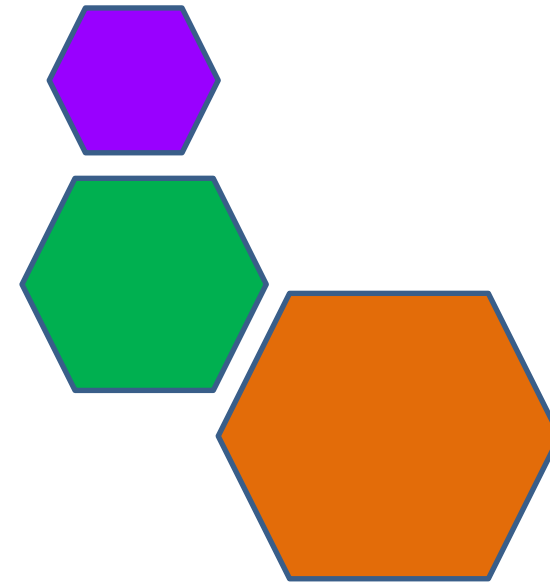
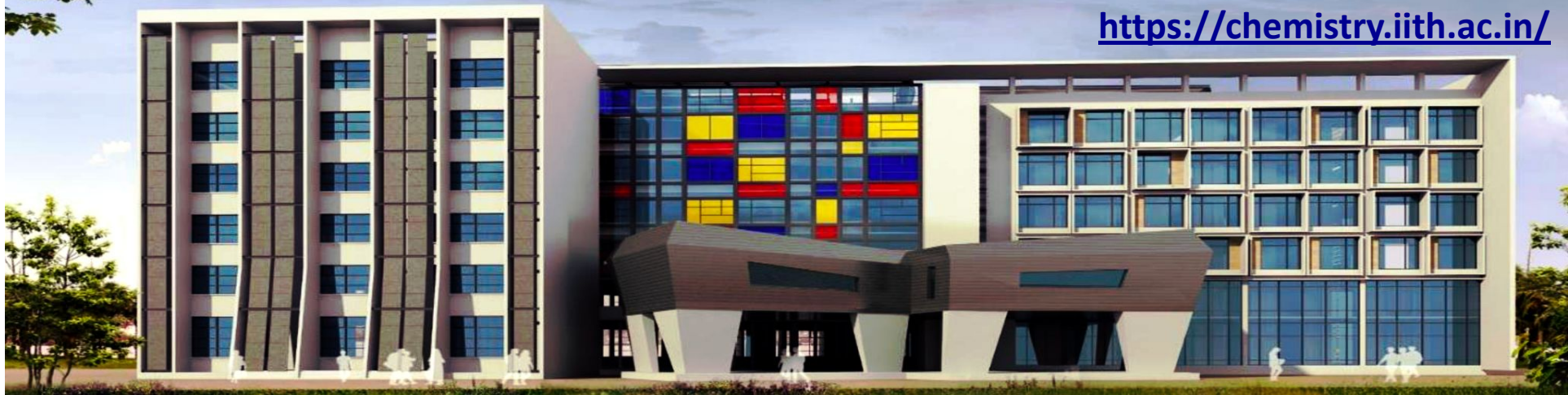




భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad



Department of Chemistry



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



.....“Welcome to the Department of Chemistry. The Department started functioning from the very inception of IITH in 2008. The Department has the distinction of starting the first PG program in science at IITH in 2010. In 2021, the department started B.Tech Industrial chemistry. The Department enjoys advanced and comprehensive research facilities, providing strong support for academic research and innovation. 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”.

Vision of the dept: To be a world-renowned institution in chemistry, delivering high quality teaching and research.

Mission: The Department of Chemistry is committed to excellence in chemistry by establishing world class research programs for meeting major scientific and technological challenges. Our aim is to produce highly sought after and knowledgeable graduates for pursuing careers with academia, industry and government



Prof. Bhabani Shankar Mallik

Head of the Department

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

Overview of the Department

Faculty

- 29
- 1-on lien

Publications : 1150+

Project Funding : 84 Cr+

Students

- **PhD students** **155+**
- **MSc students** **80**
- BTech students (Industrial Chemistry) **90**

