SOMAIYA
VIDYAVIHAR UNIVERSITY

S K Somaiya College

Somaiya TRUST

Department of Polymer Science

A Centre for Post-Graduate Teaching & Research in Chemical Sciences

Shri Samir Somaiya
Chancellor, Somaiya Vidyavihar University

On 26th of August 2019, Somaiya Vidyavihar University has become a reality. Many of our institutions will combine together to become a part of this University.

I had promised my grandfather, our founder, Padma Bhushan K J Somaiya, that I will, in my lifetime, endeavour to make Somaiya Vidyavihar an institution that any person in the world would want to apply to. This was a condition he made, when he allowed me to go study at Cornell. We traded dreams.

My dream to go to Cornell and his dream to make Somaiya into an institution that his grandson, and by extension, others would aspire to attend.

Becoming a University is a necessary part of that journey and that goal.

This is a similar time for us. Becoming a University is a time for charting our own course on what we teach, and how we teach it.

We do dream of making a world-class institution of teaching, research, and service, and build on the aspiration of our founder. We need to imagine what makes for a good education. We need to determine that for ourselves, in our local context and in the global world that we live in today.

Today, many of our institutions transition to University status. Our other institutions are also part of this journey toward excellence.

Prof V. N. Rajasekharan Pillai
Vice-Chancellor, Somaiya Vidyavihar Univeristy

It is with great pleasure that I introduce the brochure for the Department of Polymer Science, Somaiya Vidyavihar University. This department is also conceived as a centre for post-graduate teaching and research in the area of Chemical Sciences. This brochure serves as a testament to the remarkable work being conducted by our dedicated faculty members, researchers, and students in the field of polymer science.

Polymer science and technology have become increasingly crucial in our modern world, playing an integral role in numerous industries, ranging from materials and manufacturing to healthcare and sustainability. The Department of Polymer Science has been at the forefront of post-graduate education and research in this dynamic field. The M.Sc. Program in Polymer Science and the Post-graduate Diploma in Polyurethane Technology are jointly designed and taught by university teachers and experienced industry professionals in the field.

Our department is committed to nurturing intellectual curiosity, promoting interdisciplinary collaboration, and fostering innovation. Our faculty members, renowned for their expertise and research contributions, create a vibrant learning environment that encourages students to explore the frontiers of polymer science and allied disciplines.

Through a comprehensive curriculum and state-of-the-art laboratories, our students acquire a strong theoretical foundation and practical skills necessary for addressing complex challenges in polymer science and technology. They are trained to become future leaders and innovators who will drive advancements in macromolecular materials, processes, and applications.

Research forms a cornerstone of our department's activities. Our faculty members and researchers are engaged in cutting-edge projects that push the boundaries of knowledge and address pressing societal needs. From developing sustainable polymers to exploring advanced manufacturing techniques and biomaterials, our research endeavors have far-reaching implications.

Moreover, our department collaborates with industry partners, government agencies, and other academic institutions, enabling us to bridge the gap between academia and real-world applications. These collaborations not only enrich our research but also provide valuable opportunities for our students to gain practical experience and contribute to the industry.

I invite you to explore this brochure, which showcases our department's achievements, facilities, academic programs, and research initiatives. We take pride in our accomplishments, but we also recognize that our journey is ongoing. We remain committed to excellence in teaching, research, and innovation as we strive to make a lasting impact in the field of polymer science and technology and allied industrial areas.

I appreciate all our faculty, students, staff, alumni, and collaborators for their unwavering support and dedication. Together, we will continue to shape the future of polymer science, its chemistry, physics, and biology and make significant contributions to knowledge skills and applications in this area.

I extend a warm welcome to this multi-faculty comprehensive university which is situated in a panoramic 60-acre green campus in the heart of Mumbai. Our motto is “Freedom of Possibilities”. Let us together explore them!

