Indian Institute of Technology Indore

Invites applications for PhD admission in Chemistry

IIT Indore invites applications from highly motivated and research-oriented students for admission to its PhD Program in the discipline of Chemistry for the Spring Semester of AY 2015-16 as per the below-mentioned categories of admission and time schedule. Candidates are strongly advised to visit the profiles of the faculty members at **http://chemistry.iiti.ac.in/** before applying for the PhD Program.

Physical Chemistry

- Nanostructured Materials, Polymer composites, Biomimetic materials chemistry, self and directed assembly of organic-inorganic materials.
- Single molecule spectroscopy, Fluorescence imaging.
- Study of different biological systems by fluorescence spectroscopy

Organic and Medicinal Chemistry

- Peptide and DNA based nano-structured materials, Catalysis, Systems Chemistry.
- Development of new organic/inorganic materials for Photonic and electronic applications.
- Asymmetric synthesis, Metal mediated synthetic transformation, Green chemistry, Total synthesis of biologically active compounds
- 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

Inorganic and Organometallic Chemistry

- Transition-metal coordination chemistry, Organometallic chemistry.
- Structural Reactivity of Metal Chalcogenized Clusters with Metal Acetylides, Coordination Polymers, Inorganic co-crystals and Single-Crystal to Single-Crystal Transformation.
- Synthetic organometallic and coordination chemistry of transition metals, Nanoparticles and catalysis.

Theoretical and Computational Chemistry

- Developing model Potentials (using Artificial Neural Networks, AMOEBA force fields) and soft-computing techniques (particle swarms, Monte-Carlo methods) to explore potential energy surface for metal clusters and nanoalloys, organic clusters and nano-materials.
- Computational Material Science, Atomistic Modelling on Clean Energy Materials, Hydrogen Storage and Production (Photo catalysis) Li-ion Batteries, Fuel Cell, Surface Catalysis, Molecular Electronics.

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Application Procedure:

- Candidates must apply ONLINE through our website (http://academic.iiti.ac.in:8080/nregistration.jsp). This will generate a unique application number for each applicant.
- After Submitting the application online, the same is to be downloaded and the signed hard-copy along with Demand Draft, recent photograph, Self-attested relevant Certificates, must be sent to the concerned DPGC Convener.
- The candidate MUST write his/her name, name of the discipline and the Application Number on the reverse side of the Demand Draft.
- The envelope of the application must CLEARLY mention "APPLICATION for ADMISSION in PhD Program in <name of the discipline> for Spring Semester of AY 2015-16".
- In case a candidate wishes to apply in more than one discipline then separate application must be filled for each discipline.

For any queries please contact:

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