



# DEPARTMENT OF CHEMISTRY

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# PREFACE

## **PROF. RADHA V. JAYARAM**

**Head and Professor,  
Department of Chemistry**

*M.Sc., Ph.D.*

The best research will give the best teaching and the best teaching will give the best research.

**Dr. A. P. J. Abdul Kalam, Former President of India**

**T**he Department of Chemistry, ICT has always strived to make noteworthy contributions to the Institute.

This is perceived in the activities of the Department and listed in the Annual Report. It is my pleasure to sum up the accomplishments and activities of the Department in the academic year 2018-19 through this annual report.

The academic performance of the post graduate and doctoral students of the Department is always a matter of pride. All the 20 enrolled students successfully completed the M.Sc programme in the year 2018-19, while 23 research scholars from the Department were awarded the Ph. D. degree in the annual convocation. Presently, 51 graduate students are registered for doctoral studies under the guidance of the faculty members of the Department. Due to the overwhelming response for the programme, in take for M. Sc. (Chemistry) was increased from 20 to 24 in

this academic year. The Department hosts 4 postdoctoral fellows working under different schemes. Most of the post graduate and doctoral candidates of the Department either pursue higher studies in reputed universities / Institutions or successfully embark on an industrial position.

Dr. Dipanwita Das, an INSPIRE faculty since August 2013, who has contributed immensely to the growth of the Department, has left for a postdoctoral programme in Germany after the completion of the tenure. The Department wishes her all the very best in her future endeavours.

The academic and research excellence achieved by the faculty members fetched them notable awards and honours from prestigious organisations. Prof. Bhanage received the “Best Teacher Award 2017–18” from the South Indian Education Society and Dr. Sarojini Devi Memorial Award by Higher Education Forum. Dr. Anant Kapdi received C. B. Murarka Best Assistant Professor award for 2018-19. The students of the Department also won prizes several intercollegiate events.

The outstanding outcome of the research activities of the Department have been transformed into patents and publications. In this year, the faculty members and the students contributed to 77 papers in reputed journals, 6 book chapters and one edited book. Applications have been filed for six patents. The number of research projects sponsored by government and private funding agencies has gone up to 18, with a cumulative research grant of Rs.

4.56 crores. The Department also received a generous financial support from the UDCT Alumni Association (UAA) for the upgradation of four gas chromatograph units and also for the purchase of routine laboratory equipment. A proposal for the repair and renovation of undergraduate and research labs has also been approved and the details are being finalised.

The annual event of the Department

'Rasaynam' 2019 conducted on 18th and 19th January 2019 and was a huge success. The event comprised of numerous activities which brought together students from colleges across the city and suburbs. As a practice, the Annual Day of the Department was conducted on 2nd May 2019 in which several past students also participated and shared their experiences and nostalgic memories.

I take this opportunity to thank the faculty members, visiting faculty and support staff for their unflinching support in all the Department activities. I also appreciate the enthusiasm and sincere commitment of the student community, which act as a catalyst to the cumulative performance of the Department. We look forward to improve and excel in everything possible way for the betterment of the Institute and the society.

# FACULTY



## PROF. RADHA V. JAYARAM

*M.Sc., Ph.D., F. M. A. Sc.*

Professor of Physical Chemistry and Head of Department  
Department of Chemistry

### Profile:

Publications (peer reviewed): 104

Patents: 01

Conference proceedings/papers: 05

Ph.D.'s Awarded as single/ Co-

Guide: 23

Masters' Awarded as single/ Co-

Guide : 42

h-Index: 28

Citations : 2529

### Fellowships/ Memberships of Professional Bodies :

- Fellow, Maharashtra Academy of Sciences
- Member, Board of Examiners, Indian National Chemistry Olympiad (INChO), Homi Bhabha

Centre for Science Education,  
Mumbai

- Resource person, National Initiative for Undergraduate Sciences (NIUS), Govt. of India
- Member, Scientific committee, 48th International Chemistry Olympiad Tbilisi, Georgia, July 2016
- Team Leader, Indian team for 43rd International Chemistry Olympiad (IChO)
- Ankara, Turkey, July 2011
- Team Member, Indian team for the 42nd International Chemistry Olympiad (IChO) Tokyo, Japan, July 2010
- Member, precious metal committee, BIS
- Life Member, Chemistry Teachers Association of India
- Life Member, Catalysis Society of India
- Life Member, The Indian Society for Surface Science and Technology
- Member, Board of studies, St. Xavier's College, Mumbai
- Syllabus Committee member, Board of Studies in Nano Science & Nano Technology, National Centre for Nano Science and Nano Technology, University of Mumbai.

- Member, Advisory Committee for the DBT awarded Star College Scheme, Sophia College, Mumbai

### Research Interests

Heterogeneous catalysis and green chemistry, Functional polymers, Adsorption techniques for removal of water pollutants, Recovery of spent metals, phase transfer catalysis, Enzyme catalysis, Photo-catalytic degradation, Waste water treatment, Functionalized carbon materials

### Academic courses:

Physical Chemistry and Physical Pharmacy, Solid State Chemistry, Surface and Interfacial Chemistry, Quantum Chemistry, Catalysis,

Molecular Symmetry and Group Theory, Kinetics and Phase Equilibria, Organic Chemistry Laboratory, Physical Chemistry Laboratory

### Research Output:

#### AJ Current research students:

M. Tech. – 03  
M.Sc. (Chemistry) – 03  
Ph. D. – 10

#### Research Publications:

International - 07  
Peer-reviewed - 08  
Conference proceeding - 02

#### Sponsored Projects: 02

### In-house responsibilities

- Nodal Officer, Academic, TEQIP phase III
- Member – Post Graduate Programme Committee
- Member, Under Graduate Programme Committee
- Member Secretary, Faculty Common Room
- Chairperson, RRC, Chemistry
- Member, Examination committee
- Member, Student Academic Interface Committee
- Female Member, Grievances Redressal and Disciplinary Action Cell
- Member Anti-ragging Committee

### Prof. Radha V Jayaram Research Group



**First Row Right to Left:** Kimaya Shahane, Bhumika Patil, Prof. Radha V Jayaram, Amber Sahani, Hanuman Gaike, Amid Sadgar

**Second Row Right to Left:** Sonali Thakare, Kunal Pawar, Dattatraya Hase, Tushar Deore



## PROF. SHRINIWAS D SAMANT

*M. Sc., Ph. D.*

Professor of Organic Chemistry  
Department of Chemistry

### Profile:

Publications (peer reviewed): 146

Patents: 03

Conference proceedings/papers:  
> 100

Ph.D.'s Awarded as single/ Co-  
Guide: 56

Masters' Awarded as single/ Co-  
Guide : 03 (by research)

h-Index: 33

Citations : 3184

### Fellowships/ Memberships of Professional Bodies:

- Member: Board of Governors, ICT
- Member: Academic Council, ICT
- Chairman: Committee to frame rules for PhD degree, ICT

- Chairman: Committee to frame rules for PhD degree, University of Mumbai
- Member: Committee to frame Ordinances of the Dr. Babasaheb Ambedkar Technological University, Lonere
- Member: Academic Council, Ruia College (Autonomous)
- Member: Board of Studies in Chemistry, Jhunjhunwala College (Autonomous)
- Member: Board of Studies in Chemistry, Patkar College (Autonomous)
- Member: Academic Council, Khalsa College (Autonomous)
- Member: Research Board, IIS University, Jaipur, Rajasthan

### Research Interests

Reaction mechanism, New synthetic methods, Catalysis Mechanistic organic chemistry

### Academic courses:

Organic Chemistry, Organic Reaction Mechanism, Stereochemistry of Organic Compounds, Organic Spectroscopy, Research Methodology in Chemical Sciences (Credit Course Ph.D.)

### Research Output:

Research Publications: 01

### In-house responsibilities

- Member: Board of Governors, ICT
- Member: Academic Council, ICT
- Chairman: Committee to frame rules for PhD degree, ICT



## PROF. BHALCHANDRA M. BHANAGE

*M.Sc., PhD*

Professor of Industrial & Engg. Chemistry &  
Dean (Infrastructure and Campus Development)  
Department of Chemistry

### Profile:

Publications (peer reviewed): 394  
Patents: 21 (granted) + 13 (applied)  
Ph.D.'s Awarded as single/ Co-Guide: 43  
Masters' Awarded as single/ Co-Guide : 31  
h-Index: 56  
Citations :12516

### Professional Activities

- Fellow of the Royal Society of Chemistry, UK (FRSC)
- Fellow of the Biotech Research Society of India (FBRSI).
- Fellow of the Maharashtra Academy of Sciences (FMASc)
- Member of the Catalysis Society of Japan (No 98251) 1998-99.
- Member of the The Society of Chemical Engineers, Japan 1997-1999
- Examiner and Resource Person to Indian Chemistry Olympiad during 2004-2012
- Member of The Society of Chemical Engineers, Japan;
- Examiner and Resource Person to the Indian Chemistry Olympiad during 2004-2012.
- Member of the American Chemical Society ACS, USA

- Member of the American Nano Society (2011-2013) Advisory Committee member/Syllabus Committee member for following autonomous colleges: K.J. Sommaiyya Engineering College Sion, NMIS Engineering College, Andheri, K.J. Sommaiyya Arts and Science College, Vidyavihar, SIES College, Sion, K.C. College, Churchgate, Vidyalkar Institute of Technology, Wadala.
- Member : Bureau of Indian Standards Precious Metals Sectional Committee
- Member : Bureau of Indian Standards : Chemical Department (CHD)
- Catalysis Science & Technology (Advisory Board Member, Royal Society of Chemistry Journal, IF 5.773)
- Associate Editor, Catalysis in Green Chemistry and Engineering, Publisher: Begell House, USA
- Secretary, ACS India International Chapter
- Chairperson, Catalysis Society of India, Mumbai Chapter
- Editorial Board Member for Marathi Science Magazine "Patrika"

