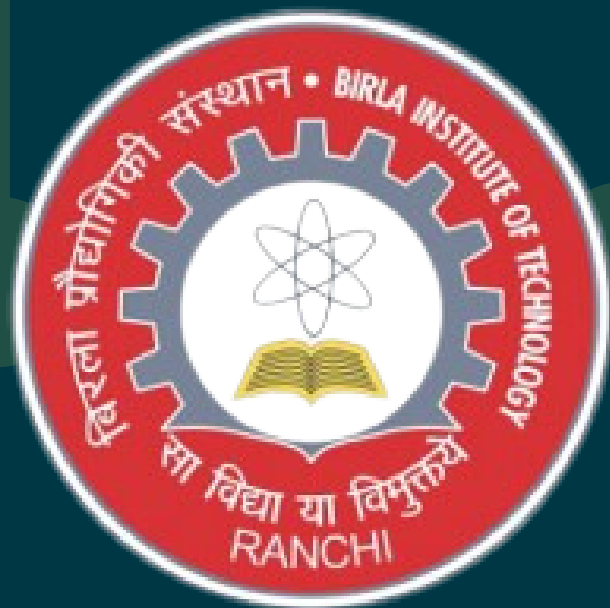




DEPARTMENT OF CHEMISTRY

(DST FIST SUPPORTED)

BIT MESRA, RANCHI



ChemOreiká
(JANUARY-JUNE'24)

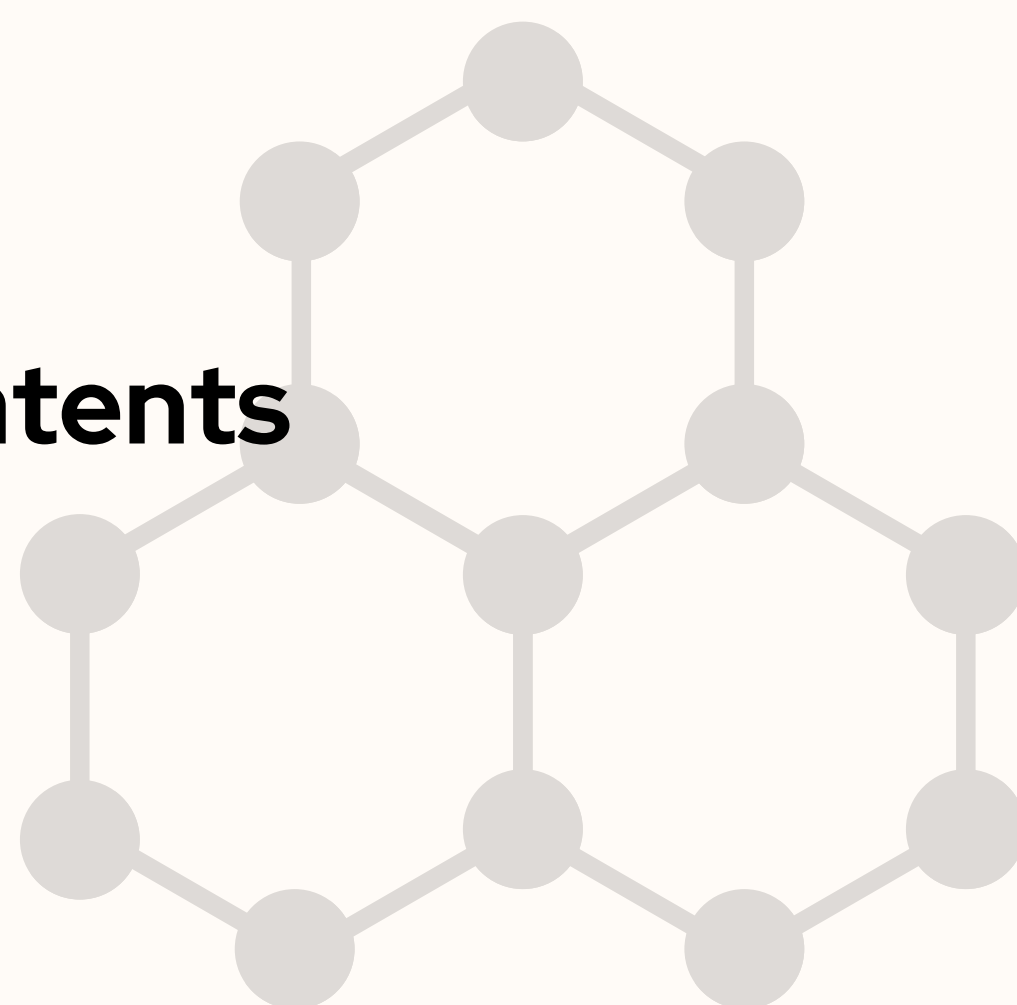
Editors:
Dr. Sumit Mishra
Dr. Joydeep Dhar

