agencies like UGC, CSIR, DAE, IGCAR and DST. Some of the faculty members are carrying out research in collaboration with reputed organisation from both India and abroad. In the last five years the department has published more than 200 research publications in international journals of repute with an average impact factor of more than two. The work is also recognised well in term of large number of citations (more than 5000). The faculty member is actively involved in several extra-mural academic activities, like the Indian National Chemistry Olympiad, National Initiative for Undergraduate Sciences (NIUS). Currently the department has 45 Ph.D. and 37 M.Sc. Students. The Students who have obtained doctoral degrees from the Department get attractive placements in industries and research institution. The research students of the department assist the faculty in conducting undergraduate courses. This helps them in their personal development.



Organic Chemistry Undergraduate laboratory and three research laboratories renovated to state-of-art standards



- Major upgrading of equipments for UG, PG practicals as well as research facilities
- Three GC units reinstalled for UG and PG practicals with generous support from UAA
- Raman spectrometer acquired and installed

The Department is equipped with sophisticated instruments such as FTIR, UV-VIS, Spectrophotometer, GC-MS, gas chromatographs, HPLC, Zetameter, Viscometer, Microwave synthesizer, Digital polarimeter, computer workstation, Electrochemical Workstation, Vapour pressure reactor, supercritical carbon dioxide reactor, surface area analyser, high pressure reactors, Tensiometer, X-Ray diffraction unit. The Department has several endowments through which, experts from various leading research institutes working in frontier areas in Science and Technology are invited for lectures and interaction.



## DEPARTMENT OF GENERAL ENGINEERING

### VISION :

To contribute to India through excellence in technical education and research, to serve as a valuable resource for industry and society.

### MISSION :

To impart basic knowledge of General Engineering subjects to students to enable them for better understanding of practical applications to various industrial problems.

To undertake collaborative projects which offer opportunities for long term interaction with academia and industry.

To provide an excellent educational experience for its students. This experience includes an emphasis on the technical communication, teamwork and life-long learning skills in which graduate engineers held to excel at the workplace and in society.

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General Engineering Department of the Institute was established in the year 1954 and is involved in teaching undergraduate as well as postgraduate students of the institute. The Department is running a full time master's Program M. E. in Plastics Engineering from 1972, the course is accredited by National Board of Accreditation. Students having basic qualification in Mechanical, Production, Plastic/ polymer, Electrical and chemical engineering and technology are eligible for admission to this course. The course consists of curriculum on Processing of plastics, composites, Design of Molds, Design of processing tools/ machinery, CAD, CAM and CAE, Testing of plastics and Polymer applications in various fields of engineering. Development of new materials for industrial as well as domestic applications. Apart from laboratories such as workshop, electrical and electronics, Applied mechanics and Strength of materials. The department has a provision for special facilities of processing of plastic and polymer composites, testing of plastics, and computer aided design and drawing laboratories. These laboratories cater to the needs of the undergraduate and post graduate students of the department and the Institute. The Department has plastic processing equipment such as micro-processor controlled injection molding machine with molds of standard mechanical test pieces, blow molding machine, rotational molding machine, and as well as twin screw extruder. Department is having licensed CAD and CAE softwares such as Mold flow, Pro-engineer and Solid Works with high end computer facilities. The department is having a facility of Plastic Testing such as impact tester, MFI tester, hardness tester etc. Department has recently set up an Environmental Engineering Laboratory having facility of Synthesis of polymeric filter media membrane for water and wastewater treatment. Laboratory is well equipped with facilities for analysis of water and wastewater. All these laboratory facilities are used by M E and Ph D students to do their research work. GATE qualified candidates of M. E. in Plastics Engineering receive AICTE fellowship.

Candidates can register for Ph. D. in Plastics/ Mechanical/ Production/ Electrical/ Civil/ Engineering either full time or as the external candidates (Only for teachers/ employees from Government organizations). In recent years the enrollment for Ph D in the department is increasing. Presently number of PhD students enrolled in the department in various branches are: 29 in Mechanical Engineering, 09 in Civil Engineering, 05 in Plastic Engineering, 11 in Electrical Engineering and 04 in Electronics Engineering etc. This year 3 AICTE Doctoral students taken admission, besides 1 student already working under National Doctoral Fellowship. Department is also having industry sponsored Ph D student from BASF and Master's student from Dow Chemicals. Recently the department faculty has been awarded one national patent based on the work done in recently set up Environmental Engineering laboratory under DST funded project. The patent is on "Continuous extraction of pure water from feed with resaturation and reuse of draw". The technology is successfully implemented at Ausa, District : Latur. Department is also involved in execution of Research project funded by DST, Under this project a lake is rejuvenated, 5000lits/hr R O plant is set up which is catering the treated water needs of Ausa town. Another major project under Rajiv Gandhi Science and Technology Commission of Govt of Maharashtra is being executed by one of the faculty.

The department is having specialized teaching faculty from mechanical, plastics, production, civil, electrical and electronics branches. Most of the faculty are guides for the masters and doctoral

programs of the institute. Besides teaching and research, departmental faculty members are holding associate dean position and member of various inhouse committees to help the management of the institute. Students can take up research in multidisciplinary areas.

The department is also responsible for Civil and Electrical maintenance of infrastructure such as institute buildings, laboratories, faculty quarters and hostels. Department is actively involved in the development of the new buildings and infrastructural facilities in all the campuses. Department looks after Liaisoning with BEST and Municipal Corporation for all the requirements of the institute upto some extent.

## DEPARTMENT OF MATHEMATICS

### VISION:

The Department of Mathematics, Institute of Chemical Technology, Mumbai, aims to be an internationally leading mathematics department that will offer innovative educational and research programmes in mathematical sciences and their applications in science and technology

### MISSION:

In pursuit of its vision, the department wish to (i) offer courses and programs that will ensure that the student get practical knowledge in mathematics which will be relevant to the society (ii) provide a modern educational environment for instruction and research (iii) create an environment for learner to engage in solving real-world problems (iv) contribute to the understanding of complex mathematical structures and their applications.

### RESEARCH AREAS:

The Department of Mathematics has research expertise mainly in the areas of Computational Fluid Dynamics and Mathematical Modeling, Momentum, Heat and Mass Transfer in Newtonian Non-Newtonian Fluids, Singular Perturbation Theory, Optimization Techniques, Statistical Analysis, Data Analysis, Mathematical Biology, Species Distribution Modeling, Applied Functional Analysis, Differential Equations, and Mathematical Pedagogy.

### ABOUT THE DEPARTMENT:

The Department of Mathematics, ICT Mumbai was established in the year 1944. Since its inception it caters to all the courses related to mathematics, statistics and computer programming of UG and PG programmes in ICT. The department offers a 2 year M.Sc. programme in “Engineering Mathematics”. This programme was started in the academic year 2012-2013 under the UGC INNOVATIVE SCHEMES and is very unique in its nature. The department also has Ph.D. programme in Mathematics covering diverse area of research. The community of the department consists of six faculty members, with broad areas of expertise related to mathematics and statistics, and two support staffs. The department has modern and high level computational facilities, consisting of 50 All-In-One Computers, Two Servers, one workstation and a High Performance Computing (HPC) cluster. All computers are installed with software such as MATLAB, Mathematica, SPSS, R Python and Sagemath etc. The department has strong research collaborations with other renowned academic institutions and industries. Students are also provided with industrial internship and placements opportunity. The faculty members of the department are member of Board of Studies of several institutes. The department regularly arranges workshops, conferences and seminars for students and teachers of other colleges. Faculties are also engaged in various training programmes in mathematics and statistics across the country.

## DEPARTMENT OF PHYSICS

### VISION :

To evolve ourselves to understand and know the basics of science and to utilise it to develop newer technologies for the benefit of society and aptly be a part of this Esteemed Institution and to strive to infuse momentum to the Department so that this Department becomes one of the best learning centres of basic sciences and strive to make significant contributions to academia as well as to industry.

### **MISSION :**

Innovatively follow newer ways of teaching and upgrade curricula to infuse enthusiasm of knowing in students.

Work in diverse fields and multidisciplinary themes so that learning and knowledge is gained by faculty to move further to fulfil the vision.

Strive to get funds to upgrade and maintain present research facilities.

### **To create POLYMER and NANO SCIENCE CENTRES.**

Department of Physics at the ICT has the distinction of being one of the earliest Departments in the Institute. It was started as Optics Section in 1935 which was subsequently changed as Physics Section in the Second Five Year Plan and then to Department of Physics under MUICT. Department of Physics undertakes undergraduate and post graduate teaching in Physics. The Department participates in 1<sup>st</sup> year B. Tech. and B. Chem. UG teaching - theory and practical's. The Department offers electives at 2<sup>nd</sup> year B. Tech. and B.Chem. The faculty of the Department undertakes a full course of Physical Methods of Analysis for all branches of M. Tech. students in both the semesters which also serves as a credit course for majority of Ph.D. students. The Department has started M.Sc (Physics) (Material Science) course from year 2014 with emphasis on the Material Science with maximum strength as 20.

The Department is one of the participating Departments of Centre of Advanced Studies in Physio-Chemical Aspects in Textiles, Fibres, Dyes. The Department has made significant contributions in the field of Material Science (Study of Polymer/Polymer composites and nano-composites and their various properties), Solar Thermal Applications, Nano-aided Drug Delivery. The research in Colour assessment of dyed textiles and colour perception is also carried out in this Department. Currently 20 doctoral students are working on various topics. Faculty members have actively participated and attended national and international seminars / workshops and presented their papers. A good number of papers are published in peer reviewed journals. Faculty members have research projects from industry and various government funding agencies. Two patents on solar thermal system are also filed recently.

### **THRUST AREAS OF RESEARCH:**

The faculty of the department undertakes research in many aspects of materials sciences:

- Polymer Morphology/Orientation, Polymer composites / nanocomposites.
- Nano-drug delivery.
- Polymer dispersed Liquid crystals, Plasma processing of Materials.
- Statistical Mechanics applied to Chemical Engineering Thermodynamics.
- Synthesis and functionalization of CNTs, Energy storage, Super-capacitors.
- Magnetism, transport properties of quantum magnets and Low-temperature Physics.
- Computational Physics, Phase Transitions in Polymers and Gels.
- Solar Thermal applications, Solar Energy Harvesting.

### **NAME OF THE PROGRAMMES OFFERED:**

#### **M.Sc. Physics (Material Science)**

Ph. D. in Physics (thrust area being Polymer/Polymer Composites and nanocomposites, Solar thermal, Coloured assessment of dyed fabric and study of geometric attributes of Colour, Nanoparticle synthesis, Theoretical aspects of Chemical Engineering, Probing Magnetic properties of materials, Carbon nanotubes, Graphene, Fuel cell electrocatalyst, Energy storage and Electrochemical sensors)

#### **Admission Criteria for the programmes offered**

For M.Sc. Physics: Eligibility: B.Sc. in Physics with minimum 55% or Selection based on Entrance exam. For Ph.D. Physics: Eligibility: M.Sc. in Physics with minimum 55% or Selection based on Entrance exam.

### Courses handled:

First and Second Year B. Chem. Engg. and B. Tech. – Applied Physics I and II, Statistical Mechanics and Colour Physics

Courses for M. Tech. and M.Sc. (Textile Chemistry)

## DEPARTMENT OF SPECIALITY CHEMICALS TECHNOLOGY

### VISION :

To build world class programmes of excellence in education and research in the specialized area of Speciality Chemical Chemistry and Technology for the benefit of society through problem solving competencies

### MISSION :

The department aspires to be one of the world's top color chemistry departments. It will do so by-

Providing knowledge and skilled based training at undergraduate and postgraduate level by designing, teaching, and periodically upgrading a color chemistry and technology syllabus in line with current anticipated trends in industry and academia

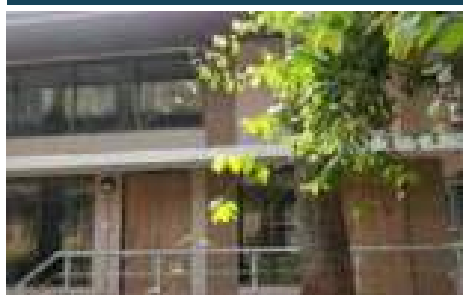
Pursuing world class research in colorants and related areas-basic textile and leather coloration, functional colorants, organic process technology and specialty chemicals

Proactively developing and maintaining close interaction with national and international research laboratories, universities and chemical industries

### ABOUT

Speciality Chemical technology department started functioning in 1944 under the stewardship of Prof. K. Venkataraman, the then director of Institute of Chemical Technology (ICT, formerly known as UDCT), University of Mumbai and is an outstanding department, an epitome of skill, talent, hard-work and success. Highly experienced scientists and scholars such as Prof. B.D. Tilak, Prof. S. V. Sunthakar, Prof. S. Seshadri, and Prof. D.W. Rangnekar have enriched this department and led to its progress. More than 1000 undergraduate students and over 450 postgraduate students have passed out from this technology department.

### Department of Speciality Chemicals Technology



Construction of new NMR laboratory



### RESEARCH FOCUS

Late Prof. K. Venkataraman's pioneering work on synthetic Speciality Chemical chemistry, natural colorants, structural elucidation, spectral studies and his books on "The Chemistry of Synthetic Dyes" are still popular and treated as Bible for Speciality Chemical Chemists and Technologists around the world and was translated in more than 14 languages.



The outstanding research work carried out in the department has created permanent global impact on Speciality Chemicals and allied industries especially the Indian Speciality Chemical Industry. Publications of popular informative volumes, over 1000 publications of national and International repute, have led the progress of the department.

Presently the department is more focused on functional colorants, colorants for non textile applications and high performance pigments. These include the synthesis of laser colorants, colorants for optical information storage devices, colorants for ink-jet printing, colorants for biology, colorants for solar energy conversion and synthesis of various high performance pigments. The department is getting ready to meet the ever changing and demanding global challenges in the field of colorants and allied fields.

### HIGHLIGHTS OF COURSE

The Speciality Chemical technology department is a unique centre of learning. It offers a very advanced curriculum which produces new generation of talented color technologists as well as bright researchers. The curriculum as well as on going research synchronizes with the latest industrial and academic developments. This has led to a high quality of industry-academia relations for better technology and products.

B.Tech. course in Speciality Chemical and Intermediates emphasizes Chemistry, Technology and Engineering of organic intermediates and colorants. We equip our student with knowledge of manufacturing processes, analytical techniques and laboratory synthesis with scaling up skills.

M.Tech. course in Speciality Chemical Technology mainly focusses on the latest process technology and business management. The main aim of this course is to provide better knowledge for the student and prepare him for entrepreneurship. Thos also have 4-6 months industry internship and an extensive project work.

Our curriculum envisages developing entrepreneur skill as well as research attitude. During the curriculum students are exposed to the general engineering skills like, tool design, electrical appliances, machine drawing, etc. In addition, a detailed study of basic sciences (Physics, Mathematics, and chemistry) and chemical engineering aspects are covered. Humanity related subjects like Industrial economics, Chemical Process Economics and Industrial management are also covered during the four-year course of B.Tech. Students also have the opportunity to develop the soft skills like effective communication and software programming languages.

We have a very good track record of 100 % placement for both B.Tech. and M.Tech. course. Our department have produced about 100 first generation entrepreneurs.

## PERFUMERY AND FLAVOUR TECHNOLOGY

### VISION :

Empowering the knowledge of perfumery, flavors and cosmetics through learning a cutting-edge **technology for the benefit of mankind.**

### MISSION :

To educate students and professional in the area of perfumery and flavor, cosmetic technology.

To serve and upgrade the aroma industry in the form of chemical technology so as to make them competitive in local and global market.

Actively nurturing with close co-operation at National and International levels, with reputed institutions, industries, research and development organizations and universities.

We are using flavor and fragrances since last five millennia. The first individual chemist known to history was from the second millennium BCE in Mesopotamia. As an area of modern chemical industry, it is low profile compared with the pharmaceutical and petrochemicals. Yet it is a multi-billion dollar, global industry that impacts on everyone's life in the developed world.

Synthetic chemistry is developing new methodologies, so that materials which are important and available at high cost can be made available at an affordable price. Analytical work on examination

of new exotic materials may also lead to the identification of exciting new compounds.

Currently the organizations like Givaudan, IFF, Firmenich, Symrise and Quest International have turnovers greater than \$ 16 billion. The geographical distribution of sale of flavour and fragrance materials is surprising with North America 30.6 %, Asia Pacific 27 % and Western Europe 23.2%. The key factor is the development of global economy. The market for flavour and fragrance is a mirror of the affluence of a society. With this we can hope that billions can share the living standards of the developed world which in turn shall open the market for the flavour and fragrance industry.

Perfumery and Flavor Technology is a unique course in Institute of Chemical Technology. It started in the year 1990-91. Major funding agencies for this course are FAFAI and ICEOFF and Dr. R.Y. Mantri Endowment. We are offering two fellowships of Rs. 10,000 per month for the Masters course in Perfumery and Flavours.

## DEPARTMENT OF FIBRES AND TEXTILE PROCESSING TECHNOLOGY

### VISION :

- To be the world class centre of excellence in teaching and research in chemical processing of fibres, textiles, apparels and the key areas of technical textiles with ecological, social and ethical responsibility, meeting the crucial needs of trained man power and technological solutions of Indian textile industry.

### MISSION :

- To be the leader in offering top class human resources by training them from bachelors to doctorate level degrees in core competence i.e. in chemical processing of fibres, textiles and apparels.
- To train the industrial technicians as per the demands of the industry, upgrading their skill to meet international quality standards.
- To conduct industrially relevant research and provide technical guidance aimed at offering technology solutions and enhancing competitive edge to the industry.

Almost 5 years ago, in 1933, when the Indian Textile Industry was progressing in full swing in cities like Mumbai, and Ahmedabad, other industries were not even born. It was the time Sir Vitthal Chandavarkar was the Vice Chancellor of University of Mumbai and also the Chairman of Textile Mill Owners' Association.

Thus, the Department of Fibres and Textile Processing Technology (FTPT), formerly known as Textile Chemistry Section, has the unique distinction of being the first discipline with which this institution started. The Department conducts B.Tech. course with an intake capacity of 34, which is highest among all the B.Tech. courses of ICT. The course involves study of chemistry and manufacture of fibres, their chemical processing such as bleaching, dyeing, printing and finishing. It further encompasses the study of chemistry as well as application of various kinds of chemicals, dyes, thickeners, and finishing auxiliaries which are used in chemical processing of textile fabrics and garments. It also involves knowledge of green chemistry, biotechnology and nanotechnology with special reference to chemical processing of textiles.

The post graduate courses of M. Tech. in Fibres and Textile Processing Technology both, Regular- 2 years and Sponsored 3- Years, M.Sc. in Textile Chemistry, Ph.D. (Tech.) in Fibres and Textile Processing Technology, Ph.D. (Sci.) in Textile Chemistry and Ph.D. (Sci.) in Chemistry attract a large number of students and so far more than 2500 graduates and 500 post graduates have passed out from this Department. The faculty of the Department has good interaction with the industry. Several industries and institutions have signed MOUs for research collaboration with us. Under these MOUs we offer Ph.D. and M. Tech. courses to their scientists. A number of industries have been benefited by the technical advice given by the faculty. There have been a number of industrial and governmental research projects in which problems of mutual interest

are investigated and the students as well as the Department have been benefitting by this interaction. The Department is recognized as Centre of Advanced studies in “Physicochemical aspects of Textile, Fibres, Polymers and Dyes” presently in Phase VII, since 1962. It was also recognised under the MODROB scheme of UGC. The Department is has been funded by TEQIP. In the month of December 2012, the Department got recognised as DST-FIST funded Department for the second time. The department also played an important role in evaluating TUFs under Ministry of Textiles, GOI. Also, the Department organizes guest lectures by industry experts under different endowment programmes. An international conference ‘Texsummit’ was organized by the Department recently, in December 2012. The faculty is engaged in high quality fundamental as well as applied research and they have got over 1000 publications in Indian and International journals as well as reputed fellowships to the credit from recognized institutions in India and abroad.

After the globalization of the markets with border-less trade, textile manufacturing activities are shifted to country like India which is fast developing economy. Textile being one of the fundamental needs of human being, it is a mother industry, next to only agriculture sector, involving over 60 million people. Today, the business is fast growing and will soon touch around US\$ 100 Billion. However, in the border-less trade many multinational brands are competing and the critical area of chemical processing of textile fabrics and garments requires tremendous amount of consolidation in terms of well trained manpower which can keep pace with latest technological operations and demand of stringent quality parameters in shortest delivery time giving competitive edge to the manufacturers. There is a huge shortage of Textile Processing graduates in the core textile industry as well as in multinational and reputed Indian manufacturers of dyes, chemical and auxiliaries. Thus the scope for graduates and postgraduates of this Department is enormous and such a demand with every passing day will only be rising given that consumption of apparels and technical textiles in India and abroad is increasing at galloping rate. The Department has a twinning programme with Ethiopia for past 4 years and is involved in helping Ethiopian textile Industries Development Institute (ETIDI).

## DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY

### VISION :

Establishing a center of excellence to provide demand driven, value-based and quality technical education to make India a developed country through socio-economic transformation

### MISSION :

Creating an atmosphere to deliver fundamental knowledge in Food Engineering and Technology for the students to fulfill the need of all segments of society and the environment.

Starting from the classroom teaching and simultaneously creating a multi-disciplinary platform capable of conducting research, technology development and solving industrial challenges.

Providing leadership and training personnel for the benefit of the industry and society complying with overall activity towards economic growth of the country.

This Department is the first in our country to offer specialized education in Food Technology. The B. Tech. (Food Eng. and Tech.) course trains the students in chemical, biochemical and microbial aspects of foods. Students are also taught how high quality products can be prepared and preserved for storage and how the storage conditions might affect the quality. The course gives adequate engineering inputs for large-scale production. The training also includes development of food products, manufacturing processes, design of factory with proper quality assurance system established. Economic feasibility of marketing such products is also taught during the course. The major research interests include carbohydrate chemistry and technology with focus on Indian traditional foods; and food microbiology related to quality, safety and

application of new technology. Prof. D.V. Rege Centre has been founded to cater to the needs of Food Technology Research.

The UGC has recognized the Department as Centre of Advanced Studies in Food Engineering and Technology, under which 15 SAP fellowships are awarded per year. A new course assisted by DBT in Food Biotechnology has been in place since 2009-10 with 10 M. Tech. GATE fellowships. The Department also participates in two interdisciplinary M. Tech. courses - Perfumery and Flavour Technology, and Bioprocess Technology.



Inauguration of Prof. D.V. Rege Centre for Advanced Food Technology on August 15, 2019 by Dr. G. N. Warke, Managing Director of Hi-Media Laboratories Pvt Ltd. The centre was renovated by the generous donation from Hi-Media.



High-Tech FET Conference Room was created with the generous donation by Fine Organic Industries Ltd. in the memory of Mr. Ramesh M. Shah, Founder of Fine Organic Industries Ltd. It was inaugurated by Prof. J.S. Pai, Executive Director, PFNDIAI on November 16, 2019.

## DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY

After WW-II, the Department for Technology of Oils, Fats and Waxes was started, which was headed by Professor J. G. Kane, whose work on non-edible oils was exceptional. The Department has been in forefront for its quality education. Several of its alumni have been industrialists and reputed educationists.

### VISION :

Harnessing innovative skills of its faculty and students to achieve a global leadership position in Oils, Oleochemicals and Surfactants Technology, while nurturing a culture of trust and healthy competition in order to serve the critical professional needs of industry and society.



**MISSION :**

To pursue world class programs of excellence in education and research in specialized areas of Oils, Oleochemicals and Surfactants Technology relevant to the sustainable development of process industries that require problem solving competences in these core areas of knowledge.

**What is this Technology?**

The lipids are a class of biochemical compounds, many of which occur naturally in plants and animals. The lipids constitute a very large class of compounds, many of which play essential roles in organisms. Among the most important lipids are fats and oils, waxes, steroids, terpenes, fat-soluble vitamins, prostaglandins, phosphoglycerides, sphingolipids, and glycolipids. Phospholipids, for example, occur in all living organisms, where they are a major component of the membranes of most cells. The main use of fats commercially is in the production of soaps and other cleaning products. Oleochemicals are chemicals derived from biological oils or fats. The hydrolysis or alcoholysis of oils or fats form the basis of the oleochemical industry. The formation of basic oleochemical substances like fatty acids, fatty acid methyl esters (FAME), fatty alcohols, fatty amines and glycerols are by various chemical and enzymatic reactions. Intermediate chemical substances produced from these basic oleochemical substances include alcohol ethoxylates, alcohol sulfates, alcohol ether sulfates, quarterner ammonium substances, monoacylglycerols (MAG), diacylglycerols (DAG), structured triacylglycerols (TAG) and sugar esters. The importance of these chemicals is thus evident.

This Department has been pioneering in the field of Oil Technology. The curriculum has been designed to provide an in-depth knowledge of chemistry and technology of oils and fats, and their industrial applications. Career opportunities exist in oils mills and refineries, oleochemicals, soap and detergent manufacturing industries, surfactants and specialty chemical manufacture producing auxiliary chemicals, Paints, Cosmetics, Perfumery and raw materials used in the above industries. Several short and long term projects instituted by sponsoring bodies for process/product development have been supervised by the faculty as part of their routine research activity.

It also participates in M. Tech. in Perfumery and Flavour Technology, Green Technology and Bio-Process Technology.

## DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

**VISION :**

To be a globally recognized premier educational and research Centre with world class facilities, adopting international best practices, focused on the integration of science and technology in the areas of Drug Discovery, Drug Delivery, Organic Process Research and Herbal Healthcare Products

**MISSION :**

To achieve the best in pedagogy and research, through creation of a dedicated team of faculty and state of art research facility, to develop skilled manpower and innovative cost effective technology to support national healthcare programmes.

This Department offers two distinct programmes - Pharmaceutical Technology and Pharmacy. The Pharmaceutical Technology course or the B. Tech. programme, earlier B.Sc. (Tech.), deals with the technology of manufacture of drugs and pharmaceuticals. It has all the ingredients for a solid foundation in basic sciences, mathematics, computation and chemical engineering. B. Tech. (Pharmaceuticals and Fine Chemicals) was started in 1943, and today the course is B.Tech. (Pharmaceutical Chemistry and Technology). Basic science subjects like chemistry, mathematics and physics are dealt with in depth, while students are introduced to subjects of biochemistry, microbiology and pharmacology. Strong background knowledge of chemical

engineering including chemical reaction engineering, unit operations, separation processes, instrumentation and process control, and stoichiometry is imparted to synergise with the major focus, which is on manufacturing process technology and chemistry of API, intermediates and fine chemicals and dosage form technology. Several distinguished alumni and many first generation renowned industrialists had their training in this Department. The aim of the B.Tech. (Pharma) course is to develop complete professional technologists/entrepreneurs for the active pharmaceutical ingredients (API) and pharmaceutical industry.

The B. Pharm. Course at ICT, started in 1958, was the first course of this kind in the state of Maharashtra. The course involves a detailed study of Pharmaceutics, Pharmaceutical and Medicinal chemistry, Pharmacology, Pharmaceutical Analysis and Pharmacognosy. The goal is to enable an understanding of the science of drugs and drug actions. The course is supported with in depth courses in basic sciences namely, organic chemistry, inorganic chemistry, physical chemistry, biochemistry, microbiology, maths and other relevant subjects like biotechnology, forensic pharmacy, management. The focus is on development of an expertise in the chemistry of drugs, drug effects, dosage regimen, drug toxicity and interactions with adequate knowledge of the synthesis of drugs, principles of drug formulation design and evaluation and regulatory requirements.

The UGC has recognized the Department as Centre of Advanced Studies in Pharmaceutical Science and Technology with supernumerary Single Girl Child Fellowships. Besides, fellowship are also accorded under various other government projects with individual faculty. The Department has also received support under the DST-FIST programme. Many industry sponsored projects, both National and International, are also currently in progress. Modern equipment, instruments and infrastructure are available for research. The faculty is highly active and has filed patents in a variety of areas including NCE's and drug delivery. The Department also participates actively in three inter disciplinary courses of ICT namely M.Tech. in Bioprocess Technology, M.Tech. in Perfumery and flavour Technology and M.Tech. in Green Technology. M. Tech. in Pharmaceutical Biotechnology has been started since last year with 10 GATE fellowships. The programme is multi-disciplinary.

## DEPARTMENT OF POLYMER AND SURFACE ENGINEERING

### VISION :

Empowering skills and knowledge about latest Research in the field of Polymer and Surface Coating Technologies.

### MISSION :

To Pursue world class Programs on Excellence in Education and Research in the area of Polymer and Coating Technology for the sustainable development of Industries that require trouble shooting competencies in these core areas of knowledge.

The Department of Polymer and Surface Engineering has undergone changes in its nomenclature and was established in 1946. Earlier it was known as Paints, Pigments and Varnishes (PPV) Section and was steered in the beginning by none other than Professor N.R. Kamath, a famous chemical engineer, graduate of first batch of B.Sc. (Tech.), in 1936, who later migrated to IIT-Bombay as Head of Chemical Engineering and Deputy Director. The B.Sc. (Tech.) courses in plastics and paints technologies were started in 1946 and have been popular throughout the world. Several small and medium industries covering plastics, paint, printing ink, adhesive, sealers and allied industries have been founded by the graduates of the Department and maintained excellent connectivity with industry.

The Department runs two B. Tech. programmes: Polymer Engineering and Technology, and Surface Coating Technology.

### **What is Polymer Science and Engineering**

Polymers are macromolecule that contains many monomer units, typically tens of thousands to millions. While many polymers occur naturally as products of biological processes, synthetic polymers are made by chemical processes that combine many monomers, together in chains, branched chains, or more complicated geometries. Starch, cellulose, proteins, and DNA are examples of natural polymers, while polyolefins, nylon, PET, ABS, Teflon, and PEEK etc. are examples of the synthetic variety. Both classes possess a number of highly useful properties that are as much a consequence of the large size of these molecules as of their chemical composition. Although most synthetic polymers are organic, that is, they contain carbon as an essential element along their chains, other important polymers, such as silicones, are based on noncarbon elements.

The rapid pace of advances in polymers, particularly after World War II, has been remarkable and the birth of this discipline in ICT in mid-1940s was timely. Synthetic polymers are so well integrated into the fabric of society that we take little notice of our dependence on them, whether it is health, medicine, clothing, transportation, housing, defense, energy, electronics, employment, space, and trade. Without a doubt, synthetic polymers have large impacts on our lives.

Although progress in polymer science and engineering can be considered ground-breaking, opportunities are abundant for creating new polymeric materials and modifying existing polymers for new applications; depolymerization and polymer recycling; oxo and biodegradable polymers; nano-composites, and the like. Scientific understanding is now replacing empiricism, and polymeric materials can be designed on the molecular scale to meet the ever more demanding needs of advanced technology. The possible control of synthetic processes by biological systems is promising as a means of perfecting structures. New catalysts offer the opportunity to make new materials with useful properties, and the design of new specialty polymers with high-value-added applications is an area of rapidly increasing emphasis. Theory, based in part on the availability of high-speed computing, offers new understanding and aids in the development of improved techniques for preparing polymers as well as predicting their properties. Analytical methods, including an array of new microscopic techniques particularly suited to polymers, have been developed recently and promise to work hand-in-hand with theoretical advances to provide a rational approach to developing new polymers and polymer products. The field of polymer science and engineering therefore shows no sign of diminished vigor, assuring new applications in medicine, biotechnology, electronics, and communications that will multiply the investment in research many times over in the next few decades.

The education provided to the students is the blend of practice and theory related to polymer science and engineering. The students learn to develop systems which are economically feasible and environmentally acceptable.

### **What is Surface Coating Technology?**

Coating applied on other surface of the materials for the decoration and protection. The surface coating change aesthetic properties such as color, gloss, texture and functional properties like resistance to wear, chemical attack, permeability, weathering resistance without changing the bulk properties. These materials includes coatings, adhesives, sealants, varnishes, enamels, lacquers. Initially coating were solvent based however, the volatile organic compounds are compelling to develop ecofriendly coatings like water based, high solids coatings, powder coatings and radiation curable coatings. In general, organic coatings are based on a vehicle, usually a resin, which, after being spread out in a relatively thin film, changes to a solid. This change, called drying, may be due entirely to evaporation (solvent or water), or it may be caused by a chemical reaction, such as oxidation or polymerization. The materials providing the hiding are the opaque materials called pigments, dispersed in the vehicle, contribute colour, opacity, and increased durability and resistance.

The physical, chemical and mechanical properties of a material surface determine its applicability in many technical devices. Numerous applications could not be realized without the use of surface

modifications, coatings and thin film technology. Therefore, the need for efficient and effective methods of surface modification is becoming increasingly evident to allow the production of far superior products in terms of wear resistance, corrosion protection, enhanced biocompatibility, thermal insulation, improved optical and altered electronic properties. Coating technologies of particular interest include physical and chemical vapor deposition, thermal spraying, electrochemical deposition, sol-gel-syntheses, and plating. Surface modification includes directed energy techniques such as ion, electron and laser beams as well as etching procedures and thermo-chemical diffusion. Beyond that, mono-layers (e.g. SAM, Langmuir-Blodgett) have attained high significance in preparing thin films to modify biomedical surfaces. Recent novel techniques to prepare patterned surfaces (e.g. nano-imprint lithography, micro-contact printing) have proven their potential for the fabrication of integrated circuits and bioactive implants. Thus, this course offers an exciting field of study.

New trends related to surface engineering and coating technology for the synthesis of functional materials surfaces including novel fabrication methods, materials and applications, new characterization techniques as well as numerical simulation and modeling are some of the areas of research.

The Department is supported by UGC, DST, BRNS, etc.

## DBT-ICT CENTRE FOR ENERGY BIOSCIENCES

### VISION:

We aspire to be an internationally leading Centre for education to create industry ready manpower, generating new economic growth by providing solution to national and international agenda, and through world class translational research in the field of biosciences and industrial biotechnology.

### MISSION:

To provide outcome based education, and research infrastructure to become global leader in creating industry ready manpower, and sustainable technologies based on biosciences and industrial technology for development, in joint efforts with industries, academia and business at national and international level.

The DBT-ICT Centre for Energy Biosciences (DBT-ICT-CEB) is a unique place that integrates basic and translational science capabilities for bioprocess development and scale up. Funded by the Department of Biotechnology, Ministry of Science and Technology, India, the Centre was established and formally inaugurated in May 2009. Established at a total cumulative cost equivalent to more than USD 15 million, the Centre is a part of the Institute of Chemical Technology (ICT) at Matunga, Mumbai, which is a deemed to be University under Section 3 of UGC Act 1956. The Centre was set up as a result of vision and efforts of Dr. M. K. Bhan, Secretary DBT and Dr. RenuSwarup, Advisor, DBT, and functions under the leadership of Dr. G. D. Yadav, Vice Chancellor, ICT. The projects and technical programs at the Centre are coordinated by Prof. Arvind Lali. The Centre is focused primarily at developing biotechnologies for deriving biofuels and other products from renewable resources for reducing India's rising dependence on petroleum and cut down greenhouse gas emissions. The Centre believes in building multidisciplinary capacity for development of integrated technology packages.

The Centre successfully completed its first phase of five years in 2013 and was awarded an extension of five years by the Department of Biotechnology with the extended mandate of upscaling and upgrading the platform technologies developed during the first phase. The 10 Ton/day biomass pilot plant set up by Industry has successfully validated all segments of the novel DBT-ICT Lignocellulosic Ethanol Technology in a continuous non-stop flow mode from biomass size reduction to ethanol fermentation. The technology is at present being taken to commercial scales by different oil marketing companies. The Centre has developed a highly competent working groups in the area of Synthetic biology, Fermentation technology, Green/Chemical catalysis, Algal technologies, Enzyme engineering and technology, Separation technologies. These groups



have developed a range of globally competitive cutting edge technologies that are at present being translated to demonstration and commercial scale plants.

With an outstanding achievement in the first phase, the second phase progressed to develop platform technologies for conversion of all domestic, industrial and agricultural wastes to renewable products (fuel, food, feed, material, energy and chemicals) using smart combinations of chemical and biological technologies. Also during the second phase, the Centre has developed an integrated biorefinery concept through multi-product processing using chemical or biological routes that are being taken up for technology transfer or scaleup. The Centre has expanded its state-of-art facility and procured several high-end equipment's and instruments that not only leads to high level contemporary research but also an accelerated development of several more scalable technologies based on the knowledge base generated. The Centre having completed its second phase in 2018, aims to continue the work in an intensive mission mode for innovative research and translation of developed technologies.

The Centre for Energy Biosciences has attracted a large number of industrial and academic collaborations as a result of its reputation of conducting cutting edge research and delivering viable and scalable solutions to the biotech industry. The Centre is also part of several national and international academic collaborations (Indo-UK, Indo-Australia, Indo-German, Indo-US and several national projects) with grants amounting to more than 10 million USD under various RandD schemes floated by Ministry of Science and Technology, Government of India. The technologies developed at the DBT-ICT Centre have been secured through patent filings across the world. A number of technologies have been already licensed to industries for pilot and commercial scale plants.

## CENTRE OF GREEN TECHNOLOGY

### Inception of the centre of Green Technology

The Green Technology center at ICT was incepted in 2005 under the potential for excellence scheme of the University of Mumbai. Subsequently, ICT has become a Deemed University and an Elite Center of Excellence in 2008. Since then the Green Technology programmes are conducted solely by Centre of Green Technology, ICT.

### VISION :

To become a globally recognized Green Technology Centre of excellence, through illustrious academic contributions at the national and international level.

### MISSION :

- To promote the objectives, principles and outcome of green processes and products.
- To transmit research outcome to industry for making processes and products environmentally benign.
- Human resource development with awareness of environment and hazard related issues.
- To undertake sponsored projects of national relevance.
- To get quality publications in peer reviewed journals, national and international forums for the benefit of scientific community and society.

### Programmes offered by the Centre of Green Technology

The center of Green Technology offers an interdisciplinary M. Tech. programme of both part and full time. It also conducts a Ph.D. programme. GATE and GPAT qualified candidates admitted to the M Tech. programme are eligible for fellowships.

### Highlights of the Green Technology programmes

Both the post graduate and Ph.D. programmes in Green Technology at ICT encompass the aspects of green and sustainable science and technology. As the programmes are interdisciplinary, the

post graduate and doctoral students get ample experience and support across the Departments of ICT both in terms of research and curricular courses. This broad spectrum expertise is a unique and valuable advantage.

Areas in which research projects carried out in the Centre of Green Technology

- Development of catalysts for energy efficient and green processes
- Synthesis and application of nanomaterials
- Green Technology in pharmaceuticals and drug synthesis
- Conversion of multi-step synthesis into cascade engineered synthesis
- Synthesis of biodegradable chemicals and materials
- Application of biotechnology for sustainability
- Synthesis of safe and benign chemicals with minimum impact on environment.
- Process equipment design and operation to achieve sustainability
- Green Technology for hazard free, benign processes and products

It is hoped that the centre emerge as a model school encompassing various disciplines of science, engineering and technology with the common goal of sustainability and environmental viability.



# ICT Mumbai - IndianOil Odisha Campus, Bhubaneswar







## MESSAGE FROM THE DIRECTOR



Greetings from the Institute of Chemical Technology, Indian Oil Odisha Campus, Bhubaneswar, one of the offshore campuses of Institute of Chemical Technology (then UDCT), Mumbai. The campus was started in 2018 with a unique programme, Integrated M. Tech. after 10+2 in Chemical Engineering as Major and Minor in six different branches of Chemical Technology. From this campus, we also offer M. Tech. programme (Two Years) in various branches of Chemical Technology and Ph. D. in Science/Technology. In view of the massive investment in energy, petrochemicals, chemicals, polymers, textiles, minerals, materials, biotechnology and pharmaceutical industries in Odisha, ICT Mumbai was requested to open a campus in Bhubaneswar.

Indian Oil Corporation Ltd took a historic decision to support fully a campus of ICT in Bhubaneswar. This is the first of its kind in India where a corporate house has decided to support innovative education and research under its CSR policy to create manpower and job opportunities and entrepreneurs and skill development centres in Eastern India. The campus is equipped with modern equipments for carrying out high-class research and innovation at Centres of Excellence to develop technology and to support Research & Development in industry and Skill Development in Chemical Engineering, Petrochemicals, Textiles, Polymers, Pharmaceuticals, Energy, etc. The nation, at large, will benefit from this initiative.

Our endeavour is not only to provide access to quality education and training but also to create an individual who can earn sustainable livelihood.

Our Vision and mandate is to develop a self-sustainable institution with sophisticated and high-end research facilities in the field of Chemical Technology and its allied branches and to produce well-trained engineers and extraordinary researchers.

### **Professor Pradeep Vavia**

*B. Pharm., M.Pharm., Ph.D. (Tech), FIPA, FMASc*

Professor of Pharmaceutics

[On deputation as DIRECTOR, ICT-IOC Bhubaneswar]



**IMPORTANT INSTRUCTIONS**

The fees for the submission of a single form for a particular programme at ICT are as follows

Course	Open Category	Reserved Category**
Integrated M.Tech	₹ 1000***	₹ 500***

\*\*\* The payment for the same should also be made online (extra online charges may apply)

1. The admission form for the academic year 2021-22 should be filled online on the ICT website, <http://www.ictmumbai.edu.in>
2. Anybody, not belonging to the Reserved Category, found buying application form under that category will be disqualified.
3. Please read the Handbook carefully before filling the admission form.
4. Due to circumstances beyond control of authorities, the schedule of admission may change and it will be notified on the website. Candidates are advised to watch the website regularly.
5. Merit list/ schedule of admission rounds for the Integrated M.Tech course will be displayed on [www.ictmumbai.edu.in](http://www.ictmumbai.edu.in) and the ICT-IOC Notice Board. Please note that no individual correspondence will be made in this regard and it is the responsibility of the candidates to visit the webpage regularly.
6. Pleading ignorance about information displayed on the web shall not be entertained.
7. Admission to hostel is as per the rules laid down and the quota for the course.
8. Merit is the only criterion for admission to any course and seats are reserved as per Government of Maharashtra's directives in this connection for campuses in Mumbai and Jalna. The Bhubaneswar campus will follow the all India criterion.
9. Biometric attendance system is adopted for all classrooms and lectures are recorded. An auto generated message is sent to the student and his/her registered parent/guardian at 9.00 pm if the student has missed any lecture. Thus, a record is available to ICT authorities on real time basis.
10. There are no agencies operating on behalf of the institute and there is no capitation fee or donation in regard of admissions. Be careful of any persons claiming to offer admission to the ICT-IOC or knowing authorities. No extraneous considerations should be brought to exert pressure on the Admission Committee. It will be strictly dealt with. We take pride in fairness and openness in admissions and all matters and give justice to one and all.
11. All correspondence regarding admissions should be addressed to the Registrar, Institute of Chemical Technology, Nathalal Parekh Marg, Matunga, Mumbai-400019 ([admission@ictmumbai.edu.in](mailto:admission@ictmumbai.edu.in); +91-22-33611111/ 2222; Fax: +91-22-33611020).

**APPROACH ROUTES TO ICT-IOC, BHUBANESWAR AND LANDMARKS**

A location map of the ICT-IOC, available on Google maps, is provided above and the various access routes are described from nearby railway stations, bus stops and the airport.

**Landmarks in the vicinity of ICT-IOC**

ICT-IOC, currently running its classes from the Extension Centre campus of IIT-Kharagpur at the Temple City, is situated just behind the famous 5-star luxury Hotel named "Swosti Premium". The Hotel is situated on the right side of the Jayadev Vihar to Nandankanan Main Road.

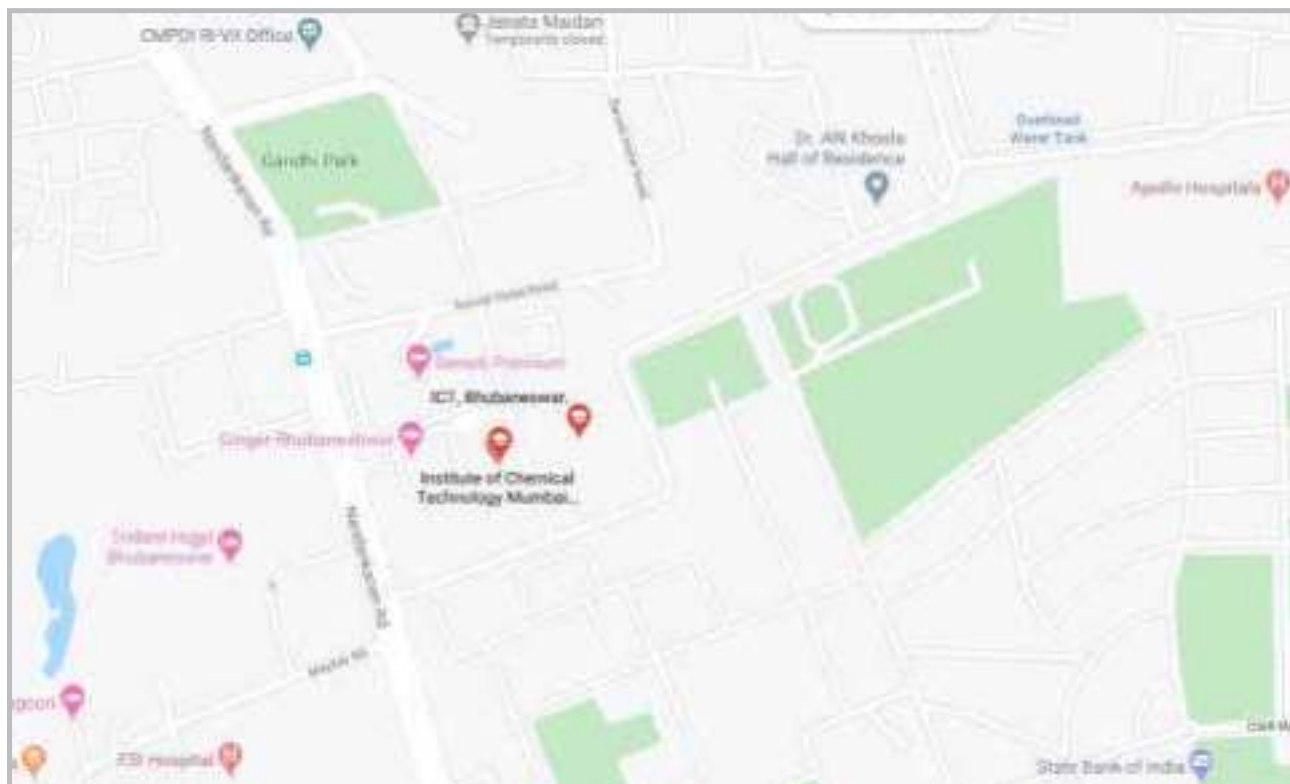
**A. From Bhubaneswar Railway Station (Main Station)**

The ICT-IOC can be reached in about 15 minutes on the main road from Master Canteen Square towards Jayadev Vihar- Nandankanan Main Road. Main Railway Station is also accompanied by the Govt. Bus stand to its adjacent, a result Govt. Buses are readily available in this route.

**B. From Biju Patnaik International Airport (Bhubaneswar Airport)**

It is about 25 minutes by road from the only Airport of Bhubaneswar. Cabs and Govt Buses are easily accessible which directly ply through the road connecting the Institute.





## MANAGEMENT OF ICTM-IOC BHUBANESWAR

The Director reports to the Vice Chancellor for overall directions and is guided by two committees, namely, Advisory Committee and Executive Committee.

### ADVISORY COMMITTEE

1. Shri Shrikant Vaidya, Chairman, Indian Oil Corporation Limited (Patron)
2. Professor A. B. Pandit, Vice Chancellor, ICT Mumbai (Chairman)
3. Professor Damodar Acharya, Former Director, IIT-Kharagpur, Former Chairman, AICTE, Former Vice Chancellor, Biju Patnaik University of Technology (Member)
4. Shri Ranjan Kumar Mohapatra, Director (HR) IOCL (Member)
5. Dr. S.S.V. Ramakumar, Director (R&D) IOCL (Member)
6. Professor P. R. Vavia, Director, ICT-IOC Bhubaneswar (Member Secretary)

(A few eminent persons are invited as special invitees. The Committee meets twice a year)

### EXECUTIVE COMMITTEE

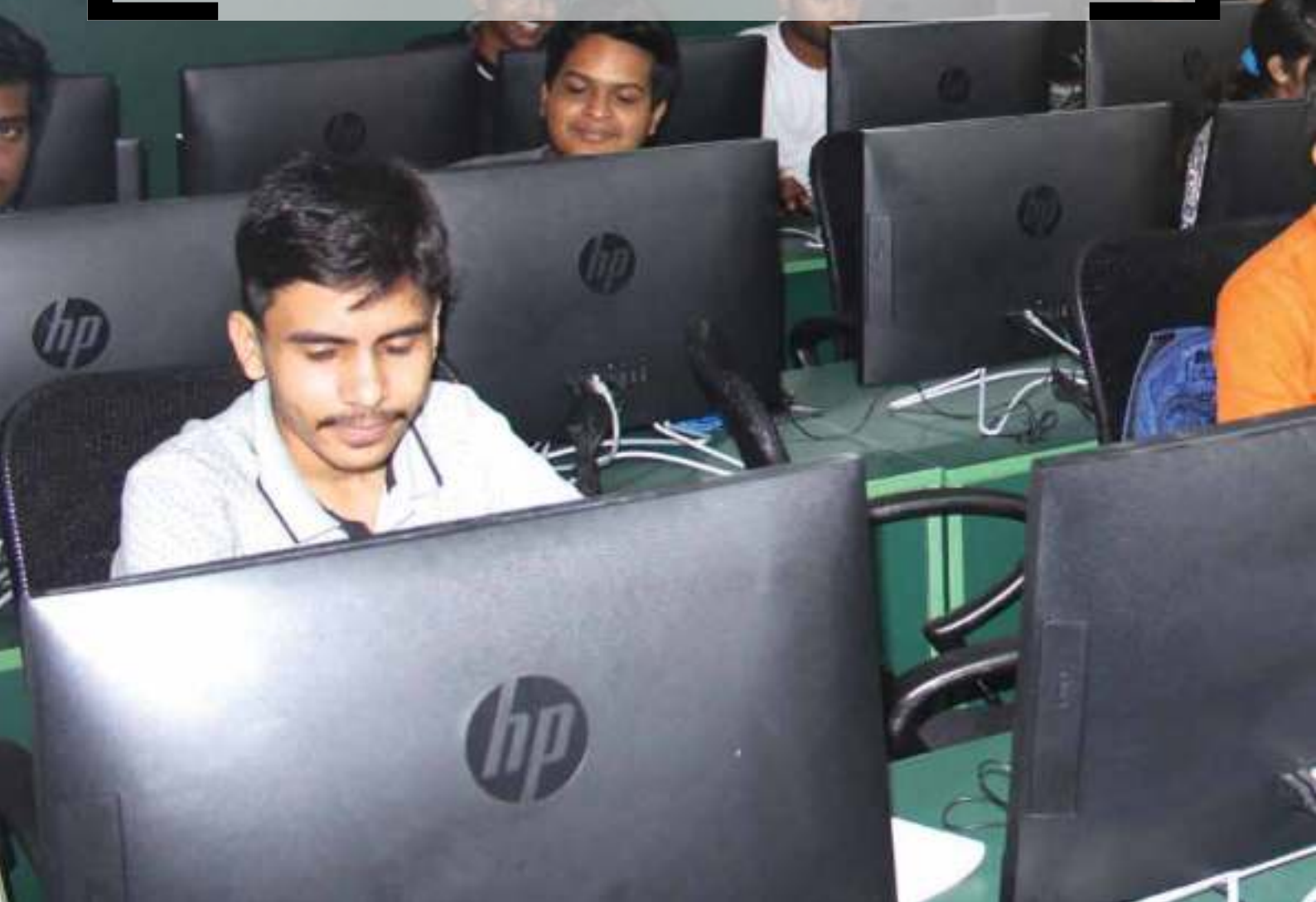
1. Professor A. B. Pandit, Vice Chancellor, ICT Mumbai (Chairman)
2. Professor P. R. Vavia, Director, ICT-IOC Bhubaneswar (Member Secretary)
3. Professor S. S. Bhagwat, Dean (Academic Programmes), ICT (Member)
4. Professor R. R. Deshmukh, Registrar, ICT (Member)
5. Shri V. S. Jain, Executive Director, Paradip Refinery, IOCL (Member)
6. Shri. S. K. Bose, Executive Director (HR), IOCL Corporate Office (Member)
7. Shri. S. K. Sarangi, Associate Dean, Industries, ICT-IOC Bhubaneswar (Member)

(A few eminent persons are invited as special invitees. The Committee meets more frequently to monitor progress of the campus activities including ICT policies and Advisory Committee decisions)



# FACULTY PROFILE

ICT Mumbai - IndianOil  
Odisha Campus, Bhubaneswar





**PROFESSOR PRADEEP VAVIA**

*B. Pharm., M.Pharm., Ph.D. (Tech),  
FIPA, FMASc*

**Professor of Pharmaceutics**

**[DIRECTOR, ICT-IOC Bhubaneswar]**



### Prof. P. R. Vavia

*B. Pharm., M.Pharm., Ph.D. (Tech), FIPA, FMASc*

**Dean (Internal Quality Assurance Cell) and  
Professor of Pharmaceutics**

Techniques in solubilization, Soft gelatin capsules, Bio-conjugates for active targeting, gene delivery.

