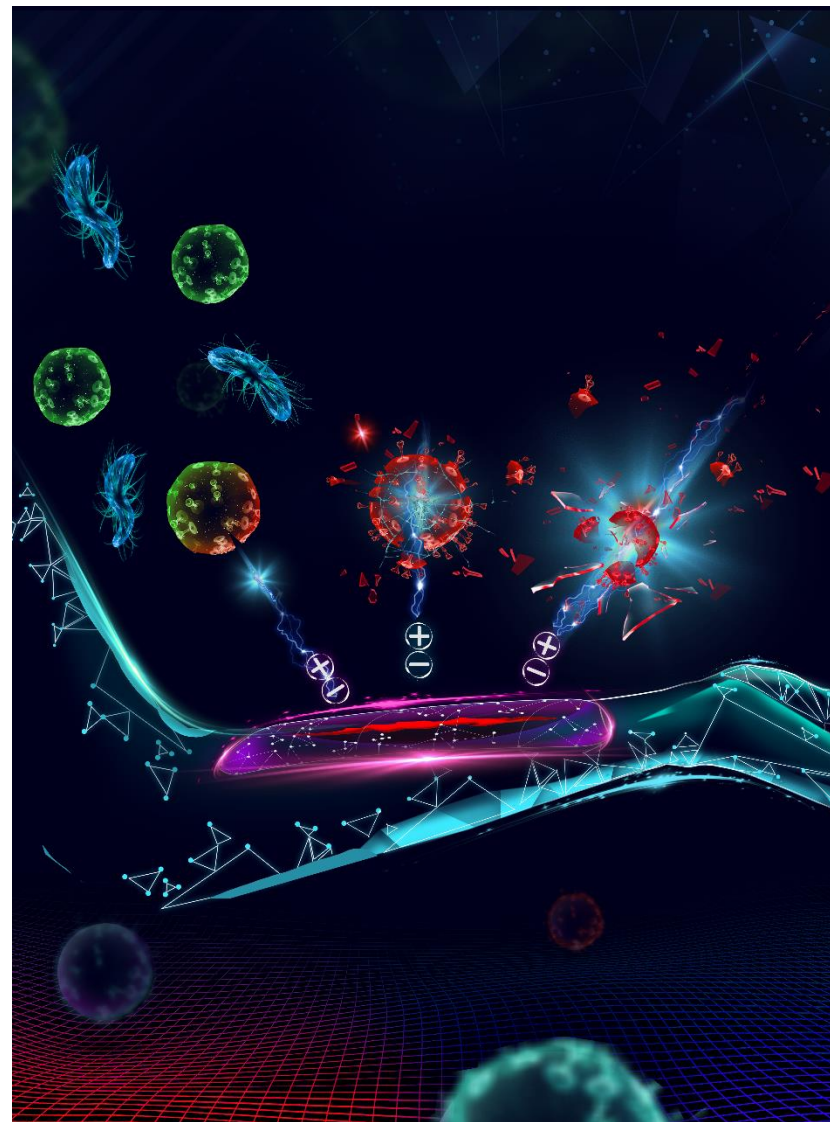




**Institute for Advanced Studies
in Basic Sciences**
Gava Zang, Zanjan, Iran



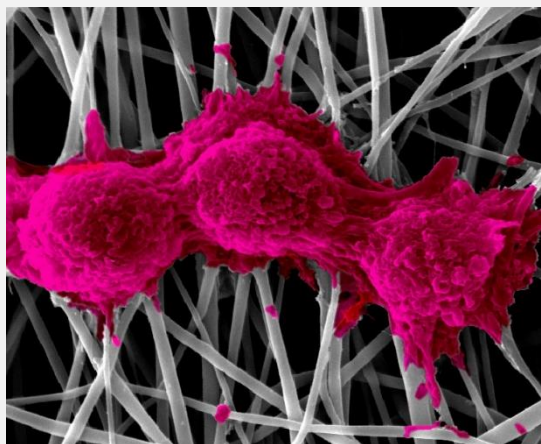
The Department of Chemistry

Departmental Overview

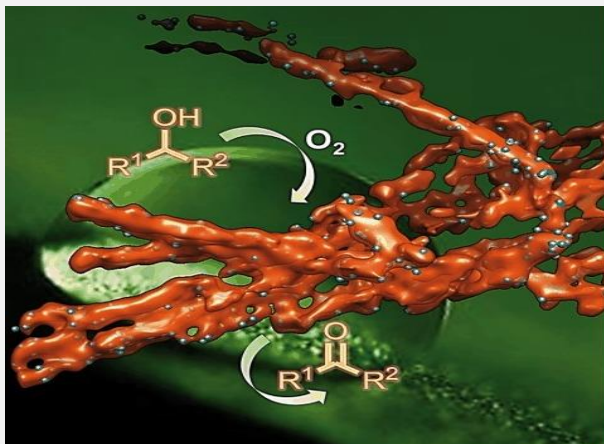
The Department of Chemistry at the IASBS is dedicated to research and education at the postgraduate level. We offer PhD and MSc programmes in various fields of chemistry. The Chemistry Department has strong international ties and has signed various academic agreements to facilitate visits and mutual collaborations for students and faculty members. We are currently conducting research in many exciting areas, including the development of new materials as efficient catalysts, tissue engineering, drug delivery, anode/cathode in metal-ion batteries, supramolecular chemistry, catalytic CO₂ conversion, separation and purification, theoretical chemistry, data science, data mining methods and machine learning.

Areas of study

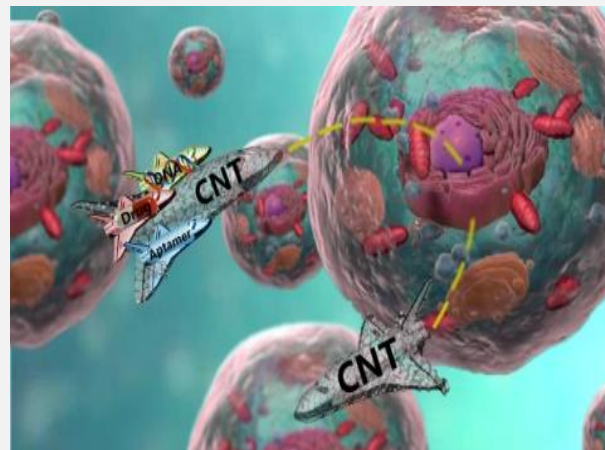
- ✓ Water Oxidation and Artificial Photosynthesis
- ✓ Antibacterial Wound Dressing
- ✓ Ordered Mesoporous Materials
