PhD Program in Chemistry

Come, Live and Explore Chemistry@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**.

Discipline 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 Discipline of Chemistry.

Discipline of Chemistry offers a variety of research areas in chemistry which includes **self-assemblies, florescence spectroscopy, single molecule florescence imaging, organic synthesis**, **organic electronics**, **natural product and medicinal chemistry**, **bioorganic chemistry**, **polymers, biomimetic materials, 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 for 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 Discipline of Chemistry.

Faculty Profile (Discipline of Chemistry, IIT Indore)

Prof. Pradeep Mathur
Email: director[at]iiti.ac.in

Inorganic and Organometallic chemistry

Prof. Rajneesh Misra
Email:
rajneeshmisra[at]iiti.ac.in

Development of new organic/inorganic materials for Photonic and electronic applications

Prof. Suman Mukhopadhyay
Email: suman[at]iiti.ac.in

Transition-metal coordination chemistry

Dr. Apurba K Das
Email:
apurba.das[at]iiti.ac.in

Organic Synthesis, Peptide and DNA based nanostructured materials, Biosensors

Dr. Anjan Chakraborty
Email: anjanc[at]iiti.ac.in

Study of different biological systems by fluorescence spectroscopy

Dr. Sampak Samanta
Email: sampaks[at]iiti.ac.in

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

Dr. Tushar Kanti Mukherjee
Email: tusharm[at]iiti.ac.in

Single molecule spectroscopy, Fluorescence imaging

Dr. Biswarup Pathak
Email: biswarup[at]iiti.ac.in

Applied Computational Chemistry, Atomistic Modelling on Clean Energy Materials, Hydrogen Production (Photo catalysis) and Hydrogen Production, Li-ion Batteries, Fuel Cell, Surface Catalysis, Molecular Electronics (DNA Sequencing, Molecular Switches)

Dr. Shaikh M. Mobin
Email: xray[at]iiti.ac.in

Structural Reactivity of Metal Chalcogenized Clusters with Metal Acetylides, Coordination Polymers, Inorganic co-crystals and Single-Crystal to Single-Crystal Transformation

Dr. Tridib Kumar Sarma
Email: tridib[at]iiti.ac.in

Nanostructured Materials, Polymer composites, Biomimetic materials chemistry, self and directed assembly of organicinorganic materials

Dr. Satya S. Bulusu
Email: sbulusu[at]iiti.ac.in

Computational Chemistry, Structural evolution of Nanoclusters and Nanoalloys, Global Optimization Methods, Algorithms for predicting Transition State, DFT Guided Monte Carlo Simulations

Dr. Sanjay Kumar Singh
Email: sksingh[at]iiti.ac.in

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

Dr. Chelvam Venkatesh
Email: cvenkat[at]iiti.ac.in

Synthesis of natural products, heterocycles and carbocycles, Construction of C-C and C-X (X =N,O,S,P) bonds, diagnostic applications of new targeting ligands for cancers and inflammatory diseases, synthesis of Inhibitors for drug targets, drug delivery systems, near-infra red fluorescence, nuclear Imaging and bio-conjugate chemistry

Dr. Amrendra Kumar Singh
Email: aks[at]iiti.ac.in

Cooperative metal-metal interactions for the multi-electron reduction of small molecules. Metal-ligand multiple bonds. Carbon free energy routes. New bifunctional ligands with disparate metal binding sites and multidentate N-heterocyclic carbene (NHC) ligands

Dr. Abhinav Raghuvanshi
Email:
r.abhinav[at]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[at]iiti.ac.in

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

Admission Requirements

For details regarding eligibility criteria and the admission process please visit http://academic.iiti.ac.in/phdadvt.php

Application Fee

For Indian applicants: 100/- Indian Rupees (non-refundable). For International application: US $ 30 (non-refundable). For details of application fee payment, please visit http://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, Discipline of Chemistry, SB-116, Helium Building, 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.

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 as per the rules/guidelines of the concerned funding agency.
TA (Teaching Assistantship): Teaching Assistantship with scholarship from IIT Indore.

For more details regarding Admission Categories please visit http://academic.iiti.ac.in/phdadvt.php

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 Hall of Residence, studio apartments, and several eating outlets are available to students. For those who prefer to live off campus, there are several rentals are available in the neighboring area of Simrol town and in the Indore City. It is very common for groups of students to share a house, who opt to stay off the campus. For more details please visit: www.iiti.ac.in.

For further information contact: admission-chem@iiti.ac.in
(Chemistry Office Phone: 07324-306-756)