**Recognized Research Guide for Pharmaceutics**

Guided students: Ph.D. 43, Masters: 56

**Total Research Publications (Scopus):**

National: 21, International: 116,

H-Index : 28, Citations: 2806

**Patents:** International: 3 [PCT (Granted: 1; Applied: 2)]

National: Granted: 8, Applied: 30

#### AWARDS:

- Best Teacher's Award 2018,
- Global RESOMER Award 2017 for developing the "Novel bilayer dissolving microneedle arrays with concentrated PLGA microparticle to targeted intradermal delivery: Proof of concept",
- Best Teacher's Award 2016,
- VASVIK Award in the category of Biological Sciences and Technology, for developing the Novel Drug Delivery Systems, Synthesis and application of novel polymers and excipients and targeted drug delivery in cancer treatment, January 2015

#### SUBJECTS TAUGHT:

Pharmaceutics, Drug Delivery systems, Advanced Pharmaceutics, Biopharmaceutics and Pharmacokinetics

#### RESEARCH INTERESTS:

Cyclodextrin based drug delivery systems, Nanosponge based drug delivery system, Transdermal drug delivery system, Protein and Peptide drug delivery system, Lipid based colloidal formulations, Polymer synthesis for drug delivery, Modified release films, Melt extrusion technology, Oral liquid dosage forms, Oral modified release systems,

### Dr. LISA ROY

*Ph. D.*

**Assistant Professor**

#### Subjects Taught:

Organic, Inorganic, Physical, Computational Chemistry

#### Research Interests:

Bio-inspired homogeneous catalytic reactions Small molecule activations Gas storage and surface reactions Non-covalent interaction guided catalysis and self-assembly

#### Recognized Research Guide for:

Computational chemistry

#### Number of students guided:

1 (PhD continuing), 6 (Project Fellows)

#### TOTAL RESEARCH PUBLICATIONS-

30, H-Index- 11, Citations: 363

#### AWARDS: (last 5 years):

- Early Career Advisory Board Member of ChemPlusChem (Wiley VcH)



### Dr. CHAYAN SARKAR

*Ph.D in Chemical Engineering from IIT Kharagpur*

**Assistant Professor, Chemical Engineering**

#### Subjects Taught:

Momentum Transfer, Chemical Reaction Engineering, Mathematical Methods in Chemical Engineering

#### Research Interest:

Photocatalysis, Adsorption

**Recognized research guide for:** Chemical Engineering

**Number of Publications:** 6

**H-Index:** 5, **Citations:** 141



### Dr. Ritesh Malani

Ph. D.

Assistant Professor

#### Subjects Taught:

Reservoir technology, Petroleum refining, Petrochemical and Mass transfer operations

#### Research Interest:

Heterogeneous catalysts, renewable fuels, Polyurethane synthesis from renewable sources

Number of publications: 14

H-Index: 11, Citations: 508

#### Awards:

- HPLC NGIC Award 2020 - 2nd position organized by HPCL Green R&D Center Bengaluru,
- Best paper presentation award at LAMSYS - 17 organized by ISRO, Sriharikota,
- Ambuja's Young Researcher Award



### DR. RAMAKANTA NAIK

Ph.D. (Physics)

Assistant Professor

#### Subjects Taught:

Physics

#### Research Interest:

Nanostructured Materials; Nonlinear-linear optical Phenomena; Phase transition; Optoelectronic Materials

Recognized research guide for:

Physics

Number of students guided:

Ph.D.:3 completed, 5 ongoing M.Phil:10

completed; M.Sc. Tech:13 completed; M.Sc.10 completed

Number of publications: 130

H-Index: 21, Citations: 1113

#### Awards:

- DST-INSPIRE Faculty Award(2012),
- Young Scientist Award 2015, Orissa Physical Society



### Dr. Sankha Karmakar

Ph. D.

Assistant Professor

#### Subjects Taught:

Material and Energy Balance; Separation Processes; Environmental Engineering and Process Safety; Mathematical Methods in Chemical Engineering; Process Development and Engineering

#### Research Interest:

Metal Organic Frameworks; Waster water treatment; Membrane

Technology; Waste Valorization

Recognized research guide for: Ph.D.

Number of students guided: 1,

Number of publications: 16

Number of patents

(Filed/Granted): 4

H-Index: 11, Citations: 453

#### Awards:

Golden Jubilee Research Fund 2022



### DR. SAIKAT BHAUMIK

M.Sc. (Physics), PhD (IACS, Kolkata), Postdoc (NTU, Singapore)

Assistant Professor

#### Subjects Taught:

Physics

#### Research Interest:

Nanomaterials, Material Science, Perovskites, Photophysics, Optoelectronic devices

Recognized research guide for: Physics,

Material Science

Number of publications: 23

Number of patents

(Filed/Granted): 1

H-Index: 12, Citations: 1272

#### Awards:

CSIR-NET, GATE, DST-Inspire Faculty







### DR. NABENDU B PRAMANIK

PhD at IIT Kharagpur

**Assistant Professor**

#### Subjects Taught:

Organic Chemistry, Polymer Chemistry, Organic/Inorganic Chemistry practical

#### Research Interest:

Polymer and materials science, bottlebrush polymers via ROMP, hyperthin membranes for gas separations, self-healing polymers, controlled radical polymerization like ROMP, RAFT, ATRP

**Number of publications:** 15

**H-Index:** 9, **Citations:** 222

#### Awards:

- National Eligibility Test (NET) qualified in Chemical Science by CSIR (AIR - 288),
- Junior Research Fellowship (JRF) awarded by CSIR, New Delhi, India from 2011-2013,
- Senior Research Fellowship (SRF) awarded by CSIR from 2013-2016,
- Acted as a reviewer for the scientific journals like Advanced Powder Technology by Elsevier, Bulletin of Materials Science by Springer.

### Dr. Rambabu Dandela

Ph. D.

**Assistant Professor**

#### Subjects Taught:

Chemistry and Pharmaceutical Chemistry

#### Research Interest:

Chemical biology

**Recognized research guide for:**

Chemistry

**Number of students guided:** 7 ongoing

**Number of publications:** 120,

**Number of patents (Filed/Granted):** 9

**H-Index:** 26, **Citations:** 1877

#### Awards:

- Life Fellow of Indian Chemical Society,
- Associate Member of Royal Society of Chemistry,
- Lifetime Patron Member Orissa Chemical Society,
- Associate fellow of Telangana Academy of Sciences,
- Associate fellow of Andhra Pradesh Academy of Sciences



### Dr. Sanjib Kumar Acharya

Ph.D.

**Assistant Professor**

#### Subjects Taught:

Mathematics I, II, Engineering application of computers I, II, III

#### Research Interest:

Engineering Mathematics and Engineering application of computers

**Number of publications:** 4

**H-Index:** 2, **Citations:** 10



### DR. ASHISH ADAK

Ph. D.

Assistant Professor

#### Subjects Taught:

Mathematics-I, Mathematics-II, Process Simulation Lab-1

#### Research Interest:

Nonlinear Coherent Structures, Wave Breaking, Nonlinear Plasma Theory, Nonlinear Dynamics.

Number of publications: 9 H-Index: 4,

Citations: 91

#### Awards:

- UGC-Dr. D.S. Kothari Postdoctoral Fellowship (DSKPDF),
- National Post-Doctoral Fellowship (NPDF).

### Dr. Ayantika Sett

PhD in Chemical Engineering

Assistant Professor

#### Subjects Taught:

Heat Transfer, Chemical Process Control, Energy Engineering (minor), Process Simulation

#### Research Interest:

Microscale transport processes, lab on a chip device application in water treatment and in healthcare

Recognized research guide for: Chemical Engineering

Number of publications: 6

H-Index: 5, Citations: 41



### Dr. Sanchari Basu

Ph.D.

Assistant Professor

#### Subjects Taught:

Conventional Energy and Utilization, Renewable Energy and Utilization, Energy and Sustainability, Coal Engineering and Coal to Chemicals, Fluidization Engineering, Fundamentals of Drilling and Exploration, Advanced Reservoir Engineering, Catalysis in Petroleum Industry

#### Research Interest:

Heterogeneous Catalysis, Reaction Engineering, Petroleum Refining

Number of publications: 5

Number of patents (Filed/Granted) : 1

H-Index: 4, Citations: 78

### DR. SWAGAT MOHAPATRA

Ph. D.

UGC Asst Professor

#### Subjects Taught:

Chemistry

#### Research Interest:

Organic and Organometallic Chemistry

Recognized research guide for: Chemistry

Number of publications: 27

Number of patents (Filed/Granted): 1

H-Index: 19, Citations: 1666



### Dr. Saurabh C. Patankar

BE (Chemical), MChem Engg, PhD (Tech), PDF (Wood Science)

Assistant Professor in Chemical Engineering

#### Subjects Taught:

Material and Energy Balance Calculations, Chemical Engineering Thermodynamics 1 and 2, Chemical Reaction Engineering

#### Research Interest:

Waste Management and Valorisation, Green Chemistry and Technology, Sustainable Engineering

#### Recognized research guide for:

Chemical Engineering

Number of publications: 9

No. of patents (Filed/Granted): 4

H-Index: 8, Citations: 199

#### Awards:

- Best Presenter and Innovative Research Idea award at the Shanghai Cooperation Organisation- Young Scientist Conclave (November 2020)
- MLA award in Murbad assembly constituency as Youth Icon

(February 2019)

- Loksatta Tarun (Young) Tejankit (Illustrious) Award 2017 for developing new technology to utilize biomass using solid recyclable catalyst
- Industrial Green Chemistry World 2015 award from Green Chemistree foundation, India for developing a novel copper catalyst for valorization of biomass at high temperature and pressure using water as solvent.
- ISTE- IPCL National award for Best Chemical Engineering thesis for M.Chem.Engg. thesis. The award is instituted by the Indian Petrochemical Corporation Ltd. (IPCL) to promote research in chemical engineering at post-graduate level and is operated by Indian Society for Technical Education (ISTE). (2011)



### DR. ABHAY VIJAY KOTKONDAWAR

Ph. D., Chemistry

Assistant Professor

#### Subjects Taught:

Organic Chemistry; Physical Chemistry and Sophisticated Analytical technique  
Research Interest: Hydrogen production methodology, Heterogeneous catalysis; Environmental Pollutant detection; Photocatalytic process; Organic-electrochemistry

#### Recognized research guide for:

Photo-electrocatalytic hydrogen production from water

Number of publications: 6

Number of patents (Filed/Granted): 1 (Granted)

H-Index: 3, Citations: 30

### Dr. Kruthi Doriya

M. Tech. in Biotechnology and Biochemical Engineering from IIT Kharagpur. PhD in Chemical Engineering from IIT Hyderabad

Assistant Professor

#### Subjects Taught:

Bioprocess Engineering and Technology, Biochemical Engineering, Introduction to biological science and bioengineering, Advanced Biochemistry

Research Interest: Submerged fermentation, Solid state fermentation, Biochemical Engineering

Number of Publications: 8

H-Index: 8, Citations: 600





### Dr. Shivanand S. Shirkole

PhD (Food Process Engineering)

Assistant Professor (FET)

#### Subjects Taught:

Advances in food technology, Food packaging science and technology, Experimental design and optimization in food processing, Food analysis lab, Food process engineering lab.

#### Research Interest:

Low moisture food safety, Thermal processing of foods, Phase transition modeling, Computer-aided food engineering, Industry scale process optimization, Automation in food process operations.

**Recognized research guide for:** Food Engineering and Technology

**Number of students guided:** 7 MTech - Ongoing

**Number of publications:** 19

**Number of patents (Filed/Granted):** 1

**H-Index:** 7, **Citations:** 173

#### Awards:

- Best Paper Presentation Award at 10th Asia Pacific Drying Conference (ADC-2019) held at Vadodara, India, 2019.
- Doctoral Fellowship by Ministry of Human Resource Development (MHRD), Government of India for the PhD program (2014-2019) at NIT, Rourkela.
- Best Research Award at M. Tech (Agril. Engg.) level during the academic year 2009-10 by Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, India.



### DR. SUSHMA CHAKRABORTY

M.Tech. and Ph. D. in Chemical Engineering; IIT Guwahati,

Assistant Professor (Chemical Engineering)

#### Subjects Taught:

Heat Transfer, Material Science and Engineering, Equipment Design and Drawing, Chemical Engineering Lab  
Research Interest: Membrane separation and technology, food processing, wastewater treatment

**Recognized research guide for:**

Chemical Engineering

**Number of publications:** 8

**H-Index:** 4, **Citations:** 70

### Dr. Sonal Ayakar

Ph. D.

Assistant Professor

#### Subjects Taught:

Introduction to Biological Science and Bioengineering, Bioprocess Technology, Biochemistry and Microbiology, Pharmaceuticals and Pharmacology, Industrial Pharmacy, Pharmaceutical Technology Laboratory

#### Research Interest:

My research lab (Natuerochemie Lab) work in environmental Biology and microbial screening. Currently we are analyzing various ecological samples for the applications as pharmaceuticals, nutraceuticals, biomass valorization aids, plastic waste valorization and

decomposition aids. We analyze the microbial consortia using omic studies. We also work in harnessing the biological circuits in biosensor development. We are developing a tool for on-site biomass qualitative analysis. We use the knowledge in engineering metabolic pathways and enzymes. We employ synthetic biology for development of cell factory platforms for fine chemical manufacture.

**Recognized research guide for:**

Biotechnology

**Number of students guided:** 2 ongoing

**Number of publications:** 6

**Number of patents (Filed/Granted):** 2

**H-Index:** 3, **Citations:** 45





## VISITING FACULTY



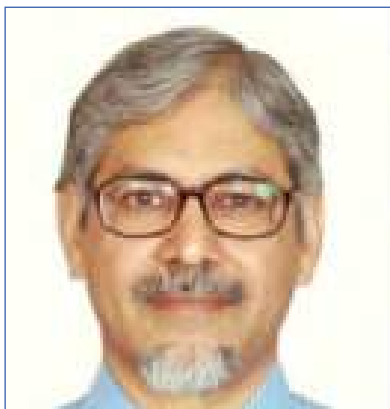
**Rajani Menon**

- More than 2 decades of experience in setting up and mentoring Start-Ups, devising their Operations teams, motivating them to perform, formulating Compliances, Policies, Rewards & Recognition ensuring that the team delivers to attain Business goals
- A certified Career Counsellor holds prestigious position of: Member Bangalore Council, Karnataka of Women's Indian Chamber of Commerce and Industry (WICCI)
- Contributes her time in a start-up EdTech company, Edu Metrix, which is India's first marketplace serving Education Sector. This company supports Digital India initiatives and empowers educational institutes by compiling world class products, services & Technology solutions thereby bringing efficiency & value to the Education Ecosystem.
- Currently she represents Times of India's CSR Division, helping in launching and executing Teach India Program in Bengaluru and under her leadership she has successfully completed 27 batches in the first cycle.

**Balamani Ravisankar**

- She is associated with Teach India ever since its inception in 2011. Teach India, a spoken English program of the Times of India, focuses on skilling the youth of India who, for certain unfortunate circumstances, could not measure up to the desired levels of the employers. Along with the British Council and NGOs as partners, the program has been bridging the gap between employee needs and employer expectations.
- In addition to empowering the students with language skills, she also selects and train volunteers for the Teach India programme.
- Besides Teach India, she has worked with Kings Learning and the Regional English Language Office, US Consulate, Mumbai teaching English to students. She completed her CELTA in 2014. She has also completed online certification courses with World Learning on Teaching Grammar and Designing Professional Events for English Language Teachers. She did her post-graduation in Marine Science from Goa University, post which she worked as a Research Fellow under the UGC-CSIR NET Fellowship.
- I consider teachers as facilitators. I firmly believe in learner autonomy and creating an effective learning environment in the classroom by engaging students in multi-sensory activities.





### Dr. GIRISH MUKUND KHANDEKAR

*B.Sc., (Chemistry/Physics) - University of Mumbai  
B.Sc.(tech) Pharmaceuticals & Fine Chemicals - UDCT, Univ. of Mumbai  
MSc (tech) Pharmaceuticals & Fine chemicals - UDCT, Univ. of Mumbai  
PhD(tech), Pharmaceuticals & Fine chemicals - UDCT, Univ. of Mumbai  
Post-Doctoral Research - DysonPerrins Laboratory, OXFORD, UK*

### Work Experience & Achievements:

2016 Till Date:	Work as a freelance consultant for process designing, process improvement, structural elucidation, effluent treatment etc. In addition to this engaged with ICTs, IITs and universities as an external faculty and as an examiner for thesis of M.Tech., PhD students.
2015- 2016:	Joined as President R&D, Atul Limited, Valsad.
2005- 2014:	Joined as V.P.-R & D and retired as Sr. V.P.-R&D from Indofil Chemical Company.
2004- 2005:	Worked as V.P.-R & D and Business Development with Innovassynth Technologies Ltd., Khopoli.
2001- 2004:	Joined as G.M.-R & D in duphar-interfran ltd, Thane in November 2001.
1999- 2001:	Joined Zandu Chemicals Ltd. In October' 1999 as GM-R & D.
1998- 1999:	Joined Sekhsaria Chemicals Ltd, Dombivali as GM-R&D.
1987- 1998:	Joined as a scientist in NOCIL R&D. Left NOCIL as Manager- R & D in NOCIL in 1998

### Dr. TOGAPUR PAVAN KUMAR

*B.Sc. – Osmania 2002, M.Sc. – Osmania 2004, Ph.D. – Osmania (CSIR- IICT) 2011, PG Diploma in Patents Law – NALSAR 2014*

**Senior Scientist, Coordinator-IPR / Convener-Business Development/ Manager-InTEC, CSIR-Institute of Minerals & Materials Technology (IMMT), Bhubaneswar- 751013; Odisha, India**

### Area of Interest:

- Basic Research: Organocatalysis-Asymmetric Synthesis; Nucleic Acid Chemistry; Process Chemistry, Medicinal Chemistry; Natural Product Synthesis & Flow Chemistry
- IP Management & Business development: Patent searches and analytics using various databases/STN Search and Markush Structure Analysis/ Patent Drafting and Portfolio-Management
- Academic Teaching: Organic Chemistry Courses and Intellectual Property (IP), Patent Search and Analytics
- Technology Development: Process/Technology Development and Demonstration, Client management, Project execution and monitoring, Documentation and Result submission etc.





### Dr. CHETAN SHINDE

*M. Pharm., Ph.D., PG Diploma in Patent Law,  
Diploma in Management*

**Deputy Manager, Cipla Ltd.**

#### Subjects Taught:

Pharmaceutics, IPR, Novel drug delivery system, Industrial Pharmacy

#### Research Interests:

Long-acting injectable drug delivery systems, Lipid based drug delivery, Nano drug delivery, Meta Medicine

**Total Research Publications-** 20+

**Conference Proceedings:** (10+)

### SUBHAPRADA NISHTALA

*MSc Food Technology, CFTRI*

**Director In-charge, ITCFSAN (setup jointly by FSSAI and EIC)**

#### Subjects Taught:

Food Safety & Regulations

#### AWARDS:

AFST(I) FSSAI Food Safety Professional of the Year 2019

**Professional Services:** Regulatory Advice, Training.

**Professional Membership:** AFST(I) – President, Mumbai Chapter



### DR. SANGRAM KESHARI SAMAL

*PhD in Biomaterials, University of Pisa, Italy*

**Ramalingaswami Fellow, Scientist-D**

#### Subjects Taught:

Introduction to Biological Science and Bioengineering

#### Research Interests:

Nano-biomaterials, Cell and phage therapy, Bio-imaging, Protein chemistry, Drug and Gene delivery

**Recognized Research Guide for:** PhD, MSc and M.Tech.

**Guided students:**15

**Total Research Publications-** National: 2, International: 73

**Conference Proceedings:** International: 25 National: 32

H-Index : 23, Citations : 2151

**Patents** (granted in last 5 years)- 5

**AWARDS:** 11



### DR. SHANTANU KRISHNARAO SAMANT

*Ph.D. Tech. (Food Technology)*

**Associate Director (R&D), Mondelez International Ltd.**

#### Subjects Taught:

Carbohydrate Chemistry & Technology, Biotechnology of Fermented Foods

#### Research Interests:

Food products, carbohydrates- protein interactions, specialty fats & its applications.

**TOTAL RESEARCH PUBLICATIONS** – National: 05, International: 08

**Conference Proceedings** - National: 02

#### AWARDS:

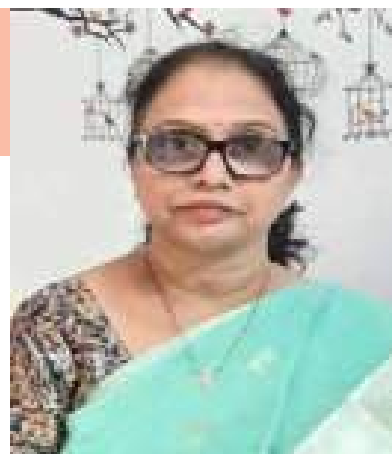
Received 5 awards from company – Mondelez International.

**Professional Services:** Visiting faculty- ICT (from 2017 – till today;  
Research Council member CFTRI (2013- 2015),  
Regulatory Committee member PFNDAI (past),  
Research Committee member for Food Tech Dept, ICT (past),  
Professional Membership: Life Member AFST(I)

### Mrs. Sujata J. Chivate

*M.Sc. (Analytical & Medicinal Chemistry)*

**Manager -Food Chemical Testing**



#### Subjects Taught:

Comprehensive techniques in Food Analysis. SSAI Qualified Food Analyst by Government of India, AGMARK approved Chemist

**Professional Services:** Total Experience 20+ years in Third party testing laboratory.

Manager: FBO Consulting & Technical Services. Sep 2019-Present

Manager : Food, Envirocare Labs Pvt. Ltd, May 2007-March 2017

Analyst : Microchem Labs Pvt. Ltd. -2006-2007

Analyst : SGS India Pvt. Ltd. 1993-2003

Professional Membership : AFSTI Life Membership

## Staff Profile

### Mr. SATISH KUMAR SARANGI

**Associate Dean (Industries and Internship),  
Officer on Special Duty, ICT-IOC Bhubaneswar**



M.Tech (IIT Kharagpur), MS (Institute of petroleum and Gas, Romania, UNESCO Programme)

MBA (Faculty of Management Studies, Delhi)

Ex. Executive Director, IndianOil Corporation Ltd,  
Consultant (Technical), IndianOil Corporation Ltd,

Short Term Course on Strategic Management in  
WHARTON Business School, USA and Universities of  
Alberta, CANADA.

Former CEO, IOTUES, Paradip, Ex. Chairman, IndianOil  
CREDA Biofuels Ltd, Ex. Chairman IndianOil Ruchi  
Biofuels Ltd, Director, Joint venture of NPCIL and IOCL,  
Director IndianOil Panipat Power Project



## Central research facility at ICT-IOC Bhubaneswar



## Central research facility at ICT-IOC Bhubaneswar







*Faculty Members, ICT-IOC Bhubaneswar*

*Not in picture: Dr. Swagat Mohapatra and Prof. Anand V. Patwardhan*



*Supporting staff at ICT-IOC Bhubaneswar*





*UG & PG laboratory at ICT-IOC, Bhubaneswar*



*UG & PG laboratory at ICT-IOC, Bhubaneswar*



*Central Library at ICT-IOC Bhubaneswar*





*Central Library at ICT-IOC Bhubaneswar*



*Bus facility at ICT-IOC Bhubaneswar*



*Faculty-students classroom interaction at ICT-IOC Bhubaneswar*



*Prof. Pradeep Vavia, Director, ICT-IOC Bhubaneswar while interacting with staff*



*PhD Research Scholars at ICT-IOC Bhubaneswar*



*MTech-Food Engineering and Technology Students of 2020 and 2021 batch*



*MTech-Pharmaceutical Chemistry and Technology Students of 2020 batch*



*Integrated MTech (Chemical Engineering) Students of 2018 batch*



*Integrated MTech (Chemical Engineering) Students of 2019 batch (Half students of batch in internship)*





*Integrated MTech (Chemical Engineering) Students of 2020 batch*





## INNOVATIVE PROGRAMMES AT ICTM-IOC BHUBANESWAR

### PREAMBLE

As was stated elsewhere, ICT has added two campuses from 2018-19, this being one of the two. Because of the Category I and Deemed to be status, it was possible for ICT to go out of Maharashtra. In view of massive investment in energy, petrochemicals, chemicals, polymers, textiles, minerals, materials, biotechnology and pharmaceutical industries in Odisha, ICT was requested to open a campus in Bhubaneswar. Indian Oil Corporation Ltd took a historic decision to support fully a campus of ICT in Bhubaneswar. This is the first of its kind in India where a corporate house has decided to support innovative education and research under its CSR policy to create manpower and job opportunities and entrepreneurs and skill development Centres in Eastern India. The nation at large will benefit.

The campus is equipped with modern equipment for carrying out high class research and innovation at Centres of Excellence to develop technology and to support Research & Development in industry and Skill Development in Chemical Engineering, Petrochemicals, Textiles, Polymers, Pharmaceuticals, Energy, Food Technology, etc.

### INTEGRATED M. Tech. IN CHEMICAL ENGINEERING (i-M.Tech.)

i-M. Tech. is unique in its content, character, delivery, and outcome. It is new and being introduced

in India for the first time. The objective to impart industrial training of two years to all students in different areas and develop entrepreneurial skills. CREATING ENTREPRENEURS AND INNOVATORS instead of job seekers is a prime goal. A variety of opportunities are provided to both students and teachers. During the industrial internship the student will receive stipend/or concessions from industry making the education affordable to one and all.

i-M.Tech. starts after completion of 12th Standard (HSSC, 10+ 2, or equivalent) and is of 5 years duration consisting of 15 trimesters (6 trimesters in industry and 9 in classroom on campus) with alternate term in industry, with major degree in Chemical Engineering and minor in 6 different disciplines. It will ensure improved quality and industry-relevance in curricula development for integrated M. Tech. in the field of Chemical Engineering as major branch with minor in Petrochemicals, Textiles, Polymers and Materials, Foods and Pharmaceuticals, and Energy Engineering. The last two trimesters will be for promotion of research problem with experiments which will lead to a design project to promote entrepreneurship and start-up companies. An experience of 2 years in different industries will boost the morale of students, their industry-readiness and placement prospects. Our idea is to place them in all processing industries including software companies, programming, electronics industries, minerals, coal, biotech, etc.

### REVISE INTAKE CAPACITY AS PER NEW EWS RULES

The admission to this course is based on JEE (Mains). The capacity is 66.

### SUPERNUMERARY QUOTA

Supernumerary quota for students under Study in India programme has been created. (see Study in India Cell; <https://studyinindia.gov.in/>). Certain number of seats are also created in each programme for NRI, PIO and Foreign students. Students from SAARC countries are also included at a special fee structure. Currently 15% supernumerary seats are created to be distributed equally among three categories adjusting internally.

As stated earlier the programme is a trimester (4-month) system with 3 terms per year. The class of 60 is divided into two batches, Batch A and Batch B with 30 students each. The first trimester in an academic year will begin with 60 students in the class room and will receive training in high level instruments in the fields of Chemistry and Physics, and Mathematics. The syllabus of Chemistry and Physics is so designed as to make the students useful for taking adequate training for industrial internship. The instrumental methods will include theory and experiment

on instrumental methods of analysis, typically taught at M.Sc. level and in Mathematics, they will learn MATLAB, Python, C++, R-programming, CAD/CAM. The first term will make them understand the importance of various industries.

Table : Schedule of Lecture and Work Terms for Batches A and B

Year	Trimester	Scheme of trimesters	Starting month
1	T1	Theory	September
1	T2	Theory	January
1	T3	In-plant	May
2	T4	Theory	September
2	T5	In-plant	January
2	T6	Theory	May
3	T7	In-plant	September
3	T8	Theory	January
3	T9	In-plant	May
4	T10	Theory	September
4	T11	In-plant	January
4	T12	Theory	May
5	T13	In-plant	September
5	T14	Theory	January
5	T15	Theory	May

During T14 and T15 the students will study courses on management, finance, environmental laws, legal issues, entrepreneurship and sustainability and work on a group project called Start-Up Project. The students will be divided in 12 groups with mixture of students from Batch A and B, who would have worked in different industries, and given a project based on research done in ICT. They will repeat experiments to verify data, develop a green process for the given project, collect information on kinetics, reactor design, safety, market, capacity and potential industrial zone, etc. and will prepare a feasibility report to start a company and will be helped to meet venture capitalists.

#### MAJOR AND MINOR (i-M.Tech.) PROGRAMME

100% seats are for students from all over India (all States and Union Territories including Maharashtra)

1. Chemical Engineering (Major)  
Polymer and Materials Engineering (Minor)
2. Chemical Engineering (Major)  
Food Engineering and Technology (Minor)
3. Chemical Engineering (Major)  
Pharmaceutical Technology (Minor)
4. Chemical Engineering (Major)  
Fibre and Textile Processing Technology (Minor)
5. Chemical Engineering (Major)  
Energy Engineering (Minor)
6. Chemical Engineering (Major)  
Petrochemical Engineering (Minor)
7. Chemical Engineering (Major)

Chemical Technology (Minor): The student who takes different subjects from the different

minor programmes but could not have enough credits to get the single minor degree will be given chemical technology as minor.

### EXAMINATION PATTERN

The examination pattern is 70% marks for continuous evaluation and 30% weightage will be for the end-trimester examination.

### SELECTION OF BATCHES

Table shows the manner in which the study terms and in-plant training terms will be assigned to the students.

### UG RESEARCH COMPONENT FOR STUDENTS ON THE CAMPUS

Some of the students desirous of getting trained for research will have an opportunity to work with a few professors on the campus during their Lecture Term by putting in extra-hours per week. This training will get adequate credits. A minimum of 20 credits could be so acquired. These extra credits will enable the student to get Honours degree at the end.

### CURRENT INDUSTRIES FOR INTERNSHIP

The students of ICT-IOC Bhubaneswar campus have been given internships in the following industries and this list will go on increasing to include industries across the country as well as abroad in future.

Biofermenta Dahej and Kulu	IOC Gujarat Refinery
Gujarat Refinery Baroda	IMMT Bhubaneshwar
IOC Panipat Refinery	IOC Paradip Refinery
IOC R&D Faridabad	Jagannath Polymers Cuttack
Microfilt Umbergaon	Microfilt Umbergaon
NALCO	Oriplast Balasore Odisha
Paradeep Phosphate	RINL Vizag steel
Galaxy Surfactants Ltd.	UPL Ltd
Godrej Industries Ltd.	Indo Amines Ltd.
Atul Ltd.	Anupam Colours Pvt. Ltd.
Rubicon Research Pvt. Ltd.	Aarvi Encon Pvt. Ltd.
Gujrat Narmada Chemicals Ltd.	Microchem Laboratory Pvt. Ltd.
Reliance Industries Ltd.	Alkyl Amines Chemicals
Aarti Drugs Ltd.	Aarti Industries Ltd.
Pidilite Industries Ltd.	IIP Dehradun
Adani Group	BPCL
Dalmia Group Cement	GAIL
HPCL	IFFCO
BEML	DRDO
Deohler	BHEL
MAPRO	HAL Nashik
GreenShift Energy Pvt Ltd	Concept Pharmaceuticals Ltd
University of Calgary	University of British Columbia
University of Alberta	McMaster University
McGill University	National University of Singapore

Additional Industries which will take interns during 3rd and 4th Trimesters apart from the above.

Adani Group	BPCL
Dalmia Group Cement	GAIL
HPCL	IFFCO
OPAL Dahej	

This list is not exhaustive and will continue to grow. Very interestingly the industries have liked the Internship Diary prepared by ICT to monitor the student's Progress and some of the students are already assigned research oriented assignments, literature search and report writing. The acceptance of the young students has been enthusiastic and speaks volumes about the quality and content of the i-M. Tech. programme

When the steady state of the programme is achieved in the fifth year, 150 students will always in industry throughout the year. Therefore industrial connectivity is a very strong component of i-M.Tech programme.

### **MINOR DEGREE COMPONENT**

The award of the minor degree will be decided at the end of the programme depending on the number of credits the student has acquired. It will not be decided in the beginning and thus the student will have a chance of learning lessons from different disciplines and developing interest. This is again a unique feature. If no adequate credits are accrued, then the student gets Major degree with mention of Chemical Technology as the Minor degree.

### **VIBRANT SYLLABUS**

Since the students will be going to industry, they will have to write reports and credits are given to the student for industrial internship. After the 4th trimester, the students can suggest which new topics should be included in the syllabus in tune with the demands of the industry.





# ICT Marathwada Campus, Jalna





## MESSAGE FROM THE DIRECTOR



*Dear Aspiring students and parents,*

The Marathwada Campus of Institute of Chemical Technology was established at Jalna, and will now be in its fifth year of operation with the intake of fifth batch of Integrated M Tech in Chemical Engineering, and 3rd batch of (Two Year) M. Tech in Food, Pharma and Polymer.

Institute of Chemical Technology, Mumbai is synonymous with world-class education, cutting edge research, and strong Industry ties and its Jalna campus (fondly called as ICT MARJ) is not far behind. ICT MARJ is doing the same thing that Mumbai campus has been doing since the inception. The focus of the education and research is the Chemical and allied technologies. The Institute has won several accolades in research, intellectual property, Industry-Institute interactions, at National and International levels and can

be adjudged from the NIRF, QS, and other rankings.

The Integrated Masters in Technology program is unique program in the country with its trimester pattern, rigorous academic schedule and large Industrial internship component. The program duration is 5 years with three trimesters in each academic year. of the 15 trimesters, the students undergo 9 trimesters of academics in classroom supplemented with 6 trimesters of industrial in-plant training, where the students perform projects applying the knowledge gained in the classroom to practical problems.

Simultaneously, in the tradition of ICT, Doctoral programs also began with induction of 18 PhD scholars. In 2020-21, ICT, Marathwada grew larger with starting of three M Tech Programs in Polymers Technology, Pharmaceutical Science and Technology and Foods Technology.

As IPT (In-Plant Training) is the most attractive part of ICT MARJ, the most significant part here is the Faculty and the Students and the way both of them complement each other in various respect such as teaching-learning, research, co-curricular and extra-curricular activities. The teaching staff is the mixture of both “young minds and the experienced ones”. They are not only involved in the teaching in the best way but also undertake research grants (DST-SERB and others), projects, and patents; publish in reputed journals such as Nature-catalysis; get (inter)national recognitions and awards (Royal Society of Chemistry, FMASc, etc.); and also, are the visiting faculty in international institutions/universities. Such faculty instills the research mindset among the students which is evident in their (students’) life at ICT MARJ.

The students have made the most of it which resulted in them getting their work published under the guidance of the faculty. They have also bagged summer internship at reputed universities in Canada under the scheme MITACS Globalink. This is how we at Jalna campus nurture and develop the research mindset and research culture. This does not mean students here work like machines. We provide very positive ambience to the students where they get good guidance, counselling by the experts, hands-on knowledge about what in reality industry expects from the engineers by the industry experts (we organize fortnightly “Colloquy”). Apart from this, they have college (Student) life in the form of co-curricular and extra-curricular activities, involvement and participation in various Student Clubs, through IDP, National Science Day, Pi Day, Freshers Day to name a few. To know more about it please refer to our campus newsletter- Margjal which is the mirror of our campus life. It tells you what happens at our campus, what kind of research faculty and students are involved, how things work here, and the list will go on (if I start mentioning each activity, I may end up writing a thesis!)

I welcome you to browse our website to learn about the programs, quality and the depth of the academics and research at ICT, Marathwada. I look forward to have you enrolled in the programs at ICT, Marathwada Campus, Jalna (or at ICT MARJ). My best wishes for all the readers!

**Prof. (Dr.) Uday S. Annapure**

*B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)*

**DIRECTOR**

## ABOUT ICT MARATHWADA CAMPUS JALNA:

Category I status enabled Institute of Chemical Technology, Mumbai to have additional off-campus apart from that in Mumbai. Institute of Chemical Technology (Mumbai) Marathwada campus Jalna, fondly known as ICT-MARJ, was established on 4<sup>th</sup> May 2018 with the assistance of the Government of Maharashtra. It was entrusted with the legacy of ICT and has paved a distinctive and innovative path. Padma Vibhushan Professor M.M Sharma inaugurated the Academic endeavor of MARJ on 28<sup>th</sup> August 2018.

### VISION

To be a vibrant educational institute with innovative programs and research culture in the field of chemical and allied sciences.

### MISSION

- Produce trained engineers and problem solver research fellows.
- Develop science and technologies of global standards having relevance to India as well as to local Industry from Marathwada region.
- Develop entrepreneurship and provide incubation centres for encouraging Start-ups in Marathwada Region. Catalyse the process of generating wealth from knowledge creating bridge among industry, agriculture, environment and society.

## LOCAL ADVISORY COMMITTEE

LAC is formed to guide and facilitate solving local problems on the Campus. The current members are as follows:

Sr.no.	Name	Designation
1	Prof. A.B Pandit	Chairman, Vice Chancellor
2	Prof. U.S Annapure	Campus Director
3.	Shri. B.S. Khose	Chairman, UAA Marathwada Chapter
4.	Shri. Shivprasad Jaju	President, CMIA/Nominee
5.	Shri. Mahendra Bagadi	President, Rotary Club of Jalna
6.	Shri. Vijay Rathod	Collector, Jalna
7.	Shri. Nitin Janardan Narvekar	Municipal Chief Officer, Jalna
8.	Shri. Umesh T. Nagdeve	I/c Jt. Director, DTE, Aurangabad Region
9.	Shri Suresh Agarwal	Chairman, Beej Sheetal
10.	Shri. Ashish Mantri	VC's Nominee
11.	Shri Ranjeet Gulati	VC's Nominee
12.	Dr. Parag Nemade	Member Secretary
13.	Shri. Prasad Kokil	Invitee
14.	Shri. Sunil Raithatha	Invitee
15.	Shri Ghanasshyam Goyel	Invitee
16.	Shri. Nitin Kabra	Invitee
17.	Shri. G. D. Agarwal	Invitee

Hostel is set up by renting suitable premises and also some new buildings are under construction. Student activities such as cultural events, sports (Dhamaka), National Science Day Celebration, World Food Day Celebration, Colloquy (experts from various fields interact with the students), Science Quiz, Industry Defined Problems competition are being organized in addition to visit to ICT Mumbai main campus. Several factory visits are organized in every trimester. Seminars by academic experts, visit by foreign scientists, video conferencing feature regularly at Jalna campus. Good library and sports facilities are set up along with other facilities such as gym, mess and canteen. A quarterly newsletter Margjal is published regularly to capture happenings at Jalna campus and also to give opportunity for creativity of students. students are placed in different industries under IPT. Doctorate candidates have also joined, and research culture of ICT is set in! Additionally, we have Two Year Master's programme in Food Engineering & Technology, Pharmaceutical Technology and Polymer Engineering & Technology.



# FACULTY PROFILE

ICT Marathwada Campus,  
Jalna





**PROF. UDAY S. ANNATURE**

*B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)*

**Professor of Food Chemistry**

**DIRECTOR,  
ICT-Mumbai Marathwada Campus,  
Jalna**



## REGULAR FACULTY



### **PROF. UDAY S. ANNAPURE**

*B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)*

**Professor of Food Chemistry**

**Director, ICT-Mumbai Marathwada Campus, Jalna**

#### **SUBJECTS TAUGHT:**

Food Chemistry, Technology of Fruits, Vegetables and Tubers, Principles of Food Preservation.

#### **RESEARCH INTERESTS:**

Extrusion Processing, Non-thermal processing of food-Cold Plasma Processing, Carbohydrate Chemistry and Technology - Plant Gums, Traditional Foods, Nutraceuticals, Fermentative production and downstream processing of industrially important secondary metabolites. Recognized Research Guide for: Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci.) in Food Science, Biotechnology

Guided students: Ph.D: 18, Masters: 85

TOTAL RESEARCH PUBLICATIONS: National: 10, International: 126, Book Chapters: 10, H-Index: 28 (Scopus); 33 (Google Scholar), Citations: 2577 (Scopus); 3686 (Google Scholar)

#### **AWARDS:**

- Fellow of Maharashtra Academy of Science (2017)
- BOYSCAST Fellow (DST Govt. of India) – 2010
- Recipient of the Best Teacher Award (Professor D.V. Rege-AFST Mumbai Chapter-2011 Endowment) 2014 and 2016.



### **Dr. PARAG R. NEMADE**

*B. Chem. Eng., M. S. and Ph.D. (University of Colorado)*

UGC Assistant Professor, Department of Chemical Engineering and Department of Oils, Oleochemicals and Surfactants Technology

**Deputy Director, Infrastructure and Lab Development, ICT, Mumbai, Marathwada Campus, Jalna (on deputation)**

#### **SUBJECTS TAUGHT :**

Advanced Membrane Separations, Nanotechnology, Advanced Momentum Transfer, CE Lab, Introduction to Chemical Engineering, Materials and Energy Balance Calculations, Chemical Engineering Thermodynamics I, Momentum Transfer

#### **RESEARCH INTERESTS :**

My group works on membrane separation processes, on development of new polymeric and graphene-based materials for membranes, catalysts, and sensors applications.

We also work on sustainability engineering, in areas such as sustainable sanitation, development of new applications for industrial wastes, etc.

Recognized Research guide for PhD. (Tech) in Chemical Engineering, Oils, Oleochemicals and Surfactant Technology, Ph.D. (Sci) in Chemistry Guided students: Ph.D.: 05, Masters: 32 Ongoing PhD: 08, Masters: 02

TOTAL RESEARCH PUBLICATIONS- National: 01, International: 24 Patents applied: 04 Patents granted: 03, H-Index: 13 (Scopus); 13 (Google Scholar), Citations: 845 (Scopus); 1000 (Google Scholar)

#### **Awards:**

DAE Young Scientist Award, 2013, Reinvent the Toilet Challenge 2013 (Bill and Melinda Gates Foundation), Chevening Rolls - Royce science, Innovation and Leadership Fellowship 2016, Newton-Bhabha Fellowship 2017





### Dr. GIRISH JOSHI

*B.Sc.(Physics), M.Sc. (Physics), Ph.D., B.Ed.*

**Professor, Engg. Physics and Materials**

#### SUBJECTS TAUGHT :

Engineering Physics, Material Science, Semiconductor Devices and Applications.

#### RESEARCH INTERESTS :

Polymer Nanocomposites- Battery Electrolyte Applications, Dielectric Properties, Graphene Oxide, Quantum dots, thermistor, capacitor Applications, Polymer Blends- Engg. Applications, thermal conductivity, Tribology, High performance composites, Metal Precursor- Electrical and optical properties  
Recognized Research guide for: Ph.D. Plastics and Polymer (Technology), Ph.D. (Science) in Physics  
Guided students: Ph.D. 06, Masters: 03, Ph. D ongoing:03  
Total Research Publications: National: 02, international: 1125+, Edited Book: 02; Patents: 01, H-Index: 20 (Scopus); 22 (Google Scholar), Citations: 1562 (Scopus); 1600 (Google Scholar)

#### Awards:

National Best Teacher Award, 2017 (by Krishnmurthy Trust, Tirupati), Maharashtra Academy of Sciences Fellow Award 2019., Life fellow Indian chemical society 2021, visiting scientist UCLM, Spain 2009, 2016.



### DR. MANOJ B. GAWANDE

*FRSC, docent (habil) M.Sc., Ph.D. (Chemistry), Ph.D. (Science), ICT Mumbai, Docent (Habilitation), Palacky University, Olomouc*

**Visiting Professor, Nanyang Technological University, Singapore. Visiting Professor, CATRIN-RCPTM, Palacky University, Czech Republic.**

**Fellow of Royal Society of Chemistry, London (UK)**

**Associate Professor in Chemistry**

#### AWARDS:

FICS: Fellow of Indian Chemical Society-2021; RSC Research Grant Award-2021; Docent (habilitation)/"Associate Professor" nominated by Palacky University; FRSC 2017: Fellow of Royal Society of Chemistry (FRSC), United Kingdom; FMASc: Fellow of Maharashtra Academy of Sciences, Deans Award-2016 and 2017: By Dean of Palacky University, Olomouc; Mahatma Gandhi Pravasi Samman-2014: Ministry of Overseas Indian Affairs; Visiting Professor grant by FCT Lisbon, Portugal; BK-21 (Brain Korea) Research Fellowship Award South Korea; FCT Research Associate Fellowship; Associate Editor of Current Catalysis; Editorial Board Member of Nature- Scientific Reports; Guest Editor of ACS Sustainable Chemistry and Engineering (ACS Publications), Small and Advanced Materials Interfaces (Wiley Publications). Featured in Stanford University's global list of top 2% scientists for the year 2019 and 2020 in the Chemistry field.

#### SUBJECTS TAUGHT :

Organic Chemistry, Physical Chemistry, General Chemistry, Green Chemistry, Nanomaterials, Heterogeneous Catalysis

#### RESEARCH INTERESTS:

Nanotechnology, Nanocatalysis, Sustainable Organic Transformations, Single-Atom Catalysts, Environmental Remediation and Energy.  
Recognized Research Guide for Ph.D. (Sci) in Chemistry Guided students: 06(ongoing); 3 (co-guided), Total Research Publications: National: 00, International: 140, Patents: 02 (filed), H-Index: 44 (Scopus); 46 (Google Scholar), Citations: 9300 (Scopus); 1100+ (Google Scholar)



**Mr. SHARAD LAHOTI**

*B.Sc., M.B.A., L.L.B.*

**Associate Dean, Industry**

**SUBJECTS TAUGHT :**

Industrial Psychology, Financial Management and Project Finance.

**RESEARCH INTERESTS :**

Financial Management in Enterprises. Psychology, Financial Management and Project Finance. He has a working experience of more than 40 years in Private sector industries in Electronic, Plastics, Fertilizers, Agro Inputs etc. and in Banking sector. He has good experience in day today administration of industrial units, including all management functions, ISO and Ecocert Certifications, DSIR approval, Projects grants, Industrial promotion schemes of Government.



**Dr. MANOJ KUMAR JADHAO**

*B.Sc. (Chem), M.Sc. (Anal. Chem), Ph.D. Physical Chem.,*

**Assistant Professor of Advance Instrumentation**

**SUBJECTS TAUGHT :**

Chemistry-I (Analytical chemistry), Chemistry-II (organic chemistry), Spectroscopic and Chromatographic methods of Analysis. Physical methods of Analysis.

**RESEARCH INTERESTS:**

Protein aggregation, Phytochemical Isolation. Photophysics.  
Guided Students: Ph.D. 03 (Ongoing), 01 (Co-guide)  
TOTAL RESEARCH PUBLICATIONS: National: 00,  
International: 15, Book 1, Book Chapter: 3  
H-Index: 08 (Scopus); 08 (Google Scholar),  
Citations: 138 (Scopus); 161 (Google Scholar)

**AWARDS:**

National Postdoc Fellowship, 2017 (DST-SERB, Government of India), Life Member of the Indian Laser Association (LM-1308, 2019). DST JRF (2012), DST SRF (2015).



### Dr. SANDEEP BHAIRAT

*B.Sc. (Maths), M.Sc. (Applied Maths), Ph.D. (Applied Maths)*

**Assistant Professor of Engineering Mathematics and Computer Science.**

#### SUBJECTS TAUGHT:

Advanced Calculus, Differential Equations and Integral Transforms, Numerical Techniques, Scientific Computational Tools Lab - MATLAB, Mathematical Methods in Chemical Engineering.

#### RESEARCH INTERESTS:

Qualitative Study of Fractional Differential Equations & Dynamical Systems, Stability and Bifurcation Analysis, Mathematical Modelling in Disease Dynamics, in Drug delivery systems, in Pharmacokinetics, in Protein Aggregation and Numerical Simulations.

Guided Students: 02 (On going)

TOTAL RESEARCH PUBLICATIONS: National: 02, International: 12

H-Index: 03 (Scopus); 08 (Google Scholar),

Citations: 36 (Scopus); 189 (Google Scholar)



### Dr. NAGSEN P. MESHAM

*B.Sc. (Physics, Chemistry, Mathematics), M.Sc. (Physics), Ph.D. (Materials Science)*

*Post-Doctoral Fellow- Kongju National University, South Korea (2013-2015)*

*Post-Doctoral Fellow- Chonbuk National University, South Korea (2016-2017)*

*Research Associate- Dept of Metallurgical engineering and Material Science IIT Bombay (2018-2019)*

**Assistant Professor of Applied Physics**

#### SUBJECTS TAUGHT :

Applied Physics

#### RESEARCH INTERESTS:

Photoelectrocatalysis, Photovoltaics, Thin film solar cell, Nanomaterial Synthesis, Semiconductor Thin films, 2D- materials, Semiconductor Devices

TOTAL RESEARCH PUBLICATIONS: National:1, International: 10

H-Index: 05 (Scopus); 05 (Google Scholar),

Citations: 91 (Scopus); 129 (Google Scholar)

### Dr. KAPIL IRWANTRAO SAGROLIKAR

*B.A. (English, History & Public Administration), M.A. (English),*

*Ph.D. (English/Interdisciplinary)*

**Assistant Professor of Communication Skills and Humanities (English)**

#### SUBJECTS TAUGHT :

Communication Skills, Technical Communication & Human Values

#### RESEARCH INTERESTS:

English Literature, Oral Narratives, Women Studies, Bhasha Literature, Cultural Studies

TOTAL RESEARCH PUBLICATIONS: National: 04.