CA Monica Lodha
Director, S K Somaiya College

S K Somaiya College is a constituent college of Somaiya Vidyavihar University with its future-ready, sprawling campus, a world - class learning infrastructure offering a 360 degree career transformational set-up aiming to provide inclusive education by making it accessible to all sections of society. It offers students, diverse educational programme in the fields of Commerce, Management, Humanities, Social Science, Science& Technology giving opportunity for academic exploration, all round growth, to complement Major with Minor degree in three years (interdisciplinary), to develop advanced theoretical and research skills ensuring better experiential learning through Honours Programme - giving an edge to students to embark in competitive corporate market providing a platform to display his or her varied skill sets and dormant talents. We follow a student-centric approach. The classroom is looked upon as a site of engaged learning, reflective action and participatory pedagogy through value based holistic teaching and learning by integrating traditional and innovative practices.

Our endeavour and commitment is to help our students to generate innovative ideas, knowledge and skills requisite for social benefits and equip them with the skills needed to adapt better to the changing global scenario and gain access to multiple career opportunities.

Courses Offered

Master of Science (MSc) in Polymer Science

This is a post-graduate full-time, two-year course that aims to provide the student with specialised knowledge and skills in the area of polymer science. This is an **'Industry-Academia Joint-Taught Programme'**. The course is taught by renowned, experienced teachers/scientists (from colleges/universities/industrial and public R&D institutes) with doctoral and postdoctoral qualifications.

Objectives of the programme

- Students would gain the ability to design and conduct experiments as well as to analyse and interpret data
- Students would gain the ability to design a system, component, or process to meet industrial needs
- Students would gain the ability to function in multi-disciplinary teams and communicate effectively
- Impart holistic development for an understanding of professional and ethical responsibility
- Learn to conduct investigations of complex problems
- Develop acumen towards scientific methods, problem analysis, and critical thinking

Career Options and Opportunities

Polymer Industry is a broad and well-developed sector, and there are various job options after completing the MSc Polymer Science programme. Students can seek jobs in various fields of polymer industries like

Research and Development | Application Testing | Quality assurance | Market Development
Sales | Business development

After successful completion of the course, a student can opt for higher education like doctoral and postdoctoral studies. The programme also encourages self-employment and entrepreneurship among students and inspires them to turn an emerging idea into a viable start-up.

Unique features and Programme Highlights

- Multifaceted post-graduate teaching, training, and research capacity building in one of the central industrial growth sectors
- Joint Academia-Industry Taught programme with 3 semesters in the College and 1 semester in the industry and R&D
- Taught by renowned, experienced teachers/scientists (from College/Universities/Industrial and Public and Corporate R&D Institutes) with Doctoral and Postdoctoral research experience
- Multidisciplinary collaboration among chemists, physicists, and engineers who are seeking new knowledge on design, synthesis, characterisation, processing and understanding the molecular basis of novel functional materials
- This research-oriented course offers topics in polymer chemistry, polymer physics, and polymer engineering
- Equips the candidates for work in industry and provides advanced training for research at the PhD level

Admission Requirements

- A candidate for being eligible for admission to the MSc degree in Polymer Science must have Bachelor of Science degree in Chemistry/Physics/Geology/Life Sciences/Biotechnology or Bachelor of Technology / Engineering and a minimum of 55% aggregate marks in the qualifying graduation examination.
- Students with Bachelor's degree in Physics-Chemistry-Biology (PCB) or Physics-Chemistry-Geology (PCG) may also apply but should have Mathematics at HSC (12^{th} std) level.
- For students with Bachelor's degree Physics-Chemistry-Geology or Physics-Chemistry-Biology or Life Sciences or Biotechnology remedial Mathematics course would be compulsory.
- For students with Bachelor's degree in Life Sciences, Engineering and Technology, remedial courses, as needed will be prescribed in the area of chemistry and physics and will be compulsory.

Admission Procedure

- Admission is based on the marks obtained in Bachelor's Degree.

