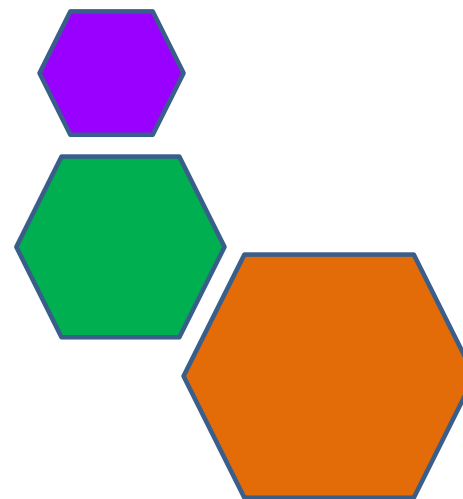
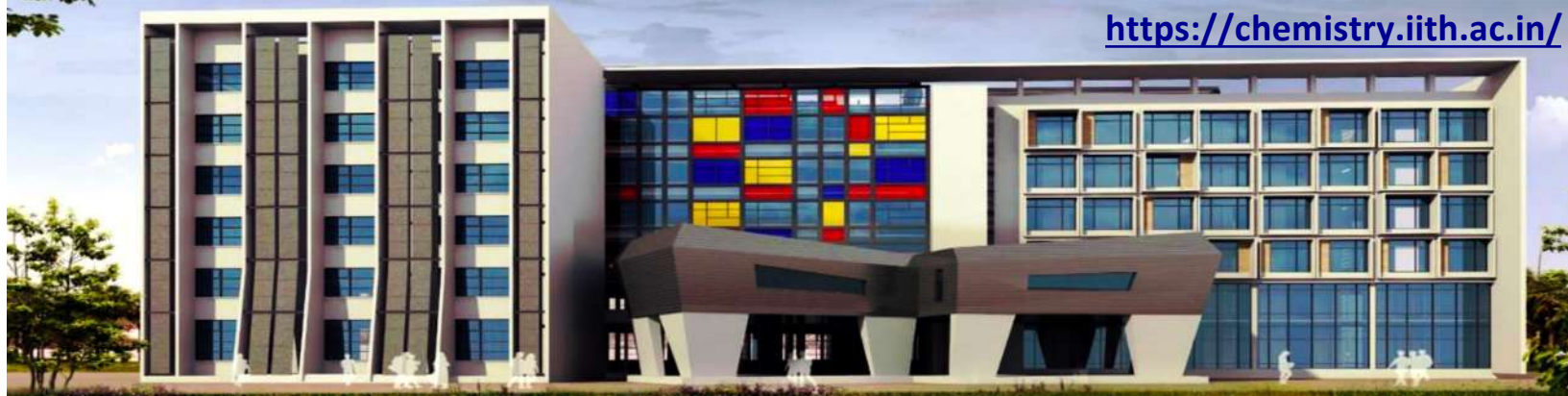




భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad



Department of Chemistry



<https://chemistry.iith.ac.in/>



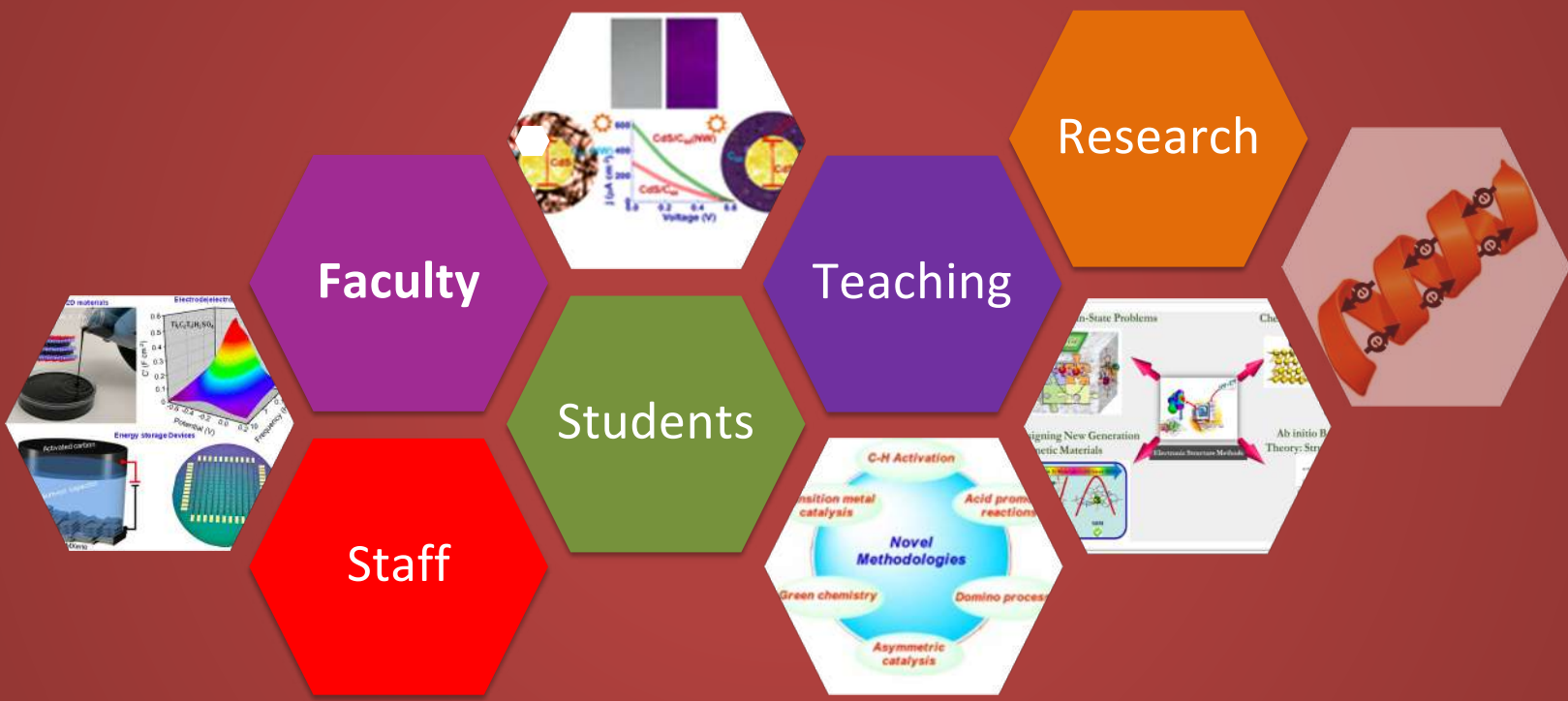
Welcome to the Department of Chemistry. The Department started functioning from the very inception of IITH. Both theory and laboratory teaching programs for UG have started from the very first day of IITH. The Department has the distinction of starting the first PG program in science at IITH. This M.Sc chemistry degree program was started in 2010. Besides, the state-of-the-art PG and research laboratories were established. The Department is committed to excellence in chemistry by establishing research programs for meeting scientific and technological challenges faced by the ever changing, science centered world of the 21st century. Our aim is to produce highly sought after and knowledgeable graduates for pursuing careers with academia, industry and government.



Dr. Surendra Kumar Martha

Head of the Department

E-mail: martha@chy.iith.ac.in
head@chy.iith.ac.in



Faculty

Teaching

Research

Students

Staff

Dr. Venkata Rao Kotagiri



Dr. Kishore Natte

Dr. Abhijit Sau



Dr. Ashutosh Mishra



Prof. C. Malla reddy

Organic Chemistry

Expertise:

- Transition Metal-mediated reactions in organic synthesis
- Discovery of New Methodologies and Stereochemistry in organic synthesis
- Asymmetric Synthesis and Medicinal Chemistry
- Bioorganic Chemistry
- Functional Organic Materials and Supramolecular Chemistry
- Organic synthesis and Carbohydrate Chemistry
- Organofluorine
- Chemistry Valorization of gases and small molecules
- Electrochemistry
- Photochemistry, Mechanochemistry
- Crystal Engineering
- Solid-state Pharmaceutical chemistry
- Mechanically Flexible and Self-healing Organic Functional Crystals