#### AWARDS:

National: (Institutional Doctoral Research Fellowship offered by CWDS (Centre for Women's Development Studies) ICSSR, New Delhi (01 October 2015- 16 August 2018)



### Dr. SOMEN MONDAL

B.Sc. (Chem.), M.Sc. (Phy. Chem.), Ph.D. (Chem)

Post-Doctoral Fellow- INST Mohali (2017-2018)

Post-Doctoral Fellow- Israel Institute of Technology (2017-2019)

**Assistant Professor of Physical Chemistry**



#### SUBJECTS TAUGHT :

Chemical kinetics, Electrochemistry, Catalysis, Surface and interfacial chemistry.

#### RESEARCH INTERESTS:

Ultrafast Spectroscopy, Photo-induced electron transfer and proton transfer dynamics, Conductive biopolymer for optoelectronic devices.

Guided Students: PhD: 01 (ongoing),

Project Assistant: 01 (ongoing), Integrated M.

Tech: 02 (ongoing)

Total Research Publications:

National: 1, International: 26, Book Chapter: 1

H-Index: 12 (Scopus); 12 (Google Scholar),

Citations: 318 (Scopus); 350 (Google Scholar)

#### AWARDS:

2021: Invited Speaker (RSC-chemsci-2021)

2020: JACS Young Investigators-2020,

2020: Royal Society-Newton International

Fellowships, UK. 2019: The Lady Davis

fellowship, Technion IIT-Israel. (declined),

2018-2019: Planning and Budgeting committee

(PBC) Fellowship program, Technion IIT-Israel.

2017-2018: Grand Technion Energy program

(GTEP) Fellowship program, Technion IIT-Israel.

2017 (Feb-Nov): National postdoctoral fellowship (NPDF)- India.

2013 - 2017: Senior Research Fellowship (SRF),

IISR Kolkata. 2011 - 2013: Junior Research

Fellowship (JRF), IISR Kolkata. 2009 - 2011: West

Bengal Govt. Merit-Cum-Means Scholarship

Scheme (WBG M-C-M) for pursuing M.Sc. NIT Durgapur.



### Dr. DEBASHIS KUNDU

B.E. (Chemical Engineering), M.Tech. (Chemical Engineering),

Ph.D. (Chemical Engineering)

**Assistant Professor of Chemical Engineering**

#### SUBJECTS TAUGHT :

Thermodynamics-I, Chemical Engineering Thermodynamics-II, Chemical Process Control, Energy Engineering, Conventional Energy and Utilization, Biochemical Engineering, Process Simulation Laboratory-I, Process Simulation Laboratory-II.

#### RESEARCH INTERESTS:

Thermodynamics, Molecular Dynamics Simulation, Polymeric Gel, Enhanced Oil Recovery

Guided Students: Master: PhD: 01 (ongoing), JRF: 01 (ongoing),

Integrated M. Tech: 05 (ongoing)

Total Research Publications:

International: 28;

H-Index: 09 (Scopus); 11 (Google Scholar),

Citations: 251 (Scopus); 291 (Google Scholar)

#### AWARDS:

2012: Ambuja's Young Researcher's Awards for doing post graduate studies in India.

2018: Best Poster Award in Research.

2018: Conclave'18, IIT Guwahati, India.

### Dr. SAURAV RAJ

*B.Sc Engg. (Electrical and Electronics Engineering)*

*Ph.D. (Electrical Engineering)*

**Assistant Professor of Electrical engineering.**



#### **SUBJECTS TAUGHT :**

Basic Electrical Engineering, Computer Application in Power System, FACTS, Electronics Instrumentation

#### **RESEARCH INTERESTS:**

Power System optimization, FACTS Devices, Renewable Energy, Distributed Generation, Swarm and evolutionary optimization techniques.

Guided Students: UG-13, PG-00, Ph. D-01 (ongoing)

Total Research Publications: National: 01, International: 35;

H-Index: 08 (Scopus); 10 (Google Scholar),

Citations: 282 (Scopus); 382 (Google Scholar)

#### **AWARDS:**

**2019:** Best paper presentation awarded in 1<sup>st</sup> International Conference on Innovation in Electrical Power Engineering, Communication, and Computing Technology, Springer on 13<sup>th</sup>-14<sup>th</sup> December, 2019.

**2020:** Best paper presentation awarded in 2020 International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET) at NIT Patna on 10-11 July 2020..



### Dr. JOYITA SARKAR

*B.Sc. Microbiology (Hons.), M.Sc. Biotechnology,*

*Ph.D. Biological Sciences & Bioengineering*

**Assistant Professor**

#### **SUBJECTS TAUGHT :**

Biological Sciences & Engineering; Biochemistry/ Microbiology; Biochemical Engineering, Advanced Biochemistry

#### **RESEARCH INTERESTS:**

Biomaterials: Effect of mechanical properties of 3D scaffolds; 3D Bioprinting, Drug metabolism and Toxicity: 3D cell culture system for high throughput studies, Tissue Engineering and cancer nano-theranostics

Guided Students: PhD: 2 (ongoing); Project Assistant: 1 (ongoing); MTech (Mentor): 4 (ongoing)

Total Research Publications: National: 01 International: 10, Book Chapter: 02, Conference Proceedings: 2;

H-Index: 05 (Scopus); 06 (Google Scholar),

Citations: 147 (Scopus); 160 (Google Scholar)

#### **AWARDS:**

Outstanding DST-AWSAR Award 2019 (PDF category); SERB-NPDF Award (2018); Best Oral Presentation Award in 5th Annual International Conference on Advances in Biotechnology (2015); CSIR SRF-NET (2012); CSIR JRF-NET (2010); University Gold Medal, University of Burdwan (2010); Late Kamala Mallick Prize University of Burdwan (2010); DBT Studentship (2008).



## CONTRACTUAL FACULTY



### Dr. RITIKA JOSHI

*B.Sc. (Chem.), M.Sc. (Chem), Ph.D. (Chem.).*

**Assistant Professor (Temporary)**

#### SUBJECTS TAUGHT :

Organic Chem (Lab & Theory); Physical Chem (Theory); Analytical Chem (Lab)

#### RESEARCH INTERESTS:

Fluorescence Spectroscopy, Photophysics, Photopharmacology, Photochromism, Biosensing  
Guided Students: Integrated M Tech: 05 (ongoing)  
TOTAL RESEARCH PUBLICATIONS: National: 1  
International: 16, Book Chapters:3  
H-Index: 09 (Scopus); 09 (Google

#### AWARDS:

CSIR NET JRF-SRF fellowship,  
Bronze Medal & Certificate from the Royal Society of Chemistry, London.

### Dr. ATUL H. BARI

*B.Tech. (Chem.), M.Chem.Engg. Ph.D. (Chem.Engg).*

**Assistant Professor (Temporary)**

#### SUBJECTS TAUGHT :

Mass transfer operations, Separation Processes, Multiphase reactor design, Introduction to petroleum technology, Petroleum refining processes, Refinery engineering.

#### RESEARCH INTERESTS:

Mathematical Modelling and Simulation, Chemical Kinetics, Crystallization, Nanomaterial synthesis

TOTAL RESEARCH PUBLICATIONS:

International: 09,

H-Index: 06 (Scopus); 06 (Google Scholar),

Citations: 103 (Scopus); 122 (Google Scholar)

**TOTAL RESEARCH PUBLICATIONS:**

International: 09,

H-index: 4, Citations: 93

#### AWARDS:

2019: DST-SERB National post-doctoral fellowship.





### **Dr. NAVNATH HANAVTE**

*M. Pharm., Ph.D. (Tech) Pharmaceutical Chemistry*

**Assistant Professor in Pharmaceutical Technology**

#### **SUBJECTS TAUGHT :**

Advanced Pharmaceutical Chemistry, Active pharmaceutical Ingredient Technology, Drug Metabolism, Pharmaceutical Organic Chemistry, Pharmaceutical Inorganic Chemistry, Medicinal Chemistry, and Industrial Pharmacy

#### **RESEARCH INTERESTS:**

Drug Design and Development, Development of Novel Methodologies for the synthesis of API'S and it's Intermediates, Process Chemistry, Excipient modification and their application in drug delivery.

**TOTAL RESEARCH PUBLICATIONS:**

International: 12, H-Index: 05 (Scopus); 05 (Google Scholar), Citations: 50 (Scopus); 56 (Google Scholar)

#### **AWARDS:**

Awarded PG Scholarship for master studies by UGC form 2012-2014.

Awarded UGC-BSR fellowship for the Ph.D. studies at Institute of Chemical Technology, Mumbai

Best poster presentation award in the 6th international symposium on current trends in discovery and research held at CSIR-CDRI, Lucknow (March 2013)

### **Dr. SANDHYA SHEWALE**

*M.Sc. (Food Technology), Ph.D. (Engineering Sciences)*

**Assistant Professor in Food Technology**

#### **SUBJECTS TAUGHT :**

Fruits and Vegetable Technology, Advanced Drying Technologies, Food Chemistry, Unit Operations in Food Engineering, and Introduction to Food Technology.

#### **RESEARCH INTERESTS:**

Electromagnetic Radiation Based Processing of Foods, Low Humidity Air Drying, Innovative Combinational Drying Technologies, Minimal Processing of Foods, Light-Based Processing, Non-Thermal Processing of Foods.

**TOTAL RESEARCH PUBLICATIONS:**

International: 7.

H-Index: 05 (Scopus); 06 (Google Scholar),

Citations: 80 (Scopus); 97 (Google Scholar)

#### **AWARDS:**

AWSAR Award for Popular Science Story under Ph.D. Category by Department of Science and Technology, Government of India, 2020;

DST-INSPIRE Fellowship for Doctoral Research by Department

of Science and Technology, Government of India, 2015; Junior

Research Fellowship for Post-Graduation Studies by Indian Council

of Agriculture Research, 2011; Awarded University Gold Medal by

VNMKV formerly known as Marathwada Agricultural University,

Parbhani, Maharashtra, 2012.





### Dr. SAMEENA MALIK

B. Tech (Chem.), Ph.D.(Tech.) (IIT Bombay)

Assistant Professor in Chemical Engineering

#### SUBJECTS TAUGHT :

Process Equipment Design I & II, Chemical Technology, Process Economics & Plant Design, Heat Transfer, Material Science & Engineering, Renewable Energy Systems

#### RESEARCH INTERESTS:

Advanced Oxidation Process, Wastewater Treatment, Solid Waste Management, Biofuels, Nanotechnology, Nanocatalysis.

Guided Students: Masters: 01

TOTAL RESEARCH PUBLICATIONS:

International: 15,

H-Index: 09 (Scopus); 11 (Google Scholar),

Citations: 342 (Scopus); 415+ (Google Scholar)

#### AWARDS:

Prime Minister's Doctoral Fellowship, 2015:

Visiting Research Scholar at Windsor University, Canada, 2018

### Dr. YOGESH GAT

M. Tech., Ph.D. (Food Engineering and Technology)

Ph.D. (Tech), ICT Mumbai

Assistant Professor in Food Technology

#### SUBJECTS TAUGHT :

Advances in Food Engineering, Food Processing and Preservation, Novel Techniques in Food Packaging, Computer Applications in Food Industry.

#### RESEARCH INTERESTS:

Extrusion Processing, Nutraceuticals and Functional Foods, Waste Valorisation, Value Addition, Traditional Foods, New Product Development.

**Guided Students:** M. Sc/M. Tech: 16; Ph. D (Part time): 01 (ongoing)

**TOTAL RESEARCH PUBLICATIONS:**

National: 05, International: 52,

Patents Filled: 01, Industrial Consultancy Project: 01

H-Index: 17 (Scopus); 21 (Google Scholar),

Citations: 946 (Scopus); 1557 (Google Scholar)

#### AWARDS:

Young Research Award-2017 conferred by LPU; Research

Appreciation Award-2018 conferred by LPU; Research

Excellence Award-2019 conferred by LPU; High Impact Teaching

Award-2017 conferred by Dale Carnegie Associates; High Impact

Article-2018 conferred by Industrial Biotechnology Journal;

Best Poster Presentation Award in International Conference

(IFCON-2013) conferred by CSIR-CFTRI.

**Teaching Experience:** More than 6 years of teaching and research experience from Lovely Professional University, Jalandhar (Punjab).

**Industrial Experience:** Mondelez International Professional

**Memberships:** Life member, Association of Food Scientist and

Technologist India. Life member, Indian Science Congress

Association.



### Dr. SRIMANTA MAJI

*B. Sc. (Math), M.Sc. (Math), Ph.D. (Applied Mathematics)  
Ph.D. (Science)), ICT Mumbai*

**Assistant Professor in Engineering Mathematics**



#### SUBJECTS TAUGHT :

Mathematics-I, Mathematics-II, Computer Lab-I, Computer Lab-II, Computer Lab-III, Statistical Simulation using R.

#### RESEARCH INTERESTS:

Numerical Heat Transfer and Fluid Flow, Computational Fluid Dynamics, Stirred Tank Simulation using Various Turbulence Models

TOTAL RESEARCH PUBLICATIONS:

National: 01, International: 04, Conference Proceedings: 01

H-Index: 01 (Scopus); 01 (Google Scholar),

Citations: 01 (Scopus); 01 (Google Scholar)



### DR. SUPRIYO KUMAR MONDAL

*M. Tech. (Chemical Engineering), Ph.D. (Tech) (Chemical Engineering)*

#### SUBJECTS TAUGHT :

Energy Conversion and Storage, Process Development and Engineering, Materials Science and Engineering

#### RESEARCH INTERESTS:

Membrane Technology, Wastewater Treatment, Recovery of Bioactive Compounds, Nanotechnology, Hydrogen Production.

TOTAL RESEARCH PUBLICATIONS:

International: 05 Conference Proceedings: 02

H-Index: 04 (Scopus); 04 (Google Scholar),

Citations: 58 (Scopus); 65 (Google Scholar)

### DR. YATIN GADKARI

*M. Pharm., Ph.D. (Tech) Pharmaceutical Chemistry*

**Assistant Professor in Pharmaceutical Technology**



#### SUBJECTS TAUGHT :

Advanced Pharmaceutical Chemistry, Technological of Fine and Speciality Chemicals, Drug Delivery Technology, Food Safety and Toxicology

#### RESEARCH INTERESTS:

Green Chemistry, Drug Discovery and Development, CADD, Development of Novel Methodologies for the synthesis of APIs and its Intermediates, Process Intensification.

TOTAL RESEARCH PUBLICATIONS:

National: 01, International: 09, H-Index: 02 (Scopus); 03 (Google Scholar), Citations: 14 (Scopus); 23 (Google Scholar)

#### AWARDS:

Awarded PG Scholarship for master studies by UGC from 2010-2012.

Awarded DBT fellowship for the research project at Prin. K. M.

Kundanani College of Pharmacy, Mumbai

Awarded COEPI, TEQIP – III fellowship for the Ph.D. studies at Institute of Chemical Technology, Mumbai.



## PROFESSOR EMERITUS



### PROF. S. S. LELE

*B. Chem. Eng., M. Chem. Eng., & Ph.D. (Tech)  
Fellow, Maharashtra Academy of Sciences,  
Fellow, Biotech Research Society of India (BRSI)  
Fellow, Asso. of Food Sc. And Tech. (AFST)*

#### RESEARCH INTERESTS :

Food product/process development, fruit and vegetable processing to reduce post-harvest losses, fruit wines, holistic utilization of fruit and vegetable wastes, food allergy

**Recognized Research guide for:** Ph.D. (Tech.) Food Engineering and Technology, Food Biotechnology, Ph.D. (Sci.) in Food Science, Biotechnology

**Guided students:** Ph.D. 33, Masters: 72, Ongoing Ph.D.: 06

**Total Research Publications:** National: 11, International: 131, Patents granted: 04, H-Index: 29 (Scopus); 35 (Google Scholar), **Citations:** 3244 (Scopus); 4917 (Google Scholar) Cumulative impact factor for the last 5 years: 63

#### AWARDS:

VASVIK award (2018), "Uncha Maza Zoka" Zee Marathi, (2016), Distinguished Alumnus Award of UAA under Academics (2015)

## ADJUNCT PROFESSOR



### Dr. KISHORE M PAKNIKAR

*MSc, PhD*

Ex. Director, Agharkar Research Institute, Pune

#### SUBJECTS TAUGHT :

Nanobiotechnology, Environmental biotechnology.

#### RESEARCH INTERESTS:

Applications of nanotechnology in biology, medicine, agriculture and environment

**Guided Students:** PhD: 39, MD: 1, MSc: 2

Total Research Publications: National: 10, International: 155, Patents: 35 granted + 10 applied, Google Scholar: h-index: 41; Citations: 8524

#### AWARDS:

Biotech Research Society of India Industrial Medal Award- 2007,

Society for General Microbiology UK Third World Microbiology Fund award-1987, United Nations Environment Program (UNEP) scholarship-1982, Fellow, National Academy of Agricultural Sciences (FNAAS)-2010, Fellow, Association of Microbiologists of India (FAMI)-2007, Fellow, Biotech Research Society of India (FBRS)-2004, Fellow, Maharashtra Academy of Sciences (FMAS)-1996, Marico Industries Visiting Fellow, Institute of Chemical Technology, Mumbai- 2009

### Dr. NANDKUMAR KUNCHGE

Director (Biotechnology) Kalash Seeds Pvt. Ltd.  
Jalna, Maharashtra - 431 203, India.

#### SUBJECTS TAUGHT :

Bioengineering

#### RESEARCH INTERESTS:

Plant Biotechnology

Guided Students: 4 B. Tech Semester Students & 2 Ph.D. students (ICT)

Other: 12 BCIL trainee students (Six months Industrial project)

Total Research Publications: National: 02, International: 01



## LIBRARIAN

### Dr. HITENDRA PATIL

B.Sc. (Comp. Sci.), M.L.I.Sc.

Ph.D. Library and Information Science

Librarian

#### RESEARCH INTERESTS:

Information Seeking Habits, Citation Analysis,  
Authorship Pattern.

Total Research Publications:

International: 12,

h-index : 02, Citations : 14



## VISITING FACULTY



### DR. JAYANT R. BANDEKAR

M.Sc., Ph.D. (Microbiology) Retired Head, RB&HSD, Head, Food Microbiology & Seafood Technology Section, Food Technology Division, Bhabha Atomic Research Centre

#### SUBJECTS TAUGHT:

Food Safety & Toxicology

#### RESEARCH INTERESTS:

Food-borne bacterial pathogens, application of radiation processing for preservation and hygienization of food.

Recognized Research Guide for Ph.D. (Science) in Microbiology

GUIDED STUDENTS: Ph.D. 08

TOTAL RESEARCH PUBLICATIONS

National: 10, international: 62, Book Chapters:6, Gene Bank Sequences:179,

Google Scholar: H-Index: 24; Citations: 1433, i-10 Index:45

#### AWARDS:

Fellow of Maharashtra Academy of sciences 2011

### PROF. PANKAJ K. BHOYAR

M.Tech (CAD/CAM), MBA (Mfg. Mgmt.)

Assistant Professor, Mechanical Engineering Department, MSSCET, Jalna

#### SUBJECTS TAUGHT:

CAD/CAM/CAE, Computer Software Applications I & II, Machine Drawing, Engineering Graphics, Project Management & Operations Research, Automatic Control System, Statistical Methods, Optimization Techniques, Advanced Optimization Techniques

#### RESEARCH INTERESTS:

Computer Aided Design and Manufacturing, Finite Element Analysis, Project Management and Operations Research

GUIDED PROJECTS: UG level: 13

TOTAL RESEARCH PUBLICATIONS: National: 00, international: 18,

Patent: 01, Scopus: H-index: 02 Citations: 14

#### AWARDS:

Proud Supporter Award given by Young Inspirators Network (YIN), Sakal Media Group in 2017





### ROHIT O. TEMBHURKAR

*B.E- Mechanical, M.E-Mechanical*

Assistant Professor in Department of Mechanical Engineering at MSS's CET, Jalna

#### SUBJECTS TAUGHT:

Engineering and Solid Mechanics, Engineering Mechanics, Strength of Materials, Refrigeration and Air Conditioning, Fluid Mechanics, Internal Combustion Engine and Gas Turbines, Engineering Thermodynamics.

#### RESEARCHINTERESTS:

Micro Channel Heat Exchanger, Refrigeration and Air Conditioning, Design and Manufacturing, Material Science

GUIDED STUDENTS: Masters - 02, Undergraduate- 25

TOTAL RESEARCH PUBLICATIONS: International: 02

#### PROFESSIONAL MEMBERSHIP:

Life time Member of International Society for Research and Development (ISRDR). Membership ID: M4150900882



### Dr. KISHORE M PAKNIKAR

*B.Sc. B.Sc.(Tech), M.Sc.(Tech), PhD (Tech) Pharmaceuticals, Post Doctoral (Oxford).*

#### SUBJECTS TAUGHT :

Advance pharmaceutical technology, API technology, Chirotechnology, Catalysis, Organic chemistry

#### RESEARCHINTERESTS:

Process development of API, intermediates, Agrochemicals, Aroma chemicals, Specialty chemicals. Development of technology for chiral

molecules, development of effluent treatment methodologies for various streams of effluents, isolation and characterization of impurities, scale up of laboratory processes to pilot scale and to commercial scale, continual improvement of the chemical process in terms of quality of product, yield and process safety.

### DR SHANTANU KRISHNARAO SAMANT

*Ph.D. Tech. (Food Technology)*

Associate Director (R&D), Mondelēz International Ltd. (Retd)

#### SUBJECTS TAUGHT :

Carbohydrate Chemistry & Technology, Biotechnology of Fermented Foods; Food Chemistry

#### RESEARCH INTERESTS:

Food products formulation (chocolate, confectionary & cocoa drinks) for well-being and affordable nutrition, , specialty fats & its applications ; Cocoa & Chocolate science

**Total Research Publications:** 13

National: 05, International: 08, Conference Proceedings: 02 (National)

Patents: 02 (Awarded) 2 (in process) 2 (trade secrets)

#### Awards:

Received 5 awards from company, Mondelēz International, & also one Global RDQ achievement award received in 2020.

Professional Services: Founder & Head- 3SB Consultants, Mumbai; Visiting faculty- ICT – Mumbai, Jalna & Bhubaneswar (from 2017 – till today);

Associate Director R&D (retired)- Mondelez International Ltd.; Research

Council member CFTRI (2013-2015), Regulatory Committee member PFNDIAI

(past); Research Committee member for Food Tech Dept, ICT (past); Examiner

for M. Tech and Ph.D. Tech (Food) thesis for ICT (Mumbai) (continued)

Professional Membership: Life Member AFST(I)





### DR ROHINI SHARMA

M.Sc. Food Technology – with Distinction (CFTRI, Mysore)  
PhD Nutrition and Stress Management (Avinashilingam University, Coimbatore)  
PG Diploma Public Relations – I Rank (Bhawan's Secunderabad)  
PG Diploma in Psychological Counselling (Gold medalist – TNOU)

### SUBJECTS TAUGHT:

Food Processing, Food Chemistry

### INDUSTRY EXPERIENCE:

1. Hindustan Coca Cola Beverages Pvt. Ltd. Hyderabad and Secunderabad
2. Ganga Hospital, Coimbatore – Chief Clinical Nutritionist
3. Trained Internal Auditor for the Coca Cola Quality Systems
4. Technical Peer Reviewer as part of the Technical Editorial Board for the All-India Food Processors Association (AIFPA) Digital Journal “Indian Food Packer” since June 2021.
5. Consultant for Nutrition, Food Hygiene and Food Safety
6. Academic and Teaching Experience:
7. Associate Professor, Department of Food Processing Technology & Department of Nutrition & Dietetics, PSG College of Arts & Science, Coimbatore

### Awards

- Second Award for Oral presentation in 47th IDA Conference, AIIMS, New Delhi on the topic “Impact of High Protein Concentration Supplements at Low Feed Volumes on Serum Albumin and Length of Hospital Stay in Nutrition Therapy of Patients with Severe Burns” on 21-23rd December 2014.
- Best Poster Award on the topic “Comparing the efficiency of positive therapy combined with diet modification versus positive therapy alone in managing stress in school-going adolescents” in the 4th Indo-Korean Conference on Integrative Bioscience Research – Opportunities and Challenges, Avinashilingam University, Coimbatore on 10th & 11th February 2012.
- Best Poster award for “Stress and anxiety reduction in school going adolescents through diet modification and positive therapy” at the 43rd National conference of Nutrition Society of India held at NIN, Hyderabad from 10th to 12th November 2011
- Best paper presentation (Oral presentation on “Prevalence of peer victimization amongst school going adolescents in Coimbatore and impact of intervention” at the 2-day conference on “Psychodynamics of abuse and neglect” at PSG college of Nursing, 15-16th September 2011.

## VISITING FACULTY

Sr.	Name of Visiting Faculty	Programme
1	<b>Prof. M. A. Shenoy</b> Former Registrar and Head of Dept. Polymer and Surface Engineering (Retd.) ICT, Mumbai	I. M. Tech./ I. M. Tech
2	<b>Mr. R. J. Shere Patil</b> Matsyodari Insititute of Engineering and Technology, Nagewadi, Jalna	I. M. Tech.
3	<b>Ms. Subhaprada Nishtala</b> Director, Food Adroit, Mumbai	M. Tech.



## INDUSTRIAL TRAINING

### ICT-Marathawada, Jalna Campus

I-M. Tech students of ICT-Marathawada, Jalna Campus were placed for 4-month industrial training in different companies. The companies are as follows:

Sr.	List of Industries for IPT of ICT Jalna Students	Place
1	Abhay Cotex Pvt Ltd Jalna	Jalna
2	Adherence Techno Products Pvt Ltd Aurangabad	Aurangabad
3	Adonia Cosmetics Pvt Ltd Atgaon	Shahapur Thane
4	Ajanta Pharmaceuticals Ltd Aurangabad	Aurangabad
5	Alkem Laboratories Ltd	Sikkim
6	Alkyl Amines Ltd Kurkumbh	Pune
7	Amogh Chemicals Pvt Ltd	Mumbai
8	AMUL Milk Union Ltd Anand	Anand
9	Approcopp Engineering Pvt Ltd Jalna	Jalna
10	ARHA Foods	Nasik
11	Asian Azoles Pvt Ltd	Vapi
12	Atra Pharmaceuticals Pvt Ltd Waluj	Aurangabad
13	Baramati Agro Ltd	Baramati
14	Bhabha Institute of Atomic Research (BARC)	Mumbai
15	Bhagyalaxmi Steels Pvt Ltd Jalna	Jalna
16	Bhakti Solvex Pvt Ltd Jalna	Jalna
17	Blast Carboblocks Pvt Ltd Vashi	New Mumbai
18	BPCL Ltd Mumbai	Mumbai
19	Central Institute of Mining & Fuel Research	Dhanbad
20	Century Paper & Pulp Ltd	Nainital
21	Century Rayon Ltd Kalyan	Kalyan
22	Chemvera Speciality Chemicals Pvt Ltd	Mumbai
23	Concept Pharmaceuticals Pvt Ltd Aurangabad	Aurangabad
24	Cream N Joy Ice-Creams	Aurangabad
25	Deepak Nitrite Ltd	Vadodara
26	Dinshaw Foods Pvt Ltd Nagpur	Nagpur
27	Divya SRJ Foods Jalna	Jalna
28	Dr B A Ambedkar Sugar Co-Op.Ltd Osmanabad	Osmanabad
29	Endress+Hauser Ltd	Waluj Aurangabad
30	Energy Efficiency Services Ltd	Mumbai
31	Envirocare Laboartories Ltd Thane	Thane
32	Exotic Fruits Pvt Ltd	Krishnagiri T.N.
33	FDC India Ltd	Roha

Sr.	List of Industries for IPT of ICT Jalna Students	Place
34	Fit-Shit Health Solutions	Mumbai
35	Food Innovation Research	New Delhi
36	Garware Polysters Ltd Aurangabad	Aurangabad
37	Gauri Agro Tech Pvt Ltd Jalna	Jalna
38	Gharda Chemicals Ltd	Chiplun
39	Glatt Systems Pvt Ltd Mumbai	Mumbai
40	Glenmark Pharamaceuticals Ltd Nasik	Nasik
41	Godrej Industries Ltd Mumbai / Valia	Mumbai
42	Haffkine Bio-Pharma Pvt Ltd Mumbai	Mumbai
43	Har Hal Plastic Eng Pvt Ltd Waluj	Aurangabad
44	Harman Finochem Ltd Shendra	Aurangabad
45	Hebbar Chemicals Pvt Ltd	New Mumbai
46	HPCL Ltd Chembur Mumbai	Mumbai
47	Humanity Chemie Pharma Pvt Ltd Waluj	Aurangabad
48	Hygeinic Research Institute Pvt Ltd	Mumbai
49	Indian Institute of Chemical Technology	Hyderabad
50	Indian Institute of Petroleum	Dehradun
51	Indian Oil Corp.Ltd Panipat Refinery	Panipat
52	Indian Rare Earths Ltd Ganjam Orissa.	Ganjam Orissa
53	Indian Rubber Mfrs Research Organisation Thane	Thane
54	Indo Amines Ltd	Mumbai
55	Indo Reagens Polymer Additives P Ltd Thane	Thane
56	IPCA Laboratories Ltd Mumbai	Mumbai
57	Jay Bhavani Sugar Ltd	Gevrai
58	Jayant Specialities Pvt Ltd Palghar Mumbai	Mumbai
59	JB Chemicals & Pharmaceuticals Ltd Panoli.	Panoli Gujarat
60	JSW Paints Vasind	Thane
61	Kalash Seeds Pvt Ltd Jalna	Jalna
62	Kansai Nerolac Paints Ltd Koparkhairane	New Mumbai
63	Kopran Ltd	Khopoli
64	Laxmi Cotspin Ltd Jalna	Jalna

Sr.	List of Industries for IPT of ICT Jalna Students	Place
65	Lupin Pharmaceuticals Ltd	Aurangabad
66	Luvn Foods Powai	Mumbai
67	Macchem Products Pvt Ltd Tarapur	Dist Palghar
68	Mahanand Dairy Mumbai	Mumbai
69	Mapro Foods Pvt Ltd Mahabaleshwar	Mahabaleshwar
70	Metalman Auto Components Pvt Ltd Aurangabad	Aurangabad
71	Metaroll Steels Pvt Ltd Jalna	Jalna
72	Mondelez Foods Induri (Cadburys)	Pune
73	Mylan Laboratories Ltd Aurangabad	Aurangabad
74	Omech Components Shendra	Aurangabad
75	OPAL Dahej Gujarat	Dahej Gujarat
76	Orthocrafts Innovations Pvt Ltd	Pune
77	Parle Biscuits & Confectioneries	Nasik
78	Patanjali Ayurved , Haridwar	Haridwar
79	PPG Asian Paints Limited Navi Mumbai	Mumbai
80	R J Foods (Parle Biscuits)	Jalgaon
81	Rajuri Steels Pvt Ltd Jalna	Jalna
82	Rathi Steel & Metal Pvt Ltd Jalna	Jalna
83	RCF Ltd Chembur Mumbai	Mumbai
84	Rena Sugar Ltd	Renapur
85	Rich Products & Solutions Pvt Ltd	Pune
86	Roopam Steels Pvt Ltd Jalna	Jalna
87	S For S Technology Sanpada Navi Mumbai	Mumbai
88	Sanjay Techno Group Aurangabad	Aurangabad
89	SASMIRA Worli Mumbai	Mumbai
90	Savera Pharamaceuticals Pvt Ltd	Waluj Aurangabad

Sr.	List of Industries for IPT of ICT Jalna Students	Place
91	Set on Site Transformers Waluj	Aurangabad
92	Sheela Transformer Industries Jalna	Jalna
93	Shree Tubes Pvt Ltd Waluj, Aurangabad	Aurangabad
94	Shreya Pharamaceuticals Waluj Aurangabad	Aurangabad
95	Shreyam Power & Steel Ltd	Gandhidham
96	Smoothline Cables Jalna.	Jalna
97	Snowtech Equipments Pvt Ltd	Mumbai
98	Solar Industries Ltd	Nagpur
99	Songwong Speciality Chemicals Pvt Ltd Ankaleshwar	Ankaleshwar
100	Suhans Activated Alloys Pvt Ltd	Jalgaon
101	Sula Wines	Nasik
102	Thakurji Solvex Pvt Ltd Jalna	Jalna
103	Thermax Limited Pune	Pune
104	Transpek Industry Ltd	Vadodara
105	Transpek Silox Pvt Ltd	Vadodara
106	Trilok Foods Satara	Satara
107	Tulsi Paints Pvt Ltd Nanded	Nanded
108	UPL Ltd Kalol Gujarat	Kalol Gujrat
109	Vadilal Industries Ltd	Gandhinagar
110	Vaidehi Masale Industries Jalna	Jalna
111	Vega Chemicals Pvt Ltd Jalgaon	Jalgaon
112	Vibfast Pigments Pvt Ltd Ahmedabad	Ahmedabad
113	Vinati Organics Ltd	Chiplun
114	Vinodrai Engineering Pvt Ltd Jalna	Jalna
115	Wockhardt Pharmaceuticals Ltd Aurangabad	Aurangabad
116	Zelos Foods	Pune

## Glimpses of Student Activities and Socio-Cultural Celebrations

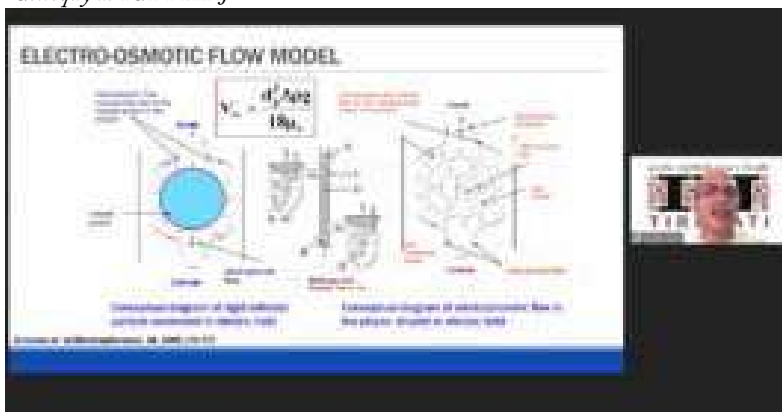
*Awareness Program conducted by ICT MARJ Students at Padalli Village*



*Colloquy 1 at ICT MARJ*



*Colloquy at ICT MARJ*



*Dasara Celebration*



*Hon'ble Minister, Higher and Technical Education, Maharashtra  
Shri. Uday Samant visits ICT MARJ Campus*



Induction Program at ICT MARJ



MARJ Student Selection for Mitacs Summer 2022

Nutri Fiesta



Publication by ICT MARJ Students (Atharv Jahangir and Vedant Kulkarni)



## Campus Development Activities



*Mechanical Lab*



*Wet Lab*

## eConference



*NANO SA 2020 Conference*



# AWARDS AND HONORS RECEIVED BY ICT FACULTY

1. The NIRF ranking 2022 was announced on 15th July, 2022 and ICT was ranked – 14th at university level, 28th Overall, 25th as Research Institute, 18th in Engineering and 7th in Pharmacy.
2. Green University Audit of Institute of Chemical Technology was conducted by the “Green Mentors” Agency and in August, 2022, ICT has achieved 446 Points out of 500 Points & earned Platinum Ranking in the Platinum Green University Accreditation Standards for the Period of Academic Year 2021-2024.
3. ICT, Awarded ICC Award 2021, ICC – K. V. Mariwala Award for Effective Chemical Industry – Academia Partnership.
4. Padmabhushan Professor J. B. Joshi crossed 25,000+ citations as per Google scholar record in September 2022.
5. In July, 2022, Padmabhushan Professor J.B. Joshi earned the distinction of publishing more than 100 research papers in the premium journal, “Chemical Engineering Science”. This is a very unique distinction and Honour received by Professor J.B. Joshi. He is only the second author in the history of the journal to have a century of publications to his credit. On this occasion, a virtual special issue commemorating & celebrating this achievement titled “Century in CES” will be published by the journal Chemical Engineering Science to coincide with the upcoming GLS conference in Canada.
6. All India MSME association has elected Professor G.D. Yadav, for the Honorary Membership of the association as “Successful Educationalist/Academician” on September, 2022.
7. Dr. Prajakta Dandekar-Jain from Department of Pharmaceutical Sciences and Technology received “Uncha Maza Zoka” award from Zee Marathi for her research in pharmaceutical biotechnology in August, 2022.
8. Professor Vandana Patravale crossed 10,000+ citations as per google scholar record in September, 2022.
9. Professor Uday S. Annapure, Director, ICT-MARJ has been conferred with
10. Shri Somalal Vyas - SEA Innovation Award 2022 by The Solvent Extractors’ Association of India in collaboration with FoodTech Pathshala.
11. Prof. (Mrs.) Vandana B. Patravale has been nominated by the Council of the Indian Chemical Society for prestigious Professor R S Varma Memorial Award for the year 2022
12. Dr. Manoj B. Gawande, from Marathwada campus crossed 12,000 citation mark.
13. Dr. Shraeddha Tiwari participated as Scientific Observer in the Mentors team of India in the International Chemistry Olympiad conducted by China from 10th to 18th July 2022. All the four students from the Indian team had an excellent performance and won individual silver medals each in the event.
14. Dr. Parag R Gogate received Invitational Research Fellowship of Japan Society for the Promotion of Science (JSPS).
15. Dr. Mannepalli Lakshmi Kantam, was elected as a Fellow of Indian National Academy of Engineering (INAE) by the governing council for her distinguished contribution to Engineering and Technology.
16. Dr. Anant Kapadi, appointed as the Research Ambassador of DAAD at hands of German Consul, German Embassy, Delhi.
17. Dr. Viabhav Tidke, selected for INAE Young Innovator and Entrepreneur Award 2022.
18. An ICT student team led by Suraj Kapale & Harshal Patil (Zero Spillage Milking Can) &

Ameya (Preservative Free Juices) showcased an innovative concept at the “Smart India Hackathon 2022” organised by AICTE at IIT Roorkee in August, 2022 & won a Prize of Rs 1 Lakh each in the specified category.

19. Prof. P. D. Vaidya has been granted a funding to the tune of 50,000 euros from “SHV Energy Open Innovation Challenge”.
20. ICC – K. V. MARIWALA AWARD FOR EFFECTIVE CHEMICAL INDUSTRY – ACADEMIA PARTNERSHIP – Jointly given to: NOCIL Limited along with Institute of Chemical Technology Mumbai (Prof. A.W. Patwardhan) Rallis India Limited along with Institute of Chemical Technology Mumbai (Prof. A.W. Patwardhan and Prof. P.R. Gogate)
21. On 27th April, 2023, ICT-IOCB received “The Best Academic Institution” award by The Odisha Leadership Awards 2023.
22. The Vice Chancellor, Prof. A. B. Pandit has been inducted as a fellow of “The United States National Academy of Engineering (US-NAE)” for his contribution to Cavitation Reactors from concept to commercialization, and engineering solutions to improve the lives of under-served people in February, 2023.
23. Prof. A. B. Pandit has been nominated as a member of the CSIR Society for the period of three years vide CSIR Circular No. D.O. No. 181(2)/2023-PD/76 dated 23rd March, 2023. Hon’ble Prime Minister of India is the President (ex-officio) of CSIR Society.
24. Prof. S. S. Bhagwat has been appointed as the Director of IISER, Pune.
25. On 24th February, 2023, Professor G.D. Yadav received “The Life Time Achievement Award” of the Indian Drug Manufacturers Association in Mumbai.
26. Professor P.D. Vaidya, Department of Chemical Engineering has been selected for ‘The Professor M.M. Sharma Science and Technology Award’ by the Marathi Vidyan Parishad on October 20, 2022.
27. ICT’s Startup, S4S Technologies Pvt. Ltd., led by our Alumnus Dr. Tushar Gaware was highly acclaimed by the Hon’ble Prime Minister Shri Narendra Modi during “The Kisan Sammelan-2022” held on 17th October, 2022. Kisan Sammelan 2022 had 300 startups and the PMO office short-listed 5 of them for one-to-one interaction of the PM with the proprietor. Dr. Gaware explained about the unique business model, revenue generation, and empowerment of women through micro entrepreneurship to Hon’ble Prime Minister.
28. Dr. Neetu Jha has won the “Climate Hackathon Challenge Award” in the forum on “What industries should do to mitigate climate change?” Energy Swaraj Foundation has selected her for this Award for her unique ideas on climate change action and environmental correction in November, 2022.
29. Dr. Neetu Jha has been selected for the membership of the Indian National Young Academy of Sciences (INYNAS) in February 2023 for the period of 5 years.
30. Prof. Parag Gogate was honoured with ‘The Malaviya Memorial (Senior Faculty) Award’ for the year 2021 by the Biotech Research Society (BRS) on 7th December, 2022.
31. Prof. B. N. Thorat, has achieved the distinction of a researcher whose publications have the highest read from all ICT faculty. Average read per month is 683, which translates in to 35,516 reads during the last one year. This was possible due to the publication of 12 review papers on various topics of public interest in top peer reviewed journals.
32. Dr. Aarti More has been bestowed “the Best Technical Paper award” under the institute category at the 30th and 31st Indian paint conference organized by Indian Paint Association on 20th January, 2023.



33. Dr. Prajakta Dandekar - Jain has been bestowed “the Swami Vivekanand Yuva Puraskar award” for 2022 by RSS Jankalyan Samiti Maharashtra Prant on 18th January, 2023.
34. Prof. N Sekar has been elected as fellow of The Academy of Sciences, Chennai on 15th March 2023. This award was received from the hands of Dr. T. Ramswamy (former secretary DST) in the University of Madras, Guindy campus.
35. Prof. N. Sekar, 2nd time named in “the list of the top 2% of the scientists, in chemical sciences” in a study published by Stanford University.
36. The first Faculty Start-up under ICT Innovation and start up policy, founded by Prof. Padma V. Devarajan and incubated at ICT- NICE, has been awarded Rs 50 lakhs by the DBT BIRAC BIG GRANT.
37. Prof. R. D. Kulkarni has Received, the UAA-ICT Distinguished Alumnus Award - Academics for the year 2022 on Dec. 17, 2022. this is an annual award for Professional Par Excellence in Academics amongst ICT (UDCT-Mumbai) alumni across the globe.
38. Prof. R. D. Kulkarni has been elected as a Fellow of the Maharashtra Academy of Sciences (FMASc) [No. HLF 1165] on Dec. 02, 2022.
39. Prof. R. D. Kulkarni is a member of Maharashtra State NEP Implementation Steering Committee, Dept of Higher and Technical Education, Govt of Maharashtra (2023): G.R. No. NEP-2022 / CR No. 09/ VISHI-3 dated April 20, 2023: Implementation of UG and PG Curricular Framework on the lines of National Education Policy-2020
40. Prof. Vandana Patravale has been recognized as one of the Most Iconic Healthcare Leaders (Global) organized by World Federation of Healthcare Leaders, The Business Leader of the Year & World Sustainability on 16th February, 2023



# [ RESEARCH & DEVELOPMENT PROJECTS ]



Sr. No.	Faculty	Funding Agency
1	Adivarekar R V	CPCB SER-II
2	Adivarekar R V	Unilever Industries Pvt Ltd
3	Amin P D	ICPA Health Products Limited
4	Amin P D	Lifescient INC
5	Amin P D	Unilever Industries Pvt.Ltd.
6	Amin P D	VAIDYA SANE AYURVED LAB.LTD
7	Anil Annamma	Fytomax Nutrition Pvt. Ltd.
8	Annapure U S	ADITYA BIRLA S& T CO. P.LTD.
9	Annapure U S	DST Indo-German Auto Nutri
10	Annapure U S	DST-Srilanka
11	Annapure U S	Mad Parsee Foods LLP
12	Annapure U S	Orchard Brands Pvt Ltd.
13	Annapure U S and Waghmare J S	Malaysian Palm Oil Board
14	Arya S S	REVELATION BIOTECH P. LTD.
15	Athalye A S	Rossari Biotech Ltd
16	Bhagwat S S	Amines & Plasticizer Ltd.
17	Bhagwat S S	Zoetis Pharma. Research Pvt Ltd
18	Bhanage B M	Galaxy Surfactants Ltd.
19	Bhanage B M	Thermax Ltd
20	Bhanage B M	Yunnan Zhengbang Tech. Co. Ltd
21	Chakraborty Snehasis	CSIR
22	Dandekar Jain P R	UGC FRP
23	Devarajan P V	Amaterasu Lifesciences LLP Prof
24	Devarajan P V	Viridis Biopharma P. Ltd.
25	Devarajan P V	Zim Laboratories Pvt.Ltd.
26	Devarajan P V and Kharkar Prashant	MERCK PVT.LTD
27	Divya V	UGC FRP
28	Gaikar V G	BPCL PDPP
29	Gaval V R	BASF INDIA LIMITED
30	Ghosh P K and Patwardhan A W	Rubamin Pvt Ltd
31	Gogate P R	UGC-Mid Career Award
32	Gokhale J S	Praj Industries
33	Gokhale J S	UGC-FRP Start-Up-Grant
34	Jain R D	AMNEAL PHARMACEUTICALS R.D.JAIN
35	Jain R D	Anya Biopharm Inc.
36	Jain R D	Biogenomics Limited
37	Jain R D	BIRAC
38	Jain R D	CIPLA LTD.
39	Jain R D	IPCA LAB LTD.
40	Jain R D	Mankind Research Centre
41	Jain R D	METEORIC BIOPHARMA LTD.
42	Jain R D	PAR Formulations Pvt Ltd

<b>Sr. No.</b>	<b>Faculty</b>	<b>Funding Agency</b>
43	Jain R D	Sun Pharma
44	Jain R D	Zumutor Biologics Pvt Ltd.
45	Jain R D	Zydus Lifesciences Ltd.
46	Jha Neetu	NORDISCHE ENERGY SYSTEM P.LTD.
47	Jha Neetu	UGC FRP Start-Up Grant
48	Kalekar Archana	DST SERB
49	Kapdi A R	Kashyap Patel Contingency
50	Kapdi A R	STREM Chemicals. INC
51	Kapdi A R	Transasia Bio Medicals Limited
52	Kapdi A R	UGC-FRP Start-Up Grant
53	Kharkar Prashant	ACG Associated Capsules Ltd
54	Kharkar Prashant	BRIZO SERVICES
55	Kundu Pintu	DST SERB-II
56	Kundu Pintu	UGC FRP-
57	Laddha K S	EPIGENERES BIOTECH P. LTD.
58	Laddha K S	HARIDEVKA INC
59	Lakshmi Kantam	DST-SERB-J.C.Bose- II
60	Lakshmi Kantam and Rathod V K	Godavari Biorefineries Ltd
61	Lakshmi Kantam and Rathod V K	Prasol Chemicals Pvt Ltd
62	Lakshmi Kantam and Rathod V K	Vinati Organics Ltd
63	Lakshmi Kantam, Yadav G D and Rathod V K	Jubilant Ingrevia Ltd.
64	Lali A M	DBT CEB MSW Energy
65	Lali A M	DBT-CEB
66	Madankar C S	Energyyya Petrochem
67	Madankar C S	Virenxia
68	Mahanwar P A	Hindustan Unilever Ltd
69	Mhaske S T	DEEPAK NITRITE LIMITED
70	Mhaske S T	Hindalco Industries Limited
71	More P M	AI Engineering Services Ltd
72	Nemade P R	Synectics Bio-Science Pvt Ltd
73	Nemade P R	UGC-FRP Start-Up Grant
74	Pandit A B	DST-SERB-J C BOSE-II
75	Pandit A B	Shellac & Forest Products Export
76	Pandit A B	Wipro Limited
77	Patravale V B	Abdul Kalam TIN Fellowship
78	Patravale V B	BIRAC SRISTI
79	Patravale V B	DST SERB
80	Patravale V B	Olon Active Pharmaceutical Ingredients (I) Pvt Ltd
81	Patravale V B	TAP Pharmaceuticals AG
82	Patwardhan A V	RGSTC Recycling of Water
83	Patwardhan A W	DAE BRNS



Sr. No.	Faculty	Funding Agency
84	Patwardhan A W	RIL-III-Hydrogen Carriers
85	Patwardhan A W	Tata Chemical Ltd.
86	Pinjari D V	Chemlayer Limited
87	Pinjari D V	Elkay Chemicals Pvt.Ltd.
88	Pinjari D V	MIRACLE INDUSTRIES LTD.
89	Pinjari D V	UGC FRP
90	Prakash Gunjan	DST SERB
91	Rane A S	UGC FRP
92	Rasayan Inc	Rasayan Inc
93	Rathod V K	Godavari Ltd
94	Rathod V K	LAXMI ORGANIC IND LTD.
95	Reshamwala Shamlan	Salicylates & Chemicals Pvt.Ltd.
96	Sabnis A S	DORF KETAL CHEMICALS P. LTD.
97	Sabnis A S	Precision Wires India Ltd.
98	Sadhukhan Nabanita	DAE BRNS
99	Saha Satyajit	DST SERB-AIEgens
100	Sathaye S S	India Glycols Ltd.
101	Sathaye S S	Tirupati Wellness Pvt Ltd
102	Sekar N	DST Colored Florescent
103	Sekar N	Wool Research Association
104	Singh Awneesh	UGC FRP
105	Singhal R S	KAMANI OIL IND
106	Singhal R S	RGSTC Jaggery Process
107	Some Surajit	ONGC Preparation of Graphene
108	Some Surajit	ONGC Recovery of Crude Oil
109	Thorat B N	Central Pollution Control Board
110	Thorat B N	Covestro India Pvt Ltd
111	Trivedi Nitin	DST-Inspire
112	Vaidya P D	Amines & Plasticizers Ltd
113	Vaidya P D	Centre for High Tech. BioGas
114	Vavia P R	Momentive Performance Material (I)Pvt Ltd.
115	Waghmare J S	Pitambari Products Pvt.Ltd.
116	Yadav G D	DST SERB
117	Yadav G D	Godavari Biorefineries Ltd
118	Yadav G D	Godavari Biorefineries Ltd
119	Yadav G D	ICT OECT Phase III
120	Yadav G D	ICT-OEC CO2 TO MeOH and HHCs
121	Yadav G D	Ongc-Co2 Conversion Phase II
122	Yadav G D	Salicylates & Chemicals Pvt Ltd
123	Yadav M D	DST SERB