Curriculum

Semester I

Core Courses

- Introductory Polymer Science- I
- Introductory Polymer Science -II
- Step-and-Chain growth polymerisation
- Anionic and Cationic polymerisation
- Stereochemistry of polymers and Coordination polymerisation
- Polymer morphology, cross-linking and gelation
- Mechanical properties and degradation of polymers
- Polymer rheology and dynamics
- Basic mathematics and statistics for chemist
- Research Methodology -I
- Polymer Laboratory -1
- Critical Review of Research Paper
- Open Course / Seminar / Term Papers
- Seminar / Viva Voce

Semester II

Core Courses

- Chemical Composition of Polymers
- Molecular Properties of Polymers
- Thermal Properties of Polymers
- Rheological Properties of Polymers
- Mechanical Properties of Polymers
- Morphology of Polymers
- Polymer Processing
- Introduction to Paints and Coating
- Polymer Membranes: Structure, Property and Applications
- Special Properties of Polymers
- Fiber Science and Technology
- Adhesives Science and Technology
- Research Methodology Part-2
- Polymer Laboratory -II
- Open Course / Webinar / Seminar/Industrial visits
- Viva Voce/Seminar

Semester III

Core Courses

- Sustainability of Polymers: Issues and Solutions
- Blends, Alloys, and Advanced Composites
- Bioderived, Biodegradable, and Compostable Polymers
- Structure and Properties of Natural and Biologically Derived Polymers: Cellulose, proteins, Peptides, Polysaccharides, Supramolecular Structures
- Polymers in Pharmaceuticals, Medicine and Health Care
- Modeling, Simulation, and Advanced Computational Methods in Polymer Science
- Polymer Product Design
- Elective Course: 1. Polymers for Fuel Cells Applications (Proton ConductingMembranes): Low Temperature and High Temperature.

  2. Polymers for Light Harvesting Applications
- Case Study of the Development of an Industrial Polymer or Process or Applications
- Polymer Laboratory: 3
- Literature Survey Reports / Term Paper
- Project Work, Internship and Thesis
- Seminar and Viva Voce

Semester IV

Core Courses

- MSc Thesis
- Comprehensive Viva Voce covering the entire course

Master of Science (MSc) in Polymer Science - Part Paper, Part Research

This is intended to be a two-year course designed for industry personnel desirous of pursuing MSc studies (and beyond). The course will be designed to be a balance of classroom teaching for a certain number of credits and certain core and elective subjects. There will be a research component that the student may carry out in the College and the rest will be carried out in his/her parent organization. There will be no distinction between an on-campus student and a student from industry as far as academic criteria are concerned.

Programme Highlights

This programme would give another opportunity to the people who missed out on acquiring post-graduate qualification earlier. The programme will galvanise the candidates to acquire higher qualifications which may help in advancing their careers. This would also open another window to study for PhD programme if candidate scan dream.

Admission Requirements

The desirous candidate should have a BSc in any branch of Chemistry from are cognised institute.

He/she must have been working in an Industry/Academic Institution. It is an Industry-Academia Joint Taught course. He/she must be sponsored by the Industry/Academic Institution where he has been employed.

Admission Procedure

Admission is based on the marks obtained in the Bachelor's Degree and a Personal Interview

PhD Degree

The Department of Polymer Science is the only department where all the Faculty Members are Recognised Guides of MSc/PhD programmes. The guidelines for PhD studies would be adopted from the University Grants Commission (UGC) norms and modified for local needs of Somaiya Vidyavihar University.

The quality and content of the research will be on par with any advanced educational institution/university in India or abroad.

Admission Requirements

Post-graduate degree with 50% marks in Physics, Chemistry, and Polymer chemistry

Admission Procedure

NET or PhD Entrance examination by SVU and Personal Interview
For more details - https://www.somaiya.edu/en/phd/

Research & Teaching Associateship (RTA) Programme

Somaiya Vidyavihar Univeristy is offering full time research positions through Research & Teaching Associateship (RTA) Programme

For more details: https://www.somaiya.edu/en/view-career/145

Major Research Areas by Department

- Polymeric Waste Recycling and Sustainable Polymers
- Light Emitting and Conducting Polymers
- Renewable Sources
- High Performance Polymers
- Natural Products and Textiles
- Computational and Quantum Chemistry
- Electron-Induced Chemistry and Polymerisation
- Astro-Chemistry

Post Graduate Diploma in Polyurethane Technology (PGD)

This is a one-year diploma course designed for students graduated in science as industry personnel desirous of pursuing studies in Polyurethane Technology. This will be in collaboration with the Indian Polyurethane Association (IPUA), and allied polyurethane industries in Western India, and execute the same jointly with the industry experts.