### Research Interests

Heterogeneous and homogeneous catalysis, Activation of small molecules like carbon dioxide, carbon monoxide and hydrogen for various reactions, novel strategies for cross-coupling reactions like Heck, Suzuki, Sonogashira and their carbonylative forms, strategies for catalyst product separation and catalyst recyclability, homogeneous transition metal based catalysts and solid base catalysts for carbon dioxide fixation, nanoparticle synthesis and its catalytic applications, enzymatic catalysis

### Academic courses:

Organic Chemistry II, Industrial Inorganic Chemistry, Catalysis I, Catalysis

### Research Output:

#### Current research students

M. Tech. – 02  
M.Sc. (Chemistry) – 03  
Ph. D. – 13  
Postdoctoral fellows – 02

#### Research Publications:

International – 50  
Books – 02  
Conference proceeding – 02

#### Sponsored Projects: 7

### In-house responsibilities

- Dean, Infrastructure and Campus Development and associated committees





## PROF. (MRS.) JAYASHREE M. NAGARKAR

*M.Sc., Ph.D.*

Professor, Department of Chemistry

### Profile:

Publications (peer reviewed): 65

Patents: 02

Ph.D.'s Awarded as single/ Co-Guide: 11

Masters' Awarded as single/ Co-Guide : 16

h-Index: 18

Citations : 898

### Professional Activities

- Life member, Indian Society of surface Science & Technology
- Life member, Indian Women Scientist Association
- Life Member, Catalyst Society of India
- Life Member, Society of Advancement of Electrochemical Science & Technology

- Member, Board of studies, University of Goa

### Research Interests:

Homogeneous catalysis, C-C, C-N coupling reaction for organic synthesis, Preparation & Application of DES for organic synthesis, Heterogeneous Catalysis, Synthesis of Nanomaterial, Exploration of Nanomaterials as catalysts for organic synthesis, Green chemistry, Oxidation, Emulsifications of Vegetable oils

### Academic courses:

Kinetics and Phase Equilibrium, Advance Thermodynamics and Electrochemistry, Instrumental Methods of Analysis, Analytical Chemistry Practical.

### Research Output:

#### Current research students

Ph. D. – 03

M.Sc. (Chemistry) – 02

#### Research Publications

International – 02

#### In-house responsibilities

- In charge, Art Club TA,
- In charge, Departmental Colloquium,
- Member, PG Admissions Committee,
- Member, Woman Cell,
- Member, Departmental Safety Committee
- Coordinator Safety Workshop programme of the Institute

Prof. (Mrs.) Jayashree M. Nagarkar Research Group



Left to Right: Ravindra Wagh, Prof. (Mrs.) J. M. Nagarkar, Kartiki Jadhav



## DR. ANANT R. KAPDI

M.Sc. Ph.D.

UGC-FRP Assistant Professor

Department of Chemistry

### Profile:

Publications (peer reviewed): 73 (14 book chapters)

Seminars/Lectures/Orations delivered: 07

Ph.D.'s Awarded as single/ Co-Guide: 05

Masters' Awarded as single/ Co-Guide : 02

h-Index: 26

Citations : 4675

### Professional Activities:

- Fellow of Maharashtra Academy of Sciences
- Alexander Von Humboldt Fellow
- Member of Royal Society of Chemistry (MRSC)-membership no: 359354
- Chemical Research Society of India membership No: 828
- Alexander von Humboldt Alumni Association (Mumbai chapter)
- Life Member of Catalysis Society

of India

- Life Member of Indian Society of Chemists and Biologists
- Life Member of Maharashtra Academy of Sciences (Young Associate)
- Life Member of Chemistry Teachers Association of India

### Research Interests

Homogeneous catalysis using palladium and nickel based complexes, Heterogenization of the complexes on solid support, C-H bond functionalization, Green Technology approaches for synthesis, Microwave assisted organic synthesis, Natural Product synthesis

### Academic courses:

Heterocyclic Chemistry, Natural Product Synthesis, Analytical Chemistry, Analytical Chemistry practicals, Organic Chemistry, Organometallic Chemistry

### Research Output:

#### Current research students

Ph. D. – 09

M.Sc. (Chemistry) – 02

RA – 02

#### Research Publications

International – 11

Books – 01

#### Sponsored Projects: 07

#### In-house responsibilities:

- Deputy Director of ICT-IOC Bhubaneswar
- Editor of Bombay Technologist
- Committee member of several committees in ICT-IOC Bhubaneswar
- Committee member for safety committee for Department of Chemistry.
- Placement incharge of Department of Chemistry, ICT Mumbai

Dr. Anant R. Kapdi Research Group



**Right to Left:** Dharmendra Prajapati (Ph.D. student), AniketGholap (Ph.D. student), Sai Vengurlekar (Project Assistant), Ajay Ardhapure (Ph.D. student), TejalGirase (Ph.D. student), Dr. Anant R. Kapdi, Gopal Dhangar (Ph.D. student), VidyaZende (Ph.D. student), RashilaGund (Project Assistant), SafiyaRehman (Project Assistant), Vaibhav Sable (Ph.D. student), ShatrughnaBhilare (Ph.D. student).



## VIJAY KUMAR A.

*M.Sc, Ph.D.*

Assistant Professor in Organic Chemistry  
Department of Chemistry

### Profile:

Publications (peer reviewed): 39

Patents: 02 (filed)

Ph.D.'s Awarded as single/ Co-Guide: 02

Masters' Awarded as single/ Co-Guide :14

h-Index: 19

Citations : 1438

### Research Interests

Biomimetic organic synthesis,  
Supramolecular Chemistry,  
Sustainable catalysts for organic

synthesis, New synthetic  
methodologies development, Total  
synthesis of natural products &  
drugs

### Academic courses:

Organic Chemistry, Organic  
Chemistry Laboratory, Organic  
Synthesis, Bioorganic Chemistry,  
Supramolecular Chemistry

### Research Output:

#### Current research students:

Ph. D. – 02

M.Sc. (Chemistry) – 03

### Research Publications

International – 04

Books – 01

### Sponsored Projects: 02

### In-house responsibilities

- Warden, ICT Hostel
- Committee member for safety committee for Department of Chemistry.
- In Charge, Instrumentation facilities of the Department
- Convenor, Rasayanam

### A. Vijay Kumar Research Group



**From L to R:** Ms. Ayushi Chand, Ms. Rani Patil, Mr. Abhishek Dubey, Dr. A.Vijay Kumar, Mr. Prashant Mandal, Mr. Anurag Chinchole, Ms. Shweta Pawar, Mr. Mahendra Patil



## DR. SHRAEDDHA TIWARI

Ph. D.

Assistant Professor in Inorganic and Physical Chemistry  
Department of Chemistry

### Profile:

Publications (peer reviewed): 16  
Ph.D.'s Awarded as single/ Co-Guide: 01  
Masters' Awarded as single/ Co-Guide : 09  
h-Index : 6  
Citations : 255

### Professional Activities

- Member, Royal Society of Chemistry
- Resource person, Indian National Chemistry Olympiad 2019
- Resource person / Examiner, Orientation Camp for Chemistry Olympiad 2019

### Research Interests

Physical Organic Chemistry, Solvent effects on chemical reactions, nonlinear effects in chirality, neoteric solvent systems, interfacial chemical processes, vibrational spectroscopy

### Academic courses:

Physical Chemistry – 1, Physical Chemistry – 2, Instrumental Methods of Analysis, Physical and Analytical Chemistry laboratory, Physical Chemistry – 3 laboratory (Computational Chemistry lab)

### Research Output:

#### Current research students

Ph. D. – 04

M.Sc. (Chemistry) – 01  
Others – 02

### Research Publications

International – 01

Sponsored Projects: 02

### In-house responsibilities:

- Member, Student Diary Committee
- Member, NBA/NAAC Committee
- Member, Department Safety Committee
- Convenor, ICT Freshers' 2018

### Dr. Shraeddha Tiwari Research Group





## DR. DIPANWITA DAS

M.Sc. Ph.D.  
DST-INSPIRE faculty

### Profile:

Publications (peer reviewed): 25  
Conference proceedings/papers: 02  
Ph.D.'s Awarded as single/ Co-Guide: 01  
Masters' Awarded as single/ Co-Guide : 06  
h-Index: 10  
Citations : 381

### Research Interests

Molecular recognition and sensing, Photochromic metal organic frameworks, Inorganic photo physics and bio-sensing, DNA binding and photocleavage

### Academic courses:

Inorganic Chemistry; Chemistry of main group elements

### Research Output:

#### Current research students

Ph. D. – 03

#### Research Publications

International – 06  
Conference proceeding – 01

#### Sponsored Projects: 02

### Dr. Dipanwita Das Research Group



**Upper row:** Dr. Sagar Patil, Mr. Daulat Phapale

**Lower row:** Mr. Harshawardhan Agarkar, Dr. Dipanwita Das, Ms. Vrushali Raut



## DR. SANGHAMITRA CHATTERJEE

M.Sc. Ph.D.  
DST INSPIRE Faculty  
Department of Chemistry

### Profile:

Publications (peer reviewed): 31  
Seminars/Lectures/ Orations: 26  
Masters' Awarded as single/ Co-Guide : 06  
h-Index: 17  
Citations : 1870

### 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

### Academic courses taught:

Analytical Chemistry (Theory), Physical/Analytical Chemistry Laboratory, Organic Chemistry Laboratory, Photochemistry and Pericyclic Reactions (Theory)

### Research Output:

**Current research students:**  
Ph. D. – 04  
M.Sc. (Chemistry) – 02

**Research Publications:**  
International – 01

**Sponsored Projects:** 01

### In-house responsibilities

- Member of Media Publicity Committee at ICT
- Convener of Art Club at ICT

Dr. Dipanwita Das Research Group



*From L to R: Rutesh Savalia, Suyash Mane, Nikita Agrawal, Dr. Sanghamitra Chatterjee, Shrutika Sonawane, Pranay Wahane, PravinTartekar*