# [ PATENTS ]

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
1	VN92014A	Published	Das Sandip   Gadgeel Arjit Ajay   Kuruganti Thejaswi Sesha   Mhaske Shashank Tejrao	Recycled Plastic Products
2	IN202121027383A	Published	Chahal, Dheeraj   Mishra, Mayank   Singhal, Rekha	Systems And Methods For Service Level Agreement (Sla) Aware Workload Scheduling Using Hybrid Cloud Services
3	IN202121027622A	Published	Pinjari, Dipak Vitthal   Pandit, Aniruddha Bhalchandra   Shaha, Suyog Girish   Badnore, Amruta Udaykumar   Jadhav, Nilesh Lakshaman   Doltade, Sarjerao Babu   Pukale, Dipak Dadaso	Process For Synthesis of Cardanol Glycidyl Ether
4	IN202121027622A	Published	Pinjari, Dipak Vitthal   Pandit, Aniruddha Bhalchandra   Shaha, Suyog Girish   Badnore, Amruta Udaykumar   Jadhav, Nilesh Lakshaman   Doltade, Sarjerao Babu   Pukale, Dipak Dadaso	Process For Synthesis of Cardanol Glycidyl Ether
5	IN202121021561A	Published	Newalkar, Aditya   Deshmukh, Suresh, B	Synthesis of Zeolite Nanosheets From Mining Waste
6	IN414368B	Published	Gawade, Avinash Eknath   Bale, Sudhir Ramchandra   Gaikar Vilas, G   Shindikar Mahesh, R   Gawade, Vishal, E	Process For Continuous Production of Keratin Hydrolysate From Keratinous Biomass And System Therefor
7	IN414391B	Published	Pandit, Aniruddha Bhalchandra   Patel, Shirish Bhailal   Shinde, Yogesh Hanumant	Energy Efficient Cooking Vessel
8	IN414652B	Published	Patravale, Vandana Bharat   Fernandes, Clara Bernard   Agarwal, Ankit Ashokbhai	Pharmaceutical Colloidal Formulations For Intranasal Delivery of Zwitterionic Anticancer Drug Methotrexate

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
9	IN202221067977A	Published	Kulkarni, Ravindra Gururaj   Birajdar, Pratik Baburao   Javali, Narasimha Murty   Bagul, Chandrakant   Muthal, Amol   Kumar, Dileep	Triazoles Linked Isatin Compounds As Antibacterial Agents
10	IN202227061739A	Published	Das, Sandip   Gadgeel, Arjit Ajay   Kuruganti, Thejaswi Sesha   Mhaske, Shashank Tejrao	Recycled Resin Composition
11	IN201721001222A	Granted	Jha, Neetu   Mw, Higgins   Shakeelur Rahman, Ar	Modified Solar Still For Efficient Water Purification
12	IN201721029818A	Granted	Panse, Sudhir Vishnu   Dalvi, Vishwanath Haily   Joshi, Jyeshtharaj Bhalchandra	An Improved Vacuum Tube Receiver For Solar Collectors
13	IN202021038752A	Granted	Kokate, Swapnil R   Mhaske, Shashank T   Amrutkar, Shweta Y	System For Cooling A Multi-Layered Photovoltaic Panel And Method Thereof
14	IN2014KO1012A	Granted	Sen, Mrinal   Bahl, Vinay   Jha, Praveen, Kumar   Thodimi, Sreenivasa, Reddy   Kulkarni, Ravindra, Chandrakant   Chakrabartty, Patanjali   Singh, Dalbir	A New Design of Pulverized Coal Combination Fuel Burner Without Any Tertiary Air
15	IN201921002701A	Published	Kulkarni, Kedar D   Kulkarni, Dinesh B	Method And System For Handling An Auxiliary Platform
16	IN202221051170A	Published	Namdeo, Kamta Prasad   Verma, Deepshikha   Jhakeshwar, Prasad   Ahire, Priyanka Anil   Patil, Savita Sambhaji   Sitre, Shashikant Ramrao   Harney, Narendra V   Mathivathani, R   Dadarao, Jadhav Sachin   Jena, Satyabrata   Agey, Suhas   Afreen, Ayesha	Machine Learning Based Approach To Predict The Various Myelosuppression Agent That Can Be Used Along With Hydroxyurea In Improving The Condition of Sick Cell Anaemia
17	IN202221056908A	Published	Sikchi, Siddharth   Yadav, Ganapati D	Process For Preparation of Guaiacol And P-Methoxyphenol



Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
18	IN202121041020A	Published	Kuchake, Vitthal Gajanan   Shinde, Sachin Dnyanoba   Kale, Ravindra Hemchandra   Biyani, Kailash Radhesham   Cheke, Rameshwar, S	Alpha-Asarone Effective In Treatment of Skin Dermatitis
19	IN2014MU3525A	Granted	Pandit, Aniruddha Bhalchandra   Patel, Shirish Bhailal   Shinde, Yogesh Hanumant	Continuous Cooking System
20	IN202021018552A	Granted	Yadav, Ganapati Dadasaheb   Pisal, Devendra Shriram	A Process For Synthesis of 2-Methylimidazole By Selective Hydrogenation of 2-Imidazolecarboxaldehyde
21	IN202221053887A	Published	Gindodia, Pankaj Kailash   Chakraborty, Kaushik   Joshi, Gayatri Jayant   Jadhav, Sachin Shrikant   Parmar, Amit Ashokkumar   Shelke, Mahesh Balu   Rajan, Sudarshan   Kumar, Sachin   Phadkar, Vaishali Parag   Poonia, Sunil Kumar   Singh, Abhigyan   Tomer, Pankaj   Rastogi, Anurag   Patnaik, Parthasarathi	Evaluating An Operational Health of An Organization
22	IN202021046731A	Published	Shevade, Sukhada Satish   Venkitachalam, Devarajan Padma   Rustomjee, Maharukh T	A Liquid Injectable Composition of Donepezil
23	IN202021051953A	Published	Kuchake, Vitthal Gajanan   Kute, Vaibhav Ghansham   Shinde, Sachin D   Kale, Ravindra Hemchandra   Biyani, Kailash Radhesham   Cheke, Rameshwar S	Process of Formulation And Evaluation of Modified Release Multiple Unit Granules of Valsartan
24	IN202121011458A	Published	Yadav, Manish   Prajapati, Nikhil   Pandey, Dhananjay   Manikpuri, Yogesh Das	Multi-Purpose Agricultural Machine
25	IN202121011478A	Published	Lalit, Khare Pramod   Jain, Dandekar Prajakta   Jain, Ratnesh	A Process For Preparation of Olanexidine Or Derivatives Thereof Using Phase Transfer Catalysis

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
26	IN202131011177A	Published	Dandela, Rambabu   Thorat, Bhaskar Narayan   Mohanreddy, Pothireddy   Bhukta, Swadhapiya   Kumar, Togapur Pavan   Pandey, Sony   Mohapatra, Upasana	Process For Preparation of Guanosine Derivatives And Their Bioactivities Thereof
27	IN2013MU3089A	Granted	Gharda, Keki Hormusji   Shet, Laxminarayan S   Shelar, Aparna   Kher, Dhiraj   Parthe, Girish   Kedare, Sandeep   Warghude, Satish   Rokade, Ravi   Narale, B. K   Salavi, Manoj   Jadhav, Sachin	Synthesis of Triclopyr Acid
28	IN202127005210A	Published	Dawre, Shilpa Mahesh   Venkitachalam, Devarajan Padma	A Liquid Injectable Composition
29	IN202211051190A	Published	Jalwal, Pawan Kumar   Sha, Akhil   Shailja   Singh, Yashpal   Deepak   Yadav, Manish   Achlesh   Saini, Anshika   Preeti	Method For Developing Nanoparticulate In-Situ Gel Formulation of Acyclovir For Ocular Disease
30	IN202211051495A	Published	Jalwa, Pawan Kumar   Sharma, Akhil   Shailja   Saini, Sangita   Singh, Yashpal   Deepak   Yadav, Manish   Pankaj   Parashar, Jatin   Sharma, Tanya	Method For Formulating And Evaluating Ethosomal Gel of Atorvastatin For Diabetic Wounds
31	IN202221026570A	Published	Petare, Purushottam Arvind   Rani, Uma Pm   Satyavathi, V V V   Rani, Shweta   Sahoo, Giridhari   Arondekar, Shailesh   Sharma, Sandeep   Kumar, Vottiprolu Vijaya   Gaikar, Vilas Bhau   Nayan, Rajiv   Khursid, Mohammed   Sivaperumal, K	The Impact of The Goods And Services Tax (Gst) On Indias Fast-Moving Consumer Goods Sector
32	IN202241051156A	Published	Potluri, Pandarinath   Singh, Om Prakash   Ramalakshmi, K   Satisha, K   Narender, Kethavath   Jadhav, Sachin   Nakka, Kishore Chandra Dev	Enhanced Augmented Reality And Virtual Reality Using Mobile Edge Computing With Efficient Energy Management System

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
33	IN201621043667A	Granted	Chandulal, Badgujar Kirtikumar   Mahadeo, Bhanage Bhalchandra	Eco-Friendly Methodology For The Synthesis of Alkyl 2,2-Dimethyl Propanoate Compounds Catalyzed By Lipase
34	IN202121046923A	Granted	Halde, Prabodh, S   Dongare, Kaushal   Annapure, Uday   Devkatte, Anupama   Deotale, Shweta   Pawar, Vasant, N   Jathar, Santosh	A Method of Reducing Microbial Load And Improving Shelf Life of Jaggery
35	IN2015MU4708A	Granted	Singhal, Rekha   Sangroya, Amit	Systems And Methods For Generating Performance Prediction Model And Estimating Execution Time For Applications
36	IN201621042274A	Granted	Dalvi, Vishwanath Haily   Panse, Sudhir Vishnu   Joshi, Jyeshtharaj Bhalchandra   Shenoy, Narendra Vitthal   Patil, Ramchandra Gosavi   Thalange, Vinayak Channappa	Low Cost, Modular Solar Concentrator Capable of Being Shipped-Dismantled And Fieldassembled
37	IN201621042274A	Granted	Dalvi, Vishwanath Haily   Panse, Sudhir Vishnu   Joshi, Jyeshtharaj Bhalchandra   Shenoy, Narendra Vitthal   Patil, Ramchandra Gosavi   Thalange, Vinayak Channappa	Low Cost, Modular Solar Concentrator Capable of Being Shipped-Dismantled And Fieldassembled
38	IN2015MU2201A	Granted	Kale, Ravindra Dhondiba   Gotmare, Vijay Deorao   Bhatt, Latika	A Process For The Preparation of Mosquito Repellent Fabric Using Herbal Formulation And Composition Thereof

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
39	IN202121042106A	Published	Chakolkar, Madhav Devendra   Mahalle, Akshay Sanjay   Dahibhat, Indira Puroshattam   Jain, Shirish Premachand   Gangane, Puroshottam   Jadhav, Sachin Rajendra   Tathod, Swati S	Formulation For The Treatment of Paronychia And Method of Preparation Thereof
40	IN202221042622A	Published	Telvekar, Vikas Narendra	Process For The Preparation of Ricobendazole
41	IN202121048748A	Published	Namdeo, Jagtap Ramanand   Khushal, Wadgaonkar Kunal   Sidharth, A K   Eldhose, Chackochan	Bio Sourced Capping Agent For The Synthesis of Monodispersed Tungsten Oxide Nanoparticles
42	IN202121048748A	Published	Namdeo, Jagtap Ramanand   Khushal, Wadgaonkar Kunal   Sidharth, A K   Eldhose, Chackochan	Bio Sourced Capping Agent For The Synthesis of Monodispersed Tungsten Oxide Nanoparticles
43	TW202229258A	Published	Suramwar, Nikhil   Khole, Saurabh Arun   Lahare, Umesh Sonyabapu   Babar, Kiran Sadashiv   Yadav, Manish Kumar   Sharma, Kamlesh   Singh, Manish Kumar   Matsuzaki, Kohei	Novel Piperazine Compound Or The Salt Thereof
44	IN2013DE2755A	Granted	Ghosh, Pushpito Kumar   Srivastava, Divesh Narayan   Mondal, Dibyendu   Perween, Mosarrat	Gold Coated Natural Fibre As Electrode And Process For Preparation Thereof
45	IN202121001094A	Published	Deshmukh, Rajendra Anandrao	A Fertilizer Composition
46	IN202121001094A	Published	Deshmukh, Rajendra Anandrao	A Fertilizer Composition
47	IN2015MU4761A	Granted	Joshi, Shreerang Vidyadhar   Badgujar, Nilesh Prakash	Process For The Treatment of Paint Sludge
48	IN201621004796A	Granted	Jadhav, Sachin Sadashiv   Natu, Maitreya   Sadaphal, Vaishali Paithankar   Kulkarni, Vaishali Shashank   Vin, Harrick Mayank   Kelkar, Rahul Ramesh	Systems And Methods For Generating Blueprints For Enterprises



Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
49	IN202021011753A	Granted	Kanthale, Parag Mahesh   Gogate, Parag R   Pandey, Ramendra   Thakre, Shirish   Gujar, Swapnil	A Process For Reducing Chemical Oxygen Demand (Cod) In An Effluent Discharged During Viscose Manufacturing
50	IN202021056610A	Published	Warke, Rahul Gangadhar   Warke, Vishal Gangadhar   Mahajan, Girish Badrinath   Patil, Tanuja Ashok   Dev, Manoj Jagannath   Satardekar, Milan Rajesh   Singhal, Rekha Satishchandra   Warke, Gangadhar Motiram	Viscous Polysacchride Production From Microorganisms.
51	IN202121006395A	Published	Tambe, Srushti Mahadev   Jain, Divya Dinesh   Amin, Purnima Dhanraj	Process For Preparing Phase Inversion Based Polymeric Solution By Hotmelt Extrusion Technology
52	IN202221033834A	Published	Telvekar, Vikas Narendra	Process For The Preparation of Oxfendazole
53	IN202021054808A	Published	Singhal, Rekha   Mishra, Mayank   Chahal, Dheeraj   Kunde, Shruti   Ramesh, Manju	Efficient Deployment of Machine Learning And Deep Learning Models Pipeline For Serving Service Level Agreement
54	IN202121039041A	Published	Amin, Purnima Dhanraj   Sathaye, Sadhana   Rao, Kamalesh Krishnamoorthy   Wankhade, Sunny Babarao   Jain, Divya Dinesh   Bagle, Sneha Ramesh	Compositions of Ivermectin And Theophylline For Treating Acute Lung Injury
55	IN201821038320A	Granted	Singh, Madan Kumar   Ganvir, Vivek   Jadhav, Sachin   Shinde, Yogesh	A Process For Preparation of Cellulose Solution For Spinning of Fibres
56	IN202021040930A	Published	Kunde, Shruti   Mishra, Mayank   Singhal, Rekha   Pandit, Amey   Nambiar, Manoj   Shroff, Gautam	Method And System For Generating Labeled Dataset Using A Training Data Recommender Technique
57	IN202121000533A	Published	Mevada, Jayeshkumar Sevantilal   Pandit, Aniruddha Bhalchandra	A Compact Portable Multimodal Microscopy

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
58	IN202211033230A	Published	Sharma, Manju	Methods For Psychological Development of Autistic Children
59	IN201921037752A	Published	Pandit, Aniruddha Bhalchandra   Doltade, Sarjerao Bapu   Ladole, Mayur Ramrao   Jadhav, Nilesh Lakshaman   Dastane, Gaurav Ghanashyam	Water Disinfecting Plate Device
60	IN202221030393A	Published	Bagal, Manisha Vitthal   Nandgawle, Bhagyesh Anand   Gogate, Parag Ratnakar   Mohod, Ashish Vishwanath   Thosar, Rohan Vijay   Khalfay, Saif Munaf	Ultrasonic Photocatalytic Oxidation Reactor In The Form of Tray Tower
61	IN202221030397A	Published	Bagal, Manisha Vitthal   Nandgawle, Bhagyesh Anand   Gogate, Parag Ratnakar   Mohod, Ashish Vishwanath   Thosar, Vijay   Thosar, Rohan Vijay   Khalfay, Saif Munaf	Continuous Swirling Flow Photocatalytic Reactor
62	IN201717002575A	Granted	Furo, Chizuko   Kanda, Taiji   Hara, Koji   Vavia, Pradeep Ratilal   Monpara, Jasmin Dhirajlal   Jadhav, Pankaj Hanumantrao	Polyvinyl Alcohol Particles Pharmaceutical Binder Using Same Pharmaceutical Tablet Sustained Release Pharmaceutical Tablet And Method For Producing Polyvinyl Alcohol Particles
63	IN201821025098A	Granted	Sabnis, Anagha Shyamsundar   Shirsat, Vikramaditya Rajan	Phosphorus Containing Biobased Epoxy Resin
64	IN201821012126A	Granted	Devarajan, Padma Venkitachalam   Das, Saugandha   Kotak, Darsheen Jitendrabhai   Lokhande, Amit Sanjay	Kit For Visual Detection of Calcium In Biological Fluids
65	IN201821041686A	Granted	Yadav, Ganapati Dadasaheb   Mohire, Shalaka Sanjiv   Ashily, Rajendran	Biocatalytical Process For Racemization of D-Ephedrine

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
66	IN202031049698A	Published	Dandela, Rambabu   Thorat, Bhaskar Narayan   Mohanreddy, Pothireddy   Kumar, Togapur Pavan   Pandey, Sony   Mohapatra, Upasana   Bhukta, Swadhapriya	Process For Preparation Pyridine Derivatives And Their Antibacterial Efficiency Thereof
67	IN202211027212A	Published	Tyagi, Sonica   Dash, Kishor Kumar   Rauf, Mohammad   Mishra, Shalini   Gaikar, Vilas Bhau   Metilda, Princy V   Biswas, Prasanta Chatterjee   Partap, Vipul   Ahuja, Shifali   Kakkad, Poonam   Kannan K   Rane, Caroleena Ganesh	The Impact of Gender Discrimination On Women Employment Opportunities
68	IN201821026395A	Granted	Ratilal, Vavia Pradeep   Patil, Mrunal Unmesh	Antifungal Combinations
69	IN202221024345A	Published	Gaikar, Vilas Bhau   Sujatha, N   Pradeepa, S V   Salunkhe, Harshal Anil   Steffi, Sherly L   Arondekar, Shailesh   Dubey, Pushkar   Sayankar, Nitin Govind   Manjare, Sagar Onkarrao   Dubey, Parul   Sivaperumal, K   William, John A	The Impact of The Internet Banking System And Its Associated Technologies On Indian Banks
70	IN2012MU1823A	Granted	Yadav, Ganapati Dadasaheb   Kunde, Gajanan   Babu, C Anand	System For Production of Membrane
71	IN2012MU627A	Granted	Yadav, Ganapati Dadasaheb   Kunde, Gajanan   Babu, Anand C	Method For Production of Membrane
72	IN202127012853A	Published	Das, Sandip   Kuruganti, Thejaswi Sesha   Mhaske, Shashank Tejrav   Sheth, Parth Nitin	Flexible Packaging Film Comprising Nanocellulose
73	IN202021046675A	Published	2020	Anticancer Compounds
74	IN202221017079A	Published	Jadhav, Sachin   Sudharani, Bhupathiraju   Raffik , R   Sonkar, Sanjay Kumar   Ahmad, Mohd Wazih   Balaji, D   Menaka, S   Avasthi, Vinay	Robot Location Tracking And Navigation Method For High Dimensional Configurations

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
75	IN202221022571A	Published	Beldar, Vishal Gokul   Sidat, Parin Salim   Barse, Rohan Krishna   Dineshkumar, Manali   Beldar, Krishna Gokul   Laddha, Kirti S   Jadhao, Manojkumar M   Noolvi, Malleshappa	Herbal Tooth Cleansing Tablet
76	IN202121044237A	Published	Pawar, Hitesh Suresh   Ukarde, Tejas Mohan	Process of Catalytic Thermo Liquefaction For Converting Lignocellulosic Waste Into Carboxylic Acids And Catalyst Thereof
77	IN202221016607A	Published	Pawar, Hitesh Suresh   Pandey, Preeti Hira	A Process For Alkali Free Kolbe-Schmitt Reaction For Production of Hydroxy Benzoic Acid
78	IN2012MU2166A	Granted	Devarajan, Padma Venkitachalam   Soni, Maheshkumar P	Nanocarriers For Targeted Delivery of Active Agents
79	IN202121007438A	Published	Pawar, Hitesh Suresh   Ukarde, Tejas Mohan	Process For Catalytic Thermo Liquefaction of Plastic Waste Into Liquid Hydrocarbon Oil And Catalyst Thereof
80	IN202221008648A	Published	Shenoy, Diwakar K   Shet, Laxminarayan S   Samangadkar, Yatin S   Kalasapur, Vinay V   Jadhav, Sachin B	A Process For The Preparation of Triclop-yr-Butotyl
81	IN202221010283A	Published	Jadhav, Sachin Ramling   Jos, Bos Mathew   Gupta, Manish Kumar   Tandon, Aditya   Natarajan, M.   Magar, Shyamsundar Pralhadrao   Shanavas, T. N   Mishra, Bajarang Prasad	Integrated Driver Behaviour And Battery Optimization Techniques Using Machine Learning
82	IN202121005116A	Published	Sarma, As   Desai, Jignesh R   Kulkarni, Kedar	A Method of Preparation of Methoxy Amine Hydrochloride
83	IN2012MU1243A	Granted	Patravale, Vandana   Sharma, Shobhona   Soni, Umangi   Pathak, Sulabha	Antimalarial Nanoemulsion Formulation Comprising Halofantrine



Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
84	IN202221006034A	Published	Kuchake, Vitthal Gajanan   Shinde, Sachin Dnyanoba   Kale, Ravindra H   Biyani, Kailash R   Cheke, Rameshwor S   Patil, Mahesh A	Alpha-Asarone Effective In Treatment of Skin Dermatitis
85	IN201721046817A	Granted	Devarajan, Padma Venkitachalam   Chawla, Shweta Sunil   Gorakshakar, Ajit Chandrabhan   Madkaikar, Manisha Rajan   Ghosh, Kanjaksha Kartikchandra	A Kit For Extended Blood Group Determination And Method Thereof
86	IN202021010568A	Published	Mevada, Jayeshkumar Sevantilal   Pandit, Aniruddha Bhalchandra	A Smartphone And/Or Other Devices With High Resolution Microscopic Features
87	IN201921031629A	Granted	Yadav, Ganapati Dadasaheb   Pisal, Devendra Shriram	A Process For Selective Oxidation of Ortho-Cresol
88	IN202021002147A	Published	Devarajan, Padma Venkitachalam   Lokhande, Amit Sanjay   Jadhav, Pramod Maruti	A Kit For Visual Pregnancy Diagnosis In Livestock And Method of Detection Thereof
89	SG11202114343A1	Published	Balasubramanian, Satishkumar   Callahan, Mary Catherine   Gorantla, Mohnish   Jadhav, Sachin D.   Knorr, Christine A.   Meltzer, Jason   Mills, Dorothy   Petla, Amar   Seth, Anupam   Shaurya, Rahul   Singh, Silajit   Tyagi, Urvashi	Supplier Invoice Reconciliation And Payment Using Event Driven Platform
90	IN201921051915A	Granted	Rathod, Virendra Kishan   Gupta, Anilkumar Rammilan   Patil, Sujata Shrikant	An Antimicrobial Wood Polish Formulation From Curcumin Industry Waste Oleoresin
91	IN202021003723A	Published	Mevada, Jayeshkumar Sevantilal   Pandit, Aniruddha Bhalchandra	Inbuilt Microscopy With Light Guiding Elements For Smartphone And Other Devices

Sr.	Patent Application No.	Published/Granted	Inventor Name	Title of the Patent
92	IN202021056513A	Published	Devendra, Chakolkar Madhav   Dinkarrao, Tayade Sharad   Ganesh, Tapadiya Shweta   Ganesh, Waghmare Aditi   Ghanshyam, Chavan Mayuri   Rajendra, Jadhav Sachin	A Digital Medicine Storing Box
93	IN202241000096A	Published	Pandurangan, Raji   Shakya, Manishi   Revathi, Sri B.   Kapoor, Vishav   Senthilkumar, A   Jadhav, Sachin   Mahendran, Rakesh Kumar	Melanoma Skin Disease Detection Provided Structured Meta Data Using Machine Learning
94	IN2013MU3543A	Granted	Patravale, Vandana Bharat   Fernandes, Clara Bernard	Pharmaceutical Compositions of Saturated Lipid Polymer Matrix of Curcumin
95	IN202021024810A	Published	Singhal, Rekha   Shroff, Gautam   Chahal, Dheeraj   Mishra, Mayank   Kunde, Shruti   Nambiar, Manoj	Accelerating Development And Deployment of Enterprise Applications In Data Driven Enterprise IT Systems



# INDUSTRIAL CONSULTATIONS

Sr.	Particulars
1	Galaxy Surfactants Ltd
2	O.N.G.C. Energy Centre [G.D.Yadav]
3	Cipla Ltd
4	Unilever Ind. Pvt Ltd
5	AI Engineering Services Limited
6	Galaxy Surfactants Ltd
7	Hindalco Industries Ltd
8	Par Formulations Private Limited
9	Unilever Ind. Pvt Ltd
10	Hindalco Industries Ltd
11	Zydus Takeda Healthcare Private Limited
12	Mankind Research Engineering & Industries Ltd
13	Cipla Ltd
14	Unilever Ind. Pvt Ltd
15	Unilever Ind. Pvt Ltd
16	Hindustan Unilever Ltd
17	Thermax Ltd
18	Galaxy Surfactants Ltd
19	Galaxy Surfactants Ltd
20	Vaidya Sane Ayurved Laboratories Limited
21	Central Pollution Control Board
22	Deepak Nitrite Ltd
23	Hindustan Unilever Ltd
24	Central Pollution Control Board
25	Unilever Ind. Pvt Ltd
26	Olon Active Pharmaceutical Ingredients Pvt Ltd
27	Precision Wires India Limited
28	Unilever Ind. Pvt Ltd
29	Gujarat Multi Gas Base Chemicals Pvt Ltd
30	Panopharm
31	Transasia Bio-Medicals Ltd.
32	Gujarat Industrial Chemicals Co. Pvt. Ltd.
33	Rallis India Limited.A TATA ENTERPRISE
34	Nerofix Pvt Ltd
35	Beardsell Limited
36	Chugoku Paints India Pvt Ltd
37	IVAX PAPER CHEMICALS LTD
38	Rossari Biotech Limited
39	Sika India Pvt Ltd
40	Eternis Fine Chemicals Ltd
41	Amar Equipments Pvt.Limited (SD)

Sr.	Particulars
42	Amar Equipments Pvt.Limited (SD)
43	Lasa Supergenerics Ltd
44	Mailhem Ikos Environment Pvt. Ltd
45	Balaji Speciality Coating Pvt Ltd
46	Gujarat Multi Gas Base Chemicals Pvt Ltd
47	Grauer & Well India Ltd
48	Anuvi Food Sciences Pvt. Ltd
49	Transasia Bio-Medicals Ltd.
50	Delnova Healthcare LLP
51	Sabarmati Gas Ltd
52	Gharda Chemicals
53	Mohiniraj Enviro Consultancy
54	Godavari Biorefineries Ltd
55	Rossari Biotech Limited
56	Pidilite Industries Ltd
57	Galaxy Surfactants Ltd
58	Transasia Bio-Medicals Ltd.
59	Asian Paint PPG Pvt Ltd
60	Mohiniraj Enviro Consultancy
61	Gujarat Industrial Chemicals Co. Pvt. Ltd.
62	Virdev Intermediates Pvt Ltd
63	Siddharth Carbochem Products Ltd
64	Rossari Biotech Limited
65	BASF India Ltd
66	Sudarshan Farm Chemicals India Pvt Ltd
67	National Peroxide Ltd
68	Godavari Biorefineries Ltd
69	Victory Ventures INC
70	Shri Ram Enterprises ( Dr )
71	Sika India Pvt Ltd
72	Brihanmumbai Mahanagar Palika (SD)
73	Transasia Bio-Medicals Ltd.
74	Cosmo Speciality Chemicals Pvt Ltd
75	Delnova Healthcare LLP
76	Fytomax Nutrition Pvt. Ltd.
77	UPL Limited (R&D)
78	Rallis India Limited.A TATA ENTERPRISE
79	Unilever Ind. Pvt Ltd
80	Salasar Techno Engineering Limited
81	Delnova Healthcare LLP
82	Eternis Fine Chemicals Ltd
83	Rossari Biotech Limited
84	Jaysynth Impex Private Limited



Sr.	Particulars
85	Shiva Performance Materials Private Limited
86	Rossari Biotech Limited
87	Cosmo Speciality Chemicals Pvt Ltd
88	Colorband Dyestuff Pvt Ltd
89	Transasia Bio-Medicals Ltd.
90	Gharda Chemicals
91	KV Fire Chemicals Pvt. Ltd
92	Jay Chemicals
93	Rossari Biotech Limited
94	Suyash Composite Industries Pvt Ltd
95	Berger Paints India Ltd
96	LaGreens India Pvt Ltd
97	JSW Paints Private Limited
98	Aegis Logistics Limited
99	Dow Chemical International Pvt Ltd
100	Sunanda Speciality Coatings
101	Mynvax Private Limited
102	Afcons Infrastructur Ltd
103	Indiana Grating Pvt Ltd
104	Cosmo Speciality Chemicals Pvt Ltd
105	Jaysynth Impex Private Limited
106	Maharashtra Pollution Control Board
107	Kamdhenu Agro Chem Industries
108	Transasia Bio-Medicals Ltd.
109	Total Energies Markting India Pvt Ltd
110	ITC Ltd
111	Garware Hi-Tech Flims Limited
112	NK Trade Links
113	Sudarshan Farm Chemicals India Pvt Ltd
114	Rossari Biotech Limited
115	Cosmo Speciality Chemicals Pvt Ltd
116	Jaysynth Impex Private Limited
117	Godavari Biorefineries Ltd
118	Gujarat Industrial Chemicals Co. Pvt. Ltd.
119	Aventus Labs Llp
120	Sai Fertilizers & Phosphates Pvt Ltd
121	Fineotex Chemical Limited
122	Anuvi Food Sciences Pvt. Ltd
123	Rallis India Limited.A TATA ENTERPRISE
124	Rossari Biotech Limited
125	Synorganic Paints Pvt Ltd
126	Horizon Performance Polyurethane Pvt Ltd
127	UPL Limited (R&D)

Sr.	Particulars
128	Jaysynth Impex Private Limited
129	Transasia Bio-Medicals Ltd.
130	VioQ Renewable Pvt Ltd
131	DCM Shriram
132	Saife Vetmed Pvt Ltd
133	Cosmo Speciality Chemicals Pvt Ltd
134	Gujarat Industrial Chemicals Co. Pvt. Ltd.
135	Transasia Bio-Medicals Ltd.
136	Praktan Industries
137	Jaysynth Impex Private Limited
138	Cosmo Speciality Chemicals Pvt Ltd
139	Encore Natural Polymers Pvt Ltd.
140	Kalabhai Karson Pvt Ltd
141	Rossari Biotech Limited
142	Kesar Petroporducts Ltd
143	Grasim Industries Ltd
144	Hikal Limited
145	Hindustan Unilever Ltd
146	Sanrachana Structural Strengthening Pvt Ltd
147	Transasia Bio-Medicals Ltd.
148	Master Builders Solution India Pvt Ltd (BASF)
149	Chryso India Pvt Ltd
150	Unilever Ind. Pvt Ltd
151	Berger Paints India Ltd
152	Jaysynth Impex Private Limited
153	Godavari Biorefineries Ltd
154	Bharat Petroleum Corporation Ltd
155	N.S. Chemicals
156	Rossari Biotech Limited
157	Ketul Chem Private Limited
158	Eternis Fine Chemicals Ltd
159	Eternis Fine Chemicals Ltd
160	Rallis India Limited.A TATA ENTERPRISE
161	Zoetis Pharmaceutical Rasearch Pvt Ltd.
162	Unilever Ind. Pvt Ltd
163	Transasia Bio-Medicals Ltd.
164	Rossari Biotech Limited
165	Mazda Colours Ltd
166	Amar Equipments Pvt.Limited (SD)
167	Gujarat Multi Gas Base Chemcals Pvt Ltd
168	Shrihari Enterprise
169	Prolific Chemicals Pvt Ltd

Sr.	Particulars
170	Asian Paints Ltd ( Dr)
171	Transasia Bio-Medicals Ltd.
172	SEA6 ENERGY PRIVATE LIMITED'
173	SP Concure Pvt Ltd
174	Orbicular Pharmaceutical Technologies Pvt Ltd
175	Mazda Colours Ltd
176	Sintering Innovation Technology India Foundation
177	Khurana Oleo Chemicals'
178	Transasia Bio-Medicals Ltd.
179	MYNVAX PRIVATE LIMITED
180	ONGC Energy Centre
181	Cipla Ltd
182	Jay Chemicals
183	Asian Paint PPG Pvt Ltd
184	Fytomax Nutrition Pvt. Ltd.
185	Croda Chemical Pvt Ltd
186	Pidilite Industries Ltd
187	Ama Herbal Laboratories Pvt Ltd'
188	Amar Equipments Pvt.Limited (SD)
189	Panopharm
190	Godavari Biorefineries Ltd
191	Divine Chemical Company'
192	Godavari Biorefineries Ltd
193	Sahajanand Medical Technologies Pvt. Ltd.
194	Jindal Saw Ltd



# [MASTERS THESIS]

Sr.	Roll No.	Student Name	Project Title	Department Name	Last Submission Date	Guide Name
1	19PHC205	Purnima Hemant Singh	Synthesis of Mitochondria Targeted Polyphenols as Anti-Infective Agents	M.Pharm.	03-Jan-22	Mariam S Degani
2	19PHC206	Yogesh Dadasaheb Jagtap	Synthesis of Imidazole Derivatives of Benzoin as Potential Anti-Infective Agents.	M.Pharm.	07-Apr-22	Mariam S Degani
3	19PHP204	Sakshi Nitin Pagar	Formulation and Development of Oral Pharmaceutical Dosage Forms Using Hot-Melt Extrusion.	M.Pharm.	03-Apr-22	Pradeep Ratilal Vavia
4	19PHP203	Mahak Birthare	Design and Evaluation of Anti-Fungal Formulations	M.Pharm.	03-Jan-22	Purnima Dhanraj Amin
5	19PHM202	June Milind Wagh	Ocular Formulation Development of a Standardized Herbal Extract in Prevention and Treatment of Diabetic Cataract.	M.Pharm.	01-Jan-22	Sadhana Sathaye
6	19PHP206	Vaibhav Nanabhau Ghegade	Development of Ocular Drug Delivery System for Fungal Keratitis	M.Pharm.	20-May-22	Vandana B. Patravale
7	19PHP202	Archana Ashok Kapse	Exploring Egr Inhibitor Formulations for Vascular Disorders	M.Pharm.	31-May-22	Vandana B. Patravale
8	19BPT212	Logesh Kumar Gopala-Krishnan G	Optimization of Carbon Source of Pseudomonas Aeruginosa ATCC 10145 for The Production of Rhamnolipid	M.Tech - Bioprocess Technology	31-May-22	Amit Prabhakar Pratap
9	19BPT203	Arvind Uttam Kshirsagar	Fermentative Production and Optimization of Rhamnolipid Biosurfactant From Oilseed Cake	M.Tech - Bioprocess Technology	28-Jun-22	Amit Prabhakar Pratap
10	19BPT217	Shalvi Singh	Removal of Anti-Nutritional Factors From Moringa Seed Cake To Improve Bioavailability of Nutrients	M.Tech - Bioprocess Technology	12-Apr-22	Aniruddha Bhalchandra Pandit
11	19BPT205	Durgesh Ramdas Wankhade	The Role of Lignin in Soil Enrichment	M.Tech - Bioprocess Technology	21-Mar-22	Annamma Anil Odaneth
12	19BPT220	Snehal Rajendrakumar Zare	Enantio-Selective Biotransformation of (R, S)-Styrene Oxide To (R)-1-Phenylethane-1-2 DIOL Using Epoxide Hydrolase On ZIF-67	M.Tech - Bioprocess Technology	10-Jun-22	Ganapati D Yadav



Sr.	Roll No.	Student Name	Project Title	Department Name	Last Submission Date	Guide Name
13	19BPT209	Joecyrilharrish A M	Separation of Value Added Compounds From Distillery Spentwash	M.Tech - Bioprocess Technology	11-Apr-22	Hitesh S Pawar
14	19BPT210	KM Alka	Thermodynamic Studies of Recombinant Protein	M.Tech - Bioprocess Technology	03-Jan-22	Ratnesh Dharamchandra Jain
15	19BPT218	Shashikant Appa Doltade	Evaluation of The Effect of The Purification Process On Mab Purity and Quality	M.Tech - Bioprocess Technology	01-Mar-22	Ratnesh Dharamchandra Jain
16	19BPT226	Vivek Vasant Karande	Improvement in Extraction of Astaxanthin From Haematococcus Pluvialis	M.Tech - Bioprocess Technology	24-Mar-22	Reena Pandit
17	20BPT223	Aditya Narendra Ruikar	Formulation and Evaluation of Sprayable Alginate/ Nanocellulose Scaffold for Wound Healing.	M.Tech - Bioprocess Technology	27-Jul-22	Reena Pandit
18	19BPT222	Shivaji Baban Mawal	Screening, Production, and Purification of L-Asparaginase From Cupriavidus Oxalaticus Ictdb921	M.Tech - Bioprocess Technology	26-Feb-22	Rekha Satishchandra Singhal
19	19BPT204	Dhwani Vinay Gupta	Adaptive Evolution of Recombinant Saccharomyces Cerevisiae for Enhanced Xylitol Productivity	M.Tech - Bioprocess Technology	31-May-22	shamlan reshawala
20	19BPT213	Mausumi Gautam Chaudhuri	Recombinant Protein Production in Pichia Pastoris	M.Tech - Bioprocess Technology	29-Jun-22	shamlan reshawala
21	19BPT216	Riya Warikoo	Isolation and Characterization of Alpha Amylase From Cold Plasma Treated Mung Beans (Vigna Radiata)	M.Tech - Bioprocess Technology	29-Mar-22	Uday Shriramrao Annapure
22	19DYE208	Mahesh Ajit Gore	Formulations in Permanent Hair Dyes	M.Tech - Dyestuff and Intermediate Technology	25-Apr-22	Ganapati Subray Shankarling
23	19DYE215	Viraj Netaji Sable	Synthesis, Characterization of Metallo Phthalocyanine Dyes for Self-Cleaning, Self-Sterilizing Textile Material	M.Tech - Dyestuff and Intermediate Technology	23-Sep-22	Nabanita Sadhukhan
24	19DYE211	Roshani Dhanraj Patil	Molecular Engineering of Benzofuran Based Molecules for Enhanced Solid-State Emission.	M.Tech - Dyestuff and Intermediate Technology	24-May-22	Satyajit Saha

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25	19DYE216	Monika Madhavrao Jadhav	Development of Carbon Based Adsorbent for Selective Removal of Dye From Effluent Water	M.Tech - Dyestuff and Intermediate Technology	07-Jan-22	Surajit Some
26	19TXT204	Himanshu Devramji Mehta	Microcrystalline Cellulose Extraction From Tissue Paper and Its Comparison With Commercial Microcrystalline Cellulose	M.Tech - Fibres and Textiles Processing Technology	06-Jan-22	Ravindra D Kale
27	19TXT206	Jasam Prakash Pattanaik	Application of Sericin in Textile Wet Processing	M.Tech - Fibres and Textiles Processing Technology	11-Jan-22	Ravindra D Kale
28	19TXT202	Dhanashree Sunil Banait	Plasmonic Nanoparticles for Functional Coloration of Textiles	M.Tech - Fibres and Textiles Processing Technology	14-Jan-22	Ravindra Vithal Adivarekar
29	19TXT201	Brahma Deo Pandey	Synthesis of Reactive Softener and Its Application in Textile Finishing.	M.Tech - Fibres and Textiles Processing Technology	12-Jan-22	Sandeep Pandharinathrao More
30	18FBT201	Aayushi Pal	Study of Bioactive Compounds and Complete Utilisation of Pineapple	M.Tech - Food Biotechnology	09-Feb-22	Jyoti Sagar Sontakke Gokhale
31	19FBT211	Aastha Jaiswal	Development of Legume-Based Milk	M.Tech - Food Biotechnology	18-Apr-22	Jyoti Sagar Sontakke Gokhale
32	19FBT210	Srilekha K	Development of Porridge Mix From Germinated Multigrain for Geriatric Population	M.Tech - Food Biotechnology	05-May-22	Jyoti Sagar Sontakke Gokhale
33	19FBT204	Vesapolu Hesuh	Isolation and Characterization of Microbial Strains From Fermented Foods	M.Tech - Food Biotechnology	22-Feb-22	Laxmi Ananthanarayan
34	19FBT204	Vesapolu Hesuh	Isolation and Characterization of Microbial Strains From Fermented Foods	M.Tech - Food Biotechnology	22-Feb-22	Laxmi Ananthanarayan
35	19FBT207	Pratibha Prajapati	Enzymes From Germinated Fenugreek Seeds: Isolation, Characterization and Applications	M.Tech - Food Biotechnology	23-Apr-22	Rekha Satishchandra Singhal
36	19FBT202	Sheetal Jayesh Shrigadiwar	Cloud Stabilization of Orange Juice Using Its Peel	M.Tech - Food Biotechnology	21-Apr-22	Snehasis Chakraborty
37	19FET202	Amaya Suku	Studies in Incorporation of Vegetable Pulp in Cold Extruded Products	M.Tech - Food Engineering and Technology	05-Feb-22	Laxmi Ananthanarayan

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38	19FET205	Arman Ahmed Shaikh	Co-Extraction of Marigold Flowers and Dried Coconut Shreds Using Supercritical Carbon Dioxide To Develop Functional Food Formulations	M.Tech - Food Engineering and Technology	19-Jan-22	Rekha Satishchandra Singhal
39	19FET214	Shubham Ravindra Sawardekar	Cauliflower Flour: Preparation, Application and Evaluation of Functionality and Bioactivity	M.Tech - Food Engineering and Technology	07-Mar-22	Rekha Satishchandra Singhal
40	18FET201	Akash Vinayakrao Kshirsagar	Supercritical Fluid Extraction of Ajwain Seeds and Evaluation of Their Bioactivities.	M.Tech - Food Engineering and Technology	17-Aug-22	Rekha Satishchandra Singhal
41	19FET206	Ayan Bhattacharjee	Design and Fabrication of a Batch Ohmic Heater for Processing of Beverage	M.Tech - Food Engineering and Technology	19-Feb-22	Snehasis Chakraborty
42	19FET216	Syeda Muntazima Afrin	Isolation and Characterization of Gum From Barringtonia Acutangula Tree and Effect of Cold Plasma Treatment On The Gum Properties	M.Tech - Food Engineering and Technology	24-Mar-22	Uday Shriramrao Annature
43	19FET204	Arijit Acharjee	To Study The Effect of Cold Plasma Treatment On Physicochemical and Functional Properties of Pea Protein Isolate	M.Tech - Food Engineering and Technology	21-Jun-22	Uday Shriramrao Annature
44	20FET201	Eketa Devi	Effect of Cold Plasma Treatment On Arrowroot Starch	M.Tech - Food Engineering and Technology	13-Jul-22	Uday Shriramrao Annature
45	20FET214	Somnath Basak	Characterization of Cold Plasma-Treated High Methoxyl Apple Pectin.	M.Tech - Food Engineering and Technology	15-Jul-22	Uday Shriramrao Annature
46	19FET207	Deepak Raj	Studies On Surface Decontamination and Evaluation of Physiochemical Changes of Raisins By Atmospheric Cold Plasma (Acp) Treatment	M.Tech - Food Engineering and Technology	29-Jul-22	Uday Shriramrao Annature
47	19GRT216	Prakash S	Solid Acid Catalysts for Acetylation of P- Aminophenol Under Solvent Free Conditions	M.Tech - Green Technology (Full-Time)	01-Feb-22	Bhalchandra Mahadeo Bhanage

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48	19GRT218	Rutvij Anand Apte	Kinetic Study of Valorisation of Biomass Based Levulinic Acid To Pyrrolidone Using Protic Ionic Liquid Via Dehydrogenation of Dimethyl Amine Borane	M.Tech - Green Technology (Full-Time)	08-Jun-22	Bhalchandra Mahadeo Bhanage
49	19GRT210	Yagna Sureshbhai Hirpara	Mixed Metal Oxide (Mmo) Supported Bimetallic Catalysts for The Selective Hydrogenation of Dimethyl Oxalate	M.Tech - Green Technology (Full-Time)	03-Jan-22	Ganapati D Yadav
50	19GRT224	Kadam Vinayak Maruti Latika	Mof Supported Bimetal Catalysts for Selective Hydrogenation of Furfural To Cyclopentanone	M.Tech - Green Technology (Full-Time)	07-Jan-22	Ganapati D Yadav
51	19GRT220	Sayantan Biplab Mukherjee	Friedel-Craftsalkylation of Diphenyl Oxide With Benzyl Chloride With Amberlyst 15 Catalyst	M.Tech - Green Technology (Full-Time)	11-Feb-22	Ganapati D Yadav
52	19GRT221	Shivamkumar Dipakkumar Modi	Development of Electrochemical Sensor for Detection of Inorganic As(iii) Using Modified Glassy Carbon Electrodes	M.Tech - Green Technology (Full-Time)	22-Apr-22	Neetu Jha
53	19GRT227	Tejas Rajendra Kothawade	Development of The Electrochemical Biosensor for The Non-Enzymatic Detection of Ascorbic Acid.	M.Tech - Green Technology (Full-Time)	15-Jun-22	Neetu Jha
54	19GRT215	Payal Sudhir Dalvi	Ultrasound-Assisted Synthesis of N-Tio2/Fe3o4@Zno and Its Catalytic Application	M.Tech - Green Technology (Full-Time)	01-Jan-22	Parag Ratnakar Gogate
55	19GRT208	Gajanan Ramprabhu Rathod	Ionic Liquids for Enhancing The Activity of Pharmaceutical Agents	M.Tech - Green Technology (Full-Time)	30-Sep-22	Prajakta Dandekar Jain
56	19GRT228	Raghav Sandeep Soni	Design and Fabrication of An Affordable Rapid Solid-Liquid Dynamic Extraction Assembly and Extraction Studies With Tomato Waste, Tea Leaves and Phosphate Fertilizer Granules.	M.Tech - Green Technology (Full-Time)	01-Feb-22	Pushpito Kumar Ghosh



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57	19GRT225	Vrushali Uttam Sadhu	Synthesis, Characterization and Aggregation Behavior of Metallosurfactants and Their Applications in Various Organic Reactions.	M.Tech - Green Technology (Full-Time)	21-Mar-22	Radha V. Jayaram
58	19GRT225	Vrushali Uttam Sadhu	Synthesis, Characterization and Aggregation Behavior of Metallosurfactants and Their Applications in Various Organic Reactions.	M.Tech - Green Technology (Full-Time)	21-Mar-22	Radha V. Jayaram
59	19GRT222	Shruti Raju Bhoyar	Synthesis and Application of Magnetically Separable Solid Catalysts for Redox Reaction.	M.Tech - Green Technology (Full-Time)	24-Mar-22	Radha V. Jayaram
60	19GRT222	Shruti Raju Bhoyar	Synthesis and Application of Magnetically Separable Solid Catalysts for Redox Reaction.	M.Tech - Green Technology (Full-Time)	24-Mar-22	Radha V. Jayaram
61	19GRT217	Prethika Murugesan	Production of Biochar From Seaweed Enteromorpha Prolifera for The Mitigation of Toxic Acid Dyes in Water	M.Tech - Green Technology (Full-Time)	15-Feb-22	Reena Pandit
62	19GRT203	Ashish Bhujangrao Bidkar	Studies in Extraction of Proteins From Sorghum Seeds.	M.Tech - Green Technology (Full-Time)	05-Feb-22	Virendra Kisan Rathod
63	19GRT203	Ashish Bhujangrao Bidkar	Studies in Extraction of Proteins From Sorghum Seeds.	M.Tech - Green Technology (Full-Time)	05-Feb-22	Virendra Kisan Rathod
64	19OIL209	Nitesh Umesh Kirmirwar	Extraction of Madhuca Longifolia Fat and Its Application in Cosmetic Formulation	M.Tech - Oils Oleochemicals and Surfactants Technology	11-Jan-22	Chandu S Madankar
65	19OIL202	Ashwini Prabhakar Meshram	Studies On Production and Optimization of Rhamnolipids From Pseudomonas Aeruginosa Mtcc 9027 Using Response Surface Methodology (Rsm).	M.Tech - Oils Oleochemicals and Surfactants Technology	12-Mar-22	Chandu S Madankar
66	19OIL203	Avinash Shamsundar Shinde	Extraction of Mango Kernel Oil and Its Applications.	M.Tech - Oils Oleochemicals and Surfactants Technology	25-May-22	Jyotsna Sanjeev Waghmare
67	19OIL213	Sakshi Sanjay Sharma	Green Corrosion Inhibitor From Floral Waste	M.Tech - Oils Oleochemicals and Surfactants Technology	11-Jun-22	Jyotsna Sanjeev Waghmare

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68	19OIL218	Rohan Rajaram Wagh	Extraction of Bacoside a From Bacopa Monnieri Plant Using Deep Eutectic Solvents	M.Tech - Oils Oleochemicals and Surfactants Technology	09-Jun-22	Parag R Nemade
69	19OIL219	Yashashree Balasaheb Salunke	Nutritional Enhancement of Mayonnaise With Omega-3 Pufa With An Algal Oil and Its Effects On Physical and Sensory Attributes	M.Tech - Oils Oleochemicals and Surfactants Technology	14-Jun-22	Parag R Nemade
70	19OIL201	Anushka Chandrashekhar Patil	Microwave Assisted Synthesis of Sugar Esters	M.Tech - Oils Oleochemicals and Surfactants Technology	24-Mar-22	Ravindra Dattatray Kulkarni
71	19OIL205	Kavita Ramchandra Yadav	Synthesis, Characterization, and Performance Evaluation of Polyquats as Hair and Skin Care Surfactants	M.Tech - Oils Oleochemicals and Surfactants Technology	24-Mar-22	Ravindra Dattatray Kulkarni
72	19OIL204	Dnyaneshwari Unmesh Kulkarni	By-Product Utilization of Defatted Cakes as a Potential Source for Proteins and It's Applications in Food and Cosmeceuticals	M.Tech - Oils Oleochemicals and Surfactants Technology	28-Mar-22	Ravindra Dattatray Kulkarni
73	19OIL208	Libiya A	Synthesis of Conjugated Linoleic Acid From a Novel Vegetable Source and Optimizing The Process.	M.Tech - Oils Oleochemicals and Surfactants Technology	17-Apr-22	Ravindra Dattatray Kulkarni
74	20PER203	Bhushan Suryakant Chavan	Comparative Analysis of Spices Using Various Extraction Methods	M.Tech - Perfumery and Flavour Technology	22-Jul-22	Amit Prabhakar Pratap
75	20PER212	Preeti Kamal Pradhan	Optimization of Enzymatic Synthesis of Cyclohexyl Butyrate in a Solvent-Free System	M.Tech - Perfumery and Flavour Technology	29-Jul-22	Amit Prabhakar Pratap
76	19PER213	Shahidunnisha Mohammed Anis Choudhary	Enzyme Catalyzed Epoxidation of Cinnamyl Alcohol Under Microwave Irradiation	M.Tech - Perfumery and Flavour Technology	16-Jan-22	Ganapati D Yadav
77	19PER207	Kiran Bhagwan Avhad	Isomerisation of $\gamma$ -Pinene Oxide By Using Heterogeneous Catalysts To Campholenic Aldehyde	M.Tech - Perfumery and Flavour Technology	11-Feb-22	Ganapati D Yadav
78	19PER206	Kalyani Machhindra Kute	Extraction of Essential Oil From Temple Waste Flowers and Its Application	M.Tech - Perfumery and Flavour Technology	05-May-22	Ganapati Subray Shankarling