Prof. G. Satyanarayana



Prof. Faiz Ahmed Khan



Dr. Anup Bhunia

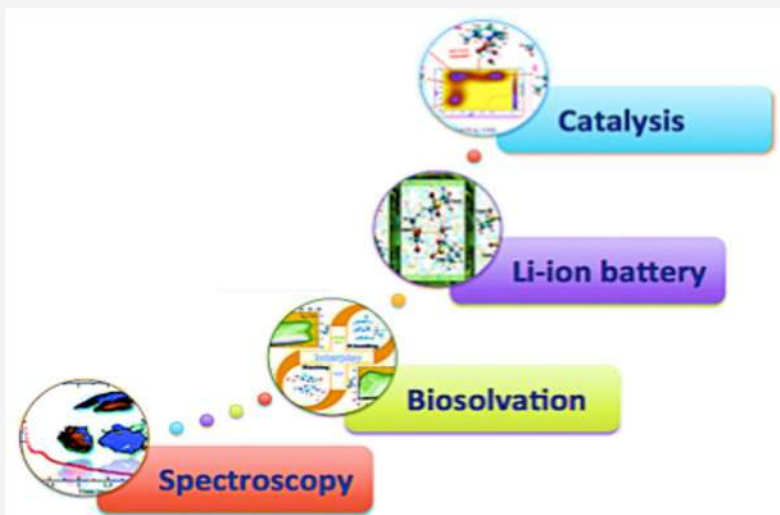
Computational Chemistry

Prof. Bhabani Shankar Mallik

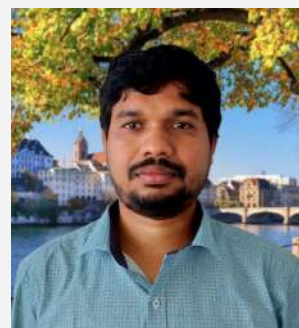


Dr. Arup Mahata

Computational Materials Science,
Density Functional Theory,
Perovskites Optoelectronics,
Surface Catalysis, Molecular
Catalysis, Spintronics, Energy
Storage Materials



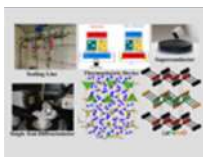
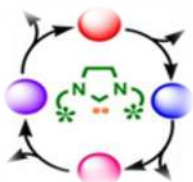
Dr. Debashish Koner



Computational Chemistry, Machine
Learning in Chemistry, Machine
Learning in Medical Diagnosis,
Biomarker Discovery, Chemical
Reaction Dynamics, Molecular
Spectroscopy. Atmospheric and
Astro-chemistry



Inorganic Chemistry



- Inorganic Synthesis
- Catalysis
- Organometallic Chemistry
- Metal catalyzed Water Splitting
- Carbon Dioxide Reduction
- Hydrogen Generation
- Strongly Correlated Materials for Thermoelectric & Superconducting Applications
- Small Molecule Crystallography
- Computational Inorganic chemistry
- Magnetic Exchange Interaction in Molecules and Molecular Solids
- Phosphor/OLED
- Bioinspired bioinorganic chemistry



Prof. G. Prabusankar



Dr. Saurabh K. Singh



Dr. Tarali Devi



Dr. Sivakumar Vaidyanathan



Dr. Somnath Maji



Prof. Tarun Kanti Panda



Dr. Jai Prakash



Dr. M. Annadhasan

Materials chemistry, Organic/inorganic flexible crystals, Mechano-photonics, Optical waveguides, Optical resonators, Photonic integrated circuits, Plasmonic nanoparticles, Stimuli-responsive materials, Single-particle photonic studies



Dr. Surajit Maity

**Spectroscopy of molecular clusters, chemical evolution of interstellar ice
Computational studies**



Dr. Surendra K. Martha

Energy Storage Materials especially Batteries and Supercapacitors



Dr. Krishna Gavvala

**Biophysical Chemistry
Time-Resolved Spectroscopy**



Dr. Narendra Kurra

Materials (electro)chemistry, Energy Storage, multivalent metal-ion batteries, Fast charging devices