Student Editors:
Abhijit Pingal Sanga
Nipun Tirkey



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Current Faculty Profile

The faculty members from the Department of Chemistry are engaged in research in pure chemistry, applied and interdisciplinary areas of all branches of chemistry, specializing in emerging materials for various applications from biomaterials, environmental remediation, energy harvesting materials, composites, sensors, supercapacitors, drug discovery and molecular modelling to theoretical chemistry and quantum chemistry research.

SPECIALIZATION IN CHEMISTRY

INORGANIC



Dr. Sumit Mishra



Dr. Subhendu Naskar



Dr. Barnali Dasgupta Ghosh



Dr. Deep Shikha



Dr. Atul Kumar

RESEARCH AREAS:
Biopolymers & Biomaterials,
Coordination Chemistry,
Bioinorganic Chemistry,
Nanomaterials &
Nanocomposites,
Supramolecular Chemistry.

PHYSICAL



Prof. P. K. Chattaraj



Dr. Gautam Sen



Dr. S. S. Mahapatra



Dr. Joydeep Dhar



Dr. Debdutta Chakraborty

RESEARCH AREAS:
Computational Chemistry,
Electrochemistry, Polymers,
Energy Materials.

ORGANIC



Prof. Ashoke Sharon



Dr. Pradip Kar



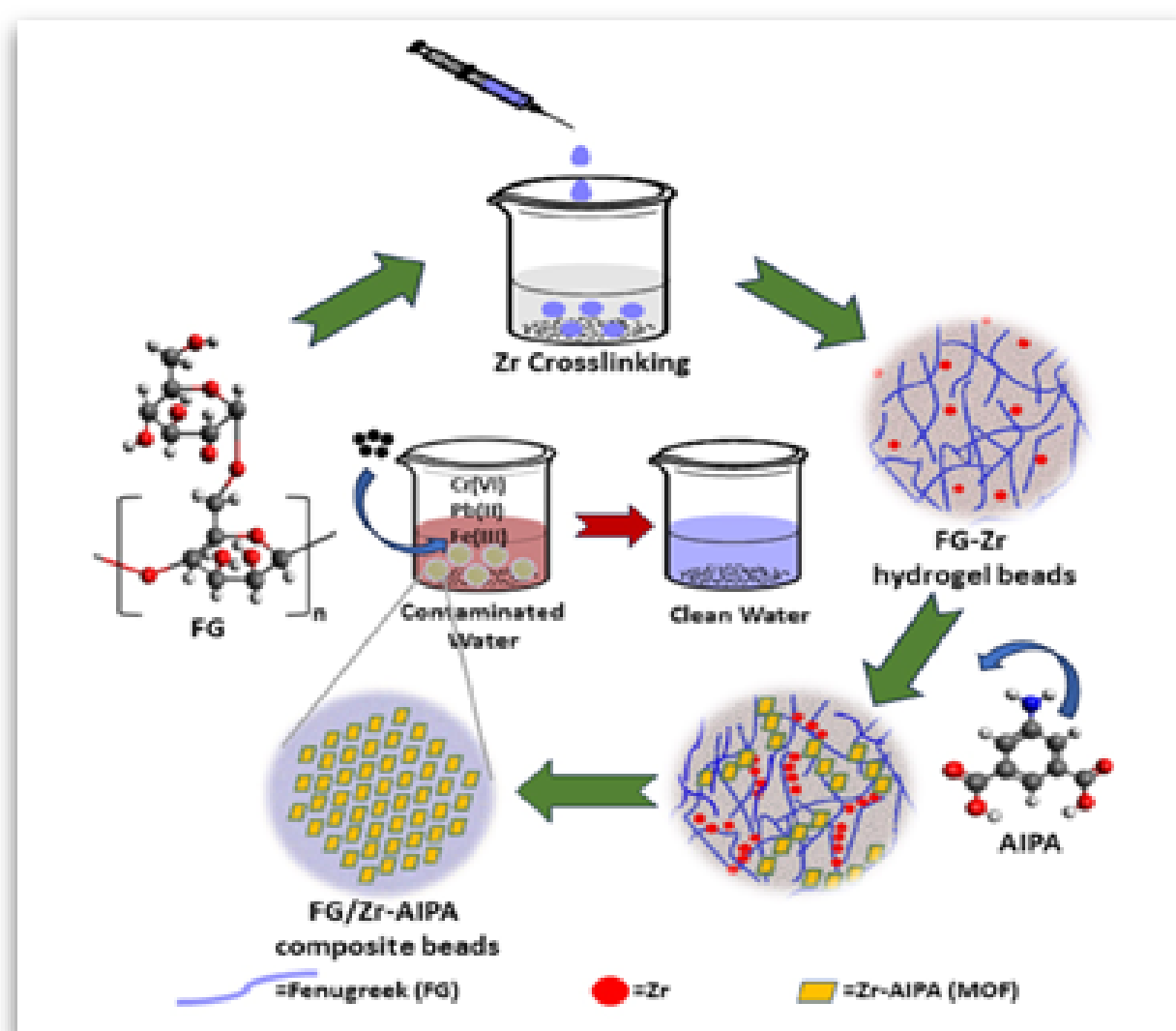
Dr. Anirban Pradhan

RESEARCH AREAS:
Medicinal Chemistry, Molecular Modeling and Drug Design, Sensor Materials, Materials for Energy Storage