## DR. P. M. MORE

MSc. Ph.D.  
Assistant Professor  
Department of Chemistry

### Profile:

Publications (peer reviewed): 09  
Patents: 01 (filed)  
Masters' Awarded as single/ Co-Guide : 01  
h-Index: 04  
Citations : 87

### Research Interests

Heterogeneous Catalysis, Synthesis of Non noble metal catalyst for complete oxidation of pollutants like vehicle exhaust, industrial exhaust and other sources, Mixed metals-based catalysts for synthesis of

valuable chemicals, Development of economically viable and green analytical procedure for industrial application

### Academic courses:

Analytical Chemistry (Theory), Physical/Analytical Chemistry Laboratory, Nanochemistry (Theory), Physical Chemistry Laboratory- III

### Research Output:

#### Current research students

Ph. D. – 02  
M.Sc. (Chemistry) – 03

### Research Publications

International – 02

Patents: 01

### In-house responsibilities

- Member of PG admission committee
- Department coordinator of TEQIP-III

### Dr. Dipanwita Das Research Group



Left: Rahul More, Nitin Lavande, P. More, Jyoti Waikar



## DR. DAWANDE S. G.

*M. Sc., Ph.D*  
Assistant Professor  
Department of Chemistry

### Profile:

Publications (peer reviewed): 05  
Masters' Awarded as single/ Co-Guide : 05  
h-Index : 4  
Citations : 94

### Research Interests:

Transition metal catalysis,  
Organocatalysis, Green Chemistry,  
Bioactive Molecule Synthesis

### Academic courses:

Organic Chemistry-I and II (theory),  
Organic Chemistry lab, Radical and  
Photochemistry

### Research Output:

#### Current research students

Ph. D. – 03  
M.Sc. (Chemistry) – 02

### Research Publications

International – 01

**Sponsored Projects:** 01

### In-house responsibilities:

- Merit -cum-means and Trust Scholar
- Member of Committee for SC/ST-ICT

### Dr. Dawande S. G. Research Group



*From L to R: Ananthapadmanabhan, Pankaj, Nilesh, Kasturi, Anmol*

## SUPPORTING STAFF



**Mr. P. S. Gaikwad**  
Laboratory Assistant



**Mr. R. M. Mhatre**  
Laboratory Assistant



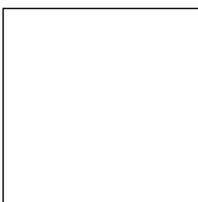
**Mr. A.P. Patil**  
Laboratory Assistant



**Mr. A. H. Awale**  
Laboratory Attendant



**Mr. S. P. Chavan**  
Laboratory Attendant



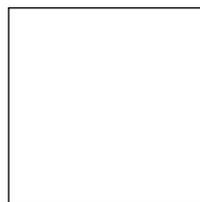
**Mr. S. B. Khapne**  
Laboratory Attendant



**Mr. Bhiva R. Rawool**  
Laboratory Attendant



**Mr. B. V. Tilve**  
Laboratory Attendant



**Smt. Deepali Pagare**  
Secretary

## VISITING FACULTY

Name	Affiliation	Course	Class / Semester
Dr. Veena Khilnani	Department of Chemistry, K. J. Somaya College, Vidyavihar, Mumbai.	Inorganic Chemistry	B.Pharm Semester I
Dr. Tanuja Parulekar	Department of Chemistry, SIWS College, Wadala, Mumbai.	Organic Chemistry	B.Pharm Semester I
Mr. Abhimanyu Yadav	Department of Chemistry, G. N. Khalsa College, Matunga, Mumbai	Inorganic Chemistry	B.Chem.Engg/ B.Tech. Semester I
Prof. N.D.Thakkar	Retired Professor, Institute of Science, Mumbai	Chemistry of Main Group Elements	M.Sc. Semester I
Mrs. Gomathi Shridhar	Department of Chemistry, V.K. Menon College, Bhandup, Mumbai	Advanced Spectroscopy	M.Sc. Semester III
Mrs. Elizabeth Joseph	Department of Chemical Engineering, Thadoma I Sahani College of Engineering, Bandra, Mumbai.	Separation Chemistry	M.Sc. Semester III
Dr. Lakshmy Ravishankar	Department of Chemistry, V.G.Vaze College, Mulund, Mumbai.	Radicals, Photochemistry & Pericyclic Reactions	M.Sc. Semester III
Prof. V. V. Mahajani	Retired Professor of Chemical Engineering, ICT, Mumbai	Chemical Project Economics	M.Sc. Semester IV
Dr. Sandeep Sharma	BARC, Mumbai	Nuclear Chemistry	M.Sc. Semester IV
Dr. P. A. Sathe	Department of Chemistry, RamnarainRuia College	Advanced Thermodynamics and Electrochemistry	M. Sc. Semester II
Dr. D. Mandal	Head, AMMD, BARC	Fundamentals of fluid flow and heat transfer	M.Sc Semester II

## ENDOWMENT LECTURES

Speaker	Affiliation	Date	Topic
<b>CMP Endowment Lecture</b>			
Dr. R. K. Vatsa	BARC, Mumbai	27th October 2018	Mass Spectrometry
<b>Golden Jubilee Visiting Fellowship Lectures</b>			
Dr. Michel Wong Chi Man	Ecole Nationale Supérieure de Chimie de Montpellier, France	5th March 2019	Functional Hybrid Silicas: Bridged Silsesquioxanes and Periodic Mesoporous Organosilicas
<b>Guest Lectures</b>			
Dr. Rohidas Arote	Department of Molecular Genetics, School of Dentistry, Seoul National University	25th April 2019	Development of multi-functional polymeric Nano-carriers for cancer gene therapy
Dr. Anna M. Venezia	Director of Research, ISMN-CNR	17th December 2018	Effect of support –SH functionalization on HDS activity of noble metal catalysts
<b>B. D. Tilak Endowment Distinguished Lecture</b>			
Prof. R. V. Choudhari	Deane E. Ackers Distinguished Professor of Chemical & Petroleum Engineering, University of Kansas	5th March 2019	Design Of Novel Catalysts For Conversion Of Polyols And Sugars To Chemicals

## SPONSORED PROJECTS

Name of Sponsor	Title	Duration	Amount sanctioned (in Rs.)
<b>Prof. R. V. Jayaram</b>			
DAE-BRNS	Synthesis of N,N-dialkyl-2-alkoxyacetamides extractants and N,N-dialkyl-2-alkoxyacetamides grafted resins for the separation of trivalent actinides from nitric acid medium and modeling of extractants	3 years	27,16,800/-
TEQIP-III	Green advantages of metallosurfactants in organic transformation- solubilisation, rate enhancement and product separation	--	--
<b>Prof. B. M. Bhanage</b>			
Technical Education Quality improvement programme (TEQIP) : Center of excellent under process intensification	Microwave, Ultrasound, Solar Energy assisted preparation of metal oxide nanomaterials	2014-2018	25,00,000/-
Department of Science and Technology (DST) under DST-JSPS Indo-Japan Project	Refinement of immobilized ionic liquid catalysts and organometallic catalysts for carbonylation and CO <sub>2</sub> conversion	2016-2018	4,46,000/-
Department of Science and Technology (International Multilateral Regional Cooperation Division)	Development of Fundamentals for integrated Catalytic processing of BIOmass to fuels and value-added chemicals	2019-2022	46,98,000/-

Department of Atomic Energy-ICT center	Electrochemical Behavior of Uranium(III), Zirconium(IV) and Aluminium (III) Present in Room Temperature Ionic Liquids	2017-2020	25,00,000/-
Board of Research in Nuclear Sciences (BRNS)	Pd complexes with Hybrid Organochalcogen Ligands as Homogeneous Catalysts in C-C coupling Reactions	2018-2021	31,41,000/-
<b>Dr. Anant Kapdi</b>			
Department of BioTechnology	Synthesis and Cellular Evaluation of Novel Palladacyclic Complexes for Breast Cancer (PI: Dr. Prajakta Dandekar Jain)	2015 – 2018	25,00,000/-
Department of Science and Technology	Metal-mediated One-Pot Sequential (Telescoping) Reactions for the Synthesis of Multifunctional Nucleosides/Nucleotides with Promising Photo- and Biophysical Properties	2017 – 2020	56,00,000/-
Council for Scientific and Engineering Research	Development of Novel Approaches to Multifunctional C-Nucleosides using Palladium-Catalyzed Coupling Processes in Aqueous Media	2017 – 2020	25,00,000/-
Alexander von Humboldt Foundation (Germany)	Multi-functional Nucleosides and Nucleotides via Palladium-Mediated Reactions Using Novel Palladacyclic Complexes with Promising Anticancer Activities Co-investigator: Prof. Carola Schulzke	2015 – 2018	38,00,000/-
<b>Dr. Vijay Kumar</b>			
Department of Science and Technology (BRICS)	Development of fundamentals for integrated catalytic processing of biomass to value added chemicals PI: Prof. B. M. Bhanage	3 years	50,00,000/-
<b>Dr. Shraeddha Tiwari</b>			
Department of Science and Technology (INSPIRE Faculty scheme)**	Investigating Reactivity and Selectivity of Organic Reactions in Liposomes as Model Protocells	2013 – 2018	35,00,000/-
Institute of Chemical Technology (Golden Jubilee Research Fund)	Investigating cellulose dissolution in ionic – liquid based nonconventional media using infrared spectroscopy	2018 – 2019	50,000/-
<b>Dr. Dipanwita Das</b>			
Department of Science and Technology (INSPIRE Faculty scheme)**	Transition metal mediated $2e^-/2H^+$ and $4e^-/4H^+$ reduction of $O_2$ : synthesis, structure-reactivity correlation and mechanistic insights by trapping intermediates	2013 – 2018	35,00,000/-
DST-SERB	Development of Promising Photochromic Metal Organic Frameworks with Functionalized Photo-switchable Groups	November 2015 to November 2018	2221000/-
<b>Dr. Sanghamitra Chatterjee</b>			
Department of Science and Technology (DST)	Nanomaterial Based Electrochemical Sensors for Biomedical Applications	2014 – 2019	35,00,000/-