Physical Chemistry



Prof. Ch. Subrahmanyam

**Catalysis
Nanomaterials
Energy Systems**



Prof. M. Deepa

**Applied Electrochemistry:
Solution Processed Solar Cells,
Electrochromic Devices,
Batteries & Supercapacitors.**



Dr. Koyel Banerjee Ghosh

Spin dependent electrochemistry and its application, surface chemistry, spin-dependent electron transfer through protein, molecular electronics



Dr. Sudarsanam Putla

Heterogeneous catalysis, nanosized and shape-controlled metal-based catalysts, biomass conversion, selective C-N coupling reactions, green chemistry



Dr. Priyadarshi Chakraborty

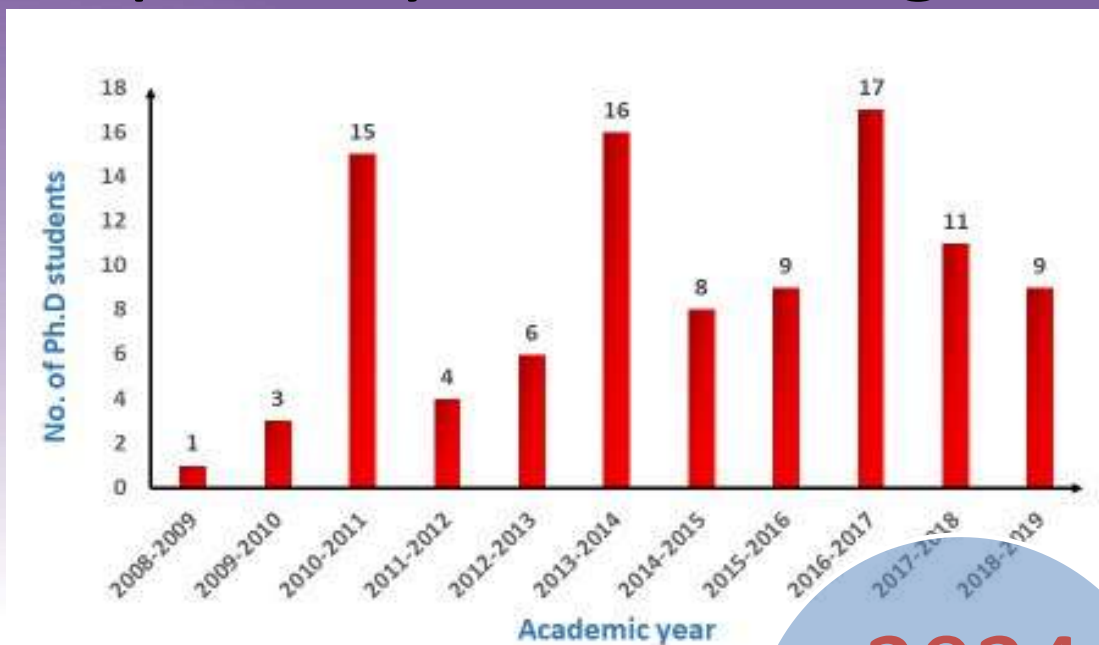
Supramolecular biomaterials, Rheology of gels, Conductive polymers, Tissue Engineering, Peptide/amino acid-based co-assembly, Drug delivery

Facilities:

1. Multi-Mode Atomic Microscope
2. Powdered X-Ray Diffraction
3. 400 MHz NMR
4. HR-MS
5. Single Crystal XRD
6. Thermogravimetric Analysis
7. IR spectrometers
8. UV-Vis. spectrometers
9. Dispersive Raman Spectrometer
10. Photoluminescence
11. Solar Simulator
12. ESR
13. CHNS Analyzer



Department of Chemistry Popularity of PhD Program



2021

35

2022

29

2024

24+

2023

40 +6_(ID)

- Postdoctoral studies
- Academic positions in reputed educational institutes
- Industries