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79	19PER212	Ruchika Sanjayrao Dapurkar	Extraction of Nutraceuticals (Lutein) From Marigold Flower Waste	M.Tech - Perfumery and Flavour Technology	23-May-22	Jyotsna Sanjeev Waghmare
80	19PER218	Yohanah Sam Mathew	Studies On Spikenard	M.Tech - Perfumery and Flavour Technology	05-Feb-22	Kirti Shivchandra Laddha
81	19PER210	Pratik Sanjay Wakchaure	Development of Aromatic Hair Dye.	M.Tech - Perfumery and Flavour Technology	21-May-22	Kirti Shivchandra Laddha
82	19PER211	Swapnil Shivaji Pawar	Non-Toxic Molybdenum?Maltol Catalyst for Bioinspired Oxidation Reactions	M.Tech - Perfumery and Flavour Technology	24-Jun-22	Nabanita Sadhukhan
83	19PER214	Vishwanath Shirishkumar Solpure	Odour and Constitution: Synthesis of Structural Analogues of Vanillin and Their Applications	M.Tech - Perfumery and Flavour Technology	09-Feb-22	Satyajit Saha
84	19PER203	Eshan Raju Dhyade	Development of Reaction Flavour	M.Tech - Perfumery and Flavour Technology	14-Jul-22	Uday Shriramrao Annapure
85	19PBT202	Rashika Dhar	Synthesis of Ticagrelor Active Pharmaceutical Ingredients From Ketone Reductases Using Microwave Irradiation	M.Tech - Pharmaceutical Biotechnology	28-Jun-22	Ganapati D Yadav
86	19PBT211	Ritu Rajendra Kamble	Understanding The Physico-Chemical Behaviour of Therapeutic Proteins Under Different Stress Conditions.	M.Tech - Pharmaceutical Biotechnology	17-Feb-22	Ratnesh Dharamchandra Jain
87	19PHT201	Chetan Rama Palvi	Design, Optimization of Suzuki-Miyaura Cross-Coupling Reaction and Molecular Modelling Studies On Novel Pleconaril Derivatives as Antienteroviral Agents.	M.Tech - Pharmaceutical Chemistry and Technology	02-Feb-22	Hemchandra Keshav Chaudhari
88	19PHT211	Indraneel Narendra Dhavale	In Silico Studies On Novel Halogenated Phenazine Derivatives as Antimicrobial Activity Against Mrsa and Investigating Applications of Boronic Acid Catalysis	M.Tech - Pharmaceutical Chemistry and Technology	02-Feb-22	Hemchandra Keshav Chaudhari

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89	19PHT210	Roshani Jagdish Bhole	Molecular Docking, Mmgbsa & Qikprob Study of Potent 2-Pyridones as Dna Gyrase Inhibitors and Synthesis of N- (Coumarin-3-Yl-Carbonyl)-Amino Acid Derivatives	M.Tech - Pharmaceutical Chemistry and Technology	16-Feb-22	Hemchandra Keshav Chaudhari
90	18PHT215	Supriya Ruprao Morey	Extraction of Polyphenols From Orange Peels	M.Tech - Pharmaceutical Chemistry and Technology	04-Jan-22	Mariam S Degani
91	19PHT218	Yogesh Shivaji Thigle	Process Optimization of Curcumin and Synthesis of Its Analogues.	M.Tech - Pharmaceutical Chemistry and Technology	06-May-22	Mariam S Degani
92	19PHT206	Nikita Sreevalsalan Nair	Permeability Assessment of Drugs Using The Pampa-Ds Model Via Side-By-Side Diffusion Cell	M.Tech - Pharmaceutical Chemistry and Technology	06-Jan-22	Prajakta Dandekar Jain
93	19PHT205	Nikita Annasaheb Patil	Formulation and Evaluation of Oral Disintegrating Film (Odf) Using Hot Melt Extrusion Technology.	M.Tech - Pharmaceutical Chemistry and Technology	29-May-22	Purnima Dhanraj Amin
94	19PHT213	Sanjiri Dilip Shelar	Synthesis of Propofol	M.Tech - Pharmaceutical Chemistry and Technology	11-Feb-22	Shreerang Vidyadhar Joshi
95	19PHT204	Mansi Narendra Shah	Novel Mucoadhesive Coprocessed Excipient	M.Tech - Pharmaceutical Chemistry and Technology	10-May-22	Vandana B. Patravale
96	19PHT207	Priyanka Dattatray Salunkhe	Biosurfactant Based Topical Nanoformulation of Clindamycin Phosphate	M.Tech - Pharmaceutical Chemistry and Technology	02-Jun-22	Vandana B. Patravale
97	18PHT501	Vivek Digamber Rathod	Design of Antikinetoplastid Agents By Molecular Modelling Study and Microwave Assisted Bromode-carboxylation of Cinnamic Acid	M.Tech - Pharmaceutical Technology (Sponsored 3 Yrs)	19-Jan-22	Hemchandra Keshav Chaudhari
98	19POL213	Nikhilkumar Pareshkumar Patel	Studies in Synthesis of Castor Oil Base Polyurethanes and its Degradation	M.Tech - Polymer Engineering and Technology	23-May-22	Adarsh Ramesh Rao
99	19POL208	Harshavardhan Vishvajit Salunkhe	Modification of Epdm Rubber and Its Application	M.Tech - Polymer Engineering and Technology	03-Jun-22	Adarsh Ramesh Rao
100	19POL209	Jimit Jeetendra Salunke	Studies in Blends of Recycled Pet	M.Tech - Polymer Engineering and Technology	14-Jun-22	Adarsh Ramesh Rao



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101	19POL205	Dhiraj Sukhadeo Kaikade	Development of Antifog Coatings	M.Tech - Polymer Engineering and Technology	07-Jan-22	Anagha Shyamsunder Sabnis
102	19POL204	Dhananjay Manoj Balbudhe	Studies in Chemical Depolymerization of Polyurethane Waste	M.Tech - Polymer Engineering and Technology	04-Mar-22	Anagha Shyamsunder Sabnis
103	19POL212	Monika Nivrutti Lokhande	Studies in Electrical Insulation Coatings	M.Tech - Polymer Engineering and Technology	01-Jun-22	Anagha Shyamsunder Sabnis
104	19POL211	Konark Mahendra Madan	Conformable Polymer Phase Change Material Composites	M.Tech - Polymer Engineering and Technology	02-Jun-22	Prakash Anna Mahanwar
105	19POL215	Priyanka Vasant Khare	Synthesis and Characterization of Poly(Lactic-Co-Glycolic) Acid (PLGA) and Fabrication of Nano/Micro Fiber By Melt Spinning.	M.Tech - Polymer Engineering and Technology	03-Jun-22	Prakash Anna Mahanwar
106	19POL210	Karishma Tarachand Supare	Synthesis and Characterization of Bio-Based Hydrogel for Controlled Release of Herbicide	M.Tech - Polymer Engineering and Technology	06-Jun-22	Prakash Anna Mahanwar
107	19POL201	Ajendra Tiwari	Synthesis of Thermoset Polymer Encapsulated Phase Change Material (Pcm) for Thermal Energy Storage Applications.	M.Tech - Polymer Engineering and Technology	08-Jun-22	Prakash Anna Mahanwar
108	19POL202	Chetan Kailas Bhole	Oxo-Degradation of Polyolefins	M.Tech - Polymer Engineering and Technology	03-Jan-22	Ramanand Namdeo Jagtap
109	19POL203	Deepak Shivaji Gangurde	Preparation of Active Packaging for Prolonging The Shelf-Life of Fruits.	M.Tech - Polymer Engineering and Technology	03-Jan-22	Ramanand Namdeo Jagtap
110	19POL216	Sagar Nandkumar Dongre	Synthesis of Polyvinyl Acetate Based Pressure Sensitive Adhesives	M.Tech - Polymer Engineering and Technology	06-Jan-22	Ramanand Namdeo Jagtap
111	19POL206	Gopi Pramanik	Synthesis and Characterization of Silane- Acrylate Based Hybrid Polymer Coating Using Sol-Gel Technique for Anticorrosive Application.	M.Tech - Polymer Engineering and Technology	08-Jan-22	S T Mhaske
112	19POL217	Saurav Sarkar	Development of Phase Change Materials (Pcm) Based Polyurethane (Pu) Foam for Cold Storage Application	M.Tech - Polymer Engineering and Technology	08-Feb-22	S T Mhaske

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113	19SUR203	Aniket Pralhad Mali	Synthesis of Bio-Based Non-Isocyanate Polyurethane and Application	M.Tech - Surface Coating Technology	30-Apr-22	Adarsh Ramesh Rao
114	19SUR217	Shrikant Pandit Raut	Studies in Synthesis of Polycaprolactone Base Polyurethanes and Its Degradation.	M.Tech - Surface Coating Technology	22-May-22	Adarsh Ramesh Rao
115	19SUR215	Ganesh Dattatraya Kshirsagar	Synthesis and Application of Branched Polymers	M.Tech - Surface Coating Technology	10-Jun-22	Adarsh Ramesh Rao
116	19SUR216	Makarand Yogesh Vanjari	Modification of Halogenated Polymers and Its Applications	M.Tech - Surface Coating Technology	14-Jun-22	Adarsh Ramesh Rao
117	19SUR212	Sameehu T V	Development of Biobased Polymeric Systems	M.Tech - Surface Coating Technology	30-May-22	Anagha Shyamsunder Sabnis
118	19SUR206	Koushik S	Studies in Bio-Based Non-Isocyanate Polyurethane for Coating Applications	M.Tech - Surface Coating Technology	03-Jun-22	Anagha Shyamsunder Sabnis
119	19SUR209	Rahul Subhash Tade	Developments in Synthesis of Antimicrobial Coatings	M.Tech - Surface Coating Technology	04-Jun-22	Anagha Shyamsunder Sabnis
120	19SUR202	Akshaykumar Yogesh Dhanuskar	Use of Phase Change Material in Water-Based Decorative Coating	M.Tech - Surface Coating Technology	03-Jun-22	Prakash Anna Mahanwar
121	19SUR204	Akshay Shantaram Gawankar	Synthesis and Characterization of Redispersible Acrylic Emulsion for Coating Application	M.Tech - Surface Coating Technology	04-Jun-22	Prakash Anna Mahanwar
122	19SUR208	Divya Anil Khetal	Synthesis of Microencapsulated Pcm and Application in Thermal Management for Industrial Coating.	M.Tech - Surface Coating Technology	04-Jun-22	Prakash Anna Mahanwar
123	19SUR218	Zeeshan Rafique Ahmad	Synthesis of Hybrid Non-Isocyanate Polyurethane Foams	M.Tech - Surface Coating Technology	04-Jun-22	Prakash Anna Mahanwar
124	19SUR214	Shubhi Soni	Synthesis of Water-Dispersible Epoxy & Its Application as Pressure Sensitive Adhesive and Antibacterial Activity.	M.Tech - Surface Coating Technology	03-Jan-22	Ramanand Namdeo Jagtap
125	19SUR207	Mansi Pradip Patil	Synthesis of Maleic Anhydride-Co-Acrylic Acid and Its Application	M.Tech - Surface Coating Technology	06-Jan-22	Ramanand Namdeo Jagtap
126	19SUR213	Shubham Kailas Chaudhari	Development of Opacifier for Paint Application	M.Tech - Surface Coating Technology	08-Jan-22	S T Mhaske
127	19SUR201	Abhisek Padhi	Development of Multi Responsive Polymer and Its Sensor Application	M.Tech - Surface Coating Technology	29-Jul-22	S T Mhaske

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128	19CHE229	Yash Mane	Study of Heat Transfer From Steam Saturated Flames	Master of Chemical Engineering	09-Jan-22	Aniruddha Bhalchandra Pandit
129	19CHE231	Voruganti Sindhuja	Regimes Based Discrete Approach: To Model Drying in Falling Rate Period	Master of Chemical Engineering	14-Oct-22	Bhaskar Narayan Thorat
130	19CHE227	Vardhan Kaushik	Mathematical Modelling and Simulation of Control Aspects of Distillation Units.	Master of Chemical Engineering	03-Jan-22	Channamallikarjun Sidramayya Mathpati
131	19CHE214	Pradnya Shankar Gosavi	Selectivity Engineering in Etherification of P-Cresol With P-Chlorobenzyl Chloride Using Liquid-Liquid-Liquid Phase Transfer Catalysis in a Novel Dual-Function Microreactor	Master of Chemical Engineering	04-Jan-22	Ganapati D Yadav
132	19CHE219	Rajshri Rekchand Undirwade	Alkylation of 2,4-Xylenol With Methyl Tert-Butyl Ether Using Heterogeneous Catalysis	Master of Chemical Engineering	04-Jan-22	Ganapati D Yadav
133	19CHE202	Akash Ganpati Thakare	Study of The Performance of Modified Nf Membrane for The Separation of Ciprofloxacin From Waste Water	Master of Chemical Engineering	01-Feb-22	Kumudinee Vinayak Marathe
134	19CHE230	Yogesh Madhao Gote	Heterogeneous Catalyst Synthesis and Application for Dye Degradation	Master of Chemical Engineering	16-May-22	Parag Ratnakar Gogate
135	19CHE217	Priyanuj Bhabajyoti Kakoty	Diesel-Range Hydrocarbons From Hydrotreatment of Vegetable Oil: Analysis of Reaction Kinetics, Life Cycle Assessment and Process Safety	Master of Chemical Engineering	03-Jan-22	Prakash D. Vaidya
136	19CHE207	Dhiraj Dnyaneshwar Sutar	Life Cycle Assessment of Petrochemical Processes.	Master of Chemical Engineering	13-Feb-22	Sachin Vijay Jadhav
137	19CHE221	Rohit Waman Umredkar	Drying of Fruits and Vegetables	Master of Chemical Engineering	10-May-22	Sachin Vijay Jadhav
138	19CHE223	Shubham Kumar	Life Cycle Assessment of Drying Processes	Master of Chemical Engineering	07-Oct-22	Sachin Vijay Jadhav
139	19CHE222	S Dhiraj	Catalytic In-Situ Upgradation of Bio-Crude Obtained From Pyrolysis of Lignocellulosic Biomass	Master of Chemical Engineering	05-Apr-22	Vilas Gajanan Gaikar

Sr.	Roll No.	Student Name	Project Title	Department Name	Last Submission Date	Guide Name
140	19CHE205	Chinmay Vilasrao Kalantre	Sodium Copper Chlorophyllin Catalysed Nitroaldol and Cdc Reaction	Master of Chemical Engineering	11-Jan-22	Vishwanath h Dalvi
141	19PLS204	Keyurkumar Sureshbhai Vadaliya	Synthesis of Modified Pva/Cellulose Ultrafiltration Membrane for Industrial Application	Master of Plastic Engineering	21-Mar-22	Dilip Dhondu Sarode
142	19PLS201	Akash Valmik Mahajan	Development of Anti-Rodent Drip Irrigation Lateral	Master of Plastic Engineering	22-Mar-22	Dilip Dhondu Sarode
143	19PLS211	Swagata Ray Chaudhury	Study of The Mechanical Properties of Jute Fiber Reinforced Hybrid Composite Using Carbon Nanotubes Filler	Master of Plastic Engineering	14-Jul-22	Rai Sujit Nath Sahai
144	20PLS206	Sai Shrikantrao Deshmukh	Product Development of Switch Cavity Injection Mold With The Help of Moldflow Simulation Software	Master of Plastic Engineering	20-Jul-22	Rai Sujit Nath Sahai
145	20PLS202	Dnyanada Diwakar Chaudhari	Effect of Graphene Nano Fillers On Properties of Polypropylene Composites Along With Compatibilizer	Master of Plastic Engineering	21-Jul-22	Rai Sujit Nath Sahai
146	20PLS203	Meghna Pratham Humbal	Study of Effect of Coupling Agent and Nanofillers On Properties of Flax Fiber Reinforced Polymer Composites	Master of Plastic Engineering	22-Jul-22	Rai Sujit Nath Sahai
147	20PLS207	Shreyash Vijay Tayde	Simulation On Plastic Injection Molding Parts To Minimize The Defects Using Autodesk Moldflow Plastic Insight Simulation Software	Master of Plastic Engineering	23-Jun-22	Vivek Ramdas Gaval
148	20PLS211	Tanvi Sanjay Suryawanshi	Development of Flax-Pineapple Leaf Fiber Reinforced Unsaturated Polyester Resin Composite By Dough Molding Compound	Master of Plastic Engineering	24-Jun-22	Vivek Ramdas Gaval
149	20PLS201	Dipashree Arun Penkar	Study of Wollastonite Filled Polyphenylene Oxide	Master of Plastic Engineering	15-Jul-22	Vivek Ramdas Gaval
150	20PLS208	Deepshikha Katiyar	Evaluation of Mechanical Properties of Wollastonite Filled Polypropylene Composite	Master of Plastic Engineering	15-Jul-22	Vivek Ramdas Gaval





# [ Ph.D. THESIS ]

Sr.	Roll No.	Student Name	Project Title	Department Name	Last Submission Date	Guide Name
1	11CHY4040	Amardip Murlidhar Patil	Synthesis of Hyperbranched Polymers for Coating Application	Ph.D (Sci) - Chemistry	29-Mar-22	Ramanand Namdeo Jagtap
2	11CHY4043	Tushar Sayajirao Deore	Synthesis and application of ionic liquid surfactants and metallosurfactants	Ph.D (Sci) - Chemistry	31-Dec-22	Radha V. Jayaram
3	11CHY4083	Premchand Bajrang Shelke	Synthetic Strategies for Known and Novel Heterocycles and their Anticancer Screening	Ph.D (Sci) - Chemistry	07-Apr-22	Amit Prabhakar Pratap
4	11PHY4004	Ashish Ashokrao Nimbekar	Synthesis and Characterization of Plasma-assisted Conducting polymeric Flexible composites and Their Applications	Ph.D (Sci) - Physics	22-Feb-22	R R Deshmukh
5	11PHY4004	Ashish Nimbekar	Synthesis and Characterization of Plasma-assisted Conducting polymeric Flexible composites and Their Applications	Ph.D (Sci) - Physics	22-Feb-22	R R Deshmukh
6	12GRT4003	Shivani Vedula	Novelties of chitosan membrane synthesis and their applications in removal of dyes and copper from waste water	Ph.D (Tech) - Green Technology	03-Jan-22	Ganapati D Yadav
7	12PHY4005	Ajinkya Mahadev Trimukhe	Pulsed plasma surface modification approaches for biomedical applications.	Ph.D (Sci) - Physics	16-Feb-22	R R Deshmukh
8	12PHY4005	Ajinkya Mahadev Trimukhe	Pulsed plasma surface modification approaches for biomedical applications.	Ph.D (Sci) - Physics	16-Feb-22	R R Deshmukh
9	13FBT4005	Bhupender Dayanand Singu	Production of Glutathione from Saccharomyces boulardii and its Applications in the Food Industry	Ph.D (Tech) - Food Biotechnology	29-Dec-22	Uday Shriramrao Annapure
10	13GRT4005	Patil Bhumika Pandurang	Remediation of contaminated water and soil by photocatalytic degradation	Ph.D (Tech) - Green Technology	20-Jan-22	Radha V. Jayaram
11	14CHY4019	Mahesh Ankush Jachak	Synthesis of functional colorants and study of its photophysical properties and applications	Ph.D (Sci) - Chemistry	23-Feb-22	Ganapati Subray Shankarling
12	14CHY4019	Mahesh Ankush Jachak	Synthesis of functional colorants and study of its photophysical properties and applications	Ph.D (Sci) - Chemistry	23-Feb-22	Ganapati Subray Shankarling
13	14CHY4027	Kripa Subramanian	Electrochemical synthesis of esters and phenanthridinones via C-N and C-H bond activation of amides	Ph.D (Sci) - Chemistry	25-Apr-22	Bhalchandra Mahadeo Bhanage
14	14FET4006	Mohmad Sayeed Bhat	Studies on water chestnut (Trapa natans), horse chestnut (Aesculus indica) and gorgon nut (Euryale ferox) seeds: their utilization and processing	Ph.D (Tech) - Food Engineering and Technology	09-Jun-22	Shalini S. Arya
15	14GRT4011	Nanda Manoharlal Rohra	Development of sustainable process for recombinant protein formulation	Ph.D (Tech) - Green Technology	16-Feb-22	Ratnesh Dharamchandra Jain
16	14PHG4001	Shefali Prashant Thakkar	Chemical Investigation And Establishing Quality Control Standards For Asphaltum (Shilajit)	Ph.D. (Tech) - Pharmacognosy	11-Apr-22	Kirti Shivchandra Laddha

Sr.	Roll No.	Student Name	Project Title	Department Name	Last Submission Date	Guide Name
17	14PHG4002	Subodh Anil Gangurde	Extraction, isolation and chemical modification of anthraquinones from senna and aloes	Ph.D. (Tech) - Pharmacognosy	28-Jan-22	Kirti Shivchandra Laddha
18	14PHT4004	Rucha Ravindra Wani	Design and Development of NCE and exploring Novel Catalyst for Synthesis of API and Intermediates	Ph.D. (Tech) - Pharmaceuticals Technology	13-May-22	Hemchandra Keshav Chaudhari
19	14PHT4012	Suparna Subrata De	Hit And Lead Generation For Tuberculosis And Other Infections	Ph.D (Tech) - Pharmaceuticals Technology	21-Jan-22	Mariam S Degani
20	14TCH4003	Gayatri Therani Nadathur	Micro and Nanostructured Constructions for Functional Materials of Textile Origin	Ph.D (Sci) - Textile Chemistry	20-May-22	Mangesh Dhondu Teli
21	15CHE4005	Aarti Hariprasad Mulay	Process Intensification studies on Cationic Exchange Resin Catalysed Synthesis of Dibutyl Maleate and Ethyl Hexanoate	Ph.D (Tech) - Chemical Engineering	29-Apr-22	Virendra Kisan Rathod
22	15CHE4031	Sujata Shrikant Patil	Process intensification studies in the extraction of Value Added Products from Turmeric Rhizome and Sustainability Study	Ph.D (Tech) - Chemical Engineering	01-Feb-22	Virendra Kisan Rathod
23	15CHE4031	Sujata Shrikant Patil	Process intensification studies in the extraction of Value Added Products from Turmeric Rhizome and Sustainability Study	Ph.D (Tech) - Chemical Engineering	01-Feb-22	Virendra Kisan Rathod
24	15CHY4021	Chaitannya Waman Ghanavatkar	Optical, Biological Properties, and DFT Studies of Heterocyclic Colorants	Ph.D (Sci) - Chemistry	29-Mar-22	Nagaiyan Nethi Sekar
25	15CHY4023	Shyam Sunder Ramtej Gupta	Development of Catalytic Solid Materials for Biomass Valorization and C-H Bond Functionalization	Ph.D (Sci) - Chemistry	18-Feb-22	Lakshmi Kantam Mannepalli
26	15CHY4023	Shyam Sunder Ramtej Gupta	Development of Catalytic Solid Materials for Biomass Valorization and C-H Bond Functionalization	Ph.D (Sci) - Chemistry	18-Feb-22	Lakshmi Kantam Mannepalli
27	15GRT4001	Priyanka Vasudeo Jawale	Investigation of stability and activity of lipase in organic and green reaction media for transesterification reactions	Ph.D (Tech) - Green Technology	23-Jun-22	Bhalchandra Mahadeo Bhanage
28	16BIT401	Pooja Purushottam More	Anaerobic acidogenesis for production of Volatile Fatty Acids (VFAs) from complex waste substrates	Ph.D (Sci) - Biotechnology	31-Mar-22	Manju Bishan Sharma
29	16CHE401	Joydeb Nabendu Mukherjee	Theoretical and Experimental Investigations of Complex Fluid Systems	Ph.D (Tech) - Chemical Engineering	21-Mar-22	Aniruddha Bhalchandra Pandit
30	16CHE410	Amol Jayavant Gore	Identification and extraction of phytonutrients from vegetable oil deodorizer distillate and preparation of stable water in oil emulsions with butter like properties	Ph.D (Tech) - Chemical Engineering	30-May-22	Bhagwat S S
31	16CHE412	Pratiksha Madhukar Biranje	Synthesis and application of graphene oxide	Ph.D (Tech) - Chemical Engineering	21-Mar-22	Ashwin Wasudeo Patwardhan
32	16CHY404	Deepak Suresh Desai	Valorization of Bio-based Chemicals using Catalytic Green Processes	Ph.D (Sci) - Chemistry	03-Jan-22	Ganapati D Yadav

Sr.	Roll No.	Student Name	Project Title	Department Name	Last Submission Date	Guide Name
33	16CHY406	Preeti Hira Pandey	Transition Metal Catalysis for Production of Renewable Hydrogen and Conversion of CO <sub>2</sub> into Platform Chemicals	Ph.D (Sci) - Chemistry	10-Mar-22	Hitesh S Pawar
34	16CHY408	Tejas Mohan Ukarde	Designing Catalytic Thermo Liquefaction for Valorisation of Solid Organic Wastes	Ph.D (Sci) - Chemistry	28-Jan-22	Hitesh S Pawar
35	16PHP402	Durgesh Kumar Jha	Investigation of Drug-Polymer Solubility and Miscibility for a rational design of Amorphous Solid Dispersions: Analytical and Theoretical Approaches	Ph.D (Tech) - Pharmaceutics	07-Jun-22	Purnima Dhanraj Amin
36	17BIT404	Custan George Fernandes	Recycling Of Cellulases For Saccharification	Ph.D (Sci) - Biotechnology	06-Aug-22	Annamma Anil Odaneth
37	17CHE409	Chaitanya Dileep Moholkar	Heat transfer in stirred tanks: Computational fluid dynamics and data correlation.	Ph.D (Tech) - Chemical Engineering	09-Feb-22	Channa-mallikarjun Sidramayya Mathpati
38	17CHE409	Chaitanya Dileep Moholkar	Heat transfer in stirred tanks: Computational fluid dynamics and data correlation.	Ph.D (Tech) - Chemical Engineering	09-Feb-22	Channa-mallikarjun Sidramayya Mathpati
39	17CHE412	Satyajeet Shivraj Yadav	Development of hydrodynamic flow focusing droplet generator for the preparation of monodisperse actinide oxide microspheres	Ph.D (Tech) - Chemical Engineering	30-Dec-22	Aniruddha Bhalchandra Pandit
40	17CHY413	Pankaj Pandit Jadhav	Directing Group Assisted Ruthenium (II)-Catalysed Novel Synthetic Methodologies for the Functionalization and Synthesis of Nitrogen Heterocycles	Ph.D (Sci) - Chemistry	02-Jul-22	Sudam Ganpat Dawande
41	17POL401	Amol Tarachand Naikwadi	Development of Phase Change Polymers as Maintenance Free Thermal Energy Storage Material	Ph.D (Tech) - Polymer Engineering and Technology	23-Jun-22	Prakash Anna Mahanwar
42	18CHY404	Kartiki Bhimashankar Jadhav	Vegetable oil Formulations for pesticidal and cosmetic application	Ph.D (Sci) - Chemistry	27-May-22	Jayashree Milind Nagarkar
43	18GRT404	Jayendra Pandit Ahire	Conversion of CO <sub>2</sub> into value added chemicals.	Ph.D (Tech) - Green Technology	18-Jan-22	Bhalchandra Mahadeo Bhanage
44	18MEC407	Ravindra Kashiram Garmode	Selection of Material for a Small Wind Turbine Blade using Multi-Criteria Decision Making Technique	Ph.D (Tech) Mechanical Engineering	27-May-22	Vivek Ramdas Gaval
45	18POL401	Prashil Dharmesh Desai	Synthesis and Formulation of Photocuring Resins for Stereolithography 3D Printing	Ph.D (Tech) - Polymer Engineering and Technology	09-Jun-22	Ramanand Namdeo Jagtap
46	18TCH401	Swati Ravindra Korgaonkar	Formulation of sustainable product using green technology and its application on nonwoven	Ph.D (Sci) - Textile Chemistry	05-Jan-22	Usha Afroz Ali Sayed
47	19MEC401	Md Modassir Hussain	Tribological Study of Sustainable Biodegradable lubricants and its Hydrodynamic Journal Bearing application.	Ph.D (Tech) Mechanical Engineering	30-Jul-22	Vivek Ramdas Gaval





# [ PUBLICATIONS ]

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
1	Dutta, A; Kininge, MM; Priya; Gogate, PR	Intensification of delignification and subsequent hydrolysis of sustainable waste as banana peels for the HMF production using ultrasonic irradiation	Chemical Engineering And Processing-Process Intensification	2023	183				109247
2	Dhar, R; Chakraborty, S	Enzyme hydrolyzed bael fruit liquefaction and its kinetic study	Food Bioscience	2022	47				101779
3	Sharma, A; Ray, A; Singhal, RS	Co-extraction of turmeric (Curcuma longa L.) and dried coconut shreds by supercritical fluid extraction (SFE): Chemical and bioactivity profile	Journal of Cleaner Production	2023	382				135313
4	Kaimal, AM; Barela, AK; Singhal, RS	Compositional characterisation of papadkhar and deciphering the influence of cationic and anionic component(s) of salt on the quality attributes of papads	International Journal of Food Science And Technology	2022	57	12	7952	7960	
5	Sahoo, D; Naik, R	A review on the linear/nonlinear optical properties of Se doped chalcogenide thin films as potential optoelectronic applications	Journal of Non-Crystalline Solids	2022	597				121934
6	Basak, S; Chakraborty, S; Singhal, RS	Revisiting Indian traditional foods-A critical review of the engineering properties and process operations	Food Control	2023	143				109286
7	Monga, A; Dev, MJ; Singhal, RS	Cottage cheese from blends of fresh green peas (Pisum sativum L.) and dairy milk (pEaneer): Preparation, characterization, and sensory evaluation	Lwt-Food Science And Technology	2022	160				113263
8	Bhagat, B; Chakraborty, S	Potential of pulsed light treatment to pasteurize pomegranate juice: Microbial safety, enzyme inactivation, and phytochemical retention	Lwt-Food Science And Technology	2022	159				113215
9	Waykole, CS; Mali, SN; Mahale, DD; Pratap, AP	Guerbet alcohol esters: Practical synthesis and applications	Journal of The Indian Chemical Society	2022	99	1			100304
10	Patil, YA; Mehta, V; Jachak, M; Bhise, R; Patel, K; Shankarling, GS	Facile and rapid synthesis of novel hybrid pigments and their application as colorants in high-performance polymer	Journal of Molecular Structure	2023	1273				134354
11	Masram, LB; Salim, SS; Gadkari, YU; Bhadke, PB; Telvekar, VN	$\beta$ -cyclodextrin: Green catalyst for the efficient and expeditious synthesis of benzodiazepines under aqueous conditions	Synthetic Communications	2022	52	21	2057	2066	

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
12	Jachak, M; Khopkar, S; Mehta, V; Bhise, R; Shankarling, G	Synthesis of A2-D2-A1-D1 type red-emitting unsymmetrical squaraine dye: Influence of additional pyridine moiety on photophysical, electrochemical, photo and thermal stability	Spectrochimica Acta Part A-Molecular And Biomolecular Spectroscopy	2022	273				121019
13	Salim, SS; Gadkari, YU; Barkule, AB; Telvekar, VN	Thiamine hydrochloride as an acid catalyst for the facile green synthesis of pyrazolopyranopyrimidines under aqueous conditions	Research On Chemical Intermediates	2022	48	12	5077	5087	
14	Jadhav, HB; Annappure, US	Triglycerides of medium-chain fatty acids: a concise review	Journal of Food Science And Technology-Mysore	2023	60	8	2143	2152	
15	Bamane, PB; Jagtap, RN	Development of the hydrophilic additive by suspension copolymerisation of methacrylic acid with isodecyl methacrylate for easy-to-clean coatings	Polymer Bulletin	2023	80	3	3309	3329	
16	Todke, PA; Devarajan, PV	In-silico approach as a tool for selection of excipients for safer amphotericin B nanoformulations	Journal of Controlled Release	2022	349		756	764	
17	Yadav, SB; Sekar, N	Linear, nonlinear optical properties and structure-property relationships in ESPT-rhodols	Computational And Theoretical Chemistry	2022	1215				113806
18	Sharma, SJ; Sekar, N	Deep-red/NIR emitting coumarin derivatives- Synthesis, photophysical properties, and biological applications	Dyes And Pigments	2022	202				110306
19	Basak, S; Annappure, US	The potential of subcritical water as a green method for the extraction and modification of pectin: A critical review	Food Research International	2022	161				111849
20	Senapati, S; Naik, R	Ratiometric optical temperature sensing based on greenish-white light emitting ZnO nanosheets and rhodamine 6G composite	Materials Research Bulletin	2022	153				111904
21	Kute, AD; Gaikwad, RP; Warkad, IR; Gawande, MB	A review on the synthesis and applications of sustainable copper-based nanomaterials	Green Chemistry	2022	24	9	3502	3573	
22	Behera, S; Dev, MJ; Singhal, RS	Cross-linked beta-Mannanase Aggregates: Preparation, Characterization, and Application for Producing Partially Hydrolyzed Guar Gum	Applied Biochemistry And Biotechnology	2022	194	5	1981	2004	

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
23	Bhukta, S; Chatterjee, R; Dandela, R	Iodine-TBHP mediated efficient synthesis of $\alpha$ -ketoamides from vinyl azides and amines under mild conditions	Organic & Biomolecular Chemistry	2022	20	19	3907	3912	
24	Paraskar, PM; Kulkarni, RD	Influence of bio-based chain extender glycerol on the performance of dimer fatty acid-derived polyurethane coatings	Journal of Polymer Research	2022	29	4			112
25	Jain, DD; Tambe, SM; Amin, PD	Formulation performance window for manufacturing cellulose-based sustained-release mini-matrices of highly water-soluble drug via hot-melt extrusion technology	Cellulose	2022	29	6	3323	3350	
26	Dhumal, PS; Lokhande, KD; Bondarde, MP; Bhakare, MA; Some, S	Heat resistive, binder-free 3d-dough composite as a highly potent flame-retardant	Journal of Applied Polymer Science	2022	139	20			e52146
27	Sahoo, D; Naik, R	GSST phase change materials and its utilization in optoelectronic devices: A review	Materials Research Bulletin	2022	148				111679
28	Basak, S; Annapure, US	Trends in green and novel methods of pectin modification-A review	Carbohydrate Polymers	2022	278				118967
29	Priya; Gogate, PR	Ultrasound-Assisted Intensification of $\beta$ -Glucosidase Enzyme Activity in Free and Immobilized Forms	Industrial & Engineering Chemistry Research	2022	61	5	2023	2036	
30	Pravallika, K; Chakraborty, S; Singhal, RS	Supercritical drying of food products: An insightful review	Journal of Food Engineering	2023	343				111375
31	Dhumal, PS; Bhakare, MA; Lokhande, KD; Bondarde, MP; Some, S	Bio-waste derived, phosphorus decorated composite for highly efficient flame retardant for cotton fabric	Cellulose	2022	29	16	8879	8888	
32	Priyadarshini, P; Sahoo, D; Naik, R	A review on the optical properties of some germanium based chalcogenide thin films and their applications	Optical And Quantum Electronics	2022	54	3			166
33	Sabnis, SS; Singh, SD; Gogate, PR	Improvements in azithromycin recrystallization using ultrasound for size reduction	Ultrasonics Sonochemistry	2022	83				105922
34	Dhoble, S; Patravale, V	SIRT 1 Activator Loaded Inhaled Antiangiogenic Liposomal Formulation Development for Pulmonary Hypertension	Aaps Pharmscitech	2022	23	5			158



Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
35	Bhadke, PK; Pahelkar, AR; Gadkari, YU; Naik, JM; Telvekar, VN	Eco-Friendly and Efficient Greener Process for the Synthesis of Chalcones and Pyrazolones Using the Supramolecular Catalyst $\beta$ -Cyclodextrin	Organic Preparations And Procedures International	2022	54	4	363	369	
36	Khan, Z; Sekar, N	Far-red to NIR emitting xanthene-based fluorophores	Dyes And Pigments	2023	208				110735
37	Mohapatra, A; Kar, MR; Bhaumik, S	Suppression of halide migration and improved stability in double-coated cesium lead halide perovskite nanocrystals for application in down-conversion white-light-emitting diodes	Journal of Alloys And Compounds	2022	927				166972
38	More, PR; Pegu, K; Arya, SS	Development and characterization of taro starch-casein composite bioactive films functionalized by micellar pomegranate peel extract (MPPE)	International Journal of Biological Macromolecules	2022	220		1060	1071	
39	Chaturvedi, S; Chakraborty, S	Evaluation of prebiotic properties of legume-based synbiotic beverages	Journal of Food Processing And Preservation	2022	46	7			e16685
40	Tambawala, H; Batra, S; Shirapure, Y; More, AP	Curcumin- A Bio-based Precursor for Smart and Active Food Packaging Systems: A Review	Journal of Polymers And The Environment	2022	30	6	2177	2208	
41	Bondarde, MP; Lokhande, KD; Bhakare, MA; Dhupal, PS; Some, S	Oxidative degradation of organic pollutants using reusable catalyst	Applied Nanoscience	2022					
42	Chaturvedi, S; Chakraborty, S	Optimization of fermentation conditions of synbiotic legume-based beverages and study of their antimicrobial and proteolytic activity	Journal of Food Science	2022	87	11	5070	5088	
43	Bakshi, G; Ananthanarayan, L	Cloud stabilization of citrus fruit juices treated with purified pectin methyltransferase inhibitor from lemon (Citrus limon L.)	Journal of The Science of Food And Agriculture	2022	102	13	6156	6162	
44	Basak, S; Venkatram, R; Singhal, RS	Recent advances in the application of molecularly imprinted polymers (MIPs) in food analysis	Food Control	2022	139				109074
45	Shaik, L; Chakraborty, S	Ultrasound processing of sweet lime juice: Effect of matrix pH on microbial inactivation, enzyme stability, and bioactive retention	Journal of Food Process Engineering	2023	46	6			
46	Madankar, CS; Meshram, A	Review on classification, physicochemical properties and applications of microbial surfactants	Tenside Surfactants Detergents	2022	59	1	1	16	

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
47	Sivagiri, SD; Mali, SN; Pratap, AP	Improved synthesis of sophorolipid biosurfactants using industrial by-products and their practical application	Tenside Surfactants Detergents	2022	59	1	17	30	
48	Mali, AS; Bandivadekar, P; Chaturbhuj, GU	Aluminized Polyborate: A New and Eco-friendly Catalyst for the Synthesis of Symmetrical N,N'-Di(aryl/alkyl) formamides	Organic Preparations And Procedures International	2022	54	3	242	248	
49	Bhattacharjee, A; Chakraborty, S	Design of a batch Ohmic heater and evaluating the influence of different treatment conditions on quality attributes of kinnow (Citrus nobilis x Citrus deliciosa) juice	Innovative Food Science & Emerging Technologies	2022	82				103186
50	Shaik, L; Chakraborty, S	Nonthermal pasteurization of pineapple juice: A review on the potential of achieving microbial safety and enzymatic stability	Comprehensive Reviews In Food Science And Food Safety	2022	21	6	4716	4737	
51	Ahluwat, A; Basak, S; Ananthanarayan, L	Optimization of spray-dried probiotic buttermilk powder using response surface methodology and evaluation of its shelf stability	Journal of Food Processing And Preservation	2022	46	11			e16928
52	Kerosenewala, J; Vaidya, P; Ozarkar, V; Shirapure, Y; More, AP	Eugenol: extraction, properties and its applications on incorporation with polymers and resins-a review	Polymer Bulletin	2023	80	7	7047	7099	
53	Kapale, SS; Gadkari, YU; Chaudhari, HK	Lipase Catalyzed One-Pot Synthesis of 3-Methyl-4-(Hetero) Arylmethyleneisoxazole-5(4H)-Ones under Aqueous Conditions	Polycyclic Aromatic Compounds	2023	43	6	4856	4865	
54	Mali, AS; Ganwir, P; Chaturbhuj, GU	Aluminized Polyborate: A New and Eco-friendly Catalyst for One-pot Multicomponent Synthesis of 1,3-Diaryl-3-(arylamino)propan-1-ones via Mannich Reaction	Organic Preparations And Procedures International	2022	54	4	338	345	
55	Danait-Nabar, S; Singhal, RS	Chemical modification of laccase using phthalic and 2-octenyl succinic anhydrides: Enzyme characterization, stability, and its potential for clarification of cashew apple juice	Process Biochemistry	2022	122		181	195	
56	Kamble, O; Chatterjee, R; Dandela, R; Shinde, S	Ultrasonic energy for construction of bioactive heterocycles	Tetrahedron	2022	120				

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
57	Rastogi, Y; Priya; Gogate, PR	Intensified recovery of whey proteins using combination of enzyme in free or immobilized form with ultrafiltration	Chemical Engineering And Processing-Process Intensification	2022	179				109076
58	Phadke, A; Amin, P	Orally Disintegrating Film of High-Dose BCS II Drug by Hot Melt Extrusion through Design of Experiment	Journal of Pharmaceutical Innovation	2023	18	1	247	261	
59	Yashwantrao, G; Saha, S	Perspective on the rational design strategies of quinoxaline derived organic sensitizers for dye-sensitized solar cells (DSSC)	Dyes And Pigments	2022	199				110093
60	Barkule, AB; Gadkari, YU; Telvekar, VN	Green and Efficient Synthesis of 1, 2, 4-Triazolidine-3-thiones using Guanidine Hydrochloride as a Recyclable Catalyst under the Aqueous Condition	Letters In Organic Chemistry	2022	19	9	683	688	
61	Annapoorna, RP; More, PR; Arya, SS	Effect of pressure and time on bioactive content, PPO inactivation, physicochemical and sensory properties of aonla (Emblica officinalis) juice during hydrodynamic cavitation processing	Food Science And Biotechnology	2023	32	1	71	82	
62	Khare, P; Chogale, MM; Kakade, P; Patravale, VB	Gellan gum-based in situ gelling ophthalmic nanosuspension of Posaconazole	Drug Delivery And Translational Research	2022	12	12	2920	2935	
63	More, PR; Pegu, K; Arya, SS	Post-harvest application of micellar pomegranate peel extract (MPPE) enriched starch-casein composite coating to preserve the plum (Prunus salicina L.) fruit during cold and ambient storage	Journal of Food Processing And Preservation	2022	46	12			
64	Ganwir, P; Bandivadekar, P; Kudale, P; Chaturbhuj, GU	Catalyst-free, one-pot expeditious synthesis of polyhydroquinolines and 2-amino-4H-chromenes	Research On Chemical Intermediates	2022	48	8	3429	3447	
65	Lokhande, KD; Bhakare, MA; Bondarde, MP; Dhumal, PS; Some, S	Bio-derived efficient flame-retardants for cotton fabric	Cellulose	2022	29	6	3583	3593	
66	Seshadrinathan, S; Chakraborty, S	Fermentative Production of Erythritol from Cane Molasses Using Candida magnoliae: Media Optimization, Purification, and Characterization	Sustainability	2022	14	16			10342

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67	Kalaivendan, RGT; Mishra, A; Eazhumalai, G; Annappure, US	Effect of atmospheric pressure non-thermal pin to plate plasma on the functional, rheological, thermal, and morphological properties of mango seed kernel starch	International Journal of Biological Macromolecules	2022	196		63	71	
68	Chatterjee, R; Bhukta, S; Dandela, R	Super Base Derived Ionic Liquids: A Useful Tool in Organic Synthesis	Current Organic Chemistry	2022	26	13	1237	1263	
69	Jadhav, HB; Waglunare, J; Annappure, U	Study on oxidative stability of deep fat fried food in Canola oil blended with medium chain triglyceride	Indian Journal of Chemical Technology	2022	29	1	95	98	
70	Sharma, SJ; Sekar, N	Charge Transfer as Bridging Correlator for DSSC Efficiency and NLO Property	Chemistryselect	2022	7	45			
71	Jadhav, MM; Lokhande, KD; Bondarde, MP; Bhakare, MA; Some, S	In-situ synthesis of graphene-based polymer and metal carbonate ternary composite for selective separation of dyes from their mixture	Materials Chemistry And Physics	2023	295				127066
72	Ray, A; Sharma, A; Singhal, RS	Valorization of arabinoxylans from Linum usitatissimum (flaxseed) and galactomannans from Leucaena leucocephala (subabul) to develop hybrid hydrogels: Rheological, morphological and thermal characterization	Industrial Crops And Products	2022	178				114575
73	Gadkari, YU; Shanbhag, RD; Telvekar, VN	An Efficient One-Pot, Multicomponent Synthesis of 1, 3-Thiazolidin-4-Ones Using L-Proline as Catalyst in Water	Letters In Organic Chemistry	2022	19	1	9	13	
74	Basak, S; Annappure, US	Rheological performance of film-forming solutions and barrier properties of films fabricated from cold plasma-treated high methoxyl apple pectin and crosslinked by Ca2+: Impact of plasma treatment voltage	International Journal of Biological Macromolecules	2023	227		938	951	
75	Patil, AA; Kaushik, P; Jain, RD; Dandekar, PP	Assessment of Urinary Biomarkers for Infectious Diseases Using Lateral Flow Assays: A Comprehensive Overview	Acs Infectious Diseases	2023	9	1	9	22	
76	Kakade, P; Pathan, Z; Gite, S; Mirani, A; Patravale, VB	Nanoparticle Engineering of Aprepitant Using Nano-by-Design (NbD) Approach	Aaps Pharmscitech	2022	23	6			204
77	Awari, HD; Sabnis, SS; Gogate, PR	Improved Crystallization of Ampicillin Trihydrate Based on the Use of Ultrasound	Industrial & Engineering Chemistry Research	2022	61	6	2538	2547	



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78	Jagtiani, E; Yeolekar, M; Naik, S; Patravale, V	In vitro blood brain barrier models: An overview	Journal of Controlled Release	2022	343		13	30	
79	Kshirsagar, SM; Chatale, BC; Amin, PD	Comparative evaluation of ibuprofen co-crystals prepared by solvent evaporation and hot melt extrusion technology	Journal of Drug Delivery Science And Technology	2022	67				103003
80	Salunkhe, S; Chaudhary, BU; Tewari, S; Meshram, R; Kale, RD	Utilization of agricultural waste as an alternative for packaging films	Industrial Crops And Products	2022	188				115685
81	Nakkala, K; Laddha, KS	Development of a validated high-performance thin-layer chromatography method for quantification of lupeol from different parts of Bauhinia acuminata	Biomedical Chromatography	2022	36	10			e5448
82	Mulchandani, K; Muley, AB; Singhal, RS	Assessment of eight Morus indica cultivars for 1-deoxynojirmycin content, antioxidant and anti-diabetic potential: optimization of ultrasound assisted process for bioactive enriched leaf extract	Journal of Food Measurement And Characterization	2022	16	4	3263	3277	
83	Une, VR; Bondarde, MP; Some, S	Formulation and development of water-based fragrance from patchouli essential oils using nonionic surfactant	Applied Nanoscience	2022	12	7	2117	2125	
84	Priyadarshini, P; Das, S; Naik, R	A review on metal-doped chalcogenide films and their effect on various optoelectronic properties for different applications	Rsc Advances	2022	12	16	9599	9620	
85	Nallasivam, LV; Gokhale, JS	Rheological, techno-functional, and physicochemical characterization of Prosopis cineraria (Sangri) seed gum: A potential food and pharmaceutical excipient	Journal of Food Processing And Preservation	2022	46	5			e16519
86	Shukla, VK; Sharma, SJ; Sekar, N	Effect of bridged spacers and auxiliary acceptors on Dye Sensitized Solar Cell sensitizers: A density functional theory-based investigation	International Journal of Quantum Chemistry	2023	123	7			
87	Giri, L; Rout, SR; Kar, A; Kenguva, G; Dandela, R	Pharmaceutical novel solid forms of Milrinone with advanced physicochemical properties	Journal of Molecular Structure	2022	1269				
88	Jadhav, NC; Jadhav, AC	Synthesis of acrylate epoxidized rice bran oil (AERBO) and its modification using styrene & Shellac to study its properties as a composite material	Polymer Bulletin	2023	80	5	5023	5045	

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89	Shaik, L; Chakraborty, S	Effect of pH and total fluence on microbial and enzyme inactivation in sweet lime (Citrus limetta) juice during pulsed light treatment	Journal of Food Processing And Preservation	2022	46	8			e16749
90	Ganwir, P; Gavali, K; Chaturbhuji, GU	N-(Phenylsulfonyl) Benzenesulfonamide: A New Organocatalyst for One-Pot, Solvent-Free Synthesis of Biginelli's 3,4-Dihydropyrimidine-2(1H)-Thiones	Polycyclic Aromatic Compounds	2023	43	4	3182	3191	
91	Jadhav, AC; Jadhav, NC	Waste sunn hemp fibres/epoxy composites: mechanical and thermal properties	Iranian Polymer Journal	2022	31	7	821	833	
92	Patil, PS; Gupta, PO; Sekar, N	Anthrone-Benzothiazole Based Heterocyclic Disperse Azo Dyes: Synthesis, Dyeing, UV Protection Property, Anti-Bacterial Activity, and Computational Study	Chemistryselect	2022	7	47			e202203075
93	Gaur, SS; Annappure, US	Untargeted metabolite profiling of Enterococcus villorum SB2, isolated from the vagina of pregnant women, by HR-LCMS	World Journal of Microbiology & Biotechnology	2022	38	12			219
94	Sanap, P; Sonawane, D; Patil, S; Pratap, A	Optimization of oleic-estolide fatty acid synthesis using response surface methodology and artificial neural networks	Industrial Crops And Products	2022	188				115711
95	Jadhav, HB; Annappure, US	Understanding the beneficial effect of using medium chain triglycerides in preparation of traditional puran poli	Journal of Food Science And Technology-Mysore	2022	59	11	4297	4304	
96	Joy, JK; Kalaivendan, RGT; Eazhumalai, G; Kahar, SP; Annappure, US	Effect of pin-to-plate atmospheric cold plasma on jackfruit seed flour functionality modification	Innovative Food Science & Emerging Technologies	2022	78				103009
97	Basak, S; Chakraborty, S	The potential of nonthermal techniques to achieve enzyme inactivation in fruit products	Trends In Food Science & Technology	2022	123		114	129	
98	Joshi, M; Joshi, S; Khambete, M; Degani, M	Role of calcium dysregulation in Alzheimer's disease and its therapeutic implications	Chemical Biology & Drug Design	2023	101	2	453	468	
99	Chaturvedi, S; Chakraborty, S	Comparative analysis of spray-drying microencapsulation of Lactocaseibacillus casei in synbiotic legume-based beverages	Food Bioscience	2022	50				102139