Dr. Sudam Dawande			
DST-SERB	Design, Synthesis of O-Thioester Substituted N-sulphonyl-1,2,3-triazoles & Their applications in The Intramolecular Cyclization to Synthesize Benzo Fused Thioheterocycles	2016 – 2019	2153000/-
DST-SERB	Ruthenium(II) Catalysis in C-6 Functionalization of Indoles: C-C and C-O Bond Formation	2017 – 2021	39,00,000/-

## Consultancy

### Professor B. M. Bhanage

- Industrial Consultants M/S SICIT 2000 SPA, Italy, 2018-till date
- Technical Consultant, ChemCleanzio, India Pvt. Ltd
- Board of Advisors: NanocoatChemtech Pvt. Ltd

### Dr. P. M. More

- Technical Consultant, M/S. Calibre Engineering Chemistry (Chemical Pvt. Ltd.)
- Technical Consultant, Mangalam organic Pvt. Ltd., Mumbai

### Dr. S. G. Dawande

- Technical Consultant, Kesar Petroproducts Private Ltd. (May 2018-Oct.2018)

## Research Publications, Patents and Book Chapters

A] Research Publications					
No.	Title and authors	Journal	Year	Vol. No.	Pages
<b>Prof. R. V. Jayaram</b>					
1	New routes for the synthesis of unsymmetrical diarylselenides: Effect of heat, light and ultrasound Sahani A. J., Burange A. S., Thakur S. D., Jayaram R. V.*	Molecular Catalysis	2019	476	110534
2	Experimental and theoretical studies on actinide extraction: dibutyl phenyl phosphonate versus tri-n-butyl phosphate Disale S.T., Brahmmananda Rao C.V.S., Gopakumar G., Jayaram R. V.*	J. Coordination Chemistry	2019	72	1480
3	Base Free Tandem Cyclooxidative Synthesis of Quinazolinones with GdxMn–ZnO (M= Mo, V, W) Catalysts Hase D. V., Jayaram R. V.*, Thirumalai K., Swaminathan M.	Chemistry Select	2019	4	3440
4	A Comparative Study of Properties of Acrylic Based Water-Borne Polymers Using Various Surfactants for Adhesive Applications Sarkar A., Jayaram R. V.*	Polymer Science, Series B: Polymer Chemistry	2018	60	629
5	An efficient Knoevenagel condensation of aldehydes with active methylene compounds over novel, robust CeZrO4-d catalyst Sahani A. J., Burange A. S., Jayaram R. V.*	Research on Chemical Intermediates	2018	44	7805

6	C-Se cross-coupling of arylboronic acids and diphenyldiselenides over non precious transition metal (Fe, Cu and Ni) complexes Sahani A. J., Jayaram R. V.*, Burange A. S.	Molecular Catalysis	2018	450	14
7	Cross-Coupling Reactions of Aryltriethoxysilanes and Diaryldiselenides - A New Route for the Synthesis of Diarylselenides Sahani A. J., Burange A. S., Narasimhan S., Jayaram R. V.*	Chemistry Select	2018	3	12291
<b>Prof. B. M. Bhanage</b>					
1	Ionic Liquid Immobilized on Graphene-Oxide-Containing Palladium Metal Ions as an Efficient Catalyst for the Alkoxy, Amino, and Phenoxy Carbonylation Reactions Gaikwad V.V., Saptal V. B., Harada K., Sasaki T., Nishio-Hamane D., Bhanage B. M.*	ChemNanoMat	2018	4	575
2	Synthesis of Cu <sub>2</sub> O/Ag nanocomposite and their catalytic application for the one pot synthesis of substituted pyrroles Gajengi A.L., Fernandes C.S., Bhanage B.M.*	Molecular Catalysis	2018	451	13
3	Ru@Psil-Catalyzed Synthesis of N-Formamides and Benzimidazole by using Carbon Dioxide and Dimethylamine Borane Saptal V.B., Sasaki T., Bhanage B.M.*	ChemCatChem	2018	10	2593
4	Recent trends in organocatalyzed asymmetric reduction of prochiral ketones Shende V.S., Singh P., Bhanage B.M.*	Catalysis Science and Technology	2018	88	955
5	Ligand Assisted Rhodium Catalyzed Selective Semi-hydrogenation of Alkynes Using Syngas and Molecular Hydrogen Jagtap S.A., Bhanage B.M.*	ChemistrySelect	2018	3	713
6	Nanoceria-Catalyzed Selective Synthesis of $\alpha$ -Hydroxy Amides through the Reduction of an Unusual Class of $\alpha$ -Keto Amides Mishra A.A., Bhanage B.M.*	Asian Journal of Organic Chemistry	2018	7	922
7	Ligand-Assisted Pd-Catalyzed N-Dealkylative Carbonylation of Tertiary Amines with (Hetero)Aryl Halides to Tertiary Amides Mane R.S., Bhanage B.M.*	Asian Journal of Organic Chemistry	2018	7	160
8	Ru-Prolinamide-Catalyzed Asymmetric Transfer Hydrogenation of Racemic $\beta$ -Hetero substituted Cycloalkanones Driven by Dynamic Kinetic Resolution Vyas V.K., Bhanage B.M.*	Asian Journal of Organic Chemistry	2018	7	346
9	Assessing ionicity of protic ionic liquids by far IR spectroscopy Patil A.B., Bhanage B.M.*	Journal of Molecular Liquids	2018	252	180

10	Combining Electronic and Steric Effects to Generate Hindered Propargylic Alcohols in High Enantiomeric Excess Vyas V.K., Knighton R.C., Bhanage B.M.*, Wills M.	Organic Letters	2018	20	975
11	Shape-selective synthesis of gold nanoparticles and their catalytic activity towards reduction of p-nitroaniline Gupta S.S.R., Kantam M.L., Bhanage B.M.*	Nano-Structures and Nano-Objects	2018	14	125
12	Catalysis for sustainable development: Special Issue Editorial Yadav G.D., Bhanage B.M.*	Clean Technologies and Environmental Policy	2018	20	680
13	Molecular Iodine Catalysed Benzylic sp <sup>3</sup> C-H Bond Amination for the Synthesis of 2-Arylquinazolines from 2-Aminobenzaldehydes, 2-Aminobenzophenones and 2-Aminobenzyl Alcohols Deshmukh D.S., Bhanage B.M.*	Synlett	2018	29	979
14	Rhodium catalyzed selective hydroaminomethylation of biorenewable eugenol under aqueous biphasic condition Jagtap S.A., Gowalkar S.P., Monflier E., Ponchel A., Bhanage B. M.*	Molecular Catalysis	2018	452	108
15	Synthesis and evaluation of n-octenyl succinylated guar gum as an anti-staling agent in bread Shah N. N., Raut A., Yedage S. L., Bhanage B.M.*, Singhal R. S.	LWT	2018	93	368
16	Reductive-hydroformylation of 1-octene to nonanol using fibrous Co <sub>3</sub> O <sub>4</sub> catalyst Bhagade S.S., Chaurasia S.R., Bhanage B.M.*	Catalysis Today	2018	309	147
17	N-Tosylhydrazone directed annulation via C–H/N–N bond activation in Ru (ii)/PEG-400 as homogeneous recyclable catalytic system: a green synthesis of isoquinolines Deshmukh D. S., Bhanage B. M.*	Organic & Biomolecular Chemistry	2018	16	4864
18	B(C <sub>6</sub> F <sub>5</sub> ) <sub>3</sub> : a robust catalyst for the activation of CO <sub>2</sub> and dimethylamine borane for the N-formylation reactions Saptal V. B., Juneja G., Bhanage B. M. *	New Journal of Chemistry	2018	42	15847
19	Molecular Dynamics Simulation Of Kinetic Resolution Of Racemic Alcohol Using Burkholderia Cepacia Lipase In Organic Solvents Mathpati A.C., Bhanage B. M. *	Journal of Proteins & Proteomics	2018	9	11
20	Palladium-Catalyzed Aerobic Oxidative Carbonylation of C–H Bonds in Phenols for the Synthesis of p-Hydroxybenzoates Gaikwad V. V., Bhanage B. M.*	European Journal of Organic Chemistry	2018	-	2877
21	Sulphated Al-MCM-41: A simple, efficient and recyclable catalyst for synthesis of substituted aryl ketones/olefins via alcohols addition to alkynes and coupling with styrenes Wagh K. V., Gajengi A. L., Rath D., Parida K. M., Bhanage B. M.*	Molecular Catalysis	2018	452	46