The course is designed to be a balance of classroom teaching for a certain number of credits and certain core and elective subjects. The hands-on training will be offered to students as internship in a well-recognized polyurethane industry.

Highlight of the programme

This programme would give an opportunity to the people who are already skilled in industry but aspire academic credits, to acquire a pre-postgraduate qualification.

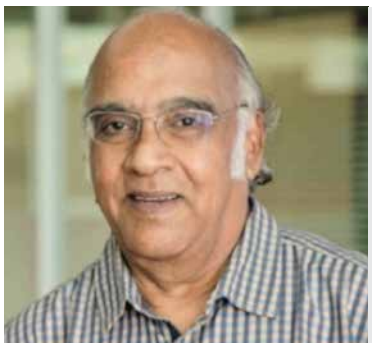
The programme will lead the candidates to acquire a post-graduate degree if they wish to continue.

The Candidates will be eligible for a postgraduate degree with one more year of study or internship in a relevant industry.

Admission Requirements

Any branch of chemistry or chemical technology or a graduate in science or technology with chemistry as one of the subject.

Teaching Faculty Members



Prof S Sivaram

Honourary Professor of Eminence & Dean, Faculty of Science, Somaiya Vidyavihar University, Mumbai.

Honourary Professor and INSA Senior Scientist, Indian Institute of Science Education and Research, Pune & Honourary Professor, Indian Institute of Science Education and Research, Kolkata

Prof V N Rajasekharan Pillai

Department of Polymer Science &
Vice-Chancellor
Somaiya Vidyavihar University

Prof Soumyadeb Ghosh

Head, Department of Polymers Science and Head of CISER and Senior Professor

Research Interests

Supramolecular polymers and their rheological properties.
Design & synthesis of high-temperature polymers.
Structure-property relations in polymer composites, particularly in nanocomposites & highly-filled system

Best Publications

- Ghosh, S.; Inganäs O. Conducting polymer hydrogels for supercapacitor electrodes. Adv. Mater. 1999, 11, 1214 (Patented).
- Ghosh, S.; Inganäs, O. Electrochemical Characterization of Poly (3,4-ethylene dioxythiophene) based Conducting Hydrogel Networks. J. Electrochem. Soc. 2000, 147, 1872-1877.
- Ghosh, S.;. Inganäs, O. Self-assembled network of electronic conducting polymer in matrices of the ion-conducting polymers: applications to fast electrodes. Electrochem. Solid State Lett. 2000, 3(5), 213-215.
- Ghosh, S.; Bowmaker, G. A.;Cooney, R. P. Ionomer-like behaviour of protonated polyaniline: effect of ionic strength on the optical spectra. In J. Mater. Chem. 1997, (4), 597.
- Ghosh, S. Near-neighbour interactions in protonation of polyaniline; Macromolecules, 1995, 28, 4729.

Teaching Faculty Members

Dr Vandana Jamdar

Coordinator and Assistant Professor
Email: vandana.jamdar@somaiya.edu

Research Interests

- Polymeric Waste Recycling
- Sustainable Polymers

Best Publications

- Jamdar, V.; Kathalewar, M.; Dubey, K. A.; Sabnis, A. Recycling of PET wastes using Electron beam radiations & preparation of polyurethane coatings using recycled material. Progress in Organic Coatings, 2017, 107, 54–63.
- Jamdar, V.; Kathalewar, M.; Jagtap, R. N.; Dubey, K. A.; Sabnis, A. Effect of γ-irradiation on glycolysis of PET waste and preparation of eco friendly coatings using bio-based and recycled materials. Polymer Engineering and Science, 2015 55(11), 2653–2660.
- Jamdar, V. ; Kathalewar, M.; Sabnis, A. Depolymerization Study of PET Waste Using Aminoethylethanolamine and Recycled Product Application as Polyesteramide Synthesis. Journal of Polymers and the Environment, 2018a, 26(6), 2601–2618.
- Jamdar, V.; Kathalewar, M. ; Sabnis, A. Glycolytic depolymerization of PET waste using MP-diol and utilization of recycled product for UV-curable wood coating. Journal of Coatings Technology and Research, 2018b 15(2), 259–270.
- Zende, R.; Ghase, V. ; Jamdar, V. A review on shape memory polymers. Polymer-Plastics Technology and Materials 2023, 62 (4), 467–485.