- ✓ Electrical Energy Storage and Electrochemical Capacitors
- ✓ Quantum and Molecular Dynamics Simulation
- ✓ Chemometrics and Machine Learning
- ✓ Semiconductor Photo-Electrochemistry
- ✓ Synthesis of Biologically Active Molecules
- ✓ Porphyrin Derivatives for Photodynamic Therapy
- ✓ Self-healing Polymers
- ✓ Heterogenous catalysis
- ✓ CO₂ Conversion and Fixation



Cultured cells on nanofibers



IM-Pd-NP on mesoporous C



Carrier for plasmid DNA and aptamer

Faculty members

Analytical Chemistry



Hamid Abdollahi
Prof of Analytical Chemistry
(Chemometrics)
<https://iasbs.ac.ir/~abd/index.html>



Habib Kazemi
Associate Prof of Analytical Chemistry
(Electrochemistry of nanomaterials
and Energy Systems)
<https://iasbs.ac.ir/~habibkazemi/>



Mohsen Kompany-Zareh
Prof of Analytical Chemistry
(Chemometrics)
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Elham Tahmasebi
Assistant Prof of Analytical Chemistry
(Separation Sciences and
Chromatography)
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Fahimeh Varmaghani
Assistant Prof of Analytical Chemistry
(Organic Electrochemistry)
<https://iasbs.ac.ir/~f.varmaghani/>