22	Electrodimerization of N-Alkoxyamides for Zinc(II) Catalyzed Phenolic Ester Synthesis under Mild Reaction Conditions Subramanian K., Yedage S. L., Bhanage B. M.	Advanced Synthesis & Catalysis	2018	360	2511
23	Rh-catalyzed selective synthesis of 1, 5-dimethylhexahydro-1H-inden-4 (2H)-one via hydroformylation of (R)-carvone Bhagade S. S., Bhanage B. M.*	Catalysis Communications	2018	112	21
24	CuNiFe a Magnetic Nano-Catalyst: an Efficient Catalyst for the Selective Synthesis of Benzoxazoles Chaurasia S.R., Bhanage B. M.*	ChemistrySelect	2018	3	7963
25	Rhodium/Phosphine catalysed selective hydroformylation of biorenewable olefins Jagtap S. A., Bhanage B. M.*	Applied Organometallic Chemistry	2018	32	e4478
26	Synthesis of Ethylene Glycol from Syngas via Oxidative Double Carbonylation of Ethanol to Diethyl Oxalate and Its Subsequent Hydrogenation Satapathy A., Gadge S. T., Bhanage B. M.*	ACS Omega	2018	3	11097
27	Immobilized lipase catalyzed synthesis of n-acyl acetate: parameter optimization, heterogeneous kinetics, continuous flow operation and reactor modeling Mathpati A. C., Kalghatgi S. G., Mathpati C. S., Bhanage B. M.*	Journal of Chemical Technology & Biotechnology	2018	97	2906
28	Direct Synthesis of Amides from Oxidative Coupling of Benzyl Alcohols and N-substituted Formamides Using a Co-Al Based Heterogeneous Catalyst Subhedar D. D., Gupta S. S. R., Bhanage B. M.*	Catalysis Letters	2018	148	3102
29	Highly Enantioselective One-Pot Synthesis of Chiral $\beta$ -Heterosubstituted Alcohols via Ruthenium–Prolinamide-Catalyzed Asymmetric Transfer Hydrogenation Vyas V. K., Srivastava P., Bhatt P., Shende V., Ghosh P., Bhanage B. M.*	ACS Omega	2018	3	12737
30	Prediction of enantioselectivity of lipase catalyzed kinetic resolution using umbrella sampling Mathpati A. C., Bhanage B. M.*	Journal of biotechnology	2018	283	70
31	Co-Al Hydrotalcites: Highly Active Catalysts for the One-Pot Conversion of Fructose to 2, 5-Diformylfuran Raut A. B., Bhanage B. M.*	ChemistrySelect	2018	3	11388
32	Asymmetric transfer hydrogenation of acetophenone derivatives using 2-benzyl-tethered ruthenium (II)/TsDPEN complexes bearing $\eta^6$ -(p-OR)(R= H, iPr, Bn, Ph) ligands Knighton R. C., Vyas V. K., Mailey L. H., Bhanage B. M., Wills M.*	Journal of Organometallic Chemistry	2018	875	72
33	Catalysis for Sustainable Development, Peace and Prosperity [Editorial] Yadav, G. D., Kantam, M. L., Bhanage, B. M.	Catalysis Today	2018	309	1

34	Semi-hydrogenation of alkynes using Ru/TPPTS as a biphasic recyclable catalyst in ethylene glycol-toluene solvent system Jagtap S. A., Bhanage B. M.*	Molecular Catalysis	2018	460	1
35	Oxime palladacycle in PEG as a highly efficient and recyclable catalytic system for phenoxy carbonylation of aryl iodides with phenols Gaikwad V. V., Bhanage B. M. *	Applied Organometallic Chemistry	2019	33	e4741
36	Cp* Co(III)-catalyzed annulation of azines by C–H/N–N bond activation for the synthesis of isoquinolines Deshmukh D. S., Yadav P. A., Bhanage B. M. *	Organic & Biomolecular Chemistry	2019	17	3489
37	Zirconium–MOF catalysed selective synthesis of $\alpha$ -hydroxyamide via transfer hydrogenation of $\alpha$ -ketoamide Mishra A. A., Bhanage B. M.*	New Journal of Chemistry	2019	43	6160
38	Amine-Functionalized Graphene Oxide-Stabilized Pd Nanoparticles (Pd@ APGO): A Novel and Efficient Catalyst for the Suzuki and Carbonylative Suzuki–Miyaura Coupling Reactions Saptal V. B., Saptal M. V., Mane R. S., Sasaki T., Bhanage B. M.*	ACS Omega	2019	4	643
39	Cu@U-g-C <sub>3</sub> N <sub>4</sub> Catalyzed Cyclization of o-Phenylenediamines for the Synthesis of Benzimidazoles by Using CO <sub>2</sub> and Dimethylamine Borane as a Hydrogen source Phatake V. V., Bhanage B. M.*	Catalysis Letters	2019	149	347
40	Aminophosphine Palladium Pincer-Catalyzed Carbonylative Sonogashira and Suzuki–Miyaura Cross-Coupling with High Catalytic Turnovers Gautam P., Tiwari N. J., Bhanage B. M. *	ACS Omega	2019	4	1560
41	Enhanced biocatalytic activity of immobilized steapsin lipase in supercritical carbon dioxide for production of biodiesel using waste cooking oil Badgujar V. C., Badgujar K. C., Yeole P. M., Bhanage B. M.*	Bioprocess and biosystems engineering	2019	42	47
42	Recent advances for sustainable production of levulinic acid in ionic liquids from biomass: Current scenario, opportunities and challenges Badgujar K. C., Wilson L. D., Bhanage B. M.*	Renewable and Sustainable Energy Reviews	2019	102	266
43	Green syntheses of levulinic esters using ionic liquid 1-Methyl imidazolium hydrogen sulphate [MIM][HSO <sub>4</sub> ] in solvent free system Kalghatgi S. G., Bhanage B. M.*	Journal of Molecular Liquids	2019	281	70
44	Ruthenium-Catalyzed Annulation of N-Cbz Hydrazones via C–H/N–N Bond Activation for the Rapid Synthesis of Isoquinolines Deshmukh D. S., Bhanage B. M. *	Synthesis	2019	51	2506

45	Hydrogenolysis of Biomass-Derived 5-Hydroxymethylfurfural to Produce 2,5-Dimethylfuran Over Ru-ZrO <sub>2</sub> -MCM-41 Catalyst Raut A. B., Nanda B., Parida K. M., Bhanage B. M.*	ChemistrySelect	2019	4	6080
46	Rapid and Atom Economic Synthesis of Isoquinolines and Isoquinolinones by C–H/N–N Activation Using a Homogeneous Recyclable Ruthenium Catalyst in PEG Media Deshmukh D. S., Gangwar N., Bhanage B. M.*	European Journal of Organic Chemistry	2019	-	2919
47	Recent Advances Utilized in the Recycling of Homogeneous Catalysis Shende V. S., Saptal V. B., Bhanage B. M.*	The Chemical Record	2019	19	2022
48	Hydrogenolysis of Biomass-Derived 5-Hydroxymethylfurfural to Produce 2,5-Dimethylfuran Over Ru-ZrO <sub>2</sub> -MCM-41 Catalyst Raut A.B., Nanda B., Parida, K.M., Bhanage, B.M.*	ChemistrySelect	2019	4	6080
49	N-Methoxy benzamide: A better coordinating directing group for Pd, Rh & Ru catalyzed C-H activations Mishra A. A., Subhedar D., Bhanage B. M. *	Advanced Synthesis and Catalysis,	2019	361	4149
50	Nickel, Cobalt and Palladium Catalysed C–H Functionalization of Un-activated C(sp <sup>3</sup> )–H Bond Mishra A. A., Subhedar D., Bhanage B. M.*	The Chemical Record,	2019	19	1829
<b>Prof. J. M. Nagarkar</b>					
1	An efficient and sustainable protocol for oxidation of alcohols to carbonyl compounds Wagh, R. B., Nagarkar, J. M.*	Tetrahedron Letters	2018	59	3443
2	Highly efficient and selective method for oxidation of aldehydes to carboxylic acids Wagh, R. B., Nagarkar, J. M.*	ChemistrySelect	2018	03	9654
<b>Dr. A. R. Kapdi</b>					
1	Pd/PTABS: Low Temperature Etherification of Chloroheteroarenes Bhilare, S., MuthryBandaru, S., Shah, J., Chrysochos, N., Schulzke, C., Sanghvi, Y. S., Kapdi, A. R.*	J. Org. Chem.	2018	83	13088
2	Homogeneous catalysis: Powerful technology for the modification of Bio-Active molecules Shelke, Y. G., Yashmeen, A., Gholap, A., Gharpure, S. J., Kapdi, A. R.*	Chem. Asian J	2018	13	2991
3	Crystal structure of 1-butyl-3-((2,3-dihydro-1H-indenyl-5-yl)amino)-2-oxo-ethyl)-1H-imidazol-3-ium chloride. Zende, V., Girase, T. S., Chrysochos, N., Kapdi, A. R., Schulzke, C.*	Acta Crystallographica E.	2018	E74	1665
4	Pd/PTABS: Catalyst for Efficient C-H (Hetero)arylation of 1,3,4-Oxadiazoles Using Bromo(Hetero)arenes Zende, V., Girase, T. S., Chrysochos, N., Kapdi, A. R., Schulzke, C.	Asian J. Org. Chem.	2019	8	289