Staff

- Scientific officers
- Lab technicians
- Executive officers, etc
- Others

12+

Research

||

Teaching

Department's Thrust Areas of Research

AI-Driven Discovery & Computational Chemistry

Next-Generation Energy Storage & Conversion

Smart Materials, Optoelectronics & Crystal Engineering

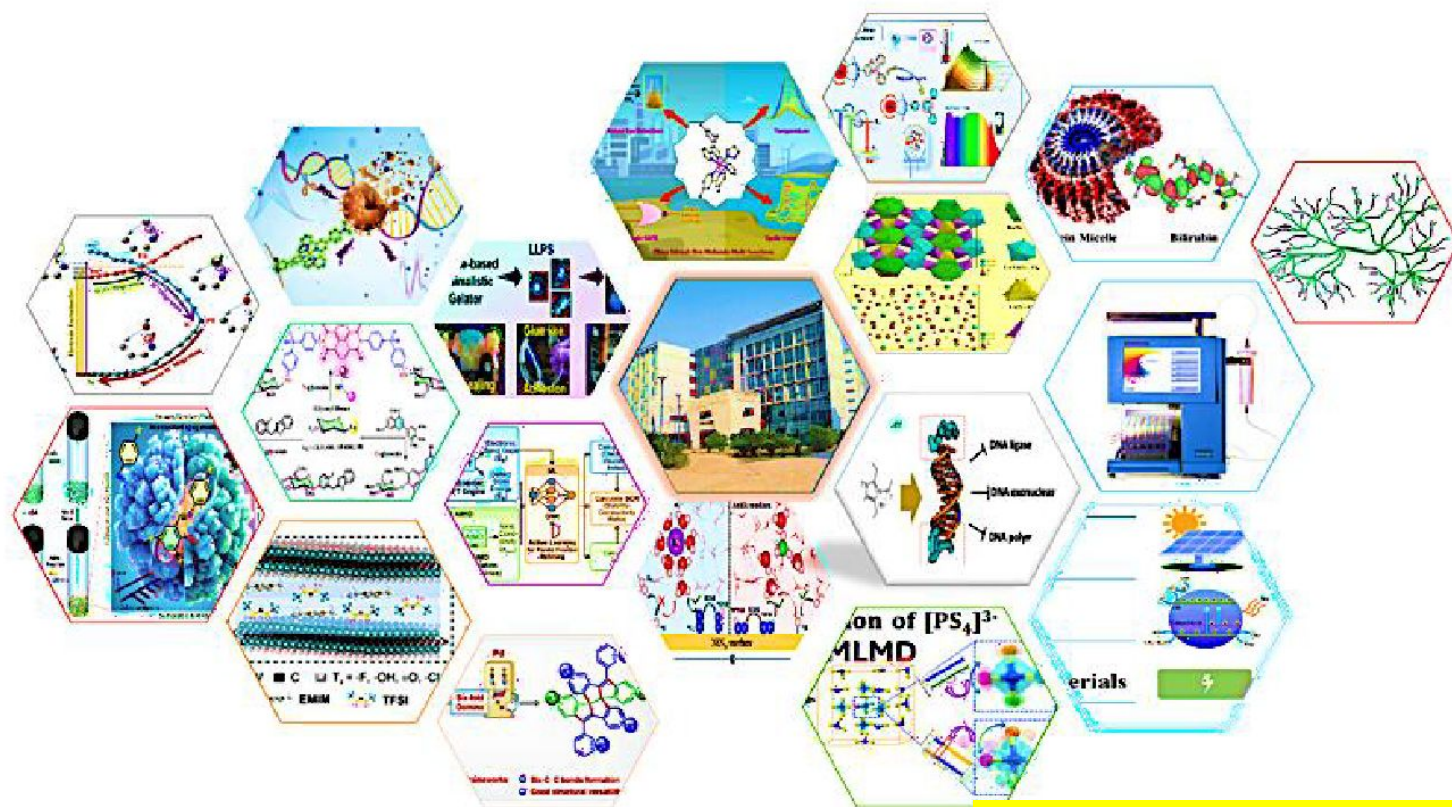
Sustainable Green Chemistry & Circular Economy

Precision Organic Synthesis & Targeted Drug Discovery

Chemical Biology, Biomaterials & Molecular Spectroscopy

1. Organic

2. Physical



3. Inorganic

4. Computational

Dr. Venkata Rao Kotagiri



Dr. Abhijit Sau



Dr. Ashutosh K. 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
- ChemistryValorization of gases and small molecules
- Electrochemistry
- Photochemistry, Mechanochemistry
- Crystal Engineering
- Solid-state Pharmaceutical chemistry