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100	Parida, A; Senapati, S; Naik, R	Recent developments on Bi-based oxychalcogenide materials with thermoelectric and optoelectronic applications: an overview	Materials Today Chemistry	2022	26				101149
101	Girase, CD; Rajput, YN; Hatkar, VM; Kulkarni, RD	Synthesis and characterizations of cationic poly(DADMAC-co-AM) surfactant for hair care applications	Journal of Polymer Research	2022	29	8			346
102	Masram, LB; Salim, SS; Barkule, AB; Gadkari, YU; Telvekar, VN	An efficient and expeditious synthesis of 1,2,4-triazolidine-3-thiones using meglumine as a reusable catalyst in water	Journal of Chemical Sciences	2022	134	3			94
103	Chaturvedi, S; Chakraborty, S	Optimization of extraction process for legume-based synbiotic beverages, followed by their characterization and impact on antinutrients	International Journal of Gastronomy And Food Science	2022	28				100506
104	Shinde, GY; Mote, AS; Gawande, MB	Recent Advances of Photocatalytic Hydrogenation of CO <sub>2</sub> to Methanol	Catalysts	2022	12	1			94
105	Jha, P; Gokhale, JS	Development and characterization of chitosan-purple yam starch-based biodegradable films: Physicochemical, mechanical, thermal, and functional properties	Journal of Food Processing And Preservation	2022	46	12			
106	Daroi, PA; Dhage, SN; Juvekar, AR	p-Coumaric acid protects against D-galactose induced neurotoxicity by attenuating neuroinflammation and apoptosis in mice brain	Metabolic Brain Disease	2022	37	7	2569	2579	
107	Jadhav, NV; Pawar, MA; Vavia, PR	Pickering Dry Emulsion System for Improved Oral Delivery of Fenofibrate	Aaps Pharmscitech	2022	23	6			168
108	Malani, RS; Malshe, VC; Thorat, BN	Polyols and polyurethanes from renewable sources: past, present, and future-part 2: plant-derived materials	Journal of Coatings Technology And Research	2022	19	2	361	375	
109	Bhakare, MA; Lokhande, KD; Bondarde, MP; Dhumal, PS; Some, S	Dual functions of bioinspired, water-based, reusable composite as a highly efficient flame retardant and strong adhesive	Chemical Engineering Journal	2023	454				140421
110	Pal, Y; Mali, SN; Pratap, AP	Optimization of the primary purification process of extracting sphorolipid from the fermentation broth to achieve a higher yield and purity	Tenside Surfactants Detergents	2022	59	5	441	449	
111	Singh, AR; Dhumal, PS; Bhakare, MA; Lokhande, KD; Bondarde, MP; Some, S	In-situ synthesis of metal oxide and polymer decorated activated carbon-based photocatalyst for organic pollutants degradation	Separation And Purification Technology	2022	286				120380

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112	Bhukta, S; Chatterjee, R; Dandela, R	I2 -DMSO-Promoted Direct Synthesis of Substituted Imidazoles from Styrenes and Benzylamines under Solvent-Free Conditions	Synthesis-Stuttgart	2023	55	5	846	856	
113	Jachak, M; Bhise, R; Chaturvedi, A; Kamble, V; Shankarling, G	Pyrroloquinoline Based Styryl Dyes Doped PMMA, PS, and PS/TiO2 Polymer for Fluorescent Applications	Journal of Inorganic And Organometallic Polymers And Materials	2022	32	7	2441	2454	
114	Kamble, OS; Chatterjee, R; Dandela, R	Bis(trifluoroacetoxy)iodo benzene (PIFA)-promoted transamidation of carboxamides and carboxylic acids with amines	Arkivoc	2022			270	281	
115	Ingle, UM; Pawar, PR; Prakash, G	Acid-assisted oil extraction directly from thraustochytrids fermentation broth and its energy assessment for docosahexaenoic acid-enriched oil production	Bioresource Technology	2023	367				128272
116	Patil, H; Mudaliar, S; Athalye, A	Ultrasound-assisted enzymatic scouring of jute optimised by response surface methodology and its natural dyeing	Coloration Technology	2023	139	1	97	108	
117	Banerjee, M; Nimkar, K; Naik, S; Patravale, V	Unlocking the potential of drug-drug cocrystals-A comprehensive review	Journal of Controlled Release	2022	348		456	469	
118	Gorade, V; Chaudhary, B; Parmaj, O; Kale, R	Preparation and Characterization of Chitosan/viscose Rayon Filament Biocomposite	Journal of Natural Fibers	2022	19	4	1189	1200	
119	Jadhav, AC; Jadhav, NC	Mechanical and thermal properties of waste Abelmoschus manihot fibre-reinforced epoxy composites	Polymer Bulletin	2023	80	2	1699	1727	
120	Ganwir, P; Kale, I; Chaturbhuji, G	Wet copper-slag: A new and eco-friendly catalyst for Knoevenagel condensation	Sustainable Chemistry And Pharmacy	2022	25				100614
121	Kadalag, NL; Pawar, PR; Prakash, G	Co-cultivation of Phaeodactylum tricornutum and Aurantiochytrium limacinum for polyunsaturated omega-3 fatty acids production	Bioresource Technology	2022	346				126544
122	Sahoo, D; Naik, R; Senapati, S	Progress and prospects of 2D VS2 transition metal dichalcogenides	Flatchem	2022	36				100455



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123	Basak, S; Annapure, US	Impact of atmospheric pressure cold plasma on the rheological and gelling properties of high methoxyl apple pectin	Food Hydrocolloids	2022	129				107639
124	Ul Karim, MA; Bhagat, SR; Bhowmick, AR	Empirical detection of parameter variation in growth curve models using interval specific estimators	Chaos Solitons & Fractals	2022	157				111902
125	Vigneshwaran, G; More, PR; Arya, SS	Non-thermal hydrodynamic cavitation processing of tomato juice for physicochemical, bioactive, and enzyme stability: Effect of process conditions, kinetics, and shelf-life extension	Current Research In Food Science	2022	5		313	324	
126	Kadam, D; Kadam, A; Tungare, K; Arte, P; Lele, SS	An investigation of correlation between structural and functional properties of Nigella sativa protein isolate	Journal of Food Biochemistry	2022	46	12			e14391
127	Iyer, G; Dyawanapelly, S; Jain, R; Dandekar, P	An overview of oral insulin delivery strategies (OIDS)	International Journal of Biological Macromolecules	2022	208		565	585	
128	Ukarde, TM; Pawar, HS	PolyE-IL, an Efficient and Recyclable Bronsted Acid Catalyst for Conversion of Rice Straw into Levulinic and Other Organic Acids	Energy & Fuels	2022	36	3	1592	1603	
129	Patil, RS; Bhagwat, SS	Thermodynamic analysis of novel absorption type pressure reducing station	International Journal of Exergy	2022	37	3	358	375	
130	Patil, NB; Chaturbhuj, GU	Sulfated polyborate catalyzed rapid and efficient electrophilic thiocyanation of activated arenes	Tetrahedron Letters	2022	96				153763
131	Sarkar, S; Mestry, S; Mhaske, ST	Developments in phase change material (PCM) doped energy efficient polyurethane (PU) foam for perishable food cold-storage applications: A review	Journal of Energy Storage	2022	50				104620
132	Agarkoti, C; Gogate, PR	Mapping of cavitation intensity in a novel dual-frequency ultrasonic reactor of capacity 10 L	Chemical Engineering Science	2022	259				117833
133	Shewale, SP; Kapadia, M; Rathod, VK	Intensification of total phenolic compounds extraction from Azadirachta indica (Neem) leaves by ultrasound	Chemical Engineering And Processing-Process Intensification	2022	181				109099

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134	Waikar, J; More, P	Co supported on Cex[Al <sub>2</sub> O <sub>3</sub> ]0.5-x as an effective catalyst for low-temperature CO oxidation: Effect of calcination temperature	Molecular Catalysis	2022	528				112466
135	Jadhav, HB; Gogate, PR; Annapure, US	Understanding the beneficial effects of using designer lipids in the formulation of cookies	Journal of Food Processing And Preservation	2022	46	5			
136	Dev, MJ; Warke, RG; Warke, GM; Mahajan, GB; Singhal, RS	Fluidized bed granulation of gellan gum: Investigations of binder effect on physical, structural and rheological properties	Powder Technology	2023	415				118199
137	Naiker, VE; Mestry, S; Nirgude, T; Gadgeel, A; Mhaske, ST	Recent developments in phosphorous-containing bio-based flame-retardant (FR) materials for coatings: an attentive review	Journal of Coatings Technology And Research	2023	20	1	113	139	
138	Pandey, PH; Pawar, HS	Cu dispersed ZrO <sub>2</sub> catalyst mediated Kolbe- Schmitt carboxylation reaction to 4-hydroxybenzoic acid	Molecular Catalysis	2022	530				112595
139	Yawalkar, AN; Pawar, MA; Vavia, PR	Microspheres for targeted drug delivery- A review on recent applications	Journal of Drug Delivery Science And Technology	2022	75				103659
140	Puranik, A; Saldanha, M; Dandekar, P; Jain, R	A comparison between analytical approaches for molecular weight estimation of proteins with variable levels of glycosylation	Electrophoresis	2022	43	11	1223	1232	
141	Pawar, S; Rathod, V	Comparative bioreactor studies of different process enhancement methods in B. licheniformis for enzyme co-production	Preparative Biochemistry & Biotechnology	2022	52	10	1134	1141	
142	Naykodi, A; Patankar, SC; Thorat, BN	Alkaliphiles for comprehensive utilization of red mud (bauxite residue)-an alkaline waste from the alumina refinery	Environmental Science And Pollution Research	2023	30	4	9350	9368	
143	Kamble, R; Puranik, A; Narvekar, A; Dandekar, P; Jain, R	Characterization of outcomes of amino acid modifications using a combinatorial approach to reveal physical and structural perturbations: A case study using trastuzumab biosimilar	Journal of Chromatography B-Analytical Technologies In The Biomedical And Life Sciences	2022	1209				123430

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144	Beldar, VG; Kale, BS; Pagare, R; Jadhao, M	CHEMICAL COMPOSITION AND ANTIMICROBIAL ACTIVITY OF ESSENTIAL OIL FROM SEEDS OF Pimpinella heyneana	Chemistry of Natural Compounds	2022	58	4	754	756	
145	Savitha, S; Chakraborty, S; Thorat, BN	Microstructural changes in blanched, dehydrated, and rehydrated onion	Drying Technology	2022	40	12	2550	2567	
146	Patil, PS; Chakraborty, A; Kadam, SS; Kharkar, PS; Patwardhan, AV; Joshi, SV	Greener approach for process intensification of iron haematinics by membrane nanofiltration	Journal of The Indian Chemical Society	2022	99	7			100510
147	Maliwal, D; Pissurlenkar, RRS; Telvekar, V	Identification of novel potential anti-diabetic candidates targeting human pancreatic $\alpha$ -amylase and human $\alpha$ -glycosidase: an exhaustive structure-based screening	Canadian Journal of Chemistry	2022	100	5	338	352	
148	Pise, VH; Shirkole, SS; Thorat, BN	Visualization of oil cells and preservation during drying of betel leaf (piper betel) using hot-stage microscopy	Drying Technology	2022	40	12	2494	2509	
149	Bamane, PB; Jagtap, RN	Development of a water-based functional additive by using isobornyl acrylate copolymer to improve ink-adhesion on untreated polypropylene surfaces: A comparative approach	International Journal of Adhesion And Adhesives	2023	121				103311
150	Jain, C; Surabhi, P; Marathe, K	Critical review on the developments in polymer composite materials for biomedical implants	Journal of Biomaterials Science-Polymer Edition	2023	34	7	893	917	
151	Gangopadhyay, S; Mahanwar, PA	Nano-silica-containing acrylic polyurethane and acrylic-polyester hybrid polyurethane coatings for direct-to-metal (DTM) coating applications - a comparative study	Journal of Coatings Technology And Research	2022	19	6	1773	1786	
152	Gangopadhyay, S; Mahanwar, PA	Experimentally investigating hybrid polyurethane silica nanocomposites for DTM coating applications	Surface Engineering	2022	38	3	234	243	
153	Ukarde, TM; Pawar, HS	PolyE-IL: A polymeric Bronsted acid ionic liquid catalyst for catalytic thermo liquefaction of sugarcane bagasse into carboxylic acids	Biofuels Bioproducts & Biorefining-Biofpr	2022	16	4	999	1014	
154	Tak, SS; Shetye, O; Muley, O; Jaiswal, H; Malik, SN	Emerging technologies for hydrogen production from wastewater	International Journal of Hydrogen Energy	2022	47	88	37282	37301	

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155	Lakshmi, NJ; Agarkoti, C; Gogate, PR; Pandit, AB	Acoustic and hydrodynamic cavitation-based combined treatment techniques for the treatment of industrial real effluent containing mainly	Journal of Environmental Chemical Engineering	2022	10	5			108349
156	Pandey, PH; Pawar, HS	Mingled Metal Oxides Catalyst for Direct Carbonylation of Glycerol into Glycerol Carbonate	Chemistryselect	2022	7	12			e202104264
157	Joshi, VA; Shah, PM; Tak, SS; Kundu, D	Thermodynamic modelling of physico-chemical properties of new generation ionic liquid-bitumen system	Geoenergy Science And Engineering	2023	221				211364
158	Vedula, SS; Yadav, GD	Superior efficacy of biocomposite membranes of chitosan with montmorillonite and kaolin vs pure chitosan for removal of Cu(II) from wastewater	Journal of Chemical Sciences	2022	134	2			55
159	Supare, K; Mahanwar, P	Starch-Chitosan Hydrogels for the Controlled-Release of Herbicide in Agricultural Applications: A Study on the Effect of the Concentration of Raw Materials and Crosslinkers	Journal of Polymers And The Environment	2022	30	6	2448	2461	
160	Patil, DA; Naiker, VE; Phalak, GA; Chugh, KW; Mhaske, ST	Synthesis and characterization of vanillin derived bio-based benzoxazine resin for high temperature application	Pigment & Resin Technology	2024	53	4	413	424	
161	Sonare, SN; Jaiswal, SJ; Mahanwar, PA	Review on applications of microencapsulated phase change material in buildings for thermal storage system	Journal of Polymer Research	2022	29	9			365
162	Datar, SD; Mane, RS; Jha, N	Zeolitic imidazolate framework-67 derived porous carbon electrodes for efficient capacitive deionization	Applied Surface Science	2022	604				154550
163	Pawar, SA; Poojari, SV; Kumar, AV	Cu <sub>2</sub> O-CD nanosuperstructures as a Biomimetic Catalyst for Oxidation of Benzyllic sp <sup>3</sup> C-H bonds and Secondary Amines using Molecular Oxygen: First Total Synthesis of proposed Swerilactone O†	Asian Journal of Organic Chemistry	2022	11	6			e202200030
164	Hinge, SPP; Patwardhan, AWW	Hydrodynamics aspects of asymmetric rotating impeller columns at different scales	Chemical Engineering Research & Design	2022	177		625	639	



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165	Nakkala, K; Godiyal, S; Ettaboina, SK; Laddha, KS	Chemical Modifications of Turmeric Starch by Oxidation, Phosphorylation, and Succinylation	Starch-Stärke	2022	74	9-10			2200053
166	Shanbhag, VV; Mukherjee, J; Pandit, AB	Analytical and numerical investigations of mixing fluids in microchannel systems of different geometrical configurations	Canadian Journal of Chemical Engineering	2022	100	9	2217	2229	
167	Chaudhary, BU; Lingayat, S; Banarjee, AN; Kale, RD	Preparation and Characterization of Antioxidant, Antimicrobial, and UV-Light Protection Film Based on Poly(vinyl alcohol) and Garlic Peel Extract	Waste And Biomass Valorization	2022	13	12	4717	4734	
168	Vishwakarma, R; Rathod, V; Mannepalli, LK	W/HAP catalysed N-oxidation of tertiary amines with H <sub>2</sub> O <sub>2</sub> as an oxidant	Journal of Chemical Sciences	2022	134	2			50
169	Sanchehi, SV; Yadav, GD	Synthesis of environment-friendly, sustainable, and nontoxic bio-lubricants: A critical review of advances and a path forward	Biofuels Bioproducts & Biorefining-Biofpr	2022	16	5	1172	1195	
170	Ahmad, ZR; Mahanwar, PA	Synthesis and properties of foams from a blend of vegetable oil based polyhydroxyurethane and epoxy resin	Cellular Polymers	2022	41	4	163	186	2.62E+15
171	Humbe, SS; Joshi, GM; Deshmukh, RR	Synergetic Effect of Plasma-Treated Graphene Oxide/Polymer Blends for Electrostatic Dissipative Applications	Physica Status Solidi A-Applications And Materials Science	2023	220	2			
172	Sayed, SZ; Vaidya, PD	Recent Insights into the Production of Syngas and Hydrogen Using Chemical Looping-Steam Reforming (CL-SR)	Industrial & Engineering Chemistry Research	2022	61	41	15015	15029	
173	Vineeth, SK; Gadhave, R; Gadekar, PT	Polyvinyl alcohol-cellulose blend wood adhesive modified by citric acid and its effect on physical, thermal, mechanical and performance properties	Polymer Bulletin	2023	80	7	8013	8030	
174	Gupta, PK; Maiti, S; Adivarekar, RV; Patra, S	Effect of Okra Plant Lifespan upon Tensile Properties of Okra Fibers	Journal of Natural Fibers	2022	19	16	14909	14923	
175	Varshney, S; Chugh, K; Mhaske, ST	Effect of layer-by-layer synthesized graphene-polyaniline-based nanocontainers for corrosion protection of mild steel	Journal of Materials Science	2022	57	17	8348	8366	
176	Gandhi, SS; Gogate, PR; Senthikumar, M	Comparison of Multivariable Models for Predicting Kinematic Viscosity of Biodiesel Obtained Using Transesterification in Ultrasonic Horn	Arabian Journal For Science And Engineering	2022	47	5	6631	6649	

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177	Desai, DS; Yadav, GD	Synthesis of energy rich fuel additive from biomass derived levulinic acid and furfuryl alcohol using novel tin-exchanged heteropoly acid supported on titania nanotubes as catalyst	Fuel	2023	331				125700
178	Mulay, A; Rathod, VK	Ultrasound-assisted synthesis of ethyl hexanoate using heterogeneous catalyst: Optimization using Box-Behnken design	Journal of The Indian Chemical Society	2022	99	8			100573
179	Kalekar, VN; Vaidya, PD	Hydrogen Production by Aqueous-Phase Reforming of Model Compounds of Wet Biomass over Platinum Catalysts	Industrial & Engineering Chemistry Research	2022					
180	Patil, SV; Thorat, BN	Mechanical dewatering of red mud	Separation And Purification Technology	2022	294				121157
181	Kakade, P; Chatterjee, A; Pandya, A; Disouza, J; Patravale, V	Carbohydrate anchored lipid nanoparticles	International Journal of Pharmaceutics	2022	618				121681
182	Jadhav, HB; Gogate, P; Annapure, U	Intensified synthesis of a triglyceride of octanoic acid using sonication and assessment of its frying characteristics	Journal of Food Science And Technology-Mysore	2022	59	8	3167	3179	
183	Naikwadi, A; Samui, A; Mahanwar, P	Experimental investigation of rigid polyurethane foam/microencapsulated phase change material composite for thermal energy storage in electronic component	Polymer Bulletin	2022	79	11	10095	10114	
184	Deka, D; Annapure, US; Shirkole, SS; Thorat, BN	Techno-economics of solar assisted drying of small freshwater fish to ensure global nutritional security	Drying Technology	2023	41	7	1214	1228	
185	Patil, BP; Jayaram, RV	Photocatalytic Degradation of Reactive Dyes Using Flyash Supported Ag-TiO2 Photocatalysts	Chemistryselect	2022	7	5			e202104183
186	Gokhale, TA; Raut, AB; Chawla, SK; Bhanage, BM	Insights into cascade and sequential one-pot pathways for reductive amination of aldehydes paired with bio-derived levulinic acid to N-substituted pyrrolidones using molecular hydrogen	Reaction Chemistry & Engineering	2022	7	4	1005	1013	
187	Gokhale, TA; Gulhane, SC; Bhanage, BM	Highly Selective Catalyst-Free Oxidative Synthesis of N-Formamides from C2- and C3-Feedstocks	European Journal of Organic Chemistry	2023	26	1			

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188	Puranik, A; Dandekar, P; Jain, R	Exploring the potential of machine learning for more efficient development and production of biopharmaceuticals	Biotechnology Progress	2022	38	6			e3291
189	Gandhi, SS; Gogate, PR; Pakhale, VD	Intensification of interesterification of sustainable feedstock as mahua oil for biodiesel production	International Journal of Green Energy	2023	20	13	1514	1523	
190	Nikam, PC; Rao, AR; Shertukde, VV	Effect of polyethylene terephthalate fiber reinforced with non-hydrophilic nano-silica on the mechanical, thermic, and chemical shielding characteristics of saturated polyurethane composite	Journal of Applied Polymer Science	2023	140	3			
191	Mestry, S; Borse, P; Patil, M; Vaidya, S; Jadhav, S; Mhaske, ST	Vanillin-derived phosphorus-containing aromatic imine for flame-retardant polyurethane coating	Iranian Polymer Journal	2022	31	10	1183	1196	
192	Ansari, SZ; Pandit, AB	Inhibitory effect of novel green polymer (Aspartic-citric acid) on the process of nucleation during gypsum scale formation	Journal of Crystal Growth	2022	581				126472
193	Rohra, N; Gaikwad, G; Dandekar, P; Jain, R	Microfluidic Synthesis of a Bioactive Metal-Organic Framework for Glucose-Responsive Insulin Delivery	Acs Applied Materials & Interfaces	2022	14	6	8251	8265	
194	Naiker, VE; Patil, DA; More, AP; Mhaske, ST	Synthesis of high-performance bio-based benzoxazine for flame retardant application	Polymers For Advanced Technologies	2022	33	5	1481	1495	
195	Gadhawe, RV; Vineeth, SK	Synthesis and characterization of starch stabilized polyvinyl acetate-acrylic acid copolymer-based wood adhesive	Polymer Bulletin	2023	80	9	10335	10354	
196	Mohire, SS; Yadav, GD	Bimetallic Cu-Ni Nanometal Supported over Mesocellular Silica Foam As a Novel Catalyst for One-Pot Synthesis of Benzimidazole in DMF As a Bifunctional Reagent	Industrial & Engineering Chemistry Research	2022	61	20	6909	6924	
197	Jagtap, A; Wagle, PG; Jagtiani, E; More, AP	Layered double hydroxides (LDHs) for coating applications	Journal of Coatings Technology And Research	2022	19	4	1009	1032	
198	More, N; Avhad, M; Utekar, S; More, A	Poly(lactic acid (PLA) membrane-significance, synthesis, and applications: a review	Polymer Bulletin	2023	80	2	1117	1153	

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199	Mahale, JS; Pawar, HS	A Polyethylenimine-Functionalized Protic Ionic Liquid (PolyE-IL) Catalyst for Conversion of Aqueous 2,3-Butanediol into Methyl Ethyl Ketone (MEK)	Chemistryselect	2022	7	27			e202201246
200	Gore, AJ; Bhagwat, SS	Separation of tocol (tocopherol & tocotrienol) and phytosterols from palm fatty acid distillate by saponification and purification by low temperature solvent crystallization	Journal of Food Science And Technology-Mysore	2022	59	8	2962	2971	
201	Gokhale, TA; Phatake, VV; Bhanage, BM	MnO <sub>2</sub> nanostructures as sustainable catalysts for selectivity tuning and syntheses of amine coupling products with bio-derived glycerol	Molecular Catalysis	2022	533				112771
202	Patil, S; Rajurkar, K; Patil, S; Pratap, A	Synthesis of guerbet esters and its application in drilling and grinding oil	Tribology International	2023	177				107993
203	Vedula, SS; Yadav, GD	Treatment of wastewater containing alizarin red dye: development and application of magnetic chitosan as a natural eco-friendly material	Clean Technologies And Environmental Policy	2023	25	3	865	878	
204	Murjani, BO; Kadu, PS; Bansod, M; Vaidya, SS; Yadav, MD	Carbon nanotubes in biomedical applications: current status, promises, and challenges	Carbon Letters	2022	32	5	1207	1226	
205	Kolekar, YA; Bhanage, BM	Tunable Pd/C-catalyzed oxidative alkoxycarbonylation/aminocarbonylation of aryl hydrazines with alcohols/inert tertiary amines through C-N bond activation	New Journal of Chemistry	2022	46	30	14421	14426	
206	Bait, S; Shinde, S; Adivarekar, R; Sekar, N	ESIPT Core Containing Benzothiazole and Benzimidazole Based Fluorescent Acid Azo Dyes for Protein Fiber: Synthesis, Spectral Characteristics, and Fastness Evaluation	Polycyclic Aromatic Compounds	2023	43	4	3002	3023	
207	Amrutkar, S; More, A; Mestry, S; Mhaske, ST	Recent developments in the anti-graffiti coatings: an attentive review	Journal of Coatings Technology And Research	2022	19	3	717	739	
208	Rathod, VK	Ultrasound-assisted intensified aqueous extraction of phenolics from waste Syzygium cumini leaves: Kinetic studies and evaluation of antioxidant, antidiabetic and anticancer potential	Food Bioscience	2022	46				101547



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209	Patil, SS; Rathod, VK	Simultaneous extraction and partial purification of proteins from spent turmeric powder using ultrasound intensified three phase partitioning and its potential as antidiabetic agent	Chemical Engineering And Processing-Process Intensification	2022	172				108788
210	Fernandes, CG; Odaneth, AA	Optimization of pretreatment conditions for bamboo culm harvested at varying ages	Biomass Conversion And Biorefinery	2024	14	14	15549	15562	
211	Pawar, MA; Shevalkar, GB; Vavia, PR	Design and Development of Gastro-retentive Drug Delivery System for Trazodone Hydrochloride: a Promising Alternative to Innovator's Controlled-Release Tablet	Aaps Pharmscitech	2022	23	7			251
212	Paranjape, P; Yadav, MD	Recent advances in the approaches to recover rare earths and precious metals from E-waste: A mini-review	Canadian Journal of Chemical Engineering	2023	101	2	1043	1054	
213	Waikar, J; More, P	Oxygen deficient Ce doped CO supported on alumina catalyst for low-temperature CO oxidation in presence of H <sub>2</sub> O and SO <sub>2</sub>	Fuel	2023	331				125880
214	Ramugade, SH; Ghanavatkar, CW; Mathew, E; Aswathy, P; Joe, IH; Sekar, N	NLOphoric Azo Dyes Studied Using Z-Scan	Chemistryselect	2022	7	20			e202201124
215	Mevada, J; Shrunug, R; Khasgiwale, V; Pandit, A	Hybrid strategy for the selective recovery of the intracellular enzyme from the cytoplasmic location using hydrodynamic cavitation: Scalable approach	Chemical Engineering And Processing-Process Intensification	2022	181				109152
216	Bamane, PB; Wadgaonkar, KK; Srivastava, KK; Jagtap, RN	The effect of partial replacement of maleic anhydride by itaconic acid in sebacic acid-based unsaturated polyester on its various properties	Journal of Polymer Research	2022	29	9			374
217	Agarkoti, C; Gogate, PR; Pandit, AB	Coupling of acoustic/hydrodynamic cavitation with ozone (O <sub>3</sub> ), hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ), magnesium oxide (MgO) and manganese dioxide (MnO <sub>2</sub> ) for the effective treatment of CETP effluent	Separation And Purification Technology	2022	284				120281

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218	Ahire, J; Bhanage, BM	Solar Light Assisted Synthesis of CeO <sub>2</sub> Nanoparticles for Transesterification of Ethylene Carbonate with Methanol to Dimethyl Carbonate	Catalysis Letters	2022	152	11	3284	3293	
219	Vedula, SS; Yadav, GD	Wastewater treatment containing methylene blue dye as pollutant using adsorption by chitosan lignin membrane: Development of kinetics of adsorption	Journal of The Indian Chemical Society	2022	99	1			100263
220	Tripathi, A; Ansari, M; Dandekar, P; Jain, R	Analytical methods for 25-hydroxyvitamin D: advantages and limitations of the existing assays	Journal of Nutritional Biochemistry	2022	109				109123
221	Muthu, M; Tiwari, S	Spectroscopic investigation of preferential solvation of N-confused tetraphenylporphyrin binary mixtures of dichloromethane with organic cosolvents	Spectrochimica Acta Part A-Molecular And Biomolecular Spectroscopy	2022	283				121718
222	Joshi, AN	A review of processes for separation and utilization of fluorine from phosphoric acid and phosphate fertilizers	Chemical Papers	2022	76	10	6033	6045	
223	More, R; More, P	Highly facile Co <sup>2+</sup> and Mn <sup>3+</sup> species supported on hydroxyapatite catalyst for carbon monoxide oxidation at a lower temperature	Bulletin of Materials Science	2022	45	3			111
224	Desai, P; Jagtap, RN	Low viscosity & high-performance resorcinol epoxy acrylate preparation & application in stereolithography 3D printing	Pigment & Resin Technology	2023	52	5	559	568	
225	Ukarde, TM; Pawar, HS; Harrish, AMJC; Dalvi, VH; Pandit, AB	Investigation of the Liquefaction Kinetics of the PolyE-IL-Catalyzed Catalytic Thermo Liquefaction Process for Organic Biodegradable Municipal Solid Waste	Energy & Fuels	2023	37	1	580	591	
226	Mevada, JS; Wanje, SG; Pandit, AB	Selective recovery of the intracellular enzyme using hydrodynamic cavitation: Scalable approach	Chemical Engineering And Processing-Process Intensification	2022	182				109205

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227	Gogate, PR	Intensified sulfate radical oxidation using cavitation applied for wastewater treatment	Current Opinion In Chemical Engineering	2022	37				100850
228	Gonsalves, OS; Ambre, JP; Nemade, PR	Improving the yield of graphene oxide-catalysed N-heterocyclization of amines through fed batch mode	New Journal of Chemistry	2022	46	36	17410	17420	
229	Katta, VKM; Dubey, RS; Joshi, GM	Experimental investigation of activated carbon nanoflakes produced by thermal and chemical activation processes	Fullerenes Nanotubes And Carbon Nanostructures	2023	31	1	10	17	
230	Vishwakarma, R; Mannepalli, LK; Rathod, V	Kinetics of Henry reaction catalyzed by fluorapatite	Chemical Engineering Research & Design	2022	181		101	109	
231	Kaikade, DS; Sabnis, AS	Polyurethane foams from vegetable oil-based polyols: a review	Polymer Bulletin	2023	80	3	2239	2261	
232	Khatri, P; Pandit, AB	Systematic review of life cycle assessments applied to sugarcane bagasse utilization alternatives	Biomass & Bioenergy	2022	158				106365
233	Phatake, VV; Gokhale, TA; Bhanage, BM	[TBDH][HFIP] ionic liquid catalyzed synthesis of quinazoline-2,4(1H,3H)-diones in the presence of ambient temperature and pressure	Journal of Molecular Liquids	2022	345				117008
234	Yadav, M; Pasarkar, N; Naikwadi, A; Mahanwar, P	A review on microencapsulation, thermal energy storage applications, thermal conductivity and modification of polymeric phase change material for thermal energy storage applications	Polymer Bulletin	2023	80	6	5897	5927	
235	Mahakal, PA; Patwardhan, AW	Hydrodynamic and axial mixing studies in asymmetric rotating impeller column at high dispersed to continuous phase ratios	Chemical Engineering Research & Design	2022	182		98	113	
236	Desai, DS; Yadav, GD	Solvent-free oxidative esterification of furfural to 2-methyl furoate using novel copper-exchanged tungstophosphoric acid supported on montmorillonite K-10 catalyst	Molecular Catalysis	2022	524				112256
237	Datar, SD; Mane, R; Jha, N	Recent progress in materials and architectures for capacitive deionization: A comprehensive review	Water Environment Research	2022	94	3			e10696
238	Mawani, JS; Mali, SN; Pratap, AP	Formulation and evaluation of antiodandruff shampoo using mannosylerythritol lipid (MEL) as a bio-surfactant	Tenside Surfactants Detergents	2023	60	1	44	53	

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239	Gharat, NN; Rathod, VK	Extraction of ferulic acid from rice bran using NADES-ultrasound-assisted extraction: Kinetics and optimization	Journal of Food Process Engineering	2023	46	6			e14158
240	Dev, MJ; Warke, RG; Warke, GM; Mahajan, GB; Patil, TA; Singhal, RS	Advances in fermentative production, purification, characterization and applications of gellan gum	Bioresource Technology	2022	359				127498
241	Jagtiani, E; Sabnis, AS	Recent advancements of electrospun nanofibers for cancer therapy	Polymer Bulletin	2023	80	2	1215	1242	
242	Mandal, S; Kumar, AV	Metal-Free One-Pot Domino Synthesis of Oxazolidinone Derivatives	Asian Journal of Organic Chemistry	2022	11	3			e202100735
243	Vishwakarma, RS; Kantam, ML; Rathod, VK	Fluorapatite-Supported Palladium Catalyst for the Synthesis of Alkenyl Nitriles	Chernanomat	2022	8	3			e202100454
244	Sanghvi, MR; Tambare, OH; More, AP	Performance of various fillers in adhesives applications: a review	Polymer Bulletin	2022	79	12	10491	10553	
245	Chavan, AR; Bhagwat, SS	Synergistic behavior of SLS-OPE-10 binary mixtures at their CMC	Tenside Surfactants Detergents	2022	59	2	134	143	
246	Mondal, U; Yadav, GD	Direct synthesis of dimethyl ether from CO <sub>2</sub> hydrogenation over a highly active, selective and stable catalyst containing Cu-ZnO-Al <sub>2</sub> O <sub>3</sub> /Al-Zr(1:1)-SBA-15	Reaction Chemistry & Engineering	2022	7	6	1391	1408	
247	Sowmya, RS; Sugriv, G; Annapure, US	Effect of basil herb on cookies development and its effect on the nutritive, elemental, phytochemical, textural and sensory quality	Journal of Food Science And Technology-Mysore	2022	59	9	3482	3491	
248	Kajarekar, BR; Gogate, PR	Ultrasound assisted intensification of streptomycin production based on fermentation	Chemical Engineering And Processing-Process Intensification	2022	171				108748
249	Jadhav, G; Gaval, V; Divekar, M; Darade, N	Effect of packing pressure on stagnation weld-line strength for thermoplastic semicrystalline glass fiber reinforced material	Journal of Thermoplastic Composite Materials	2023	36	10	3874	3890	
250	Mestry, SU; Kalmegh, S; Mhaske, ST	Mineral Trioxide Aggregates (MTA) in Dentistry: A Review on Chemistry, Synthesis Methods, and Critical Properties	Silicon	2023	15	5	2231	2249	



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251	Hussain, MM; Gaval, V; Pratap, A; Rukhade, S	Tribological study of sunflower TMP ester and silica nanoparticles additives for hydrodynamic journal bearing application under boundary lubrication condition	Industrial Lubrication And Tribology	2023	75	2	190	196	
252	Jain, D; Dalvi, V; Mathpati, C; Kant, J	Process Analytical Technology as an enabling tool for scale up of crystallization, filtration, drying and milling	Chemical Engineering Research & Design	2023	190		117	128	
253	Mhapankar, N; Siddique, A; Doshi, G; Godad, A; Zine, S	Deciphering the Role of $\beta$ -Lactamase Inhibitors, Membrane Permeabilizers and Efflux Pump Inhibitors as Emerging Targets in Antibiotic Resistance	Indian Journal of Microbiology	2022	62	4	524	530	
254	Rajput, YN; Girase, CD; Kedar, RP; Deshpande, PS; Kulkarni, RD	Microwave-assisted low-cost synthesis of sucrose-soya ester from vegetable oil refinery by-product and its application in toothpaste formulation for oral hygiene	Journal of Surfactants And Detergents	2023	26	2	119	133	
255	Dalvi, P; Dey, A; Gogate, PR	Ultrasound-Assisted Synthesis of a N-TiO <sub>2</sub> /Fe <sub>3</sub> O <sub>4</sub> @ZnO Complex and Its Catalytic Application for Desulfurization	Sustainability	2022	14	23			16201
256	Venkatraman, PD; Sayed, U; Parte, S; Korgaonkar, S	Novel antimicrobial finishing of organic cotton fabrics using nano-emulsions derived from Karanja and Gokhru plants	Textile Research Journal	2022					
257	Karemore, AL; Sinha, R; Chugh, P; Vaidya, PD	Syngas Production by Dry Methane Reforming over Alumina-Supported Noble Metals and Kinetic Studies	Chemical Engineering & Technology	2022	45	5	907	917	
258	Nimbekar, AA; Deshmukh, RR	Plasma Surface Modification of Flexible Substrates to Improve Grafting for Various Gas Sensing Applications: A Review	IEEE Transactions On Plasma Science	2022	50	6	1382	1394	
259	Mule, TA; Sawant, SS; Odaneth, AA	Maize bran as a potential substrate for production of $\beta$ -glucosidase	Biomass Conversion And Biorefinery	2024	14	3	4029	4039	
260	Narvekar, A; Pardeshi, A; Jain, R; Dandekar, P	ADCC enhancement: A conundrum or a boon to mAb therapy?	Biologicals	2022	79		10	18	
261	Puranik, A; Rasam, P; Dandekar, P; Jain, R	Development and optimization of a LC-MS based multi-attribute method (MAM) workflow for characterization of therapeutic Fc-fusion protein	Analytical Biochemistry	2023	660				114969

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262	Bellary, S; Patil, M; Mahesh, A; Lali, A	Microbial conversion of lignin rich biomass hydrolysates to medium chain length polyhydroxyalkanoates (mcl-PHA) using <i>Pseudomonas putida</i> KT2440	Preparative Biochemistry & Biotechnology	2023	53	1	54	63	
263	Bhandari, D; Shirsat, S; Gat, Y	Bioactive characterization and optimization of <i>Tamarindus indica</i> seed protein hydrolysate: technology and application of natural enzymes	3 Biotech	2022	12	12			338
264	Ganguli, AA; Pandit, AB	Computational fluid dynamics simulations to improve performance characteristics of a manifold having a central inlet and outlet	Frontiers In Energy Research	2022	10				1013540
265	Joshi, A; Bhojwani, H; Wagal, O; Begwani, K; Joshi, U; Sathaye, S; Kanchan, D	Evaluation of Benzamide-Chalcone Derivatives as EGFR/CDK2 Inhibitor: Synthesis, In-Vitro Inhibition, and Molecular Modeling Studies	Anti-Cancer Agents In Medicinal Chemistry	2022	22	3	328	343	
266	Gupta, P; Maiti, S; Das, R; Patra, S; Adivarekar, RV; Basu, G	Okra, a New Technical Bast Fiber: Its Comparison with Jute Fiber	Journal of Natural Fibers	2022	19	16	13511	13523	
267	Kumari, S; Lali, AM; Prakash, G	Development of chloroplast engineering tools for <i>Asterarcsy</i> sp.: A resilient scenedesmaeaceae microalga	Algal Research-Biomass Biofuels And Bioproducts	2022	66				102770
268	Yadav, N; Gaikwad, RP; Mishra, V; Gawande, MB	Synthesis and Photocatalytic Applications of Functionalized Carbon Quantum Dots	Bulletin of The Chemical Society of Japan	2022	95	11	1638	1679	
269	Maurya, RK; Sharma, D; Kumari, S; Chatterjee, R; Khattravath, M; Dandela, R	Recent Advances in Transition Metal-Catalyzed Domino-Cyclization Strategies for Functionalized Heterocyclic/Carbocyclic Compounds	Chemistryselect	2022	7	28			e202201408
270	Yashwantrao, G; Shetty, P; Maleikal, PJ; Badani, P; Saha, S	Dehydrative Substitution Reaction in Water for the Preparation of Unsymmetrically Substituted Triarylmethanes: Synthesis, Aggregation-Enhanced Emission, and Mechanofluorochromism	Chempluschem	2022	87	7			e202200150
271	Jadhav, G; Gaval, V; Divekar, M	Effect of weld-line on tensile properties for thermoplastic glass filled material	Journal of Thermoplastic Composite Materials	2023	36	9	3791	3808	
272	Banakar, VV; Sabnis, SS; Gogate, PR; Raha, A; Saurabh	Ultrasound assisted continuous processing in microreactors with focus on crystallization and chemical synthesis: A critical review	Chemical Engineering Research & Design	2022	182		273	289	

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273	Karemore, ALL; Sinha, R; Chugh, P; Vaidya, PDD	Syngas production by carbon dioxide reforming of methane over Pt/Al <sub>2</sub> O <sub>3</sub> and Pt/ZrO <sub>2</sub> -SiO <sub>2</sub> catalysts	Chemical Engineering Science	2022	249				117347
274	Gokhale, TA; Sarda, TJ; Bhanage, BBM	Sunlight driven rapid and efficient photodegradation of crystal violet using magnesium doped zinc oxide nanostructures	Materials Chemistry And Physics	2023	295				127075
275	Borse, P; Naiker, V; Mestry, S; Shah, V; Mhaske, ST	Development of phosphorous-based melamine-vanillin imine precursor for flame-retardant polyurethane coating	Polymer Bulletin	2023	80	9	10473	10492	
276	Joshi, AJ; Bhojwani, HR; Joshi, UJ; Begwani, KV; Wagal, OS; Sathaye, SS; Kanchan, DM	Cinnamamide-chalcone derivatives as CDK2 inhibitors: synthesis, pharmacological evaluation, and molecular modelling study	Journal of The Iranian Chemical Society	2022	19	11	4445	4455	
277	Puranik, A; Saldanha, M; Chirmule, N; Dandekar, P; Jain, R	Advanced strategies in glycosylation prediction and control during biopharmaceutical development: Avenues toward industry 4.0	Biotechnology Progress	2022	38	5			e3283
278	Pise, VH; Thorat, BN	Supercritical fluid extraction of dried Surangi flowers (Mammea suriga)	Industrial Crops And Products	2022	186				115268
279	Augustine, E; Desigan, N; Rajeev, R; Pandey, NK; Joshi, JB	Kinetics of dissolution of simulated (U-Ce) MOX fuel pellet in nitric acid	Journal of Radioanalytical And Nuclear Chemistry	2022	331	11	4529	4539	
280	Thorat, BN; Sonwani, RK	Current technologies and future perspectives for the treatment of complex petroleum refinery wastewater: A review	Bioresource Technology	2022	355				127263
281	Kotalgi, K; Kanojija, A; Tisekar, A; Salame, PH	Electronic transport and electrochemical performance of MnCo <sub>2</sub> O <sub>4</sub> synthesized using the microwave-assisted sonochemical method for potential supercapacitor application	Chemical Physics Letters	2022	800				139660
282	Gupta, PK; Maiti, S; Patra, S; Adivarekar, RV	Effect of Okra Plant Lifespan upon Optical Properties of Okra Fibers	Journal of Natural Fibers	2022	19	15	11679	11695	
283	Sharma, E; Agarwal, R; Ralebhat, S; Krishnamurthy, G; Bhagwat, S; Adivarekar, RV	Process of Incorporation of Cerium Oxide in Viscose to Spin Infrared Reflecting Viscose Fibers	Aatoc Journal of Research	2022	9	4	163	175	
284	Rana, P; Dixit, R; Sharma, S; Dutta, S; Yadav, S; Arora, B; Priyanka; Kaushik, B; Gawande, MB; Sharma, RK	Insights into the catalytic potential of a rationally designed magnetic boron nitride nanosheet supported nickel catalyst for the efficient synthesis of 1,4-dihydropyridines	Reaction Chemistry & Engineering	2022	8	1	244	253	

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285	Bhangale, AP; Wadekar, SD; Kale, SB; Mali, SN; Pratap, AP	Non-traditional oils with water-soluble substrate as cell growth booster for the production of mannoseylthritol lipids by <i>Pseudomyces antarctica</i> (ATCC 32657) with their antimicrobial activity	Tenside Surfactants Detergents	2022	59	2	122	133	
286	Nakhate, AV; Pethsangave, DA; Yadav, GD; Some, S; Tekade, PV	Phosphorus grafted chitosan functionalized graphene oxide-based nanocomposite as a novel flame-retardant material for textile and wood	Reaction Chemistry & Engineering	2023	8	4	804	814	
287	Datar, SD; Raheman, S; Mane, RS; Chavda, D; Jha, N	Improved electrosorption performance using acid treated electrode scaffold in capacitive deionization	Materials Chemistry And Physics	2022	281				125851
288	Kininge, MM; Gujar, SK; Gogate, PR; Sharma, A; Mishra, BR; Singh, D	Treatment of methylamine containing wastewater using combined processes based on ultrasound	Journal of Water Process Engineering	2023	51				103420
289	Mirchandani, Y; Patravale, VB; Brijesh, S	Hyaluronic acid-coated solid lipid nanoparticles enhance anti-rheumatic activity and reduce toxicity of methotrexate	Nanomedicine	2022	17	16	1099	1114	
290	More, PP; Gore, S; Dargode, P; Sharma, MB; Lali, AM	Volatile Fatty Acids (VFA) Production Through Altered Anaerobic Digestion (AD) Process for Efficient Utilization of Residual Liquid Stream of Pretreated Lignocellulosic Biomass	Bioenergy Research	2022	15	3	1616	1625	
291	Fernandes, CG; Sawant, SC; Mule, TA; Khadye, VS; Lali, AM; Odaneth, AA	Enhancing cellulases through synergistic $\beta$ -glucosidases for intensifying cellulose hydrolysis	Process Biochemistry	2022	120		202	212	
292	Ayare, SD; Gogate, PR	Degradation of Tricyclazole fungicide using combined oxidation strategies based on ultrasound, ultraviolet irradiation and microwave	Environmental Technology & Innovation	2022	26				102533
293	Kelkar, S; Nailwal, N; Bhatia, NY; Doshi, G; Sathaye, S; Godad, AP	An Update On Proficiency of Voltage-gated Ion Channel Blockers in the Treatment of Inflammation-associated Diseases	Current Drug Targets	2022	23	14	1290	1303	
294	Shinde, TU; Dalvi, VH; Patil, RG; Mathpati, CS; Panse, SV; Joshi, JB	Thermal performance analysis of novel receiver for parabolic trough solar collector	Energy	2022	254				124343



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295	Sowmya, RS; Warke, VG; Mahajan, GB; Annapure, US	Quality and shelf-life assessment of pesto prepared using herbs cultivated by hydroponics	International Journal of Gastronomy And Food Science	2022	30				100608
296	Nonglailit, DL; Chukkan, SM; Arya, SS; Bhat, MS; Waghmare, R	Emerging non-thermal technologies for enhanced quality and safety of fruit juices	International Journal of Food Science And Technology	2022	57	10	6368	6377	
297	Teli, SM; Mathpati, C	Process optimization and CFD simulation in external loop airlift reactor and sectionalized external loop airlift for application of wastewater treatment	International Journal of Chemical Reactor Engineering	2022	20	8	887	902	
298	Jangam, SV; Shirikole, SS	Conference Report: Virtual Mini-Symposium: Keynote Lectures by 2020-2021 Arun S. Mujumdar Medal Recipients	Drying Technology	2022	40	7	1494	1496	
299	Shekarappa, GS; Mahapatra, S; Raj, S	VAR strategic planning for reactive power using hybrid soft computing techniques	International Journal of Bio-Inspired Computation	2022	20	1	38	48	
300	Moravkar, KK; Shah, DS; Magar, AG; Bhairav, BA; Korde, SD; Ranch, KM; Chalkwar, SS	Assessment of pharmaceutical powders flowability and comparative evaluation of lubricants on development of gastro retentive tablets: An application of powder flow tester	Journal of Drug Delivery Science And Technology	2022	71				103265
301	Pothireddy, M; Hazra, G; Babu, PV; Thirupathi, B; Dandela, R	Synthesis of Fluorinated 2-Benzylphthalazin-1(2H)-one, 1-Phthalazinamine, and 1-Alkoxy/Benzylphthalazine Derivatives by an Ultrasonication Method	Synlett	2022	33	17	1716	1722	
302	Panda, DP; Swain, D; Sundaresan, A	Photophysical and Magnetic Properties in Zero-Dimensional (H <sub>2</sub> DABCO)MX <sub>4</sub> •nH <sub>2</sub> O (M = Mn and Cu; X = Cl and Br; n=0, 1, and 4)	Journal of Physical Chemistry C	2022	126	31	13291	13299	
303	Jadhav, PM; Patil, J; Prasanth, H; Rao, GRRJ	Ammonium Dodecahydridecarborate (NH <sub>4</sub> ) <sub>2</sub> [B <sub>10</sub> H <sub>12</sub> ]: Hydrogen and Boron Rich Fuel for Jet Propulsion Engines	Central European Journal of Energetic Materials	2022	19	2	158	167	
304	Humbe, SS; Joshi, GM; Deshmukh, RR; Kaleemulla, S	Polyvinylidene fluoride/polysulfone/air plasma defected hexagonal boron nitride emerging nano blends for electrostatic dissipation	Journal of Applied Polymer Science	2022	139	45			e53113

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305	More, PR; Jambirak, AR; Arya, SS	Green, environment-friendly and sustainable techniques for extraction of food bioactive compounds and waste valorization	Trends In Food Science & Technology	2022	128		296	315	
306	Pawar, MA; Vora, LK; Kompella, P; Pokuri, VK; Vavia, PR	Long-acting microspheres of Human Chorionic Gonadotropin hormone: In-vitro and in-vivo evaluation	International Journal of Pharmaceutics	2022	611				121312
307	Panda, DP; Swain, D; Sundaresan, A	Zero-Dimensional (Piperidinium)2MnBr4: Ring Puckering-Induced Isostructural Transition and Strong Electron-Phonon Coupling- Mediated Self- Trapped Exciton Emission	Inorganic Chemistry	2022	61	29	11377	11386	
308	Naikwadi, AT; Sharma, BK; Bhatt, KD; Mahanwar, PA	Gamma Radiation Processed Polymeric Materials for High Performance Applications: A Review	Frontiers In Chemistry	2022	10				837111
309	Vishwakarma, R; Gadipelly, C; Mannepal, LK	Advances in Tetrazole Synthesis - An Overview	Chemistryselect	2022	7	29			e202200706
310	Dhoble, S; Patravale, V; Weaver, E; Lamprou, DA; Patravale, T	Comprehensive review on novel targets and emerging therapeutic modalities for pulmonary arterial Hypertension	International Journal of Pharmaceutics	2022	621				121792
311	Shindalkar, SS; Humbe, SS; Joshi, GM; Kumar, CR	Engineering properties of Teflon derived blends and composites: a review	Polymer-Plastics Technology And Materials	2022	61	18	1973	1987	
312	Sharma, D; Chatterjee, R; Dhayalan, V; Dandela, R	Recent Advances in Enantioselective Organocatalytic Reactions Enabled by N-Heterocyclic Carbenes (NHCs) Containing Triazolium Motifs	Synthesis-Stuttgart	2022	54	19	4129	4166	
313	Jaiswal, PB; Pushkar, BK; Maikap, K; Mahanwar, PA	Abiotic aging assisted bio-oxidation and degradation of LLDPE/LDPE packaging polyethylene film by stimulated enrichment culture	Polymer Degradation And Stability	2022	206				110156
314	Yadav, S; Gaikwad, G; Chaturvedi, A; Ananthasivan, K; Pandit, AB; Jain, R	Fabrication of CeO2 microspheres by internal gelation process using T junction droplet generator	Brazilian Journal of Chemical Engineering	2022	39	3	671	689	
315	Kumar, S; Pandey, A; Goswami, P; Pantayya, P; Kazi, F	Analysis of Mumbai Grid Failure Restoration on Oct 12, 2020: Challenges and Lessons Learnt	IEEE Transactions On Power Systems	2022	37	6	4555	4567	