5	Amido-functionalized N-heterocyclic carbene ligands and corresponding palladium complexes: Synthesis, characterization and catalytic activity. Zende, V., Girase, T. R., Chrysochos, N., Schulzke, N.*	J. Organomet. Chem.	2019	888	44
6	Novel Carbazole-based N-Heterocyclic Carbene Ligands for Accessing Synthetically Relevant Stilbenes via Pd-Catalyzed Coupling Processes Girase, T., Kapdi, A. R.*	Chem. Asian J.	2019	14	2611
7	Pd/PTABS: Low temperature thioetherification of chloroheteroarenes Murthy Bandaru, S. S., Bhilare, S., Cardozo, J., Chrysochos, N., Schulzke, C., Sanghvi, Y. S., Gunturu, K. C., Kapdi, A. R.*	J. Org. Chem.	2018	83	13088
8	Pd Colloids-Catalyzed General and Selective Oxidative Esterification of Benzylic alcohols Sable, V., Sharma, A., Shah, J., Kapdi, A. R.*	Chem Asian J.	2019	14	2639
9	Heterobimetallic Cooperative catalysis for the synthesis of heteroarenes Gupta, G., Shah, J., Vadagaonkar, K., Lavekar, A., Kapdi, A. R.*	Org. Biomol. Chem.	2019	17	7596
<b>Dr. Vijay Kumar</b>					
1	Polydopamine: An Amine Oxidase Mimicking Sustainable Catalyst for the Synthesis of Nitrogen Heterocycles under Aqueous Conditions Pawar S. A., Chand A. N., Vijay Kumar A.*	ACS Sustainable Chem. Eng.	2019	7	8274
2	Bioinspired Palladium Nanoparticles Supported on Soil-Derived Humic Acid Coated Iron-Oxide Nanoparticles as Catalyst for C-C Cross-Coupling and Reduction Reactions, Anurag Chinchole, Dubey A. R., Vijay Kumar A.*	Catalysis Letters	2019	149	1224
3	Cu(II)-Glucose: Sustainable Catalyst for the Synthesis of Quinazolinones in a Bio-Mass Derived Solvent 2-MethylTHF and Application for the synthesis of Diproqualone Dubey A. R., Vijay Kumar A.*	ACS Sustainable Chem. Eng.	2018	6	14283
4	Biomimetic Clauson-Kass and Paal-Knorr Pyrrole Synthesis using $\beta$ -Cyclodextrin-SO <sub>3</sub> H under aqueous and neat conditions - Application to Formal Synthesis of Polygonatine, Patil R. N., Vijay Kumar A.*	ChemistrySelect	2018	3	9812
<b>Dr. Shraeddha Tiwari</b>					
1.	"Zero VOC" Synthetic Strategy - Aromatic Amination Reactions in Deep Eutectic Solvents Valvi, A.; Tiwari, S.*	Eur. J. Org. Chem.	2018	35	4933

<b>Dr. Dipanwita Das</b>					
1.	The photo-switching study of guest 2-(phenylazo)pyridine (PAP) embedded in solid host material MOF-5 Agarkar H., Das D.*	Journal of Molecular Structure	2019	1184	435
2.	A simple benzimidazole styryl-based colorimetric chemosensor for dual sensing application Phapale D., Kushwaha A., Das D.*	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	2019	214	111
3.	A nanomolar detection of mercury(II) ion by a chemodosimetric rhodamine-based sensor in an aqueous medium: Potential applications in real water samples and as paper strips Patil S. K., Das D.*	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	2019	210	44
4.	Unexpected Nonresponsive Behavior of a Flexible Metal-Organic Framework under Conformational Changes of a Photoresponsive Guest Molecule Das D.*, Agarkar H.	ACS Omega	2018	3	7630
5.	A pyrene-benzimidazole composed effective fluoride sensor: potential mimicking of a Boolean logic gate Kushwaha A., Patil S. K., Das D.*	New Journal of Chemistry	2018	42	9200
6.	Protonation induced ultrafast torsional dynamics in 9-anthrylbenzimidazole: A pH activated molecular rotor Nandi A., Kushwaha A., Das D., Ghosh R.*	Phys. Chem. Chem. Phys.	2018	20	7014
7.	Non-platinum metal-organic framework based electro-catalyst for promoting oxygen reduction reaction Das D., Raut V, Kireeti K. V. M. K., Jha N.*	AIP Conference Proceedings	2018	1942	140049
<b>Dr. Sanghamitra Chatterjee</b>					
1.	Sensing of sulfasalazine—Cysteine transporter inhibitor with platinum nanoflowers decorated on carbon nanotubes by electrochemical reduction Savalia R., Chatterjee S.*	Sensors and Actuators B: Chemical	2018	277	39
<b>Dr. Pavan More</b>					
1	Review on CO oxidation by noble and non noble metal based catalyst Waikar J., Pawar H., More P.*	Catalysis in Green Chemistry and Engineering	2019	2	11
2	Copper supported on Co substituted hydroxyapatite for complete oxidation of diesel engine exhaust and VOC More R. K., Lavande N. R., More P. M.*	Molecular Catalysis	2019	474	110414
<b>Dr. Sudam Dawande</b>					
01	Rhodium(II)-Catalyzed Highly Stereoselective C3 Functionalization of Indolizines with N-Sulfonyl-1,2,3-triazoles Kahar N. M., Nabar K. U., Jadhav PP., Dawande S. G. *	Asian Journal of Organic Chemistry	2019	8	79

<b>B] Patents</b>			
<b>No.</b>	<b>Inventors</b>	<b>Title</b>	<b>Country Patent filing number</b>
<b>Prof. B. M. Bhanage</b>			
1	S.R. Lanke, B.M. Bhanage	An Improved Method For Benzimidazole Synthesis From 2-Haloaniline, Dihalomethane And Sodium Azide In Presence Of Copper Complex Catalyst.	India Patent No. IN 297593
2	K.C. Badgujar, B.M. Bhanage	An Efficient Enzyme Catalyzed Methodology For Synthesis Of Levulinate Esters Using Lipase And Supercritical Carbon Dioxide As A Green Biocatalyst And Solvent	Indian Patent No.: IN 305636
3	L Patil, B. M. Bhanage	Novel Thiouracil Nucleoside Analogous Nucleoside Treatment Of Virus And Cancer	Indian Patent application: 201721042175
4.	K.C. Badgujar, B.M. Bhanage	Tylose As An Efficient Immobilization Matrix For The Immobilization Of Enzyme Lipase	Indian Patent Application: 201621044029
5.	B.M. Bhanage, J.P. Ahire, M.A. Bhosale	Zinc Oxide Peptide Nanomaterials And Method Of Preparation Thereof	Indian Patent Application: 201621036137
<b>Dr. Pavan More</b>			
1	S. B. Umbarkar, M. K. Dongare, P. M. More, A. V. Biradar,	Non noble metal based diesel oxidation catalyst	US Patent Application No. 20160332118
<b>C] Books</b>			
<b>Author(s)</b>	<b>Title</b>	<b>Publisher</b>	<b>Year</b>
<b>Prof. B. M. Bhanage</b>			
Bhalchandra Bhanage, Lingmian He	Ionic Liquids in Organic Reaction Series: Encyclopedia of Ionic Liquids	Springer (EIC: Suojiang Zhang)	Currently editing (2018)
<b>Dr. Anant Kapdi</b>			
Dr. A. R. Kapdi and Dr. D. Maiti	Palladacycles: Catalysis and Beyond. Volume 3: Latest Trends in Palladium Chemistry).	Elsevier	2019

<b>D] Book chapters</b>			
<b>Author(s)</b>	<b>Chapter Title</b>	<b>Title of the Book</b>	<b>Publisher, Year and Page no.</b>
<b>Prof. B. M. Bhanage</b>			
D.B. Bagal, B.M. Bhanage*	Catalytic Reduction of Nitriles Chapter 2.9,	Series: Science of Synthesis Catalytic Reduction in Organic Synthesis	Thieme Publications, 2018, pp 375, DOI: 10.1055/sos- SD-227-00186
J.A. Shah, B.M. Bhanage*	Nanoparticulate or Colloidal Pathways for Palladacycles- Mediated Catalytic Processes Chapter 8 in	Palladacycles, Eds A.R. Kapdi	Elsevier Inc. 2019, Chapter 8, pp 327- 342
<b>Dr. Anant Kapdi</b>			
Kapdi, A. R.,* Rajput, S., Patwardhan, A. V.	Dendritic Polymers and Multifunctional Supports	Applications of One Dimensional Nanomaterials, Ed. Chaugule, R. S.	American Scientific Publishers, USA, 2019
Gupta, G., Bhilare, S., Maiti, D., Kapdi, A. R.	Miscellaneous applications of Palladacycles.	Palladacycles: Catalysis and Beyond. Volume 3: (Latest Trends in Palladium Chemistry)	Elsevier, New York, 2019, pp 371-395.
Bangde, P., Prajapati, D., Dandekar-Jain, P., Fairlamb, I. J. S., Kapdi, A. R. Eds.	Palladacycles as potential anticancer agents.	Palladacycles: Catalysis and Beyond. Volume 3: (Latest Trends in Palladium Chemistry)	Elsevier, New York, 2019, pp 343-370.

## **E] General Publications**

Article on "चर्वीची जाणीव" (article about taste sensation) in Marathi Vidhyan Parishad's Monthly Magazine "Patrika" (पत्रिका) Diwali Issue (ISSN No. 0971-6912) Pages 135-140, November 2018 issue Article Language: Marathi

## Invited TalksSupport Staff

### Prof. R. V. Jayaram

- Insights of catalysis and green chemistry, International Conference on Modern Trends in Chemical Sciences including Green Chemistry (MTCSGC) 2018 at SRM IST, Ramapuram campus, Chennai, 27th to 29th December 2018
- Laboratory safety and self protection, Sophia College, 31st August, 2018
- Personal protective equipment and good lab practices, BIT Mesra, Ranchi, 17th December 2018

### Prof. B. M. Bhanage

- CO<sub>2</sub> utilization to valuable chemicals, UON-India Symposium at IIT Bombay at VMCC, 17th June 2019
- Green Synthesis of Metal and Metal Oxide based Nanomaterials with catalytic applications, UM-DAE Centre for Excellence in Basic Sciences, 19th February 2019
- Green Synthesis of Metal and Metal Oxide based Nanomaterials with catalytic applications – Keynote Lecture at National Conference on Recent Trends in Chemical and Physical Sciences, 11th January 2019
- Twelve Principles of Green Chemistry, K. C. College Churchgate under DBT-STAR College Scheme on 1st February 2019
- Organometallic Chemistry, Segment I of E-3 Lecture series at Guru Nanak Khalsa College, Matunga on 19th January 2019
- Enzymatic catalysis in non-conventional media for transesterification and kinetic resolution, International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018), the XV Convention of the Biotech Research Society, India at CSIR-Indian Institute of Chemical Technology (IICT) – Hyderabad, 22nd to 25th November 2018
- Safety Aspects in Chemistry Laboratory, Sophia Collect for Women on 1st September 2019
- Development of Catalysts for C1 Chemistry, Workshop on Sustainable Catalysis of Industrial Processes, at National Chemical Laboratory, on 21st September 2018
- Sustainable Catalysts for the fixation of Carbon Dioxide and Carbon Monoxide as C-1 sources to synthesize the Value Added Chemicals, Keynote Lecture at the 8th Tokyo Conference on Advanced Catalytic Science and Technology, (TOCAT 8) at Yokohama Japan on 8th August 2018
- Greener Methods for the Synthesis of Metal and Metal Oxide Nanomaterials and its Catalytic Applications, 7th DAE–BRNS sponsored Interdisciplinary Symposium on Materials Chemistry (ISMC-2018) during 4th to 8th December, 2018 at DAE Convention Centre, Mumbai
- Careers in Chemistry, Seminar on Careers in Basic Science, Marathi Vidnyan Parishad, Mumbai on 12th May 2019 and 30th March 2019 at Ruia College
- Opportunities in Science & Research, Borivali Career Vision on 2nd June 2019