Dr. Kishore Natte



Prof. G. Satyanarayana



Prof. Faiz Ahmed Khan



Dr. Anup Bhunia



Dr. Shubham Dutta

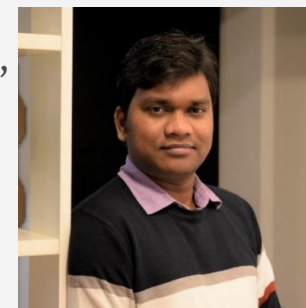
Computational Chemistry

Prof. Bhabani Shankar Mallik



Dr. Arup Mahata

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



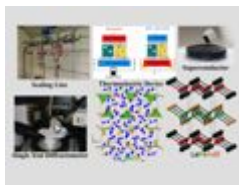
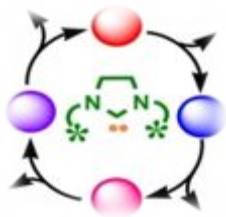
Dr. Debashish Koner



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



Dr. Jai Prakash



Dr. Saurabh K. Singh



Dr. Tarali Devi



Dr. Sivakumar Vaidyanathan



Dr. Somnath Maji



Prof. Tarun Kanti Panda



Prof. G. Prabusankar



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



Prof. 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



Dr. Ashish Kulkarni

Halide perovskite photovoltaics
optoelectronics
silicon-perovskite tandem solar
cells, roll-to-roll fabrication of s
modules.

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

Staff @ Chemistry



Mr. Md. Samiuddin
Senior Technical Officer



Mr. Kota V. Satya Girish
Senior Technical Officer



Mr. Ashok Yeligeti
Senior Technical
Superintendent



Ms. Vijayalakshmi A
Assistant Section
Officer



**Mr. P S Ramana
Babu**
Technician



Dr. P Vijayakumar
Technician



Ms. Melody P R C
Technician



Dr. Surender B
Technician



Mr. Srinivas Pulimamidi
Technician



Mr. Singam Sampath
Technician

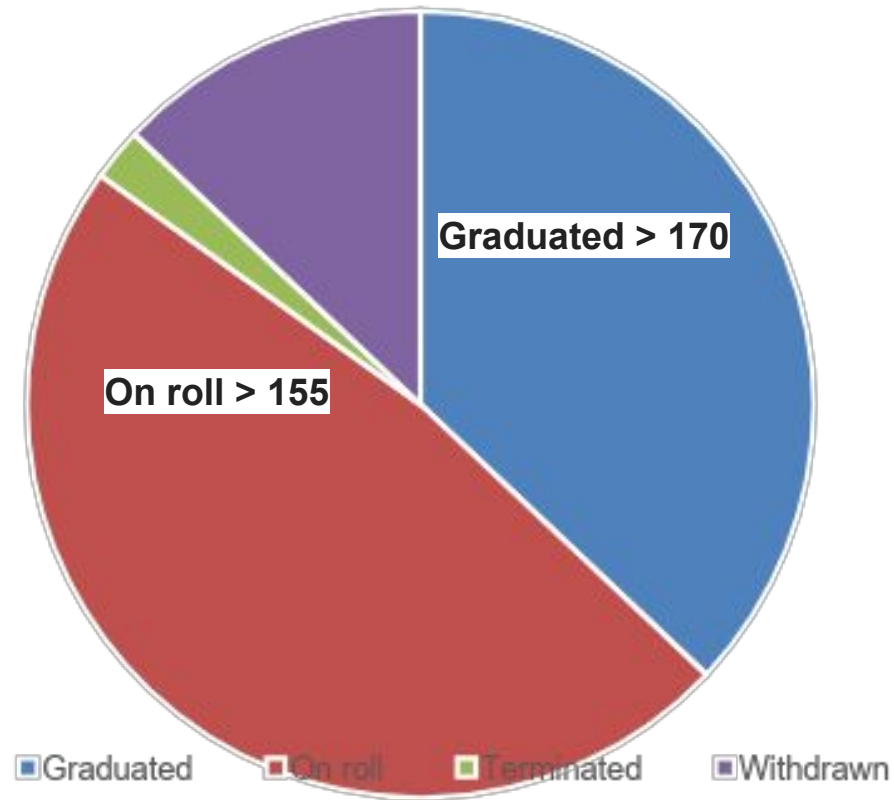


Ms. Ch Anjali
Multiskill Assistant



**Mr. Banothu
Devendar**
Junior Technician

PhD students



Total students enrolled > 320 (including 2026 batch)