COURSES

Advanced Organic Chemistry

Advanced Organometallic Chemistry

Chemical & Electrochemical Energy Systems

Chemistry of Natural Products and Biomolecules

Organolanthanide Chemistry

Heterogeneous Catalysis

Separation Techniques & Dynamic Electrode

Main Group Organometallic Chemistry

Nanochemistry & Applications

Drug Discovery, Design & Development

Asymmetric Synthesis

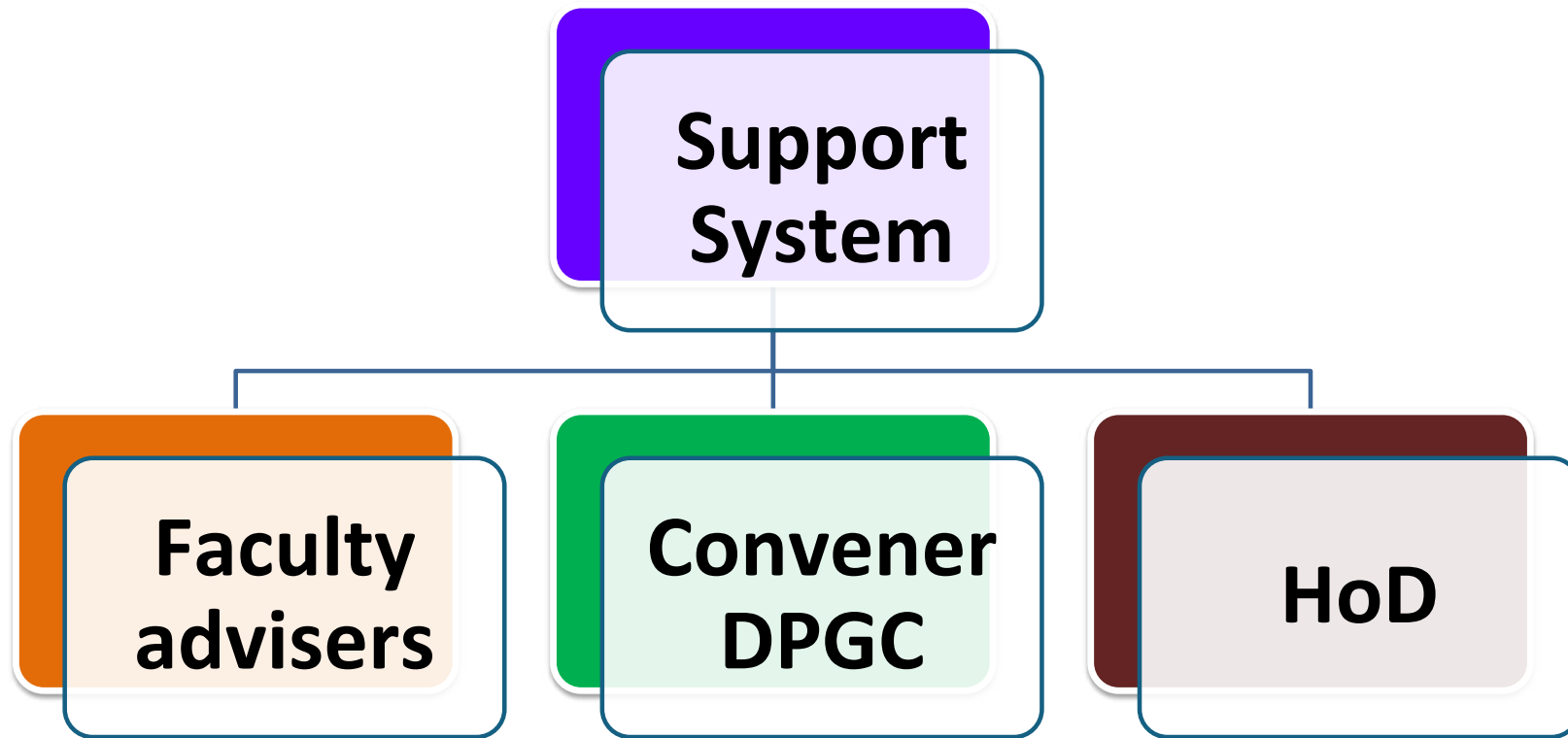
DNA Nanotechnology: structure and Application

