



PhD Program in Chemistry

Come, Live and Explore Chemistry at IIT Indore



Interested in doing exciting Chemistry! We invite you all to explore and live exciting Chemistry to understand and contribute in solving global issues on **Energy, Water** and **Environment**.

The Department of Chemistry at IIT Indore offers Doctor of Philosophy (PhD) degree in Chemistry, where students require completion of one or two semesters of course work and a thesis defense on original research performed under the direct supervision of at least one faculty member from the Department of Chemistry.

Department of Chemistry offers a variety of research areas in chemistry which includes **self-assemblies, fluorescence spectroscopy and fluorescence imaging, organic synthesis, organic electronics, natural product and medicinal chemistry, bioorganic chemistry, polymers, biomimetic materials, photo-redox catalysis, asymmetric synthesis, main group chemistry, bio-inorganic chemistry, catalysis & energy, transition metal chemistry, organometallics, nanoscience, metallogels and molecular recognition, computational and theoretical chemistry**, and many more.

We have very well-equipped research facilities and laboratories, along with a **Sophisticated Instrument Center** (SIC - state-of-the-art instrumentation facility). For more details please visit <http://iiti.ac.in/sic/>

Applicants are encouraged to contact the interested faculty members to gain more information about their research areas and/or visit <http://chemistry.iiti.ac.in/faculty.html> for detailed profile of individual faculty members of the Department of Chemistry.

Faculty Profile (Department of Chemistry, IIT Indore)



Prof. Rajneesh Misra
Email: rajneeshmisra@iiti.ac.in

Organic pi conjugated molecular systems, Organic Synthesis, organic/inorganic materials for photonics & electronics



Prof. Suman Mukhopadhyay
Email: suman@iiti.ac.in

Transition-metal coordination chemistry, Bioinorganic and Metallogel



Dr. Apurba K. Das
Email: apurba.das@iiti.ac.in

Organic synthesis, Bio-organic chemistry, Supramolecular chemistry



Dr. Anjan Chakraborty
Email: anjanc@iiti.ac.in

Study of bio-nano interface by spectroscopic techniques



Dr. Tridib Kumar Sarma
Email: tridib@iiti.ac.in

Nanostructured materials, Polymer composites, Biomimetic materials chemistry



Dr. Sampak Samanta
Email: sampaks@iiti.ac.in

Asymmetric synthesis, Metal mediated synthetic transformation, Green chemistry, Total synthesis of biologically active compounds



Dr. Tushar K. Mukherjee
Email: tusharm@iiti.ac.in

Photoluminescence spectroscopy, Fluorescence imaging



Dr. Biswarup Pathak
Email: biswarup@iiti.ac.in

Applied computational chemistry, Fuel Cells, Battery, Spintronics, Catalysis, DNA Sequencing



Dr. Shaikh M. Mobin
Email: xray@iiti.ac.in

Inorganic complexes, MOF & COF for energy storage, conversion, & generation, Crystal engineering, Applications in catalysis, bioimaging & sensing



Dr. Chelvam Venkatesh
Email: cvenkat@iiti.ac.in

Synthesis of natural products, heterocycles & carbocycles, diagnostic applications of new targeting ligands for cancers & inflammatory diseases



Dr. Satya S. Bulusu
Email: sbulusu@iiti.ac.in

Computational chemistry, Structural evolution of nanoclusters and nanoalloys, AI and Machine learning in Chemistry, Algorithms and parallel computing



Dr. Sanjay Kumar Singh
Email: sksingh@iiti.ac.in

Catalyst synthesis & design for various organic transformation (C-C & C-H bond activation), Biofuel, H₂ generation & storage, CO₂ capture & utilization



Dr. Amrendra Kumar Singh
Email: aks@iiti.ac.in

Ligand design in metal catalysis, Multidentate N-heterocyclic carbene ligands, Small molecule activation by transition metal complexes, Metal-ligand multiple bonds



Dr. Abhinav Raghuvanshi
Email: r.abhinav@iiti.ac.in

Luminescent complexes of late transition metals with emphasis on the development of Thermally activated delayed fluorescent (TADF) materials



Dr. Dipak Kumar Roy
Email: dipak.roy@iiti.ac.in

Low-valent s- and p-block compounds and small molecule activation, Multiple bonded main group compounds, Organic-Inorganic hybrid polymers



Dr. Selvakumar Sermadurai
Email: selva@iiti.ac.in

Photo-redox catalysis, Asymmetric synthesis, Synthesis of biologically active natural products, Green chemistry



Dr. Umesh A. Kshirsagar
Email: uakshirsagar@iiti.ac.in

Organic synthesis using transition metal catalyst and photo-redox catalyst, Cross dehydrogenative coupling, C-H activation and oxidative coupling, Green chemistry

Eligibility

Minimum Educational Qualifications (MEQs) and Qualifying Examination (QE) for Indian applicants:

- Masters' degree in Chemistry or other field relevant to Chemical Sciences (with first division as defined by the awarding Institute/ University) AND valid GATE qualification OR valid UGCJRF/ CSIR-JRF OR Equivalent Fellowship OR
- Masters' degree in Engineering/ Technology (with first division as defined by the awarding Institute/ University) AND GATE qualification

Minimum Educational Qualifications (MEQs) and Qualifying Examination (QE) for International applicants:

- MEQ: Masters' degree in Chemistry or other field relevant to Chemical Sciences (with first division as defined by the awarding Institute/ University). QE: Valid TOEFL/IELTS OR equivalent qualification OR Valid GATE qualification OR
- Masters' degree in Engineering/ Technology (with first division as defined by the awarding Institute/ University). QE: Valid TOEFL/IELTS OR equivalent qualification OR Valid GATE qualification.

Application Fee

Please refer the main PhD advertisement of the institute. <https://academic.iiti.ac.in/phdadvt.php>

Application Procedure

Candidates must apply **ONLINE** through the institute website <http://academic.iiti.ac.in:8080/nregistration.jsp>

- After Submitting the application online, the eligible candidate has to SEND the signed hard-copy of the application mentioning **State Bank Collect receipt, recent photograph, Self- attested relevant Certificates (for SW candidates: No Objection Certificate, Experience Certificate, last 3 months salary slip and Employer's PAN card)** to the **DPGC convener, Department of Chemistry, Indian Institute of Technology Indore, Simrol, Khandwa Road, Indore 453552, M.P., India** within **15 days from the date of ONLINE submission of the application.**

- The shortlisted candidates must arrange recommendation letters from at least two referees well before appearing for the interview. Candidates should request the referees to send recommendation letters to admission-chem@iiti.ac.in or provide in a sealed envelope. Recommendation form will be circulated separately to the shortlisted candidates only.

Last Date of Online Application

31/01/2021 (January 31, 2021) [Candidate can post the hard copy of their application]

Tentative Date of Interview

2nd week of February 2021

Financial Support/ Admission Categories

FA (Fellowship Awardee): Fellowship Awardees from the agencies such as CSIR, UGC, NBHM, etc. OR JRF/SRF project staff working in a Sponsored Research Project under a faculty member (PI of the project) of IIT Indore. The scholarship will be as per the rules/guidelines of the concerned funding agency.

TA (Teaching Assistantship): Teaching Assistantship with scholarship from IIT Indore.

Student's Life@IIT Indore

IIT Indore is a residential campus, where most of our students are staying inside the campus. Institute is committed to provide all the basic infrastructure facilities to support our research students/staff to excel best output. Campus Hostels and several eating outlets are available to students. For more details please visit: www.iiti.ac.in.



For further information contact: admission-chem@iiti.ac.in

(Chemistry Office Phone: 0731-660-3340/3415)