Inorganic Chemistry



Mohammad Mahdi Najafpour
Associate Prof of Inorganic
Chemistry
(Artificial Photosynthesis)
<https://iasbs.ac.ir/~mmnajafpour/>



Abdollah Neshat
Assistant Prof of Inorganic Chemistry
(Organometallic chemistry)
<https://iasbs.ac.ir/~a.neshat/>



Hamid Reza Shahsavari
Associate Prof of Inorganic Chemistry
(Design of Organometallic and
Inorganic Systems)
<https://iasbs.ac.ir/~shahsavari/>



Saeed Zakavi
Associate Prof of Inorganic Chemistry
(Metal free and metal derivatives of
porphyrins and Porphyrinoids in
Catalysis and Photocatalysis)
<https://iasbs.ac.ir/~zakavi/>

Organic Chemistry



Mohammad Gholinejad
Associate Prof of Inorganic Chemistry
(Heterogeneous Catalysis)
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Babak Kaboudin
Prof of Organic Chemistry
(Synthesis of Biologically Active
Molecules)
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Babak Karimi
Prof of Organic Chemistry
(Organic Chemistry, Homogeneous and
Heterogenous Catalysts, Mesoporous
Materials, Asymmetric Catalysts)
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Foad Kazemi
Prof of Organic Chemistry
(Photocatalysis)
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Nano Chemistry



Mojtaba Khorasani
Assistant prof. of Organic chemistry
(Catalytic CO₂ Conversions)
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Physical Chemistry



Mohammad Hossein Kowsari
Associate Prof of Physical Chemistry
(Computational Chemistry)
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Mohsen Lashgari
Associate Prof of Physical Chemistry
(Physical Electrochemistry)
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Fakhrossadat Mohammadi
Assistant Prof of Physical Chemistry
(Biochemistry)
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Fariba Nazari
Associate Prof of Physical Chemistry
(Computational Chemistry)
<https://iasbs.ac.ir/~nazari/>

Polymer Chemistry



Zahra Mohamadnia
Associate Prof of Polymer Chemistry
(Self-healing Polymers, Photochromic
Polymers, Nanofiltration
Membrane, Crude Oil Demulsification)
<https://iasbs.ac.ir/~z.mohamadnia/>



Nasser Nikfarjam
Assistant Prof of Polymer Chemistry
(Biomaterial Science)
<http://iasbs.ac.ir/~nikfarjam/>



Research facilities

- ✓ The Department has several instrumental, analytical, and computational facilities in the service of its teaching and research programmes. Our main laboratories include:
 - CHNS
 - GC and HPLC
 - Various Spectrophotometers
 - TGA
 - NMR
 - Porosimetry
 - Computer Clusters
- ✓ Further analytical facilities housed in other departments of the Institute are also available to the faculty and students.
- ✓ We also have a range of general facilities to support student activities, such as personal office space, computer lab, and conference rooms.
- ✓ We provide all necessary chemical materials and experimental facilities for students in other departments.



Graduate studies

- ✓ The Department of Chemistry offers the following course- and research-oriented postgraduate degree programmes:
 - MSc in Analytical Chemistry, Inorganic Chemistry, Nano Chemistry, Organic Chemistry, Physical Chemistry and Polymer Chemistry,
 - PhD in Analytical Chemistry, Inorganic Chemistry, Organic Chemistry and Physical Chemistry.
- ✓ The MSc degree is a two-years programme with 10 to 12 courses in the first year and a research thesis project in the second year. Individuals with a BSc degree in chemistry or relevant sciences are eligible to apply.
- ✓ The PhD degree is a four-year programme with at least 6 courses in the first year, and a dissertation whose results are expected to be publishable in peer-reviewed international journals. Individuals with an MSc or equivalent degree in chemistry or relevant sciences are eligible to apply.



Contact us

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Departmental Administrator

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Visit us at: <https://iasbs.ac.ir/departments/chemistry/>

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