New students joined = 20

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

Departmental Research Facilities



Circular Dichroism



Circular Dichroism



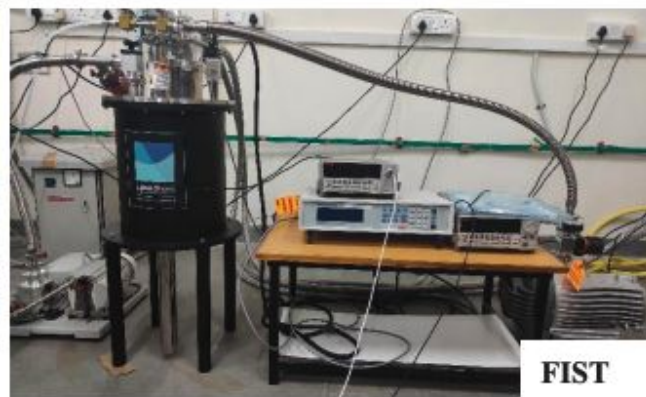
CHNS Elemental Analysers



DSC, TGA



ESR



FIST



HRMS

ICP-OES

IQE

Raman

Polarimeter

NMR

Spectrofluorometer

UPLC

Departmental Research Facilities



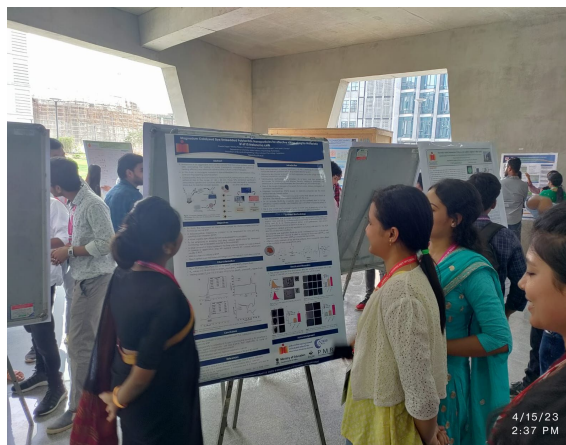
Funders



Activities



IN-HOUSE SYMPOSIUM CONDUCTED BY THE DEPARTMENT OF CHEMISTRY AT IIT HYDERABAD



The department organizes annual **in-house symposium**.

Activities



INTERNATIONAL CONFERENCES ORGANIZED BY THE DEPARTMENT OF CHEMISTRY AT IIT HYDERABAD



**International Conference on Chemistry for
Sustainability
(ICCS-2025)**



**3rd International Conference on Main-group
Molecules to Materials
(MMM III- 2023)**

Alumni

Some notable alumni....



Ms. Rini Choudhury

Indian Information Service (IIS)
AIR 396 (UPSC)



Dr. Priyanka Verma

Assistant Professor, IIT Delhi



Dr. Swati Jindal

Assistant Professor, IIT Jodhpur

University of Stuttgart, Germany

Georgia Tech, Atlanta

Drexel University

University of Illinois

University of Massachusetts

University of California

University of Delhousie

University of Texas, Austin

Florida State University

JAPAN

Support System for PhD students

```
graph TD; A[Support System for PhD students] --> B[Faculty adviser]; A --> C[Convener DPGC]; A --> D[HoD];
```

**Faculty
adviser**



Dr. Arup Mahata
arup@chy.iith.ac.in

**Convener
DPGC**



Dr. Krishna Gavvala
dpgc@chy.iith.ac.in

HoD



Prof. Bhabani Shankar Mallik
head@chy.iith.ac.in

Support System for MSc students

**Faculty
adviser**



Dr. V. Sivakumar
vsiva@chy.iith.ac.in

**Convener
DPGC**



Dr. Krishna Gavvala
dpgc@chy.iith.ac.in

HoD



Prof. Bhabani Shankar Mallik
head@chy.iith.ac.in

ELIGIBILITY CRITERIA:

For Regular Candidates:

Master's (MSc) degree in Chemistry and related areas (preferably 1st class) with a good academic record and a 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, ICMR 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. Any changes in the status of employment in the parent organization must be informed to the Department and IIT Hyderabad.

"External Direct PhD students 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:

- (a) Depending on the departmental requirement and based on the total number of applications received.
- (b) Based on the number of applications received for individual research disciplines.
- (c) 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. Krishna Gavvala, dpgc@chy.iith.ac.in for any queries.