Fundamentals of DNA Photonics, Bio Inspired Catalysis in Modern Research

Fundamentals and Applications of Small Molecule X-Ray Crystallography

Pharmaceutical solid-state chemistry and formulation technologies

Safe laboratory practices and Scientific Writing in Chemical Research



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kvrao@chy.iith.ac.in



Dr. Jai Prakash
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Dr. Surendra Kumar Martha
head@chy.iith.ac.in

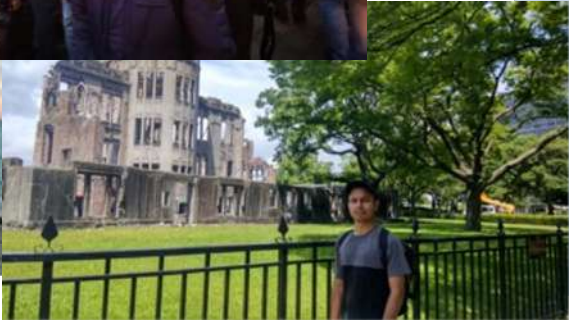
Outreach and Other programs

- **In-House Symposium**
- **Safety training**
- **Open day**



- **MSc poster session**
- **Teqip**
- **Seminars**

Alumni



Ph.D. Program

ELIGIBILITY CRITERIA:

For Regular Candidates:

Master's (MSc) degree in Chemistry and related areas with good academic record and valid GATE-Score/ UGC-JRF/ CSIR-JRF/ DST INSPIRE/ Any other relevant Scholarship.

For Sponsored Candidates:

Category A:

Students working under sponsored projects (i.e. DST, CSIR, BRNS, DBT, etc.) of the Indian Institute of Technology Hyderabad (IITH) with a valid GATE-Score/CSIR-JRF/UGC-JRF/Lectureship (LS) at the time of joining the project are also eligible to apply for the Ph.D. program (Candidates from sponsored program are not eligible for any stipend from Ministry of Education).

Category B:

Candidates working in reputed research/industrial organizations may also apply under a sponsored Ph.D. program (candidates from sponsored programs are not eligible for any scholarship from the Ministry of Education). A proof of sponsorship from the parent organization must be provided at the time of the interview. The selected candidates must complete their coursework in the Department of Chemistry at IIT Hyderabad.

"External Direct PhD Student should have at least 2 years of relevant experience with NOC can be eligible for admission as External Direct PhD. Further, they should be treated as 'External Students' and will be eligible for 12 credits of course requirements as applicable for 'External Students'. All such external direct Ph.D. students will be awarded Ph.D. without M Tech."

SELECTION PROCESS: The department may follow certain cut-off criteria:

Depending on the departmental requirement and based on the total number of applications received.

Based on the number of applications received for individual research disciplines.

The number of applications received in preference to each research discipline (i.e., first preference given by the candidate).

In general, more weightage will be given to the first choice of research interest (i.e., area of interest) given by candidates during the time of filling out their application. SC/ST and OBC reservations will be implemented as per the Government rules. Rules set by the IITH Senate will be applied.

APPLICATION PROCEDURE & LAST DATE:

Visit - <https://www.iith.ac.in/phdadmissions/> For detailed information and to apply online.

Some important guidelines for the candidates while filling out the application form:

1. The candidate must mention very clearly about his/her qualifying exam details such as CSIR/UGC-JRF and/or GATE in appropriate columns.
2. Also, the candidate should provide the rank, score and valid date of his/her qualifying exam adequately in the respective columns.
3. Without fail, the candidate should mention his/her category (Gen / EWS or OBC-Creamy layer or OBC-Non creamy layer or SC or ST).
4. Also, the candidate must specifically describe his/her area of interest (research discipline) as “Computational”, “Inorganic”, “Organic” or “Physical” Chemistry.
5. Incomplete applications will be rejected.
6. For more details of ongoing research interests in the “Department of Chemistry”, please visit the following link: <https://chemistry.iith.ac.in/>

Contact: Dr. Jai Prakash, dpgc@chy.iith.ac.in for any queries.