Dr Daly Davis

Assistant Professor
Email: daly@somaiya.edu

Research Interests

- Computational and Quantum Chemistry
- Electron-Induced Chemistry and Polymerisation
- Astro-Chemistry

Best Publications

- Davis, D.; Sajeev, Y. A hitherto unknown stability of DNA basepairs. Chemical Communications, 2020, 56(93), 14625–14628.
- Davis, D.; Bhushan K.G. ; Sajeev Y. ; Cederbaum L. A concerted synchronous [2+2] cycloreversion repair catalyzed by two electrons Journal of Physical Chemistry Letters 2018, 9 (24) 6973-6977
- Davis, D.; Kundu, S.; Prabhudesai, V. S.; Sajeev, Y.; Krishnakumar, E. . Formation of CO2 from formic acid through catalytic electron channel. Journal of Chemical Physics, 2018, 149(6).
- Davis, D.; Vysotskiy, V. P.; Sajeev, Y.; Cederbaum, L. S. A one-step four-bond-breaking reaction catalyzed by an electron. Angewandte Chemie - International Edition, 2012, 51(32), 8003–8007.
- Davis, D.; Vysotskiy, V. P.; Sajeev, Y.; Cederbaum, L. S. Electron impact catalytic dissociation: Two-bond breaking by a low-energy catalytic electron. Angewandte Chemie - International Edition, 2011, 50(18), 4119–4122.

Teaching Faculty Members

Dr Anant D Kulkarni

Assistant Professor
Email: anant.kulkarni@somaiya.edu

Research Interests

- Computational and Quantum Chemistry
- Computational Simulations of novel materials, nanomaterials and polymers
- Hydrogen storage materials

Best Publications

- Kulkarni, A. D.; Molecular Hydration of Hydration of Carbonic Acid: Ab initio Quantum Chemical and Density Functional Theory Investigation J. Phys. Chem. A 2019, 123, 5504-5516
- Kulkarni, A. D.; Truhlar D. G.; Srinivasan S. G.; Duin A.; Norman, P.; Schwartzentruber, T. Oxygen Interactions with Silica Surfaces: Coupled Cluster and Density Functional Investigations and Development of a New ReaxFF Potential J. Phys. Chem. C 2013, 117, 258-269.
- Kulkarni, A. D.; Truhlar D. G. Performance of Density Functional Theory and Møller-Plesset Second Order Perturbation Theory for Structural Parameters in Complexes of Ru, J. Chem. Theory Comput. 2011, 7, 2325-2332.
- Rankin, R.; Jinchen. L.; Kulkarni A. D.; Johnson, K. Adsorption and Diffusion of Light Gases in ZIF68 and ZIF70: A Simulation Study J. Phys. Chem. C 2009, 113, 16906-16914.
- Maheshwary, S.; Sathyamurthy, N.; Kulkarni, A. D.; Gadre, S. R. Structure and Stability of Water Clusters (H2O)n, n= 2- 20: An Ab Initio Investigations J. Phys. Chem. A, 2001, 105, 10525-10537.

Dr Vaijayanti Ghase

Assistant Professor
Email: vaijayanti.g@somaiya.edu

Research Interests

Light Emitting and Conducting Polymers

Best Publications

- Ghase, V. D.; Hasija, D. C.; Rananaware, M. M.; Patil, V. R. Alkyl and allyl substituted polydibenzofluorene: blue emitters for future display applications. SN Applied Sciences, 2020, 2(7).
- Hasija, D. C.; Ghase, V. D.; Rananaware, M. M.; Patil, V. R. Ullmann coupling for low-cost synthesis of anthracene-based polyfluorenes: A photophysical approach. High Performance Polymers, 2021, 33(1), 115–124.
- Hasija, D. C.; Gopalakrishnan, J.; Mishra, A. V.; Ghase, V. D.; Patil, V. R. . Exploring copper as a catalyst for cost effective synthesis of polyfluorenes: an alternative to platinum and palladium. SN Applied Sciences, 2020, 2(4).
- Zende, R.; Ghase, V. ; Jamdar, V. A review on shape memory polymers. Polymer-Plastics Technology and Materials 2023, 62 (4), 467–485.
- Rananaware, M. M.; Ghase, V. D.; Hasija, D.; Patil, V. R. Benzo crown ether functionalized conjugated polyfluorenes with anthracene fragment for sustainable light-emitting device technology. Polymer Bulletin, 2021, 79(4), 2429–2442.