### Jayashree M. Nagarkar

- Waste Management & Fire Safety, BIT-Mesra on 17th December 2018
- Eco-friendly formulations for pesticidal applications, Association of Chemistry Teachers (Mumbai) and Rasayan Journal of Chemistry-2018 in coordination with SRM Institute of Science & Technology, Ramapuram, Chennai, on 27th to 29th December 2018

### Dr. Anant R. Kapdi

- Phosphatriazenes: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis, at Department of Chemistry, IIT Dhanbad, on 2nd November 2018
- Phosphatriazenes: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis at The Chinese University of Hong Kong, Hong Kong on 8th January 2019
- Phosphatriazenes: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis, at Hong Kong Baptist University, Hong Kong on 9th January 2019

- Phosphotriazines: Versatile ligands for bio-active molecules modification via sustainable palladium catalysis, at Indian Oil Corporation Faridabad R&D centre on 9th May 2019
- Rational Ligand design for sustainable palladium catalysis: Story of PTABS, at Institute of Organic and Analytical Chemistry, University de Orleans, France on 29th May 2019
- Rational Ligand design for sustainable palladium catalysis: Story of PTABS, Institute National de Sciences Appliquees, University de Roenun (Normandie), France on 7th June 2019
- Rational Ligand design for sustainable palladium catalysis: Story of PTABS, Laboratory Chemistry Coordination of CNRS Toulouse, Paul Sabatier University, France on 12th June 2019.
- Rational Ligand design for sustainable palladium catalysis: Story of PTABS, Department of Chemistry, University of Dijon, France on 14th June 2019.

#### **Dr. Shraeddha Tiwari**

- Reaction Kinetics, Orientation-cum-Selection Camp conducted by Homi Bhabha Centre for Science Education on 3rd June 2019

#### **Dr. Sanghamitra Chatterjee**

- America's International Meeting on Electrochemistry and Solid State Science, 30th September to 4th October 2018 in Cancun, Mexico
- DAE-BRNS 7th Interdisciplinary Symposium on Materials Chemistry, 4th to 8th December 2018 in Bhabha Atomic Research Centre, Mumbai

#### **Dr. P. M. More**

- Oral presentation at 5th Indo-French Bilateral Symposium on Functionalized Materials for Sustainable Catalytic and Related Applications MATSUCAT-2019, 26th February to 1st March 2019 in NCL-Pune

### **Doctoral Degrees Awarded**

<b>Research Scholar</b>	<b>Project</b>
<b>Prof. R. V. Jayaram</b>	
Dr. Fernandes Thomson	Recovery of metals from metallic and non-metallic solid wastes by hydrometallurgical methods
Dr. Katkar Suyog	Catalysis by bimetallic nanoparticles
Dr. Kadam Nisha	Synthesis of polymer supported catalysts for organic transformations
<b>Prof. B. M. Bhanage</b>	
Dr. Aravind Gajengi	Synthesis of Oxides of Magnesium, Nickel, Copper Nanoparticles and Their Catalytic Applications in Organic Synthesis
Dr. Rajendra S. Mane	Palladium Catalyzed Carbonylative Synthesis of Amides and Esters Utilizing Gaseous CO as C1 Source
Dr. Subhash L. Yedage	Transition Metal Catalyzed C-H and C-N bond Activation for the Synthesis of Amides and Heterocycles
Dr. Amol B. Patil	Experimental and Computational Insights in Anisotropic Silver and Silver sulphide nonmaterial Electro deposition using Protic Ionic Liquids
Dr. Anil Sathpathy	Transition Metal Catalysed CO Based Polymerization and Ethylene Glycol Formation
Dr. Vijayesh Vyas	Ruthenium Catalysed Asymmetric Transfer Hydrogenation of Unusual Class of Heterocyclic and Hindered Ketones by Using Enantiopure TsDPEN and Prolinamide Ligands as a Chiral Source
Dr. Prashant Gautam	Studies in carbonylation reactions in organic synthesis

Dr. Vitthal Saptal	Development of Sustainable Catalysts for the Chemical Conversion of Carbon Dioxide to Cyclic Carbonates, Oxazolidinones, Quinazoline-2,4(1H,3H)-diones and N-formylation of Amines
Dr. Samadhan Jagtap	Studies in transition metal catalysed hydroformylation of olefins and semi-hydrogenation of alkynes
Dr. Abhishek Tiwari	Development of Green and Sustainable Methodologies for The Synthesis of Quinazolines, Quinazolinones, Benzoxazoles and 1,3,5-triazines
Dr. Ashwini Mathapati	Studies in Lipase Catalyzed Transesterification and Chiral Resolution Techniques
<b>Prof. J. M. Nagarkar</b>	
Dr. Sarode Sachin A	Synthesis and applications of nanomaterial's as catalyst in organic transformations
<b>Dr. Anant Kapdi</b>	
Dr. Ajaykumar V. Ardhapure	Development of novel route for the synthesis of substituted Nucleosides by using transition metal-catalysed reactions
Dr. Gopal L. Dhangar	Metal mediated coupling reactions under mild conditions.
Dr. Mahendra R. Patil	Supramolecular polyoxometalate structures synthesis and application for various catalytic organic transformation.
Dr. VidyaZende	Synthesis of novel ligands and applications in various organic reactions
Dr. Vijay Gayakhe	Greener approaches towards metal-mediated synthesis of important heterocycles
<b>Dr. Vijay Kumar A.</b>	
Dr. Rani N. Patil	Development of Cyclodextrin Based Catalysts for Synthetic Organic Transformations in Benign Solvent
<b>Dr. Shraeddha Tiwari</b>	
Dr. Arun Valvi	Effect of Reaction medium on the Reactivity and Selectivity of Aromatic Nucleophilic Substitution
<b>Dr. Dipanwita Das</b>	
Dr. Sagar Patil	Synthesis and Application of Functionalized Organic and Transition Metal based Chemosensors as Molecular Recognition Probes

## Current Doctoral Projects

Research Scholar	Project
<b>Prof. R. V. Jayaram</b>	
Patil Bhumika Pandurang	Industrial solid-waste treatment
Khiste Kavita Vidyadhar	Enzyme catalysis in degradation of organic pollutants from industrial waste and extraction of value-added compounds from micro algae and other sources
Sadgar Amid Laxman	Formation, stabilization and application of emulsions and micro emulsions
Deore Tushar Sayajirao	Synthesis and applications of ionic liquid surfactants and metallosurfactants
Das Indrani Sen	Physicochemical properties and application of aqueous non-ionic surfactant Triton X-100
Thakare Sonali	Synthesis and applications of carbon and functionalized carbon materials
Sahani Amber Jawaharlal	Homogeneous catalysis in organic transformations using non-precious metal complexes
Hase Dattatraya Vasant	Synthesis of novel N-based extractants for nuclear fuel reprocessing
Pawar Kunal Nandkumar	Micellar catalysis for selective organic transformations
Gaike Hanuman Navnath	Green advantages of metallosurfactants in organic transformations

<b>Prof. B. M. Bhanage</b>	
Jayendra Ahire	Conversion of CO <sub>2</sub> into cyclic carbonates and dimethyl carbonates
Amol Raut	Synthesis of mono and bi-metallic nanoparticles and their applications in organic synthesis
Shivkumar Chaurasia	Synthesis of Mono and Bi-metallic Nanoparticles and their Catalytic Applications
Shilpa Gowalkar	Biomass conversion to value added products
Ashish Mishra	Synthesis of Nano Metal or Non-metal Oxides and their applications in Organic Reactions
Kripa Subharamanian	Studies in electrochemically induced organic reactions
Vinayak Gaikwad	Studies in carbon monoxide fixation reactions
Priyanka Dhande	Studies in Enzymatic reactions
Vishal Phatake	Studies in Carbon Dioxide Fixation Reactions
Yuvraj Kolekar	Studies in Carbon Monoxide Fixation Reactions
Akshay Bhujbal	Electrodeposition of Lanthanides in Ionic Liquids
Kiran Ingole	C-H bond functionalization
Manjunath Lokolkar	C-C bond formation using homogeneous catalysts
<b>Prof. J. M. Nagarkar</b>	
Zade Ramesh N.	Application of mixed metal oxides as catalyst in organic transformations involving C-C, C-N, C-O & C-S bond formation
Wagh Ravindra B.	Studies on oxidation of organic compounds with peroxides
Jadhav Kartiki B.	Biobased, Nano formulations of nonedible vegetable oils for pesticidal applications
<b>Dr. Anant Kapdi</b>	
Dharmendra S. Prajapati	Synthesis and Application of novel metallacycles in organic synthesis.
Vaibhav B. Sable	Metal-mediated Synthesis and Application of (Hetero)aromatic Aldehydes.
Shatrughna Bhilare	Development of efficient catalytic systems for Nucleoside modification via Sonogashira reaction
Aniket Gholap	Development of efficient C-H bond functionalisation protocols for Nucleoside modification
Tejpal Girase	Carbazole-based synthetically and biologically relevant molecules.
Yuvraj Bhujabal	Development of novel metal-mediated processes for Nucleoside modification
Santosh Kori	Palladium-mediated functionalization of heteroarenes
Dhanashri Sable	Metal-mediated activation of CO and CO <sub>2</sub> molecules
Harshita Seth	Heterobimetallic colloids as catalysts for efficient C-C bond formation
<b>Dr. Vijay Kumar A.</b>	
Pawar Shweta Anil	DST-SERB
<b>Dr. Shraeddha Tiwari</b>	
Potangale Mangesh	Physicochemical properties of non-imidazolium based ionic liquids: structure and interaction
Dutta Jyoti	Study of Reactivity & Selectivity of Chemical Processes in Microreactors
Muthu Mariammal	Synthesis and study of substituted N-confused tetraphenylporphyrin (NCTPP) and its metal complexes for potential application towards detection and control of environmental pollutants