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316	Chakinala, N; Ranjan, P; Chakinala, AG; Gogate, PR	Performance comparison of photocatalysts for degradation of organic pollutants using experimental studies supported with DFT and fundamental characterization	Catalysis Communications	2023	174				106589
317	Shah, PT; Siddique, A; Thakkar, A; Gharat, S; Godad, A; Kale, P; Doshi, G	An update on novel therapeutic intervention in Rheumatoid arthritis	International Immunopharmacology	2022	109				108794
318	Pothireddy, M; Bhukta, S; Babu, PV; Thirupathi, B; Dandela, R	Synthetic method to access fluorinated 2-benzylpyridines by using Negishi coupling reaction	Synthetic Communications	2022	52	4	564	576	
319	Sane, PK; Rakte, D; Tambat, S; Bhalinge, R; Sontakke, SM; Nemade, P	Enhancing solar photocatalytic activity of Bi5O7I photocatalyst with activated carbon heterojunction	Advanced Powder Technology	2022	33	1			103357
320	Shinde, TU; Dalvi, VH; Mathpati, CS; Shenoy, N; Panse, SV; Joshi, JB	Heat transfer investigation of PCM pipe bank thermal storage for space heating application	Chemical Engineering And Processing-Process Intensification	2022	180				108791
321	Patil, PS; Fernandes, CG; Sawant, SC; Lali, AM; Odaneth, AA	High-throughput system for carbohydrate analysis of lignocellulosic biomass	Biomass Conversion And Biorefinery	2023	13	14	12889	12901	
322	Salame, P; Kotalgi, K; Devakar, M; More, P	Electronic transport properties of NASICON structured NaFe2(PO4)(SO4)2: A potential cathode material for Na-ion batteries, synthesized using ultrasound-assisted, indirect microwave heating technique	Materials Letters	2022	313				131763
323	Gokhale, JS; Hude, MP; Yadav, GD; Thomas, M; Kozinski, J; Dalai, AK	Hydrothermal processing of waste pine wood into industrially useful products	Journal of The Indian Chemical Society	2022	99	9			100647
324	Kulkarni, AH; Dalvi, VH; Deshmukh, SP; Kelkar, AK; Joshi, JB	Effective Maxwell-Stefan diffusion model of near ambient air drying validated with experiments on Thomson seedless grapes	Canadian Journal of Chemical Engineering	2022	100	9	2394	2416	
325	Puranik, A; Goswami, R; Sutar, P; Tupe, D; Rasam, P; Dandekar, P; Jain, R	Mass spectrometry-based glycoproteomics of biopharmaceuticals by using an automated data processing tool: SimGlycan®	Journal of Separation Science	2023	46	3			
326	Acharya, SK; Porwal, K	Primal hybrid finite element method for the linear elasticity problem	Applied Mathematics And Computation	2022	435				127462
327	Bhoje, R; Ghosh, AK; Nemade, PR	Development of Performance-Enhanced Graphene Oxide-Based Nanostructured Thin-Film Composite Seawater Reverse Osmosis Membranes	Acs Applied Polymer Materials	2022	4	3	2149	2159	

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328	Abdullah, S; Karmakar, S; Pradhan, RC; Mishra, S	Pressure-driven crossflow microfiltration coupled with centrifugation for tannin reduction and clarification of cashew apple juice: Modeling of permeate flux decline and optimization of process parameters	Journal of Food Processing And Preservation	2022	46	6			
329	Bharimalla, AK; Deshmukh, SP; Patil, S; Nandanathangam, V; Saxena, S	Development of energy efficient nanocellulose production process by enzymatic pretreatment and controlled temperature refining of cotton linters	Cellulose	2023	30	2	833	847	
330	Gadipelly, C; Vishwakarma, R; Mannepalli, LK	Advances in amidation chemistry - a short overview	Arkivoc	2022			152	178	
331	Saldanha, M; Shelar, A; Patil, V; Warke, VG; Dandekar, P; Jain, R	A case study: Correlation of the nutrient composition in Chinese Hamster Ovary cultures with cell growth, antibody titre and quality attributes using multivariate analyses for guiding medium and feed optimization in early upstream process development	Cytotechnology	2023	75	1	77	91	
332	Bagwe, PV; Bagwe, P; Ponugoti, SS; Joshi, S	Peptide-Based Vaccines and Therapeutics for COVID-19	International Journal of Peptide Research And Therapeutics	2022	28	3			94
333	Sathyvanarayan, SR; Warke, VG; Mahajan, GB; Annappure, US	Soil free nutrient availability to plants	Journal of Plant Nutrition	2023	46	5	801	814	
334	Ramarao, S; Pothireddy, M; Venkateshwarlu, R; Moturu, KMV; Siddaiah, V; Dandela, R; Pal, M	Cu(OAc) <sub>2</sub> catalyzed ultrasound assisted rapid synthesis of isocoumarin derivatives bearing 3-oxobutyl moiety at C-4 position	Journal of Molecular Structure	2022	1254				132418
335	Shahid, M; Maiti, S; Adivarekar, RV; Liu, SH	Biomaterial based fabrication of superhydrophobic textiles-A review	Materials Today Chemistry	2022	24				100940
336	Chhabria, S; Takle, V; Sharma, N; Kharkar, P; Pansare, K; Tripathi, A; Tripathi, A; Bhartiya, D	RETRACTED: Extremely Active Nano-formulation of Resveratrol (XAR™) attenuates and reverses chemotherapy-induced damage in mice ovaries and testes (Retracted Article)	Journal of Ovarian Research	2022	15	1			115
337	Panda, M; Kumar, D; Gharat, PV; Patil, RG; Dalvi, VH; Mathpati, CS; Gaval, VR; Deshmukh, SP; Panse, SV; Joshi, JB	Cost effective non-evacuated receiver for line-concentrating solar collectors characterized by experimentally validated computational fluid dynamics model	Canadian Journal of Chemical Engineering	2022	100	9	2259	2278	



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338	Pandey, A; Kumar, S; Mohire, S; Pentayya, P; Kazi, F	Dynamic Modeling and Cascade Failure Analysis of the Mumbai Grid Incident of October 12, 2020	IEEE Access	2022	10		43598	43610	
339	Parab, V; Prajapati, JJ; Karan, S; Bhowmick, AR; Mukherjee, J	Impact of abiotic factors and heavy metals in predicting the population decline of Near Threatened fish <i>Notopterus chitala</i> in natural habitat	Aquatic Ecology	2023	57	4	863	879	
340	Bapat, ANRA; Meshram, AN; Pradhan, SHLM; Madankar, CS	Synthesis and Optimization of Rhamnolipids from Tree Borne Oils and Fats for Cosmetics Applications	Journal of Scientific & Industrial Research	2022	81	6	613	621	
341	Pani, A; Shirikole, SS; Mujumdar, AS	Importance of renewable energy in the fight against global climate change	Drying Technology	2022	40	13	2581	2582	
342	Lahiri, S; Mandal, D; Gogate, PR; Bhardwaj, RL	Intensified ceria recovery from graphite substrate and cleanup of leachant using sonication	Chemical Engineering And Processing-Process Intensification	2022	174				108858
343	Agrawal, AA; Raval, AJ; Velhal, SM; Patel, VV; Patravale, VB	Nanoparticle-eluting stents for coronary intervention: formulation, characterization, and in vitro evaluation	Canadian Journal of Physiology And Pharmacology	2022	100	3	220	233	
344	Mohod, A; Bangadkar, S; Deshmukh, A; Singh, S; Bagal, M; Gogate, PR	Improvements in crystallization of copper sulphate using ultrasound and comparison with conventional method	Chemical Engineering And Processing-Process Intensification	2022	178				109028
345	Krishnaveni, V; DMello, ME; Basavaiah, K; Samsonu, D; Rambhia, DA; Kalindi, SB	Hybridization of Palladium Nanoparticles with Aromatic-Rich SU-101 Metal-Organic Framework for Effective Transfer Hydrogenation	European Journal of Inorganic Chemistry	2022	2022	25			e202200314
346	Sahu, S; Karan, G; Roy, L; Maji, MS	An expeditious route to sterically encumbered nonproteinogenic $\alpha$ -amino acid precursors using allylboronic acids	Chemical Science	2022	13	8	2355	2362	
347	Narvekar, A; Puranik, A; Kulkarni, B; Jagtap, D; Jain, R; Dandekar, P	FcyRIIIA affinity chromatography complements conventional functional characterization of rituximab	Biotechnology Progress	2023	39	1			
348	Bagal, MV; Saini, RR; Shaikh, AR; Patil, S; Mohod, A; Pinjari, D	Effect of additives on degradation of poly vinyl alcohol (PVA) using ultrasound and microwave irradiation	International Polymer Processing	2023	38	1	30	41	
349	Nidheesh, PV; Gogate, PR	Sulfate radical-based advanced oxidation processes for environmental decontamination	Current Opinion In Chemical Engineering	2022	38				100873
350	Adak, A; Rathee, N; Sengupta, S	Wave breaking limit in arbitrary mass ratio warm plasmas	Contributions To Plasma Physics	2022	62	7			e202100220

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351	Nautiyal, A; Shukla, SR; Prasad,	ZnO-TiO2 hybrid nanocrystal-loaded, wash durable, multifunction cotton textiles	Cellulose	2022	29	10	5923	5941	
352	Ramarao, S; Pothireddy, M; Venkateshwarlu, R; Moturu, KMVR; Siddaiah, V; Kapavarapu, R; Dandela, R; Pal, M	Sonochemical Synthesis and In Silico Evaluation of Imidazo[1,2-a]Pyridine Derivatives as Potential Inhibitors of Sirtuins	Polycyclic Aromatic Compounds	2023	43	4	3741	3760	
353	Gupta, K; Desai, R; Jawade, K; Jagtap, DD; Modi, D; Jain, R; Dandekar, P	Determination of functional similarity of biosimilar H9P2S from an investigational CHO clone with Adalimumab	3 Biotech	2022	12	11			315
354	Humbe, SS; Joshi, GM; Deshmukh, RR; Kaleemulla, S	Anomalous properties of plasma treated hexagonal Boron Nitride dispersed polymer nano blends	Journal of Polymer Research	2022	29	10			430
355	Jadhav, PS; Joshi, GM; Humbe, SS; Dubey, RS; Kaleemulla, S	Study of the preparation and properties of polyvinyl chloride/nitrocellulose polymer blends	Polymer International	2022	71	8	1009	1021	
356	Bhargava, A; Shelke, S; Dilkash, M; Chaubal-Durve, NS; Patil, PD; Nadar, SS; Marghade, D; Tiwari, MS	A comprehensive review on catalytic etherification of glycerol to value-added products	Reviews In Chemical Engineering	2023	39	7	1187	1226	
357	Badgujar, KC; Badgujar, VC; Bhanage, BM	Synthesis of alkyl levulinate as fuel blending agent by catalytic valorization of carbohydrates via alcoholysis: Recent advances and challenges	Catalysis Today	2023	408		9	21	
358	Humbe, SS; Joshi, GM; Deshmukh, RR; Dhanumalayan, E; Kaleemulla, S	Quantification of pre- and post-air plasma-treated graphene oxide dispersed polymer blends for high dielectric applications	New Journal of Chemistry	2022	46	20	9909	9922	
359	Kamble, PA; Vinod, CP; Rathod, VK; Kantam, ML	Hydrogenation of levulinic acid to gamma-valerolactone over nickel supported organoclay catalyst	Catalysis Today	2023	408		36	49	
360	Gade, SM; Saptal, VB; Bhanage, BM	Perception of glycerol carbonate as green chemical: Synthesis and applications	Catalysis Communications	2022	172				106542
361	Badgujar, KC; Badgujar, VC; Bhanage, BM	Recent update on use of ionic liquids for enzyme immobilization, activation, and catalysis: A partnership for sustainability	Current Opinion In Green And Sustainable Chemistry	2022	36				100621

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362	Pal, Y; Mali, SN; Kale, SB; Pratap, AP	Improved adsorptive purification and effective separation of acidic and lactic acid sophorolipid biosurfactant	Journal of The Indian Chemical Society	2022	99	11			100776
363	Maity, N; Majumder, K; Patel, AK; Swain, D; Suryaprakash, N; Patil, S	Synthesis and Emergent Photophysical Properties of Diketopyrrolopyrrole-Based Supramolecular Self-Assembly	Acs Omega	2022	7	27	23179	23188	
364	Mishra, S; Prabhakar, B; Kharkar, PS; Pethe, AM	Banana Peel Waste: An Emerging Cellulosic Material to Extract Nanocrystalline Cellulose	Acs Omega	2022					
365	Boopathi, D; Swain, D; Nayak, PK	High-rate performance and suppressed voltage decay of Li and Mn-rich oxide cathode materials upon substitution of Mn with Co for Li-ion batteries	Journal of Electroanalytical Chemistry	2022	927				116986
366	Ingle, AA; Shende, DZ; Wasewar, KL; Pandit, AB	Performance of Pd catalyst supported on trimetallic nanohybrid Zr-Al-La in hydrogenation of ethylanthraquinone	International Journal of Chemical Reactor Engineering	2022	20	12	1235	1250	
367	Yadav, A; Simha, P; Sathe, P; Gantayet, LM; Pandit, A	Coupling chemical degumming with enzymatic degumming of ultrasound pre-treated ramie fiber using <i>Bacillus subtilis</i> ABDR01	Environmental Technology & Innovation	2022	28				102666
368	Ingle, AA; Ansari, SZ; Shende, DZ; Wasewar, KL; Pandit, AB	Progress and prospective of heterogeneous catalysts for H <sub>2</sub> O <sub>2</sub> production via anthraquinone process	Environmental Science And Pollution Research	2022	29	57	86468	86484	
369	Desai, SN; Jadhav, AJ; Holkar, CR; Pawar, BG; Pinjari, DV	Extraction and microencapsulation of Buchanania lanzan Spreng seed oil	Chemical Papers	2022	76	6	3521	3530	
370	Minglani, D; Sharma, A; Pandey, H; Joshi, JB	Analysis of flow behavior of cohesive monosized spherical and non-spherical particles in screw feeder	Powder Technology	2022	398				117049
371	Dawre, S; Devarajan, PV; Samad, A	Enhanced Antibacterial Activity of Doxycycline and Rifampicin Combination Loaded in Nanoparticles against Intracellular <i>Brucella abortus</i>	Current Drug Delivery	2022	19	1	104	116	
372	Kundu, S; Roy, L; Maji, MS	Development of Carbazole-Cored Organo-Photocatalyst for Visible Light-Driven Reductive Pinacol/Imino-Pinacol Coupling	Organic Letters	2022	24	49	9001	9006	
373	Singh, A; Kale, R; Sarkar, A; Juvekar, V; Contractor, A	Autogenous Oxidation/Reduction of Polyaniiline in Aqueous Sulfuric Acid	Processes	2022	10	3			443

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374	Lahiri, S; Mandal, D; Biswas, S; Gogate, PR; Bhardwaj, RL	Sonocatalytic recovery of ceria from graphite and inhibition of graphite erosion by ionic liquid based platinum nanocatalyst	Ultrasonics Sonochemistry	2022	82				105863
375	Rao, N; Lele, AK; Patwardhan, AW	Optimization of Liquid Organic Hydrogen Carrier (LOHC) dehydrogenation system	International Journal of Hydrogen Energy	2022	47	66	28530	28547	
376	Mane, RS; Rahema, ARS; Kothawade, T; Chakraborty, H; Jha, N	Norbornane derived N-doped sp <sup>2</sup> carbon framework as an efficient electrocatalyst for oxygen reduction reaction and hydrogen evolution reaction	Fuel	2022	323				124420
377	Prajapati, J; Singh, A; Patil, K; Bhowmick, AR; Mukherjee, A; Huang, YL; Banerjee, AK	An occurrence data set for invasive and naturalized alien plants in India	Ecology	2022	103	11			e3794
378	Patankar, KC; Biranje, S; Pawar, A; Maiti, S; Shahid, M; More, S; Adivarekar, RV	Fabrication of chitosan-based finishing agent for flame-retardant, UV-protective, and antibacterial cotton fabrics	Materials Today Communications	2022	33				
379	Hameed, S; Wagh, AS; Sharma, A; Pareek, V; Yu, Y; Joshi, JB	Kinetic modelling of pyrolysis of cellulose using CPD model: effect of salt	Journal of Thermal Analysis And Calorimetry	2022	147	17	9763	9777	
380	Marathe, SJ; Dedhia, N; Singhai, RS	Esterification of sugars and polyphenols with fatty acids: techniques, bioactivities, and applications	Current Opinion In Food Science	2022	43		163	173	
381	Hazare, SR; Vala, S; Patil, CS; Joshi, AJ; Joshi, JB; Vitankar, VS; Patwardhan, AW	Correlating Interfacial Area and Volumetric Mass Transfer Coefficient in Bubble Column with the Help of Machine Learning Methods	Industrial & Engineering Chemistry Research	2022					
382	Burai, S; Ghorai, N; Ghosh, HN; Mondal, S	Discerning the Ultrafast Charge Dynamics in Photostable Perovskite-Carbon Dot Composite Systems: Role of Doped Carbon Dots	Journal of Physical Chemistry C	2022	126	47	20092	20100	
383	Kulkarni, K; Bhogle, J; Kulkarni, R; Bari, A	Investigation and Modeling of Fluoride Ion Adsorption on an Azospirillum Biofertilizer	Chemical Engineering & Technology	2022	45	11	2061	2070	



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384	Patil, AS; Ibrahim, MK; Sathaye, S; Degani, MS; Pal, D; Checker, R; Sharma, D; Sandur, SK	Mitochondriotropic Derivative of Ethyl Ferulate, a Dietary Phenylpropanoid, Exhibits Enhanced Cytotoxicity in Cancer Cells via Mitochondrial Superoxide-Mediated Activation of JNK and AKT Signaling	Applied Biochemistry And Biotechnology	2023	195	3	2057	2076	
385	Yadav, GD; Mewada, RK; Wagh, DP; Manyar, HG	Advances and future trends in selective oxidation catalysis: a critical review	Catalysis Science & Technology	2022	12	24	7245	7269	
386	Kar, MR; Chakraborty, R; Patel, U; Ray, S; Acharya, TK; Goswami, C; Bhaumik, S	Impact of Zn-doping on the composition, stability, luminescence properties of silica coated all-inorganic cesium lead bromide nanocrystals and their biocompatibility	Materials Today Chemistry	2022	23				100753
387	Rajak, A; Singh, AK; Roy, L; Das, A	Solvophobically-Driven Merocyanine Dye Assembly: Predominant Dipole-Dipole Interactions Over Hydrogen-Bonding	Chemnanomat	2022	8	6			e202200082
388	Ananthanarayan, L; Kumar, V; Panghal, A; Singh, B; Waghmare, R; Gat, Y; Kaur, N	Use of microalgal biomass as functional ingredient for preparation of cereal based extrudates: impact of processing on amino acid concentrations and colour degradation kinetics	Brazilian Journal of Pharmaceutical Sciences	2022	58				e18665
389	Sawant, SV; Dasgupta, K; Joshi, JB; Patwardhan, AW	Synthesis of boron-doped carbon nanotubes by thermocatalytic decomposition of ethanol using a floating catalyst chemical vapor deposition method: kinetic study	Reaction Chemistry & Engineering	2022	7	10	2163	2174	
390	Lokolkar, MS; Pal, MK; Dey, S; Bhanage, BM	POP-Pincer Xantphos Pd Complex of 4-Pyridylthiolate: Cyclocarbonylative Reaction for the Synthesis of Flavones Using Cobalt Carbonyl as a C1 Source	Catalysis Letters	2023	153	8	2359	2367	
391	Bhatkar, NS; Shirikole, SS; Brennan, C; Thorat, BN	Pre-processed fruits as raw materials: part II-process conditions, demand and safety aspects	International Journal of Food Science And Technology	2022	57	8	4918	4935	
392	Kumari, S; Pandit, A; Bhende, A; Rayalu, S	Thermal Management of Solar Panels for Overall Efficiency Enhancement Using Different Cooling Techniques	International Journal of Environmental Research	2022	16	4			53

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393	Sadanandan, P; Payne, NL; Sun, GZ; Ashokan, A; Gowd, SG; Lal, A; Kumar, MKS; Pulakkat, S; Nair, S; Menon, KN; Bernard, CCA; Koyakutty, M	Exploiting the preferential phagocytic uptake of nanoparticle-antigen conjugates for the effective treatment of autoimmunity	Nanomedicine-Nanotechnology Biology And Medicine	2022	40				102481
394	Verma, S; Masand, N; Cheke, RS; Patil, VM	Protein Informatics and Vaccine Development: Cancer Case Study	Current Topics In Medicinal Chemistry	2022	22	26	2207	2220	
395	Chavda, VP; Pandya, A; Kypreos, E; Patravale, V; Apostolopoulos, V	Chlamydia trachomatis: quest for an eye-opening vaccine breakthrough	Expert Review of Vaccines	2022	21	6	771	781	
396	Soni, R; Khan, R; Burange, AS; Sahani, AJ; Bavera, S; Achary, SN; Jayaram, R	Catalytic application of K <sub>2</sub> Ce(PO <sub>4</sub> ) <sub>2</sub> in Knoevenagel condensation -A green protocol	Journal of The Indian Chemical Society	2022	99	10			100680
397	Gawande, GD; Pinjari, DV; Chavan, PV	Degradation of Tartrazine Using Hydrodynamic Cavitation-Based Hybrid Techniques and Fenton Chemistry	Chemical Engineering & Technology	2022	45	6	1148	1157	
398	Biranje, PM; Patwardhan, AW; Joshi, JB; Dasgupta, K	Exfoliated graphene and its derivatives from liquid phase and their role in performance enhancement of epoxy matrix composite	Composites Part A-Applied Science And Manufacturing	2022	156				106886
399	Chakraborty, B; Bhowmick, AR; Chattopadhyay, J; Bhattacharya, S	Instantaneous maturity rate: a novel and compact characterization of biological growth curve models	Journal of Biological Physics	2022	48	3	295	319	
400	Sharma, D; Chatterjee, R; Dhayalan, V; Dhanusuraman, R; Dandela, R	Recent Advances in the Practical Synthesis of C1 Deuterated Aromatic Aldehydes Enabled by Catalysis and Beyond	Chemistry-An Asian Journal	2022	17	18			e202200485
401	Hazare, SR; Patil, CS; Vala, SV; Joshi, AJ; Joshi, JB; Vitankar, VS; Patwardhan, AW	Predictive analysis of gas hold-up in bubble column using machine learning methods	Chemical Engineering Research & Design	2022	184		724	739	
402	Bhatkar, NS; Shirikole, SS; Brennan, C; Thorat, BN	Pre-processed fruits as raw materials: part I - different forms, process conditions and applications	International Journal of Food Science And Technology	2022	57	8	4945	4962	
403	Shah, N; Marathe, SJ; Croce, D; Ciardi, M; Longo, V; Julius, A; Shamekh, S	An investigation of the antioxidant potential and bioaccumulated minerals in Tuber borchii and Tuber maculatum mycelia obtained by submerged fermentation	Archives of Microbiology	2022	204	1			64
404	Sharma, D; Dhayalan, V; Chatterjee, R; Khatravath, M; Dandela, R	Recent Advances in the Synthesis of Coumarin and Its Derivatives by Using Aryl Propiolates	Chemistryselect	2022	7	4			e202104299

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405	Siddiqui, ZA; Lambud, S; Bhadke, A; Kumar, R; Prajesh, N; Sekar, N; More, S	Unexpected formation of 2-methyl-1H-naphtho [2, 3-d] imidazole via decarboxylation governed mechanistic pathway	Chemical Physics	2023	565				111735
406	Agarawal, V; Roy, S; Shrawankar, KK; Ghogale, M; Bharathi, S; Yadav, A; Maitra, R	A hybrid coupled cluster-machine learning algorithm: Development of various regression models and benchmark applications	Journal of Chemical Physics	2022	156	1			14109
407	Dedhia, N; Marathe, SJ; Singhal, RS	Food polysaccharides: A review on emerging microbial sources, bioactivities, nanoformulations and safety considerations	Carbohydrate Polymers	2022	287				119355
408	Lokolkar, MS; Mane, PA; Dey, S; Bhanage, BM	Synthesis of 2-Substituted Indoles by Pd-Catalyzed Reductive Cyclization of 1-Halo-2-nitrobenzene with Alkynes	European Journal of Organic Chemistry	2022	2022	5			e202101505
409	Mane, RS; Pradhan, S; Somkuwar, V; Bhattacharyya, R; Ghosh, PC; Jha, N	An electron donor-acceptor-donor strategy to activate ZIF-67 as a cathode material for fuel cells and zinc ion hybrid supercapacitor	Reaction Chemistry & Engineering	2023	8	4	891	907	
410	Rojekar, S; Abadi, LF; Pai, R; Prajapati, MK; Kulkarni, S; Vavia, PR	Mannose-Anchored Nano-Selenium Loaded Nanostructured Lipid Carriers of Etravirine for Delivery to HIV Reservoirs	Aaps Pharmscitech	2022	23	7			230
411	Afrose, SP; Mahato, C; Sharma, P; Roy, L; Das, D	Nonequilibrium Catalytic Supramolecular Assemblies of Melamine-and Imidazole-Based Dynamic Building Blocks	Journal of The American Chemical Society	2022	144	2	673	678	
412	Rana, P; Kaushik, B; Gaur, R; Dutta, S; Yadav, S; Sotanki, K; Arora, B; Biradar, AV; Gawande, MB; Sharma, RK	An Earth-abundant cobalt based photocatalyst: visible light induced direct (het)arene C-H arylation and CO2 capture	Dalton Transactions	2022	51	6	2452	2463	
413	Sukhatskiy, Y; Sozanskyi, M; Shepida, M; Zhak, Z; Gogate, PR	Decolorization of an aqueous solution of methylene blue using a combination of ultrasound and peroxate process	Separation And Purification Technology	2022	288				120651
414	Panda, DP; Swain, D; Chaudhary, M; Mishra, S; Bhutani, G; De, AK; Waghmare, U; Sundaresan, A	Electron-Phonon Coupling Mediated Self-Trapped-Exciton Emission and Internal Quantum Confinement in Highly Luminescent Zero- Dimensional (Guanidinium)6Mn3X12 (X = Cl and Br)	Inorganic Chemistry	2022	61	43	17026	17036	
415	Maiti, S; Islam, MR; Uddin, MA; Afroj, S; Eichhorn, SJ; Karim, N	Sustainable Fiber-Reinforced Composites: A Review	Advanced Sustainable Systems	2022	6	11			2200258

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416	Singh, P; Pani, A; Mujumdar, AS; Shirkole, SS	New strategies on the application of artificial intelligence in the field of phytoremediation	International Journal of Phytoremediation	2023	25	4	505	523	
417	Besharat, F; Ahmadpoor, F; Nezafat, Z; Nasrollahzadeh, M; Manwar, NR; Fornasiero, P; Gawande, MB	Advances in Carbon Nitride-Based Materials and Their Electrocatalytic Applications	Acs Catalysis	2022	12	9	5605	5660	
418	Tiwari, SS; Ghatage, S; Joshi, J; Kong, B	Segregation and intermixing in polydisperse liquid-solid fluidized beds: A multifluid model validation study	Aiche Journal	2022	68	8			e17725
419	Dhakate, MM; Joshi, B; Khakhar, DV	Influence of nozzle angle and classifier height on the performance of a spiral air jet mill	Advanced Powder Technology	2022	33	3			103474
420	Raji, A; Vasu, D; Pandiyaraj, KN; Gobeira, R; Deshmukh, RR	Degradation and Detoxification of Remazol Blue Contaminants as a Model Textile Effluent via Advanced Nonthermal Plasma Oxidation Processes	IEEE Transactions On Plasma Science	2022	50	6	1407	1415	
421	Sangepu, VR; Sharma, D; Venkateshwarlu, R; Bhoomireddy, RD; Jain, KK; Dandela, R; Pal, M	Ultrasound Assisted $\alpha$ -Arylation of Ketones: A Rapid Access to Isoquinoline Derivatives	Chemistryselect	2022	7	40			e202202710
422	Bhukta, S; Samal, SK; Vasudevan, S; Sarveswari, HB; Shanmugam, K; Princy, SA; Dandela, R	A Prospective Diversity of Antibacterial Small Peptidomimetic and Quorum Sensing Mediated Drug: A Review	Chemistryselect	2022	7	8			e202102743
423	Bhatnagar, A; Khatri, P; Krzywonos, M; Tolvanen, H; Konttinen, J	Techno-economic and environmental assessment of decentralized pyrolysis for crop residue management: Rice and wheat cultivation system in India	Journal of Cleaner Production	2022	367				132998
424	Nahar, G; Rajput, S; Grasham, O; Dalvi, VH; Dupont, V; Ross, AB; Pandit, AB	Technoeconomic analysis of biogas production using simple and effective mechanistic model calibrated with biomethanation potential experiments of water lettuce (pistia stratiotes) inoculated by buffalo dung	Energy	2022	244				122911
425	Ghoderao, PNP; Narayan, M; Dalvi, VH; Byun, HS	Patel-Teja cubic equation of state-A review of modifications and applications till 2022	Fluid Phase Equilibria	2023	567				113707



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426	Sahoo, D; Alagarasan, D; Ganesan, R; Varadharajaperumal, S; Naik, R	Impact of irradiation doses on the structural, morphological, and linear-nonlinear optical properties of Ge10Sb25Se65 thin films for optoelectronic applications	European Physical Journal Plus	2022	137	6			707
427	Sanjanwala, D; Londhe, V; Trivedi, R; Bonde, S; Sawarkar, S; Kale, V; Patravale, V	Polysaccharide-based hydrogels for drug delivery and wound management: a review	Expert Opinion On Drug Delivery	2022	19	12	1664	1695	
428	Parida, A; Sahoo, D; Alagarasan, D; Vardhrajaperumal, S; Ganesan, R; Naik, R	Increase in nonlinear susceptibility and refractive index in quaternary In15Sb10S15Se60 thin films upon annealing at different temperature for photonic applications	Journal of Alloys And Compounds	2022	905				164143
429	Ghoderao, PNP; Narayan, M; Dalvi, VH; Byun, HS	Predictions of thermodynamic properties of pure fluids, refrigerants, and binary mixtures using modified Peng-Robinson equation of state	Korean Journal of Chemical Engineering	2022	39	12	3452	3463	
430	Ayakar, S; Yadav, V	Continuous ex situ recovery of volatile monoterpenoids produced by genetically engineered Escherichia coli	Canadian Journal of Chemical Engineering	2022	100	9	2204	2216	
431	Shet, H; Sahu, R; Sanghvi, YS; Kapdi, AR	Strategies for the Synthesis of Fluorinated Nucleosides, Nucleotides and Oligonucleotides	Chemical Record	2022	22	9			e202200066
432	Shet, H; Patel, M; Waikar, JM; More, PM; Sanghvi, YS; Kapdi, AR	Room-Temperature Dialkylamination of Chloroheteroarenes Using a Cu(II)/PTABS Catalytic System	Chemistry-An Asian Journal	2023	18	1			
433	Singh, PM; Tiwari, A; Maity, D; Saha, S	Recent progress of nanomaterials in sustainable agricultural applications	Journal of Materials Science	2022	57	24	10836	10862	
434	Lee, Y; Kim, SM; Kim, K; Kim, SY; Lee, H; Kwon, H; Lee, HW; Kim, C; Some, S; Hwang, HJ; Lee, BH	Dual-channel P-type ternary DNTT-graphene barristor	Scientific Reports	2022	12	1			19423
435	Uthale, A; Anantram, A; Sulkshane, P; Degani, M; Teni, T	Identification of bicyclic compounds that act as dual inhibitors of Bcl-2 and Mcl-1	Molecular Diversity	2023	27	3	1359	1374	
436	Khatravath, M; Maurya, RK; Dey, A; Burra, AG; Chatterjee, R; Dandela, R	Recent Advancements in Development of Radical Silylation Reactions	Current Organic Chemistry	2022	26	10	920	960	
437	Dudure, R; Ganorkar, K; Beldar, V; Ghosh, SK; Panda, AK; Jadhao, M	Effect of artificial sweetener saccharin on lysozyme aggregation: A combined spectroscopic and in silico approach	Spectrochimica Acta Part A-Molecular And Biomolecular Spectroscopy	2023	290				122269

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438	Parida, A; Alagarasan, D; Ganesan, R; Vardhrajaperumal, S; Naik, R	Effect of Sb addition on Sb <sub>x</sub> Sn <sub>1-x</sub> thin films: The structural, morphological, and linear/nonlinear optical changes for optoelectronic applications	Journal of The American Ceramic Society	2022	105	10	6217	6231	
439	Parida, A; Sahoo, D; Alagarasan, D; Vardhrajaperumal, S; Ganesan, R; Naik, R	Impact on nonlinear/linear optical and structural parameters in quaternary In <sub>15</sub> Ag <sub>10</sub> S <sub>15</sub> Se <sub>60</sub> thin films upon annealing at different temperatures	Ceramics International	2022	48	11	15380	15389	
440	Duan, X; Shirkole, SS; Mujumdar, AS	Special issue to honour professor Min Zhang for his contribution to food drying R&D	Drying Technology	2022	40	12	2431	2432	
441	Sharma, S; Shrivastava, S; Kausley, SB; Rai, B; Pandit, AB	Coronavirus: a comparative analysis of detection technologies in the wake of emerging variants	Infection	2023	51	1	1	19	
442	Dhakate, MM; Joshi, JB; Khakhar, DV	Analysis of grinding in a spiral jet mill. Part 2: Semi-batch grinding	Chemical Engineering Science	2022	253				117544
443	Shiva, CK; Vedik, B; Mahapatra, S; Nandi, M; Raj, S; Mukherjee, V	Load frequency stabilization of stand-alone hybrid distributed generation system using QOHS algorithm	International Journal of Numerical Modelling-Electronic Networks Devices And Fields	2022	35	4			e2998
444	Mondal, S; Ghosh, S; Pari, A; Bhattacharyya, K; Bhowmick, AR; Khan, MR; Mukherjee, A	Unveiling the drivers of nematode community structure and function across rice agroecosystems	Applied Soil Ecology	2023	182				104715
445	Solanki, PD; Oza, MH; Jethwa, HO; Joshi, J; Joshi, G; Jayavel, R; Joshi, MJ	Nickel Pyrophosphate Nanoparticles: Synthesis, Structural, Thermal, Spectroscopic, and Dielectric Studies	Nano	2022	17	7			2250049
446	Chaudhari, PJ; Bari, SB; Surana, SJ; Shirkhedkar, AA; Bonde, CG; Khadse, SC; Ugale, VG; Nagar, AA; Cheke, RS	Discovery and Anticancer Activity of Novel 1,3,4-Thiadiazole- and Aziridine-Based Indolin-2-ones via In Silico Design Followed by Supramolecular Green Synthesis	Acs Omega	2022	7	20	17270	17294	
447	Santra, S; Ghosh, A; Mondal, A; Ali, SM; Das, D; Sarkar, K; Roy, L; Molla, MR	Stabilizing Entropically Driven Self-Assembly of Self-Immolate Polyurethanes in Water: A Strategy for Tunable Encapsulation Stability and Controlled Cargo Release	Acs Applied Polymer Materials	2022	4	10	7614	7625	
448	Bhowmik, A; Chunhavacharatorn, P; Bhargav, S; Malhotra, A; Sendrayakannan, A; Kharkar, PS; Nirmal, NP; Chauhan, A	Human Milk Oligosaccharides as Potential Antibiofilm Agents: A Review	Nutrients	2022	14	23			5112

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449	Ghumra, DP; Rathi, O; Mule, TA; Khadye, VS; Chavan, A; Barba, FC; Main, S; Odaneth, A; Thorat, BN	Technologies for valorization of municipal solid wastes	Biofuels Bioproducts & Biorefining-Biofpr	2022	16	3	877	890	
450	Jahagirdar, D; Yadav, S; Gore, M; Korpale, V; Mathpati, CS; Chidambaram, S; Majumder, A; Jain, R; Dandekar, P	Compartmentalized microfluidic device for in vitro co-culture of retinal cells	Biotechnology Journal	2022	17	9			2100530
451	Patel, R; Dube, A; Solanki, R; Khunt, D; Parikh, S; Junnuthula, V; Dyawanapelly, S	Structural Elucidation of Alkali Degradation Impurities of Favipiravir from the Oral Suspension: UPLC-TQ-ESH/MS/MS and NMR	Molecules	2022	27	17			5606
452	Das, S; Priyadarshini, P; Alagarasan, D; Vardhrajperumal, S; Ganesan, R; Naik, R	Role of tellurium addition on the linear and non-linear optical, structural, morphological properties of Ag60-xSe40Tex thin films for nonlinear applications	Journal of The American Ceramic Society	2022	105	5	3469	3484	
453	Sawant, KR; Sarnaik, AP; Savvashe, P; Hajinajaf, N; Poole, P; Varman, AM; Lali, A; Pandit, R	One cell-two wells bio-refinery: Demonstrating cyanobacterial chassis for co-production of heterologous and natural hydrocarbons	Bioresource Technology	2022	363				127921
454	Doriya, K; Kumar, DS; Thorat, BN	A systematic review on fruit-based fermented foods as an approach to improve dietary diversity	Journal of Food Processing And Preservation	2022	46	11			e16994
455	Gujar, SK; Divyapriya, G; Gogate, PR; Nidheesh, PV	Environmental applications of ultrasound activated persulfate/peroxymonosulfate oxidation process in combination with other activating agents	Critical Reviews In Environmental Science And Technology	2023	53	6	780	802	
456	Raghavan, V; Martynenko, A; Shirikole, SS	Role of drying in food quality, security, and sustainability	Drying Technology	2022	40	8	1499	1499	
457	Ghorai, N; Bhunia, S; Burai, S; Ghosh, HN; Purkayastha, P; Mondal, S	Ultrafast insights into full-colour light-emitting C-Dots	Nanoscale	2022	14	42	15812	15820	
458	Sable, DA; Gholap, A; Kommyreddy, SP; Fartade, DJ; Gharpure, SJ; Schulzke, C; Kapdi, AR	Heteroatom-Assisted Regio- and Stereoselective Palladium-Catalyzed Carboxylation of 9-Allyl Adenine	Journal of Organic Chemistry	2022					
459	Sangepu, VR; Sharma, D; Venkateshwarlu, R; Bhoomireddy, RD; Jain, KK; Kapavarapu, R; Dandela, R; Pal, M	In silico studies, sonochemical synthesis and biological evaluation of 4-substituted pyrimido[1,2-b]indazoles	Journal of Molecular Structure	2023	1273				134273
460	Sable, DA; Gholap, A; Kommyreddy, SP; Fartade, DJ; Gharpure, SJ; Schulzke, C; Kapdi, AR	Heteroatom-Assisted Regio- and Stereoselective Palladium-Catalyzed Carboxylation of 9-Allyl Adenine	Journal of Organic Chemistry	2022	87	19	12574	12585	

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461	Kumar, V; Mukherjee, J; Sinha, SK; Ghosh, U	Combined electromechanically driven pulsating flow of nonlinear viscoelastic fluids in narrow confinements	Journal of The Royal Society Interface	2022	19	189			20210876
462	Misra, S; Singh, P; Singh, AK; Roy, L; Kuila, S; Dey, S; Mahapatra, AK; Nanda, J	Tuning of the Supramolecular Helicity of Peptide-Based Gel Nanofibers	Journal of Physical Chemistry B	2022	126	51	10882	10892	
463	Hans, S; Kumar, N; Gohil, N; Khambhati, K; Bhattacharjee, G; Deb, SS; Maurya, R; Kumar, V; Reshamwala, SMS; Singh, V	Rebooting life: engineering non-natural nucleic acids, proteins and metabolites in microorganisms	Microbial Cell Factories	2022	21	1			100
464	Carpenter, J; Pinjari, DV; Saharan, VK; Pandit, AB	Critical Review on Hydrodynamic Cavitation as an Intensifying Homogenizing Technique for Oil-in-Water Emulsification: Theoretical Insight, Current Status, and Future Perspectives	Industrial & Engineering Chemistry Research	2022	61	30	10587	10602	
465	Patil, VL; Dalavi, DS; Dhavale, SB; Vanalakar, SA; Tarwal, NL; Kalekar, AS; Kim, JH; Patil, PS	Indium doped ZnO nanorods for chemiresistive NO2 gas sensors	New Journal of Chemistry	2022	46	16	7588	7597	
466	Pandiyaraj, KN; Vasu, D; Kandavelu, V; Pichumani, M; Yugeswaran, S; Deshmukh, RR	Degradation of isothiazolin-3-one's from an aqueous solution via a multipin nonthermal atmospheric pressure plasma and its toxicity analysis	Journal of Food Processing And Preservation	2022	46	10			e16461
467	Yadav, M; Yadav, A; Thorat, N; Varma, R; Pillai, S; Fernandes, R; Patel, R; Patel, N	Strategically fabricated Ag loaded Fe-g-C3N4 nanosheet for photocatalytic removal of aqueous organic pollutant	Optical Materials	2022	125				112043
468	Patil, VL; Dalavi, DS; Dhavale, SB; Tarwal, NL; Vanalakar, SA; Kalekar, AS; Kim, JH; Patil, PS	NO2 gas sensing properties of chemically grown Al doped ZnO nanorods	Sensors And Actuators A-Physical	2022	340				113546
469	Trimukhe, AM; Pandiyaraj, KN; Patekar, M; Miller, V; Deshmukh, RR	Perspectives and Advances of Nonthermal Plasma Technology in Cancers	IEEE Transactions On Plasma Science	2022	50	8	2489	2515	
470	Polu, AR; Singh, PK; Kumar, PS; Joshi, GM; Ramesh, T; Noor, IM; Madkhli, AY; Kakroo, S	Development of solid polymer electrolytes based on poly(ethylene oxide) complexed with 2-trifluoromethyl-4,5-dicyanimidazole lithium salt and 1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide ionic liquid for Li-ion batteries	High Performance Polymers	2023	35	1	4	9	



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471	Davison, N; Young, W; Ross, A; Cockerill, T; Rajput, S	Investigating the Impacts of Behavioural-Change Interventions and COVID-19 on the Food-Waste-Generation Behaviours of Catered Students in the UK and India	Sustainability	2022	14	9			5486
472	Shaikh, MF; Sathaye, S; Ahmad, WANW	Editorial: MSPP 34th scientific meeting: Pharmacological perspectives on natural products in drug discovery	Frontiers In Pharmacology	2022	13				1018161
473	Ingle, PU; Shende, SS; Shingote, PR; Mishra, SS; Sarda, V; Wasule, DL; Rajput, VD; Minkina, T; Rai, M; Sushkova, S; Mandzhieva, S; Gade, A	Chitosan nanoparticles (ChNPs): A versatile growth promoter in modern agricultural production	Heliyon	2022	8	11			e11893
474	Dhumal, DM; Patil, MU; Kulkarni, RV; Akamanchi, KG	Development and evaluation of amphiphilic heterolipid based pH-sensitive nanomicelles of doxorubicin	Journal of Drug Delivery Science And Technology	2022	68				103079
475	Mohapatra, SK; Marder, SR; Barlow, S	Organometallic and Organic Dimers: Moderately Air-Stable, Yet Highly Reducing, n-Dopants	Accounts of Chemical Research	2022	55	3	319	332	
476	Munde, A; Sharma, P; Dhawale, S; Kadam, RG; Kumar, S; Kale, HB; Filip, J; Zboril, R; Sathe, BR; Gawande, MB	Interface Engineering of SRu-mC3N4 Heterostructures for Enhanced Electrochemical Hydrazine Oxidation Reactions	Catalysts	2022	12	12			1560
477	Chakravarty, A; Ahmad, I; Singh, P; Aalam, G; Sagadevan, S; Ikram, S; Sheikh, MUD	Green synthesis of silver nanoparticles using fruits extracts of Syzygium cumini and their bioactivity	Chemical Physics Letters	2022	795				139493
478	Dutta, A; Mishra, DK; Kundu, D; Mahanta, U; Jiang, SP; Silvester, DS; Banerjee, T	Examining the Electrochemical Nature of an Ionogel Based on the Ionic Liquid [P66614][TFSI] and TiO <sub>2</sub> : Synthesis, Characterization, and Quantum Chemical Calculations	Industrial & Engineering Chemistry Research	2022	61	25	8763	8774	
479	Kumaran, A; Vashisith, R; Singh, S; Surendran; James, A; Chellam, PV	Biosensors for detection of organophosphate pesticides: Current technologies and future directives	Microchemical Journal	2022	178				107420
480	Bray, DG; Nahar, G; Grasham, O; Dalvi, V; Rajput, S; Dupont, V; Camargo-Valero, MA; Ross, AB	The Cultivation of Water Hyacinth in India as a Feedstock for Anaerobic Digestion: Development of a Predictive Model for Scaling Integrated Systems	Energies	2022	15	24			9599
481	Priyadarshini, P; Das, S; Alagarasan, D; Ganesan, R; Varadharajaperumal, S; Sahoo, S; Naik, R	The impact of fluence dependent proton ion irradiation on the structural and optical properties of Bi <sub>5</sub> In <sub>30</sub> Se <sub>65</sub> thin films for nonlinear optical devices	Rsc Advances	2022	12	8	5012	5026	

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482	Kumar, CMS; Singh, S; Gupta, MK; Nimdeo, YM; Raushan, R; Deorankar, A; Kumar, TMA; Rout, PK; Chanotiya, CS; Pakhale, VD; Nannaware, AD	Solar energy: A promising renewable source for meeting energy demand in Indian agriculture applications	Sustainable Energy Technologies And Assessments	2023	55				102905
483	Jejurkar, VP; Yashwantrao, G; Suryavanshi, A; Mone, N; Madiwal, V; Ware, AP; Pingale, SS; Satpute, S; Rajwade, JM; Saha, S	Rationally designed Troger's base decorated bis-carbazoles as twisted solid-state emitting materials and dead bacterial cell imaging	New Journal of Chemistry	2022	46	12	5730	5740	
484	Sahoo, D; Sahoo, S; Alagarasan, D; Ganesan, R; Varadharajaperumal, S; Naik, R	Proton Ion Irradiation on As40Se50Sb10 Thin Films: Fluence-Dependent Tuning of Linear-Nonlinear Optical Properties for Photonic Applications	Acs Applied Electronic Materials	2022	4	2	856	868	
485	Khan, ZS; Sodhi, NS; Fayaz, S; Wani, SA; Bhat, MS; Mishra, HN; Bakshi, RA; Dar, BN; Dhilon, B	Seabuckthorn seed protein concentrate: a novel seed protein; emulsifying properties as affected by ultrasonication and enzymatic hydrolysis	International Journal of Food Science And Technology	2023	58	3	1621	1630	
486	Paul, R; Warkad, IR; Arulkumar, S; Parthiban, S; Darji, HR; Naushad, M; Kadam, RG; Gawande, MB	Facile synthesis of nanostructured TiO2-SiO2 powder for selective photocatalytic oxidation of alcohols to carbonyl compounds	Molecular Catalysis	2022	530				112566
487	Ghadge, S; Shrivastava, S; Kausley, SB; Satpute, S; Badve, M; Pandit, AA; Rai, B; Pandit, AB	ANN modelling of Hydrodynamic Cavitation for the degradation of Rhodamine B dye	Journal of Water Process Engineering	2022	47				102759
488	Thraieb, JZ; Alterimi, AB; Abd Al-Manhel, AJ; Abedelmaksoud, TG; Abd El-Maksoud, AA; Madankar, CS; Cacciola, F	Production and Characterization of a Bioemulsifier Derived from Microorganisms with Potential Application in the Food Industry	Life-Basel	2022	12	6			924
489	Sampathi, S; Prajapati, S; Junnuthula, V; Dyawanapelly, S	Pharmacokinetics and Anti-Diabetic Studies of Glizalide Nanosuspension	Pharmaceutics	2022	14	9			1947
490	Polgár, M; Agarwal, C; Gogate, P; Németh, G; Csóka, L	Using CFD simulations to investigate the shear stress in hydrodynamic cavitation reactors coupled with experimental validation using colony count measurements	Scientific Reports	2022	12	1			18034
491	Qutub, N; Singh, P; Sabir, S; Sagadevan, S; Oh, WC	Enhanced photocatalytic degradation of Acid Blue dye using CdS/TiO2 nanocomposite	Scientific Reports	2022	12	1			5759
492	Zambare, RS; Song, XX; Bhuvana, S; Tang, CY; Prince, JSA; Nemade, PR	Ionic Liquid-Reduced Graphene Oxide Membrane with Enhanced Stability for Water Purification	Acs Applied Materials & Interfaces	2022	14	38	43339	43353	

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493	Khaimani, J; Bhatia, APS; Jeurkar, A; Rao, D; Chirmule, N; Misra, P; Kadam, R; Karuppieh, S; Seshadriathan, S; Sheth, S	Digital health initiatives can take better cognizance of marginalized communities in India	Journal of Global Health	2022	12				3069
494	Sarkar, A; Sodha, SJ; Junnuthula, V; Kolimi, P; Dyawanapelly, S	Novel and investigational therapies for wet and dry age-related macular	Drug Discovery Today	2022	27	8	2322	2332	
495	Serrano, JL; Gaware, S; Pérez, JA; Pérez, J; Lozano, P; Kori, S; Dandela, R; Sanghvi, YS; Kapdi, AR	Quadrol-Pd(II) complexes: phosphine-free precatalysts for the room-temperature Suzuki-Miyaura synthesis of nucleoside analogues in aqueous media	Dalton Transactions	2022	51	6	2370	2384	
496	Humbare, RB; Sarkar, J; Kulkarni, AA; Juwale, MG; Deshmukh, SH; Amalnerkar, D; Chaskar, M; Albertini, MC; Rocchi, MBL; Kamble, SC; Ramakrishna, S	Phytochemical Characterization, Antioxidant and Anti-Proliferative Properties of Rubia cordifolia L. Extracts Prepared with Improved Extraction Conditions	Antioxidants	2022	11	5			1006
497	Chavda, VP; Dawre, S; Pandya, A; Vora, LK; Modh, DH; Shah, VD; Dave, DJ; Patravale, V	Lyotropic liquid crystals for parenteral drug delivery	Journal of Controlled Release	2022	349		533	549	
498	Shaikh, MS; Hua, CC; Raj, S; Kumar, S; Hassan, M; Ansari, MM; Jatoti, MA	Optimal parameter estimation of 1-phase and 3-phase transmission line for various bundle conductor's using modified whale optimization algorithm	International Journal of Electrical Power & Energy Systems	2022	138				107893
499	Rout, S; Tambe, S; Deshmukh, RK; Mali, S; Cruz, J; Srivastav, PP; Amin, PD; Gaikwad, KK; Andrade, EHD; de Oliveira, MS	Recent trends in the application of essential oils: The next generation of food preservation and food packaging	Trends In Food Science & Technology	2022	129		421	439	
500	Bandaru, R; Rout, SR; Kamble, OS; Samal, SK; Gorain, B; Sahebkar, A; Ahmed, FJ; Kesharwani, P; Dandela, R	Clinical progress of therapeutics and vaccines: Rising hope against COVID-19 treatment	Process Biochemistry	2022	118		154	170	
501	Yadav, A; Verma, ON; Pandey, R; Jha, N; Singh, P	Ion dynamics and electrical transport in lanthanum silicate apatite (La <sub>9.67</sub> Si <sub>6</sub> O <sub>26.5</sub> )	Applied Physics A-Materials Science & Processing	2022	128	10			862
502	Dalai, AK; Nanda, S; Zheng, Y; Yadav, GD; Roberts, W; Dadyburjor, D	Preface for Special Issue on Green catalysis for the production and upgrading of clean fuels and chemicals	Catalysis Today	2022	404		1	2	
503	Acharyya, P; Ghosh, T; Pal, K; Rana, KS; Dutta, M; Swain, D; Etter, M; Soni, A; Waghmare, UV; Biswas, K	Glassy thermal conductivity in Cs <sub>3</sub> Bi <sub>2</sub> Cl <sub>6</sub> single crystal	Nature Communications	2022	13	1			