Teaching Faculty Members

Dr Padma S. Vankar

Adjunct Professor
Email: padma.vankar@somaiya.edu

Research Interests
Natural Products and Textiles

Best Publications

- Vankar, P. S.; Saraswat, R.; Sahu, R. Biosorption of Zinc ions from aqueous solution onto natural dye waste of Hibiscus rosa sinensis: Thermodynamic and kinetic studies. Environmental Progress & Sustainable Energy, 2012, 31(1),89-99.
- Vankar, P. S.; Shanker, R.; Verma, A. Enzymatic natural dyeing of cotton and silk without metal mordants. Journal of Cleaner Production, 2007, 15 (15), 1441-1450.
- Vankar, P. S.; Shukla, D. Biosynthesis of silver nanoparticles using lemon leaves extract and its application for antimicrobial finish on fabric. Applied Nanoscience, 2012, 2, 163-168.
- Vankar, P. S.; Srivastava, J.; Molcanov, K.; Kojic-Prodic, B. Withanolide A series steroidal lactones from Eucalyptus globulus bark, Phytochemistry Letters, 2009, 2(2), 67-71.
- Srivastava, J. Vankar, P. S. Canna indica flower: New source of anthocyanins, Plant physiology and biochemistry, 2010, 48 (12), 1015-1019.

Dr Avadhani, C. V.

Adjunct Professor
Email: avadhani@somaiya.edu

Research Interests

- Renewable Sources
- High Performance Polymers

Best Publications

- Avadhani, C.V, ; Chujo, Y. Poly (Amide-Imide) -Silica Gel Hybrids. J. Macromol. Sci. PAC, 2009, 46(7), 1-11.
- Kulkarni, N.G.; Avadhani, C.V.; Sivaram, S. Efficient Method for Recycling Poly (ethylene terephthalate) to Poly (butylene terephthalate) using Transesterification Reaction. J. Appl. Polym. Sci. 2004, 91, 3720–3729.
- Ghugare, S.V.; Govindaiah, P.; Avadhani, C.V. Polypropylene-Organoclay Nanocomposites: Effect of Nucleating Agents, Polym Bull, 2009, 63, 897.
- Kumar, V.; Chatterjee, S.; Sharma, P.; Chakrabarty, S.; Avadhani, C. V.; Sivaram, S. Soluble Polybenzimidazoles with Intrinsic Porosity: Synthesis, Structure, Properties and Processability, J. Polym. Sci. Part A: Polym. Chem. 2018, 56, 1046-1057.
- Kumar, V.; Reddy, R.R.; Kumar, B.V.N.P.; Avadhani, C.V.; Ganapathy, S.; Chandrakumar, N.; Sivaram, S. Lithium Speciation in the LiPF6/PC Electrolyte Studied by Two-Dimensional Heteronuclear Overhauser Enhancement and Pulse-Field Gradient Diffusometry NMR. J. Phys. Chem. C. 2019, 123 (15), 9661-9672

Teaching Faculty Members

Prof Dr Achala Danait

Director-Strategy and Industry Partnerships and Professor, Chemical and Polymer Sciences
Email - achala@somaiya.edu

Research Interests

- Sustainable speciality chemicals
- Renewable feedstock

Best Publications

- Salgaonkar, L. ; Danait, A. Environmentally Acceptable Emulsion System: An Effective Approach for Removal of Asphaltene Deposits. SPE-SAS 367. Paper presented at the SAS Technical Symposium, Saudi Arabia, 2012
- Agrawal, A.; Danait, A.; Nanda, J; Investigation of Solids Flowback after Hydraulic Fracturing and Remedial Treatments. SPE 143648. Paper presented at SPE European Formation Damage Conference, Netherlands 2011.
- Danait, A.; Elliott, J.; Sabhapondit, A.; Kanchiak, S. Preventing Coiled Tubing Corrosion by Hydrochloric Acid in hot wells. Paper presented at SPE ICoTA 15th European Well Intervention Round Table, Aberdeen, 2009.
- Danait A.; Deshpande, D. D. A viscometric study of the miscibility behaviour of poly (N-vinyl pyrrolidone) blends. Polymer International , 1997, 42, 257.
- Danait A.; Deshpande, D. D. A novel method for determination of polymer-polymer miscibility by viscometry, European Polymer Journal, 1995, 31(2), 1221.