<b>Dr. Dipanwita Das</b>	
Phapale Daulat	Development of Photochromic Metal Complexes: Kinetics and Photophysical Study
Agarkar Harshawardhan	Study of Metal Organic Frameworks and Transition Metal Complexes for Photochromic Applications
Raut Vrushali	Development of promising Metal Organic frameworks for various applications
<b>Dr. Sanghamitra Chatterjee</b>	
Tarlekar Pravin	Development of Electrochemical Sensors for Investigation of Electroactive Compounds
Mane Suyash	Electrochemical Determination of Drugs Utilizing Nanomaterial Modified Sensors
Savalia Rutesh	Development and Application of Nanomaterial Based Sensors for Selective Determination of Pharmaceutical formulations in Biological Fluids
Agrawal Nikita	Fabrication with Nanocrystalline Materials for Electrochemical Sensing of Biological Analytes
<b>Dr. Pavan More</b>	
Lavande Nitin	Total oxidation of diesel engine exhaust and volatile organic compounds by using Cs and Mg doped $Mn_xCe_{1-x}O_{2-y}$ and $Cu_xCe_{1-x}O_{2-y}$ catalyst
More Rahul	Complete oxidation of diesel engine exhaust and volatile organic compounds by using non-noble metal catalyst
Waikar Jyoti	Catalytic oxidation of VOCs and Diesel exhaust on Mn and Co supported $Ce_x-Al_2O_3-x$ and $Sr_x-Al_2O_3-x$ catalyst
<b>Dr. Sudam Dawande</b>	

## M. Sc. Research Projects

<b>Name of student</b>	<b>Title of Project</b>	<b>Project Guide</b>
Anjila . J. Siddiqui	Synergistic effect of Nano particles and Nanomaterials as a sensing platform for Gatifloxacin	Dr. S. Chatterjee
Bharti. N. Malvia	A mild and Rapid protocol for the Oxidation of Boronic Acids to Phenols	Dr. J.M. Nagarkar
Geetanjali Joshi	Amidation of indole at C-5 and C-7 positions	Dr. S. Dawande
Jesvita Cardozo	Substrate Scope study for Pd/PTABS catalyzed Thioetherification of Chloroheteroarenes	Dr. A. R. Kapdi
Kashish Sethi	Electrochemical synthesis of carbonate esters from benzyl methoxycarbamates	Prof. B.M.Bhanage
Madhu Rai	Barium doped cobalt catalyst for selective oxidation of alcohol to aldehyde	Dr. Pawan More
Neelanjane Mukherjee	Cloud point extraction of an alkaline earth metal using a commercially available surfactant and natural surfactant	Prof. R.V.Jayaram
Neha Gangwan	Coealt(III) Catalyzed N- Tosylhdrazone Directed Annulation via C-H/N-N bond Activation for the Synthesis of Isoquinolines	Prof. B.M.Bhanage
Neha R. Gharat	Effect of solvents on the UV- Visible absorption spectroscopy of substituted N- Confused Tetraphenylporphyrin	Dr. S. S. Tiwari
Pratik D. Saudagar	Calcium doped Manganese catalyst for selective oxidation of benzyl alcohol to benzaldehyde	Dr. Pawan More

Priya Saroj	Palladium- catalyzed C-H arylation of [1,2,4] Triazolo [4,3-a ] Pyridine using Bromoarenes	Dr. A. R. Kapdi
Rajat Dheeman	Synthesis, Characterisation and properties of electro deposited Ni-P Electrocatalysts for Hydrogen Evolution Reaction	Prof. R.V.Jayaram
Sandhya V. Poojari	Cu <sub>2</sub> O- CD Nanosuperstructures: a Biomimetic Catalyst for Oxidation and Oxygeneation reaction using Molecular oxygen	Dr. Vijaykumar.A
Sanket Gije	Sodium copper Chlorophyllin catalyzed Biomimetic Synthesis of Benzimidazoles	Dr. Vijaykumar.A
Sumit Tiwari	Rh (II) catalysed reaction of 1.2.3-N-Sulphonyl triazole with 2-quinoline	Dr. S. Dawande
Urmila Makhija	Nitrogen-doped carbon quantum Dots: green synthesis and application in real samples	Dr. S. Chatterjee

### M. Sc. Seminar Topics

Name of student	Seminar Topic	Seminar Guide
Anjila Siddiqui	Analytical chemistry tools for metabolomics	Dr. S. S. Tiwari
Bharti Malvia	Asymmetric copper catalysed azide- alkyne cycloaddition reaction	Prof. B. M.Bhanage
Geetanjali Joshi	State of the art and perspectives in metallic nanoparticles	Dr. S. Chatterjee
Jesvita Cardozo	Mn Catalysts for selective oxidation of alcohols	Dr. Pavan More
Kashish Sethi	Graphene: A versatile platform for theranostic applications	Dr. S. Chatterjee
Madhu Rai	Inert gases- Are they really inert?	Prof. R.V. Jayaram
Neelanjana Mukherjee	Transannulation reactions of three and four membered carbocyclic and heterocyclic compounds	Dr. S. Dawande
Neha Gangwar	Membrane technology for the treatment of Industrial waste water	Prof. J.M. Nagarkar
Neha Gharat	Taste masking and odour masking chemicals	Prof. R.V. Jayaram
Pratik Saudagar	Sponge ionic Liquids	Dr. A. R. Kapdi
Priya Saroj	Enzymes as a chiral catalysts	Prof. B. M. Bhanage
Rajat Dheeman	Homogeneous Catalysis: A powerful technology for the modification and synthesis of biomolecules	Dr. A. R. Kapdi
Sandhya Poojari	Effect of support in the Pt catalysed selective oxidation of alcohols to aldehydes	Dr. Pavan More
Sanket Gije	Applications of ionic liquids in chromatographic separations	Dr. S. S. Tiwari
Sumit Tiwari	Total synthesis of archazolid	Dr. Vijay kumar. A
Trupti Jadhav	Rhodium catalysed decarbonylation	Prof. B.M. Bhanage
Urmila Makhija	C-H oxidation and fluorination by electrosynthesis	Dr. Vijay kumar .A

## Student Achievements

### A] Awards

Jyoti Dutta	Received the DST and SERB International Travel Grant for poster presentation in the 19th Tetrahedron Symposium in Rive del Garda, Italy (June 2018)
	Awarded the CSIR Senior Research Fellowship
Muthu Mariammal	Awarded the DST Woman Scientist Fellowship
Rahul K. More	1st Prize for poster presentation in National Seminar on Frontiers in Heterogeneous Catalysis (HETCAT-2018) organized by the Department of Chemistry, Maharaja Sayajirao University of Baroda and Catalyst Society of India on 8th and 9th December 2018
Akshay Bhujbal	“Best Paper Award” at the National Symposium on Electrochemical Sciences and Technology at IISc, Bangalore (July 2019)

### B] Oral and Poster Presentations by the Students

Name of Student	Paper/Poster	Details of Event
Kartiki Jadhav	Poster	Exploring New Horizons in Chemical Sciences (ENHCS) - 2019, Organized by Department of Chemistry, Deogiri College, Aurangabad, on 10th – 12th January 2019
Kripa Subramanian	Poster	23rd National Symposium on Catalysis (CATSYMP-23) organized by Catalysis Society of India-Bengaluru Chapter held at Bengaluru during 17-19th, January 2018
Kripa Subramanian	Oral	FICS 2018 (Frontiers in Chemical Sciences) conference held at the Dept. of Chemistry, IIT Guwahati during 6-8th December 2018
Akshay Bhujbal	Oral	14th Biennial DAE-BRNS Symposium on Nuclear and Radiochemistry (NUCAR-2019) at BARC, Mumbai

### C] Prizes under the CMP Endowment:

1. M.Sc.(Chemistry) Best Student Award (Batch 2017-19)  
Ms. Urmila Makhija – Rs. 5000/- cash prize and Certificate
  2. Prize for First Rank in M.Sc. (Chemistry) from batch of 2017-19  
Anuja Sharma - Rs.5000/-Cash Prize & Certificate
  3. Prize for Second Rank in M.Sc. (Chemistry) from batch of 2017-19  
Jevy Corriea - Rs.3000/-Cash Prize & Certificate
  4. Prize for Third Rank in M.Sc. (Chemistry) from batch of 2017-19  
Anurag Chinchole - Rs.1000/-Cash Prize & Certificate
- CMP Endowment Best Teacher Award – Prof. S. D. Samant

### D] Awards and Accolades for Faculty Members:

- South Indian Education Society's "Best Teacher Award 2017-2018" – Prof. B. M. Bhanage
- Dr. Sarojini Devi Memorial Award, by Higher Education Forum, 2018 – Prof. B. M. Bhanage
- C. B. Murarka Charitable Trust Best Asst Professor Award – Dr. A. R. Kapdi
- International Travel Support by Department of Science and Technology (DST) – Dr. Sanghamitra Chatterjee