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
504	Jackson, HO; Taunt, HN; Mordaka, PM; Kumari, S; Smith, AG; Purton, S	CpPosNeg: A positive-negative selection strategy allowing multiple cycles of marker-free engineering of the Chlamydomonas plastome	Biotechnology Journal	2022	17	10			2200088
505	Pailla, SR; Sampathi, S; Junnuthula, V; Maddukuri, S; Dodoala, S; Dyawanapelly, S	Brain-Targeted Intranasal Delivery of Zotepine Microemulsion: Pharmacokinetics and Pharmacodynamics	Pharmaceutics	2022	14	5			978
506	Sharma, A; Sawant, RJ; Sharma, A; Joshi, JB; Jain, RK; Kasilingam, R	Valorisation of End-of-Life tyres for generating valuable resources under circular economy	Fuel	2022	314				123138
507	Kasarla, SS; Dodoala, S; Sampathi, S; Talluri, NK; Junnuthula, V; Dyawanapelly, S	Therapeutic Potential of Chrysin in Improving Bone Health	Applied Sciences-Basel	2022	12	17			8728
508	Pramanik, NB; Adiyala, V; Wang, WP; Liang, F; Ajayan, P; John, G	PEG-based polymer coated proppants in supercritical CO <sub>2</sub> : A new approach in current fracturing protocols	Journal of Applied Polymer Science	2023	140	1			
509	Sampathi, S; Tiriya, PK; Dodoala, S; Junnuthula, V; Dyawanapelly, S	Development of Biocompatible Ciprofloxacin-Gold Nanoparticle Coated Sutures for Surgical Site Infections	Pharmaceutics	2022	14	10			2130
510	Gera, S; Sampathi, S; Maddukuri, S; Dodoala, S; Junnuthula, V; Dyawanapelly, S	Therapeutic Potential of Naringenin Nanosuspension: In Vitro and In Vivo Anti-Osteoporotic Studies	Pharmaceutics	2022	14	7			1449
511	Qutub, N; Singh, P; Sabir, S; Umar, K; Sagadevan, S; Oh, WC	Synthesis of Polyaniline Supported CdS/CdS-ZnS/CdS-TiO <sub>2</sub> Nanocomposite for Efficient Photocatalytic Applications	Nanomaterials	2022	12	8			1355
512	Akkineni, R; Markandeya, SV; Prasad, AN; Yamajala, B; Rao, BV; Chaudhari, S; Kumar, D; Gadge, ST; Bhanage, BM	Rapid Synthesis of 1-Aryl-3,3-dimethyltriazenes by Using In Situ Generated Aryldiazonium Tetrafluoroborate Salts with DMF-DMA under Ambient Conditions	Chemistryselect	2022	7	48			e202203092
513	Bhoyar, T; Kim, DJ; Abraham, BM; Tonda, S; Manwar, NR; Vidyasagar, D; Umare, SS	Tailoring photoactivity of polymeric carbon nitride via donor-p-acceptor network	Applied Catalysis B-Environment And Energy	2022	310				121347
514	Kartik, S; Balsora, HK; Sharma, M; Saptoro, A; Jain, RK; Joshi, JB; Sharma, A	Valorization of plastic wastes for production of fuels and value-added chemicals through pyrolysis - A review	Thermal Science And Engineering Progress	2022	32				101316



Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
515	Kaur, J; Gulati, M; Jha, NK; Disouza, J; Patravale, V; Dua, K; Singh, SK	Recent advances in developing polymeric micelles for treating cancer: Breakthroughs and bottlenecks in their clinical translation	Drug Discovery Today	2022	27	5	1495	1512	
516	Raji, A; Vasu, D; Pandiyaraj, KN; Gbobeira, R; De Geyter, N; Morent, R; Misra, VC; Ghorui, S; Pichumani, M; Deshmukh, RR; Nadagouda, MN	Combinatorial effects of non-thermal plasma oxidation processes and photocatalytic activity on the inactivation of bacteria and degradation of toxic compounds in wastewater	Rsc Advances	2022	12	22	14246	14259	
517	Tiwari, SS; Bale, S; Das, D; Tripathi, A; Tripathi, A; Mishra, PK; Ekielski, A; Suresh, S	Numerical Simulations of a Postulated Methanol Pool Fire Scenario in a Ventilated Enclosure Using a Coupled FVM-FEM Approach	Processes	2022	10	5			918
518	Sirohi, U; Kumar, M; Sharma, VR; Teotia, S; Singh, D; Chaudhary, V; Priya, Yadav, MK	CRISPR/Cas9 System: A Potential Tool for Genetic Improvement in Floricultural Crops	Molecular Biotechnology	2022	64	12	1303	1318	
519	Alagarasan, D; Hegde, SS; Varadharajaperumal, S; Aadhavan, R; Naik, R; Shkir, M; Algarni, H; Ganesan, R	Effect of SnS thin film thickness on visible light photo detection	Physica Scripta	2022	97	6			65814
520	Saito, J; Agrawal, A; Patravale, V; Pandya, A; Orubu, S; Zhao, M; Andrews, GP; Petit-Turcotte, C; Landry, H; Croker, A; Nakamura, H; Yamatani, A; Salunke, S	The Current Status, Challenges, Ongoing Efforts, and Future Perspectives of Pharmaceutical Excipients in Pediatric Patients in Each Country and Region	Children-Basel	2022	9	4			453
521	Drugkar, K; Rathod, W; Sharma, T; Sharma, A; Joshi, J; Pareek, VK; Ledwani, L; Diwekar, U	Advanced separation strategies for up-gradation of bio-oil into value-added chemicals: A comprehensive review	Separation And Purification Technology	2022	283				120149
522	Syed, TA; Ansari, KB; Banerjee, A; Wood, DA; Khan, MS; Al Mesfer, MK	Machine-learning predictions of caffeine co-crystal formation accompanying experimental and molecular validations	Journal of Food Process Engineering	2023	46	2			
523	Wijayasinghe, YS; Bhansali, MP; Borkar, MR; Chaturbhuj, GU; Muntean, BS; Viola, RE; Bhansali, PR	A Comprehensive Biological and Synthetic Perspective on 2-Deoxy-D-Glucose (2-DG), A Sweet Molecule with Therapeutic and Diagnostic Potentials	Journal of Medicinal Chemistry	2022	65	5	3706	3728	
524	Tambe, S; Jain, D; Meruva, SK; Rongala, G; Juluri, A; Nihalani, G; Mamidi, HK; Nukala, PK; Bolla, PK	Recent Advances in Amorphous Solid Dispersions: Preformulation, Formulation Strategies, Technological Advancements and Characterization	Pharmaceutics	2022	14	10			2203

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
525	Junnuthula, V; Kolimi, P; Nyavanandi, D; Sampathi, S; Vora, LK; Dyawanapelly, S	Polymeric Micelles for Breast Cancer Therapy: Recent Updates, Clinical Translation and Regulatory Considerations	Pharmaceutics	2022	14	9			1860
526	Pieta, IS; Gieroba, B; Kalisz, G; Pieta, P; Nowakowski, R; Naushad, M; Rath, A; Gawande, MB; Sroka-Bartnicka, A; Zboril, R	Developing Benign Ni/g-C <sub>3</sub> N <sub>4</sub> Catalysts for CO <sub>2</sub> Hydrogenation: Activity and Toxicity Study	Industrial & Engineering Chemistry Research	2022	61	29	10496	10510	
527	Jaleh, B; Nasrollahzadeh, M; Eslamipour, M; Nasri, A; Shabanlou, E; Manwar, NR; Zboril, R; Fornasiero, P; Gawande, MB	The Role of Carbon-Based Materials for Fuel Cells Performance	Carbon	2022	198		301	352	
528	Balsora, HK; Kartik, S; Dua, V; Joshi, JB; Kataria, G; Sharma, A; Chakinala, AG	Machine learning approach for the prediction of biomass pyrolysis kinetics from preliminary analysis	Journal of Environmental Chemical Engineering	2022	10	3			108025
529	Sahoo, K; Khatri, P; Kanwar, A; Singh, HP; Mani, S; Bergman, R; Runge, T; Kumar, D	Integrated environmental and economic assessments of producing energy crops with cover crops for simultaneous use as biofuel feedstocks and animal fodder	Industrial Crops And Products	2022	179				114681
530	Rangaraj, N; Sampathi, S; Junnuthula, V; Kolimi, P; Mandati, P; Narala, S; Nyavanandi, D; Dyawanapelly, S	Fast-Fed Variability: Insights into Drug Delivery, Molecular Manifestations, and Regulatory Aspects	Pharmaceutics	2022	14	9			1807
531	Zussy, C; John, R; Urgin, T; Oraegui, L; Vigor, C; Acar, N; Canet, G; Vitalis, M; Morin, F; Planel, E; Oger, C; Durand, T; Rajshree, SL; Givalois, L; Devarajan, PV; Desrumaux, C	Intranasal Administration of Nanovectorized Docosahexaenoic Acid (DHA) Improves Cognitive Function in Two Complementary Mouse Models of Alzheimer's Disease	Antioxidants	2022	11	5			838
532	Bhoyar, T; Kim, DJ; Abraham, BM; Gupta, A; Maile, N; Manwar, NR; Tonda, S; Vidyasagar, D; Umare, SS	Accelerating NADH oxidation and hydrogen production with mid-gap states of nitrogen-rich carbon nitride photocatalyst	Isience	2022	25	12			105567
533	Kadam, RG; Ye, TN; Zaoralová, D; Medved, M; Sharma, P; Lu, YF; Zoppellaro, G; Tomanec, O; Otyepka, M; Zboril, R; Hosono, H; Gawande, MB	Intermetallic Copper-Based Electride Catalyst with High Activity for C-H Oxidation and Cycloaddition of CO <sub>2</sub> into Epoxides	Small	2022	18	38			2201712

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
534	Pardeshi, SR; Kole, EB; Kapare, HS; Chandankar, SM; Shinde, PJ; Boisa, GS; Salgaonkar, SS; Giram, PS; More, MP; Kolimi, P; Nyavanandi, D; Dyawanapelly, S; Junnuthula, V	Progress on Thin Film Freezing Technology for Dry Powder Inhalation Formulations	Pharmaceutics	2022	14	12			2632
535	Pandiyaraj, KN; Deshmukh, RR; Murphy, AB; Morent, R; Hyde, T; Lai, S; Taccogna, F; Gitomer, SJ	Guest Editorial Special Issue on Plenary, Invited, and Selected Papers From the Second International Conference on Advances in Plasma Science and Technology (ICAPST-21)	IEEE Transactions On Plasma Science	2022	50	6	1380	1381	
536	Smith, HL; Dull, JT; Mohapatra, SK; Al Kurdi, K; Barlow, S; Marder, SR; Rand, BP; Kahn, A	Powerful Organic Molecular Oxidants and Reductants Enable Ambipolar Injection in a Large-Gap Organic Homojunction Diode	Acs Applied Materials & Interfaces	2022	14	1	2381	2389	
537	Kasthurirangan, S; Gao, CZ; Dinh, PM; Gulyás, L; Suraud, E; Tribedi, LC	Observation of giant quadrupole plasmon resonance in C60 in fast ion collisions	Physical Review A	2022	106	1			12820
538	Prasher, P; Sharma, M; Singh, SK; Gulati, M; Patravale, V; Oliver, BG; Dua, K	Mucoadhesive particles: an emerging toolkit for advanced respiratory drug delivery	Nanomedicine	2022	17	12	821	826	
539	Kumbhar, P; Kole, K; Khadake, V; Marale, P; Manjappa, A; Nadaf, S; Jadhav, R; Patil, A; Singh, SK; Dua, K; Jha, NK; Disouza, J; Patravale, V	Nanoparticulate drugs and vaccines: Breakthroughs and bottlenecks of repurposing in breast cancer	Journal of Controlled Release	2022	349		812	830	
540	Khairnar, SV; Pagare, P; Thakre, A; Nambiar, AR; Junnuthula, V; Abraham, MC; Kolimi, P; Nyavanandi, D; Dyawanapelly, S	Review on the Scale-Up Methods for the Preparation of Solid Lipid Nanoparticles	Pharmaceutics	2022	14	9			1886
541	Kumbhar, P; Kole, K; Yadav, T; Bhavar, A; Waghmare, P; Bhokare, R; Manjappa, A; Jha, NK; Chellappan, DK; Shinde, S; Singh, SK; Dua, K; Salawi, A; Disouza, J; Patravale, V	Drug repurposing: An emerging strategy in alleviating skin cancer	European Journal of Pharmacology	2022	926				175031
542	Cheke, RS; Patel, HM; Patil, VM; Ansari, IA; Ambhore, JP; Shinde, SD; Kadri, A; Snoussi, M; Adnan, M; Kharkar, PS; Pasupuleti, VR; Deshmukh, PK	Molecular Insights into Coumarin Analogues as Antimicrobial Agents: Recent Developments in Drug Discovery	Antibiotics-Basel	2022	11	5			566

Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
543	Kulkarni, D; Damiri, F; Rojekar, S; Zehravi, M; Ramproshad, S; Dhoke, D; Musale, S; Mulani, AA; Modak, P; Paradhi, R; Vitore, J; Rahman, MH; Berrada, M; Giram, PS; Cavalu, S	Recent Advancements in Microneedle Technology for Multifaceted Biomedical Applications	Pharmaceutics	2022	14	5			1097
544	Kumbhar, P; Kolekar, K; Khot, C; Dabhole, S; Salawi, A; Sabei, FY; Mohite, A; Kole, K; Mhatre, S; Jha, NK; Manjappa, A; Singh, SK; Dua, K; Disouza, J; Patravale, V	Co-crystal nanoarchitectonics as an emerging strategy in attenuating cancer: Fundamentals and applications	Journal of Controlled Release	2023	353		1150	1170	
545	Agashe, D; Maheshwary, S; Pattanaik, JK; Prakash, J; Bhatt, P; Arya, SS; Chatterjee, S; Kumar, P; Singh, P; Abbas, N; Sharma, CS; Chaudhuri, CR; Devi, P	Career challenges for young independent researchers in India	Current Science	2022	122	2	135	143	
546	Abadi, LF; Damiri, F; Zehravi, M; Joshi, R; Pai, R; Berrada, M; Massoud, EE; Rahman, MH; Rojekar, S; Cavalu, S	Novel Nanotechnology-Based Approaches for Targeting HIV Reservoirs	Polymers	2022	14	15			3090
547	Corrie, L; Gulati, M; Awasthi, A; Vishwas, S; Kaur, J; Khursheed, R; Porwal, O; Alam, A; Parveen, SR; Singh, H; Chellappan, DK; Gupta, G; Kumbhar, P; Disouza, J; Patravale, V; Adams, J; Dua, K; Singh, SK	Harnessing the dual role of polysaccharides in treating gastrointestinal diseases: As therapeutics and polymers for drug delivery	Chemico-Biological Interactions	2022	368				110238
548	Pardeshi, S; Damiri, F; Zehravi, M; Joshi, R; Kapare, H; Prajapati, MK; Munot, N; Berrada, M; Giram, PS; Rojekar, S; Ali, F; Rahman, MH; Barai, HR	Functional Thermoresponsive Hydrogel Molecule to Material Design for Biomedical Applications	Polymers	2022	14	15			3126
549	Kumar, M; Zhang, BH; Potkule, J; Sharma, K; Radha; Hano, C; Sheri, V; Chandran, D; Dhupal, S; Dey, A; Rais, N; Senapathy, M; Natta, S; Viswanathan, S; Mohankumar, P; Lorenzo, JM	Cottonseed Oil: Extraction, Characterization, Health Benefits, Safety Profile, and Application	Food Analytical Methods	2023	16	2	266	280	



Sr.	Authors	Article Title	Source Title	Pb. Yr.	Vol.	Issue	Start Pg.	End Pg.	Article No.
550	Damiri, F; Rahman, MH; Zehravi, M; Awaji, AA; Nasrullah, MZ; Gad, HA; Bani-Fwaz, MZ; Varma, RS; Germoush, MO; Al-malky, HS; Sayed, AA; Rojekar, S; Abdel-Daim, MM; Berrada, M	MXene (Ti3C2Tx)-Embedded Nanocomposite Hydrogels for Biomedical Applications: A Review	Materials	2022	15	5			1666
551	Waghmare, R; Kumar, M; Yadav, R; Mhatre, P; Sonawane, S; Sharma, S; Gat, Y; Chandran, D; Radha; Hasan, M; Dey, A; Sarkar, T; Banwo, K; Alao, M; Balakrishnan, J; Suryawanshi, D; Lorenzo, JM	Application of ultrasonication as pre-treatment for freeze drying: An innovative approach for the retention of nutraceutical quality in foods	Food Chemistry	2023	404				134571
552	Kumar, M; Selvasekaran, P; Kapoor, S; Barbhai, MD; Lorenzo, JM; Saurabh, V; Potkule, J; Changan, S; Elkelish, A; Selim, S; Sayed, AAS; Radha; Singh, S; Senapathy, M; Pandiselvam, R; Dey, A; Dhumal, S; Natta, S; Amarowicz, R; Kennedy, JF	Moringa oleifera Lam. seed proteins: Extraction, preparation of protein hydrolysates, bioactivities, functional food properties, and industrial application	Food Hydrocolloids	2022	131				107791



# [ INCOME & EXPENDITURE, BALANCE SHEET ]



# INSTITUTE OF CHEMICAL TECHNOLOGY

(Deemed University Under Section 3 of the UGC Act 1956)

Nathalal Parekh Marg, Matunga, Mumbai-400019

## INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2023

Amount (Rs.) As on 31st March 2022	Particular's	SCH	Amount (Rs.) As on 31st March 2023
	<b>INCOME :</b>		
24,26,57,081	Salary Grant	1	30,35,46,510
15,53,03,483	Income from fees	2	17,47,37,757
55,80,643	Interest		1,64,07,327
4,56,95,422	Consultancy fees		5,38,33,259
2,12,30,525	Other Income	3	2,56,09,611
12,81,87,804	Transfer to the extent of Depreciation		13,49,77,383
<b>59,86,54,958</b>	<b>TOTAL INCOME</b>		<b>70,91,11,847</b>
	<b>EXPENDITURE :</b>		
33,47,19,837	Salary	4	40,82,37,205
56,01,609	Examination expenses	5	73,04,228
1,94,27,711	Repairs and Maintenance	6	1,63,91,323
10,74,75,570	Operating & Administrative Expenses	7	11,99,40,461
	<b>Depreciation:</b>		
3,32,27,574	On ICT & Hostel Assets		3,09,19,919
1,30,63,936	On Teqip Assets as per contra		1,07,38,015
11,51,23,868	On Other Assets as per contra		12,42,39,368
<b>62,86,40,105</b>	<b>TOTAL EXPENSES</b>		<b>71,77,70,519</b>
<b>(2,99,85,147)</b>	<b>SURPLUS/ (DEFICIT)</b>		<b>(86,58,672)</b>
	<b>Appropriations:</b>		
3,15,93,631	Development Reserve (50% of Development Fees)		2,91,15,310
45,69,542	Faculty Development Reserve (10% of Consultancy Fees)		53,83,325
	<b>Teqip Mandated Funds</b>		
+	Teqip Corpus Fund		+
+	Teqip Faculty Development Fund		+
+	Teqip Equipment Replacement Fund		+
+	Teqip Maintenance Fund		+
	<b>Prior Period Adjustments</b>		
2,30,46,984	Balance of Teqip II Written Off		+
2,31,96,445	GST of earlier years		+
<b>(11,23,91,749)</b>	<b>AMOUNT TRANSFERRED TO GENERAL RESERVES</b>		<b>(4,31,57,307)</b>
<b>(2,99,85,147)</b>			<b>(86,58,672)</b>

As per our Report of Even date

For DSK & Associates

Chartered Accountants

Firm Registration No. 1167710W

P.G.DUBE

Partner

M. No. : 036288

Place: Mumbai

[Date : 28th October, 2023]



For Institute of Chemical Technology

Matunga, Mumbai Campus

*[Signature]*  
AR (F&A) Registrar Vice Chancellor

**INSTITUTE OF CHEMICAL TECHNOLOGY**

(Deemed University Under Section 3 of the UGC Act 1956)

Nathal Parekh Marg, Matunga, Mumbai-400019

**BALANCE SHEET AS ON 31ST MARCH 2023**

Amount (Rs.) As on 31st March 2022	Particular's	SCH	Amount (Rs.) As on 31st March 2023
	<b><u>SOURCES OF FUNDS:</u></b>		
1,83,84,609	<b>ORIGINAL CORPUS</b>		1,83,84,609
1,60,46,60,527	<b>RESERVES</b>	A	1,67,83,83,057
2,52,24,38,095	<b>EARMARKED FUNDS</b>	B	2,55,02,72,702
1,90,63,45,089	<b>DEPRECIATION FUND</b>	C	2,07,22,42,416
-			-
<b>6,05,18,28,320</b>	<b>TOTAL</b>		<b>6,31,92,82,784</b>
	<b><u>APPLICATION OF FUNDS:</u></b>		
	<b><u>FIXED ASSETS</u></b>		
-			-
3,00,95,72,834	Gross Block	D	3,28,61,63,928
46,30,73,580	Capital Work in Progress		46,30,73,580
2,19,22,69,735	<b><u>INVESTMENTS</u></b>	E	1,98,45,32,314
	<b><u>CURRENT ASSETS,</u></b>		
	<b><u>LOANS &amp; ADVANCES</u></b>		
20,70,24,034	Salary Grant receivable		25,01,82,373
47,58,57,302	Advances ,Deposits and Recievables	F	76,97,80,104
13,65,89,719	Cash & Bank Balances	G	10,05,78,719
81,94,71,055			1,12,05,41,196
	<b>LESS: <u>CURRENT LIABILITIES &amp; PROVISIONS</u></b>		
-			-
1,39,13,085	Earnest Money	H	1,63,64,850
5,76,38,650	Providend Fund (PF)	I	5,99,28,905
36,10,07,150	Other Liabilities	J	45,87,34,479
43,25,58,885			53,50,28,234
38,69,12,171	<b><u>NET CURRENT ASSETS</u></b>		58,55,12,962
<b>6,05,18,28,320</b>	<b>TOTAL</b>		<b>6,31,92,82,784</b>

As per our Report of Even date

For DSK &amp; Associates

Chartered Accountants

Firm Registration No: 117710W

P. G. DUBE

Partner

M. No. : 036288

Place: Mumbai

Date : 28th October, 2023

For Institute of Chemical Technology

(Matunga, Mumbai Campus)

AR (F&A)

Registrar

Vice Chancellor







# ASSOCIATIONS, ENDOWMENTS AND PLACEMENT







## TECHNOLOGICAL ASSOCIATION

Technological Association (TA) is the student body of ICT that conducts co-curricular and extra-curricular activities throughout the academic year. The 32-member strong team is presided by the Vice-Chancellor, Prof. A. B. Pandit, while Dean- Student and Alumni Affairs who is ex-officio Vice President. Cultural activities, including those related to music, dance, art, literature are organized by the different clubs under TA. On-campus, award winning festivals are also held such as the annual technical festival of the institute, **Vortex**, that allows students from all over the country to present their innovative ideas and research work and also solve industry defined problems. The annual inter-college cultural festival, **MANZAR** has a plethora of programs, specifically concerts and workshops that serve to enrich the cultural aspect of the institute. The intra-college festival, **FunTech**, is one of the oldest event on campus and involves several sporting and cultural events for all the students ICT. **SportSaga** is the annual inter-college sports festival of the institute that includes both, mainstream sporting as well as informal events and also conducts the trademark ICT Marathon each year.

Marathi Literary Association of Institute of Chemical Technology popularly known as **MANTHAN** is one the oldest club of TA started in 1980. It conducts various kinds of programs every year based on Marathi literature to inculcate and develop liking towards the native state language, Marathi. MANTHAN upholds rich tradition of presenting quality programs. **Sports Club** conducts numerous sports activities with sole aim to promote sports, fitness and team spirit. The events include inter-college tournaments of numerous sports, adventures like mid-night cycling, monsoon trek and faculty games etc. The **TEDx club** organizes activities such as TEDxMAS, MotivaTED and several inspiring talks by renowned personalities.

The in-house technical journal, **Bombay Technologist** is also run under the purview of the TA and encourages the art of scientific writing among students. **Entrepreneurship Cell** (E-Cell) was also launched recently that serves to enhance the entrepreneurial culture at ICT. The TA also addresses student grievances and serves as a link between the faculty members and the students.

## UDCT ALUMNI ASSOCIATION

UDCT Alumni Association (UAA) ([udctalumni.org.in/](http://udctalumni.org.in/)) was formed in 1989 to foster fellowship and provide a forum to bring together the alumni of ICT, its past and present faculty members on a common platform. A major activity of the UAA is to promote infrastructure growth at ICT including development of laboratories and also to support student growth both academic and co-curricular. UAA also promotes the activities of the ICT in India and abroad as well as institutes awards and fellowships to alumni/well wishers. For the last over 30 years, UAA has striven hard to achieve its objectives with valuable and timely support of the members, well wishers. UAA currently has more than 6700 life members and 14 Patron members. UAA plays a major role in following specific domains:

### 1. Providing direct financial assistance to ICT :

- To support infrastructure development of the institute
- To support student activities organized by Technological Association
- To support needy students in the form of loans, which students can pay back in installments after graduation
- To provide books in special areas such as management and also assisting the library facilities

### 2. Enhancing studentship at ICT :

- Sponsoring factory visits
- Arranging lectures, seminars, symposia, workshops
- Awarding best students of ICT for their meritorious performance



- Supporting the Training and Placement Service to the ICT current students.
  - Encouraging, promoting, supporting providing, spreading and arranging for education and research in Chemical Technology, Chemical Engineering, Pharmaceutical Sciences and related Basic Sciences, Management studies and related topics.
  - A Certificate Course in Practice of Chemical Technology is fully run and supported by UAA specially for the third year undergraduate students with an objective of career guidance and enhancing the knowledge on the practical aspects
  - The Postgraduate Diploma Course in Chemical Technology Management (CTM) for the Ph.D. students in ICT is also supported by UAA.
- 3. Organizing Institution level events :**
- Technology Day and UAA foundation day event where UAA Distinguished Alumnus awards are given to alumni for their contributions to entrepreneurship and professional development In addition, UAA Young achiever award is also given to alumni below the age of 35 years for their exceptional professional achievements
  - UAA Annual Day celebrations where UAA Distinguished Alumnus awards are given in the category of Academics, Research and extra mural
  - UAA also assists in organization of ICT Foundation and Annual day
- 4. Managing the Alumni Network : Managing the database of all alumni**
- Managing the database of all alumni
  - Increasing UAA Membership Maintaining UAA Website
  - Issuing UAA bulletins.
- 5. UAA Chapters**
- UAA has local chapters in the country at Ahmedabad, Ankleshwar, Delhi NCR region, Hyderabad, Kolhapur, Marathwada, Pune, Tarapur and Vapi as well as abroad in China, UK, USA (Atlanta, Houston and Bay area), Singapore, and Thailand

## CULTURE OF ENDOWMENTS

The ICT has sanctioned positions of 108 faculty (29 Professors, 38 Associate Professors and 41 Assistant Professors) and a support staff of 240. The ICT has a tradition of establishment of endowments with an objective of supporting faculty positions, foreign travel assistance, merit-cum-means scholarships, staff welfare, library, campus development, research fellowships and seed money for research by young faculty. There are 90 endowments in the Institute. All these endowments have been established through generous donations by alumni, industries, philanthropists and well-wishers. Only part of the interest (up to 50-70%) is used towards the purpose of the endowment and the remaining is ploughed back into the corpus allowing it to grow with time.

### 5.3.1 FACULTY ENDOWMENTS

1. R.T. Mody Professor of Chemical Technology and Director (1933)
2. Sir Dorabji Tata Reader in Pharmaceutical Chemistry (1943)
3. Singhanee Reader in Chemical Engineering (1936)
4. Singhanee Lecturer in Chemical Engineering (1936)
5. Singhanee Lecturer in Pharmacy (1943)
6. Singhanee Lecturer in Paint Technology (1946)
7. Singhanee Associate Lecturer in Chemical Engineering (1936)
8. Singhanee Associate Lecturer in Food Technology (1945)
9. Sir Homi Mehta Reader in Oil Technology (1943)
10. Sir Homi Mehta Associate Lecturer in Food Technology (1943)
11. Darbari Seth Professor of Inorganic Chemical Technology (1995)
12. BPCL Professor of Chemical Engineering (2001) Changed to Bharat Petroleum Distinguished Professor of Chemical Engineering
13. V.V. Mariwala Chair in Chemical Engineering (2004)

14. J.G. Kane Chair of Oil Technology (2008)
15. M.M.Sharma Distinguished Professor of Chemical Engineering (2009)
16. Narotam Sekhsaria Distinguished Professor of Chemical Engineering (2009)
17. R.A. Mashelkar Chair of Chemical Engineering (2009)
18. K.V.Mariwala-J.B. Joshi Chair of Chemical Engineering (2009)
19. Gunavati Kapoor Chair in Pharmaceutical Technology (2009)
20. Dr. John Kapoor lecturer in Pharmaceutical Technology (2010)
21. RCF Professor of Chemical Engineering (2012)
22. Dr. B. P. Godrej Distinguished Professor of Green Chemistry and Sustainability Engineering (2015)

### **VISITING PROFESSORS/FELLOWS/LECTURERS/ORATIONS ENDOWMENTS**

There are 50 endowments which have helped us immensely in attracting the best professionals to the Institute from all over the world who have interacted with UG and PG students, faculty and alumni. The honoraria range from Rs. 5000 to 1.25 lakhs for a period of one day to 15 days. Some eminent faculty from institutes such as MIT, Purdue, Cambridge, Monash, UC Berkeley, UCSB, Montreal have taught UG and PG Programmes in ICT under these endowments. These lectures form part of audit courses for research students. Besides this public lectures are organized under each endowment. All departments have been benefitted and the list is as follows:

#### **1. GENERAL**

1. Professor B.D. Tilak Distinguished Lectureship
2. Professor B.D. Tilak Visiting Fellowships.
3. Golden Jubilee Visiting Fellowships.
4. Late Dr. Balwant S. Joshi Distinguished Visiting Professor/ Indian Scientist in Chemical Engineering / Chemical Technology / Applied Chemistry
5. Shri. B. S. Rajpurohit Visiting Faculty and Oration
6. Shri D. M. Trivedi Lecture in Green Chemistry and Technology
7. Late Professor W. B. Achwal Oration
8. Late Dr. Balwant S. Joshi Lectureship in Organic Chemistry (including chemistry of Natural Products)/ Bio-organic Chemistry/Biotechnology - A Technologist responsible for the development of Indian Chemical Industry.

#### **2. DEPARTMENT OF CHEMICAL ENGINEERING**

9. Dr. G.P. Kane Visiting Professorship in Chemical Engineering.
10. The Dow Professor M.M. Sharma Distinguished Visiting Professorship in Chemical Engineering.
11. Shri V.V. Mariwala Visiting Professorship in Chemical Engineering
12. Shri G.M. (alias Dada) Abhyankar Memorial Distinguished Fellowship in Chemical Engineering
13. Professor R.A. Rajadhyaksha Memorial Lecture series.
14. Shrimati Kusumben and Shri Mathradas Kothari Visiting Professorship in Chemical Engineering
15. K. J. Somaiya Visiting Professor of Chemical Engineering
16. Professor Arun S. Mujumdar Visiting Fellowship

#### **3. DEPARTMENT OF SPECIALITY CHEMICAL TECHNOLOGY**

17. K.H. Kabbur Memorial Silver Jubilee Lectureship.
18. Professor K. Venkatraman Lectureship.
19. Pidilite Industries Ltd. Visiting fellow in Speciality Chemical Science & Technology.
20. Dr. KKG Menon Memorial Lecture
21. Sauradip Chemical Industries Pvt. Ltd. Visiting Fellow in the areas of Speciality Chemical Technology and Textiles Processing Technology”

- 4. DEPARTMENT OF FIBRES AND TEXTILE PROCESSING TECHNOLOGY**
  22. Professor G.M. Nabar Endowment Lectureship.
  23. L.N. Chemicals ICT Diamond Jubilee Visiting Fellow
  24. Class of 1966 Visiting Fellowship.
  25. Sauradip Chemical Industries Pvt. Ltd. Visiting Fellow in the areas of Speciality Chemical Technology and Textiles Processing Technology”
- 5. DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY**
  26. Professor A. Sreenivasan Felicitaton Lectureship.
  27. Marico Industries Visiting Fellowship
  28. ICT - Lupin Visiting Fellowship for Bioprocess Technology
- 6. DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY.**
  29. Professor J.G. Kane Visiting Professorship in Chemical Technology
  30. Professor J.G. Kane Memorial Lectureship
- 7. DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY**
  31. CIPLA Distinguished Visiting Fellowship in Pharmaceutical Sciences
  32. Themis Medicare - ICT Diamond Jubilee Distinguished Fellowship in Pharmaceutical Sciences
  33. Professor (Mrs.) Malati R. Baichwal Visiting Fellowship in Pharmaceutical Science and Technology
  34. AAIPS- Dr. R. S. Baichwal Pharmaceutical Seminar
  35. Dr. S. K. Pradhan Endowment
  36. Professor V. M. Kulkarni Endowment Fund in Pharmaceutical Science and Technology
- 8. DEPARTMENT OF POLYMER ENGINEERING AND TECHNOLOGY AND DEPARTMENT OF SURFACE COATING TECHNOLOGY**
  37. Shri K. S. S. Raghavan - Chemical Weekly Visiting Professorship in Polymer Science and Technology
  38. Indian Plastics Institute (IPI)-ICT Diamond Jubilee Visiting Fellowship in Polymer Processing
  39. Chemimpex Rastogi-ICT Diamond Jubilee Visiting Fellowship in Surface Coatings.
  40. Synpol-ICT Diamond Jubilee Distinguished Visiting Fellow in Science & Technology of Pigment
  41. Tipco-ICT Diamond Jubilee Distinguished Visiting Fellow in Thermosets
  42. Jayvee Organics & Polymers(P)Ltd. Visiting Fellowship in Polymer Additives and Compounding
  43. Shri. Parmanand F. Parikh Endowment
  44. Shri. B. S. Rajpurohit Visiting Professorship in Polymer Science and Technology
  45. Sauradip Chemical Industries Pvt. Ltd. Visiting Fellowship
- 9. DEPARTMENT OF CHEMISTRY**
  46. Dai-Ichi Karkaria Ltd. Visiting Fellowship
  47. The Dharamsi Morarji Chemical Co. Visiting Fellowship in Chemistry
  48. The (Late) Shri. G.D.Gokhale Endowment Lectureship
  49. Spinco-Biotech - Ramanathan Lectureship
- 10. DEPARTMENT OF PHYSICS**
  50. Dr. Mooljibhai Shivabhai Patel Trust Visiting Fellowship in Polymer Physics

## **MERIT-CUM-MEANS FIANANCIAL ASSISTANTSHIPS FOR UG STUDENTS FROM ICT- MUMBAI CAMPUS, INTEGRATED M. TECH. STUDENTS FROM ICT- IOCB CAMPUS AND ICT - MARJ CAMPUS FOR THE YEAR 2022-2023**

The ICT supports 251 students under merit-cum-means financial assistantship. The range is Rs. 3000/- to Rs. 1,00,000/- per annum per person through several endowments, private trust and annual commitments by alumni. All economically deprived students are given assistance in the form of tuition fees, hostel fees, mess bills and travel assistance to present papers in national conferences. The names of various Merit-cum-Means Scholarships is given below.

### **I. GENERAL SCHOLARSHIPS**

1. M. S. Patel Trust Merit-cum-Means Scholarship (Three) (Value of Rs. 5,000/- each.)
2. Smt. Badamidevi Chiranjilal Murarka Charity Trust Merit-cum-Means Scholarship (One) (Value of Rs. 3,600/-)
3. Sohrab Mistry Merit-cum-Means Scholarship (One) (Value of Rs. 5,000/- each.)
4. Perin & Jal Khan Merit-cum-Means Scholarship (Three)(Value of Rs. 3,600/- each.)
5. Smt. Parvathy Sitaram Merit-cum-Means Scholarship (One) (Rs. 4,500/- each.)
6. Druman M. Trivedi Merit-cum-Means Scholarship (Two)(Value of Rs. 3,600/- each.)
7. S.L. Venkiteswaran Merit-cum-Means Scholarship (Two) (Value of Rs. 4,500/-each)
8. Late Dr. (Mrs.) Mahalaxmi Bhagwat Merit-cum-Means Scholarship (One) (Value of Rs. 3,600/-)
9. Prof. A.N. Kothare Scholarship (Two) (only for first year, HSC Mumbai Board preferred) (Value of Rs. 5,000/- each)
10. Rukmani and Nagraj Rao Memorial Merit-Cum-Means Scholarship (One) (Value of Rs. 4,000/-)
11. Dr. D.D. Haldavnekar Merit-Cum-Means Scholarship (Three) (Value of Rs.1800/- each.)
12. Smt. Kamala Sankhe Scholarship for girl student (Four) (Value of Rs. 10,000/- each.)
13. Smt. Anuradha Deshmukh Memorial Scholarship (Two) (Value of Rs. 7000/- each.) (One Chem. Engg., OneB.Tech., Girl mostly from hostel)
14. Ramnath Holkar Merit cum Means Scholarship AND Yashvant Holkar Merit cum Means Scholarship(Two) (Value of Rs. 10,000/- each.) (One Chem. Engg., OneB.Tech.)
15. Dr. M.G. Palekar Merit cum Means Scholarship

### **II. DEPARTMENT OF DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY, DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY AND DEPARTMENT OF POLYMER AND SURFACE ENGINEERING**

1. Fine Organic Industries Merit-cum-Means Scholarship (Three) (Rs.4500/-each) amount to be decided each year. For the dept. of oil, food and polymer.
2. Kamani Oils Merit-Cum Means Scholarship (two) (Value of Rs. 25,000/- each) (for student from Final Year B.Tech. (Oils) and Final Year B. Tech. (Foods)

### **III. DEPARTMENT OF CHEMICAL ENGINEERING**

1. Gogri Brothers Scholarship (Four) (value of Rs. 3,000/- each.)
2. Hemraj Lalji Meishry Scholarship (Two) (Value of Rs. 3,000/- each)
3. Dr. Nandkumar Kochar & Raj Kumar Kochar Trust Scholarship (Two)(Value of Rs. 1,000/- each.)(one from S.Y. and one from T.Y. Chem Engg.)
4. Purbhudas Jeevandas Mint Road Wadi Trust Scholarship (Four) (Rs. 3,500/- each).
5. Y. T. Shah Merit-cum-Means Scholarship (One) (Value of Rs. 2,000/-)
6. Vaishnomal Malhotra - K.K. Malhotra Merit-cum-Means Scholarships (Two) (Value of Rs. 9,000/- each)
7. Head Master Muthuswami Merit-cum-Means Scholarship (One) (Value of Rs. 1850/-)
8. Rajendra G. Sardesai Scholarship (Four) (Value of Rs. 10,000/- each)
9. B. Chem. Engg Class of 1962 (Six) (Rs. 5,000/- each).



10. Andanallur Srinivasa Venkatesan & Ranganayaki Scholarship (One) (Rs.3,000/-)
11. Daisy Navaroze Baria Scholarship (One) (Rs. 1,000/-)
12. Dr. Surendra R. Gupta Scholar Endowment fund and Merit Cum Means Scholarship. The Scholarship shall be offered every alternate year, so there are no more than two students being supported concurrently at any point in time. The Scholarship support stands revised to Rs. 75,000 per year per recipient for the duration of the four year course as follows: Rs. 25,000/- per year for living expenses such as Lodging & Boarding, Travel costs etc. to be given as an outright Scholarship (grant). Rs. 50,000/- per year towards tuition fees and related expenses to be given as an interest Free Loan Scholarship.
13. Sarojben and Pratapray Shah Memorial Scholarship (Six) (Value of Rs.75,000/- p.a. each)
14. Shri Kantilal Ajmera Merit cum Means Scholarship (one) (Value of Rs. 5,000/- p.m.) (Only for one UG student of Chem. Engg.)
15. UDCT B. Chem. Engg. Batch 1992 (One) (Rs. 75,000/-)
16. 1978 B. Chem. Engg. batch scholarship (a) 2 x 50,000/- each to Final year Chemical Engineering student passing out from Third year who is in top 10 ranks and also financially poor.
17. Prasad and PoojaMuralik Merit cum Means Scholarship for Chemical Engineering Students (Two)(Value of Rs. 5,000/- p.a.)
18. "Scholarship from anonymous alumni from the 1978 B. Chem. Engg. batch" (by Mr. GautamShahani)(One) (Value of Rs. 75,000 p.a.) (Only for one needy UG student of Chem. Engg.)
19. 1975 B. Chem. Engg. Batch Fund for Merit cum Means Scholarship (Chem. Engg. Dept. only) decide on the balance availability of the fund.
20. "Ganapati Ram Scholarship Fund" -1994 Chem. Engg. Batch Merit cum Means Scholarship (Mr. ChandrashekharSonwane) Select One or two students from First Year Chem. Engg. Preferably among top 20% of the CET based General Admission Merit list and having limited financial resources will receive Rs. 1,40,000/- each.

#### **IV. LOAN SCHOLARSHIPS**

1. B. Chem. Engg. Class of 1982 (Two) (Value of Rs. 50,000/- each.)

#### **V. DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY**

1. Castrol Merit-cum-Means Scholarship (Two) (Value of Rs. 4,500/- each)
2. G.M. Alias Abhyankar Merit-cum-Means Scholarship (Three) (Rs.4,000/-)
3. Shri Keshao Bapurao Kulkarni Scholarship (for one UG student of Dept. of Oils) (Rs. 7500/-)
4. Professor D. R. Rebello Endowment Scholarship (One UG student from Oils Dept. only) (Rs. 5,000/-)

#### **VI. DEPARTMENT OF FIBRES AND TEXTILE PROCESSING TECHNOLOGY**

1. Perin & Jal Khan Merit-cum-Means Scholarship (Two) (Value of Rs. 4,000/- each).
2. Mr. Dinshah B. Katrak & Mrs. Goolcheher D. Katrak Merit-cum- Means Scholarship (One) (Value of Rs. 2,000/-)

#### **VII. DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY**

1. "Professor P.J. Dubash Memorial – AFST (I), Mumbai Chapter Endowment Scholarships" (One) (Value of Rs. 20,000/-) for UG B.Tech. student in FET (Food Engineering and Technology Department).

#### **VIII. DEPARTMENT OF POLYMER AND SURFACE ENGINEERING**

1. Kumar R. Basu Memorial Merit-cum-Means Scholarship (Two) (Rs. 3,500/- each) (only PPV)
2. Synpol Memorial Scholarship (Five) (Rs. 3,500/- each.)
3. "Ms. Swati Balwant Bhagwat Merit-cum-means Scholarship" for ONE girl student who has passed first year B. Tech. examination in Dept. of Polymer and Surface Engineering and Technology (Rs. 5000/-)

#### **IX. DEPARTMENT OF SPECIALITY CHEMICALS TECHNOLOGY**

1. Colour Chem. Ltd. Merit-cum-Means Scholarship (One) (Value of Rs. 3,600/-)
2. Dr. Kishore Manilal Shah Endowment Merit cum Means Scholarship in Speciality Chemical Technology (for one UG student from First to Final Year) (Value of Rs. 4400/-)

#### **X. DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY**

1. Dr. Krishna S. Manudhane Merit-Cum-Means Scholarship (Three) (Rs.1,800/- each)
2. Dr. R.K. Dhote Charitable Trust Merit-Cum-Means Scholarship (Four) (Rs. 3,600/- each.)
3. Dr. Dhiren and Kailas Thakker Endowment Scholarship (Four) (Rs.15,000/-each.) (only for student from First to Final year B. Pharm. and B.Tech. (Pharma))

#### **XI. GENERAL SCHOLARSHIPS ON YEAR TO YEAR BASIS**

1. Gunvati Jagan Nath Kapoor Merit Cum Means Scholarship (40) (out of forty 20 for B. Pharm. students) (Value of Rs. 45,000/- each) from I, II, III, & IV year B.Tech. (Pharma), B.Tech. (Other Branches), B. Pharm and B.Chem. Engg., B. Pharm. Pharmaceutical Sciences and Technology, B.Tech. Other Branches, B.Chem. Engg.
2. Mr. Rajen Mariwala Merit-Cum-Means Scholarship (One) (Value of Rs. 9,000/-)
3. Ambuja Cement Merit-Cum-Means scholarship (Fifteen) (Rs. 10,000/- each).
4. Sandra Shroff Merit-Cum-Means Scholarship (Ten) (Value of Rs.20,000/- each).
5. "Dr. Purushottam Janardan Kangle Merit-cum-means Scholarship" for SEVEN students from B.Tech. (Textile) and B.Tech. (Dyesstuff) (Rs. 3000/- each.)

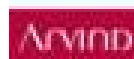
#### **XII. SCHOLARSHIPS AWARDED DIRECTLY BY THE OUTSIDE TRUST**

1. Excellence Award of Rs. 1,00,000/- and Certificate of Merit under the Narotam Sekhsaria Foundation (NSF) Scholarship Programme for Undergraduate studies in Engineering Rs. 50,000/-
2. Vishwanath Dore Scholarship (C/o ASRA Scholarship) (One) (Value decided by trust)
3. Arvind Memorial Scholarship (ASRA) (one) (only for F.Y. Chem. Engg. Student who have scored highest marks in chemistry at HSC examination) (Value decided by trust)
4. ISCMA Merit Cum Means Scholarship
  - i) Dyes – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
  - ii) Oils – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
  - iii) Textile – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
  - iv) Surface coating – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
  - v) Polymer – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
  - vi) Food – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
  - vii) Pharma – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year

- total – 4 students (Rs. 5,000/- cash + certificate)
- viii) B. Pharm. – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
- ix) Chem. Engg. – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
5. Engineers India Ltd. Scholarship

Our students have been placed in some of the following companies :







## CENTRAL PLACEMENT CELL (ICT MUMBAI)

There is no chemical and allied industry in the country that does not employ graduates of the ICT. Alumni are at the helm of affairs of large number of renowned chemical industries. A placement cell is launched with the participation of the UDCT Alumni Association (UAA) to assist campus placement which begins in the month of July, and continues throughout the year, before the students graduate. The Institute's graduates are highly-sought after by the Indian and global chemical industry and their salaries rank among the highest in the country, even dwarfing the salaries of graduates of the premier branded institutes; placements achieved via campus interviews fetch emoluments ranging from Rs. 3.50 to Rs 14.00 lakhs per annum. What is most striking is that these placements are in hard-core industries relevant to the students training and education, and not in the soft ware industry, which has been a major source for employment for graduates of some of the best institutes in India. With regards to post-graduate research opportunities, a good number of our students are offered admission by some of the world's best universities to pursue graduate studies. The Institute is one of the few institutions in Asia that is regularly represented in the graduate student bodies of prestigious institutes such as the Massachusetts Institute of Technology, Stanford University, University of California, Berkeley, Caltech, UCSB, Princeton, University of Michigan, Ann Arbor, University of Texas, Carnegie Mellon University, Purdue University, University of Massachusetts, Cambridge University, Imperial College, Manchester University, University of Twente, Monash University, to name a few. All of them receive full financial support. Several universities write to us to recommend good students. Leading foreign universities have signed MOUs for student exchange through proper support for the exchange. This would not have been without the merit of the students, and reputation of faculty and institute. On an average, about 75 students from various degree programmes get such fellowships. Quite a few Ph.D. holders go abroad for post-doctoral studies in reputed institutes; this is directly linked to the quality of research produced and personal standing of the faculty in international community.

Institute has very active Training and Placement Cell which was started under the guidance of Vice Chancellor, Prof. G. D. Yadav in 2010 to organize all the placement and training activities at a central place. It is supported by UAA (UDCT Alumni Association). Prof. Anand V. Patwardhan (Department of Chemical Engineering) is Overall faculty coordinator who is assisted by faculty coordinators and student coordinators from each Department. Placement at ICT is a regular year-long activity and typically organized on Saturdays and Sundays in order to minimize impact on regular academic activities. Companies from various fields evinced interest in recruiting students from ICT at both, bachelor's and master's levels. ICT has always been a favorite hunting ground for corporates wishing to hire bright young engineers and technologists.

### **Dr. Anant Kapdi**

*(FRSC, FMASc, AVH Fellow)*

Central Placement Coordinator, (ICT Mumbai, ICT - IOCB, and ICT - MARJ)

**Former Founding Deputy Director (ICT-IOCB)**

**UGC-FRP**

**Assistant Professor - Department of Chemistry,**

*email: [ar.kapdi@ictmumbai.edu.in](mailto:ar.kapdi@ictmumbai.edu.in) (official)*

## INDUSTRIAL INTERNSHIP:

## ICT Mumbai Campus

All 3<sup>rd</sup> year UG students of B. Chem. Engg., B. Tech. and B. Pharm. undergo 6 weeks in-plant industrial training in various industries. In the academic year 2018-2019, they were placed in about 120 different industries.

All masters students of M.Tech., M.E. and M.Sc. (Science) undergo Industrial internship from two-six months. In the academic year 2019-20, masters students were placed in about 100 different industries for industrial internship programme.

## HIGHER STUDIES:

Many of ICT bachelor students also prefer to go for higher studies outside and almost all the students get fellowship for higher studies.

**Some of the Universities where ICT students have got admission are as follows:**











# INSTITUTE OF CHEMICAL TECHNOLOGY

Deemed to be University under Section 3 of UGC Act 1956

NAAC A++ CGPA 3.77/4.00

NBA Accredited Programmes

NIRF Ranking (2021):

Engineering: 15, Pharmacy: 5

Elite Status and Centre of Excellence Govt. of Maharashtra

Category I Institute (MHRD/UGC),

State Funded Public Institute

World Universities Rankings (2020) in India : 7

NIRF (2021) Universities: 15; Overall: 27

*with campuses at :*

## MUMBAI

Nathalal Parekh Marg, Matunga,  
Mumbai – 400019, India;  
Tel: 022-3361-1111/ 2222,  
Fax: 022-3361-1020

## IOC, BHUBANESWAR

ICT-IOC Odisha Centre,  
Indian Institute of Technology,  
Kharagpur Extension Centre,  
Near Hotel Swosti Premium,  
Mouza-Samantpuri, Bhubaneswar- 13

## MARATHWADA, JALNA

M/s Beej sheetal Innovations Centre  
Private Limited,  
BT-6/7, Biotechnology Park,  
Additional MIDC Area,  
Aurangabad Road, Jalna- 431 203

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