


Indian Institute of Technology Indore


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Indian Institute of Technology Indore

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*National Institutional Ranking Framework* 

*2020*  
*Ranked 10*

*2019*  
*Ranked 13*

*2018*  
*Ranked 14*

*2017*  
*Ranked 15*

*2016*  
*Ranked 16*

# 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, H<sub>2</sub> generation & storage, CO<sub>2</sub> 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:

- Masters' degree in Chemistry or other field relevant to Chemical Sciences (with first division as defined by the awarding Institute/ University) AND 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) AND 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](mailto: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

**15/03/2021 (March 15, 2021)** [Candidate can post the hard copy of their application]

### Tentative Date of Interview

**2<sup>nd</sup> week of March, 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](http://www.iiti.ac.in).



For further information contact: [admission-chem@iiti.ac.in](mailto:admission-chem@iiti.ac.in)

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