Mr Swapan Ray

Visiting Faculty
ICPE, Mumbai and Reliance Industries

Dr Virendra Kumar Gupta

Head R&D Polymer and Senior Vice-President
Reliance Industries, Mumbai

Dr G S S Rao

Subject Matter Expert (SME)
HP Green R&D Center,
Hindustan Petroleum Corporation Limited

Teaching Faculty Members

Dr Chandana Basu

Former coordinator Polymer Science Programme
K J Somaiya College of Science and Commerce

Dr Shubhra Mohanty

Research and Development
Reliance Industries, Mumbai

Upcoming Highlights of the SVU

Shimadzu - Somaiya Vidyavihar Centre of Excellence in Analytical and Measurement Sciences.

An MOU was signed between M/s Shimadzu and SUV to establish and maintain an advanced analytical instrumentation facility which will be a university wide central facility. Under this agreement M/s Shimadzu, Japan will supply the following analytical facilities to SVU:

1. Triple Quadrupole GCMS System TQ-8050NX NC with Headspace Sampler HS-20NX (Trap)
2. UV-Vis Spectrophotometer, UV-1900i
3. FTIR Spectrophotometer, IRSpirit-T with Diamond ATR
4. Gas Chromatograph, Brevis GC with FID, TCD with Auto Sampler
5. ICP-MS Spectrometer 2030
6. DSC, DSC 60 Plus / TGA DTGA-60
7. LabSolutions CS Compliance Network

The new centre is set to bring about academic enrichment and development for students and the industry. As the Shimadzu Corporation and Somaiya Vidyavihar University (SVU) will jointly work, and they will be focusing on applied research and new method development in the areas of sustainable materials, green energy, and bio fuels. Another aim is to publish the research data on national forums and utilise the research publication for mutual benefit of the industry and both parties.

The centre will enable SVU to do advanced research and analysis using state-of-the-art analytical and measuring instruments to make meaningful contributions with science in the world.

A Centre for Computational science and simulations (CSS) is proposed, the first stage of this Centre involves development of a Modeling and Simulation laboratory to complement the research and teaching in Polymer Science. It is expected that the students will learn the essential concepts in the classroom and will get the hands-on training, which is extremely crucial for the practical implementation of the concepts for simulations in science.

The objective of the computational simulation Laboratory Course is to encourage:

- Learning essential concepts of basic simulations in the classroom.
- Receive hands-on training for practical implementation of the concepts for simulations.
- Employ basic simulations to improve understanding of certain phenomena, reactions, etc. through appropriate simulations.

Perform computational simulations to support the scientific project work.

Internship

National Chemical Laboratory · ICPE · Gharda Chemicals Limited · Reliance Industries Limited · Kansai Nerolac Paints Limited · Clariant · BARC · IRMRA · SPL Superme Petroche Ltd · asianpaints · Indofil Industries Limited · Aditya Birla Group · ICT · CIPET · Pidilite · Shakti Plastic Industries

Placement

Pidilite · Kansai Nerolac Paints Limited · ROHA · Darshan Chemicals · Dalmia Polypro · PEPL · ICPE · INDORE · CRISTOL Better Chemistry, Better Value · GEMCORP · Clariant · Shakti Plastic Industries · Reifenhäuser (India) Marketing Limited · btra · apcotex Bonds Beyond Chemistry · UNO MINDA · gb rubber products · Supreme Rubber Industries · Jesons · WINWAYS everyone wins

Students Going for Higher Studies

- University of Tennessee, Knoxville, USA.
- Seoul National University of Science and Technology, South Korea.

Events

NSPS 2022

Polymer Day 2023

Summer Course 2023

NSDS 2023

Scan Here

To Know More

To Know More

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