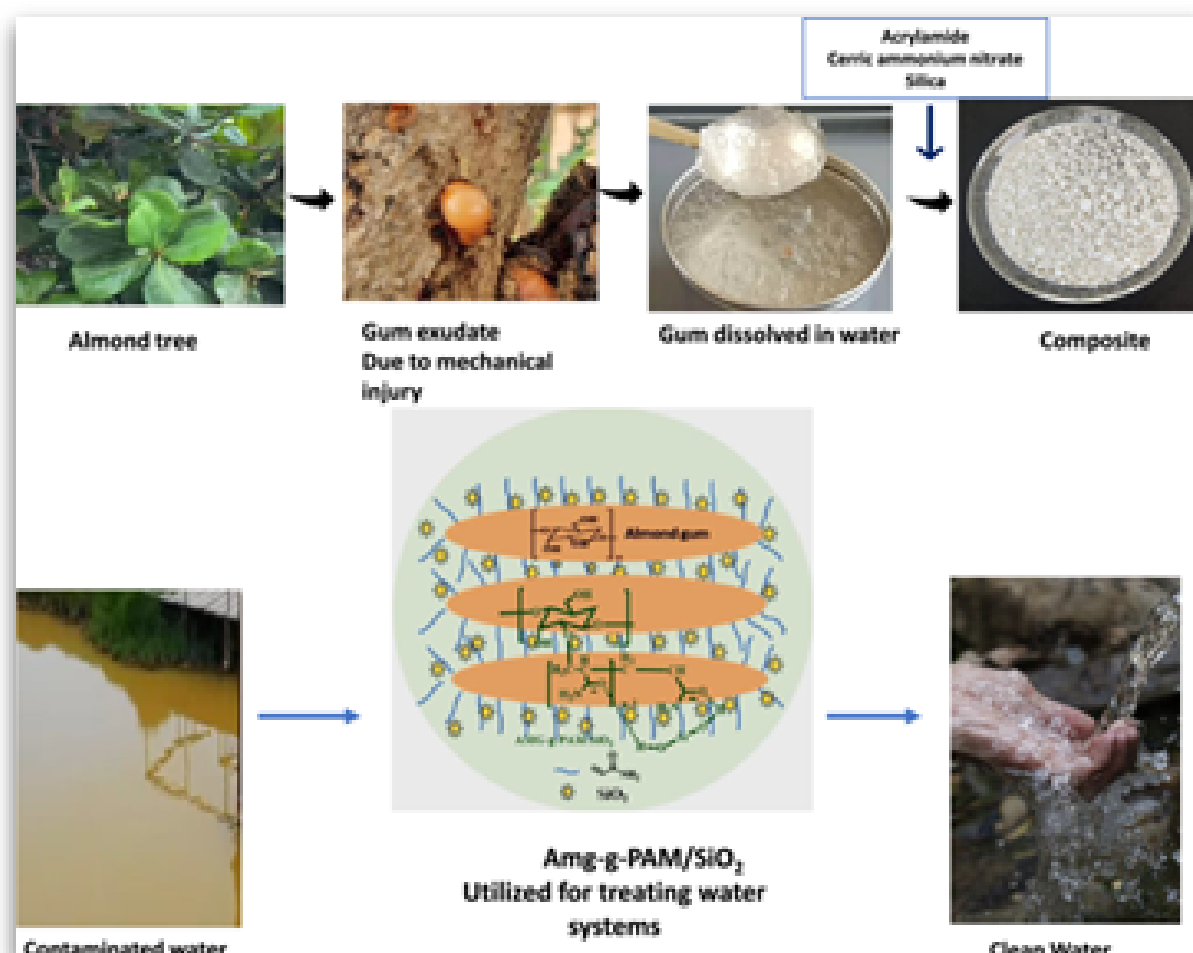


Dr. Sumit Mishra Research Group

RESEARCH HIGHLIGHTS



Metal Organic Framework for heavy metal removal



Biopolymer-based hybrid material for water treatment

Current Research Scholars

Adya Jha, Mansi Srivastava, Munmun Choudhary, Asmita De, Nipun Tirkey, Ruchi Mishra, Sonika Bara.

IMsc project student: Nistha Mukhopadhyay

Research Objectives

We are working on modification of bio-polymers, biomaterials, metal organic frameworks, and hybrid materials for water remediation, matrices for drug and nutrient release, sustainable packaging and emerging materials for other applications.

Recent Patents and Publications

1. A biopolymer-based hydrophobic adhesive and method of synthesis thereof, Sumit Mishra, Nisha Kumari; Indian Patent Application No. 202431002972 A. Date of filing: 15/01/2024, Publication date: 02/02/2024
2. A method for synthesizing a new fluorescent Metal-organic framework, Sumit Mishra, Asmita De; Indian Patent Application No. 202431018460 A. Date of filing: 14/03/2024, Publication date: 22/03/2024
3. A biopolymer-based metal-organic framework composite and method of fabrication thereof. Sumit Mishra, Munmun Choudhary, Asmita De, Srinath Das; Indian Patent Application No. 202431053454 Date of filing: 12/04/2024 (filed)
4. Exploring the potential of waste biomass-derived pectin and its functionalized derivatives for water treatment A Jha, S Mishra. International Journal of Biological Macromolecules, 133613
5. Silica Functionalized Almond Gum Derivatives for Integrated Flocculation Cycles for Natural and Synthetic Water Systems, M. Choudhary, S Mishra. Journal of Polymers and the Environment, 1-21
6. Synthesis of fenugreek gum-based metal-organic framework (FG/Zr-AIPA MOF) composite beads for sequestration of heavy metal ions from aqueous solution. A De, S Mishra Environmental Science and Pollution Research, 1-17

DEPARTMENTAL ACTIVITIES

Science Academies Lecture Workshop on
“Holistic approach to explore the beauty of
chemistry”

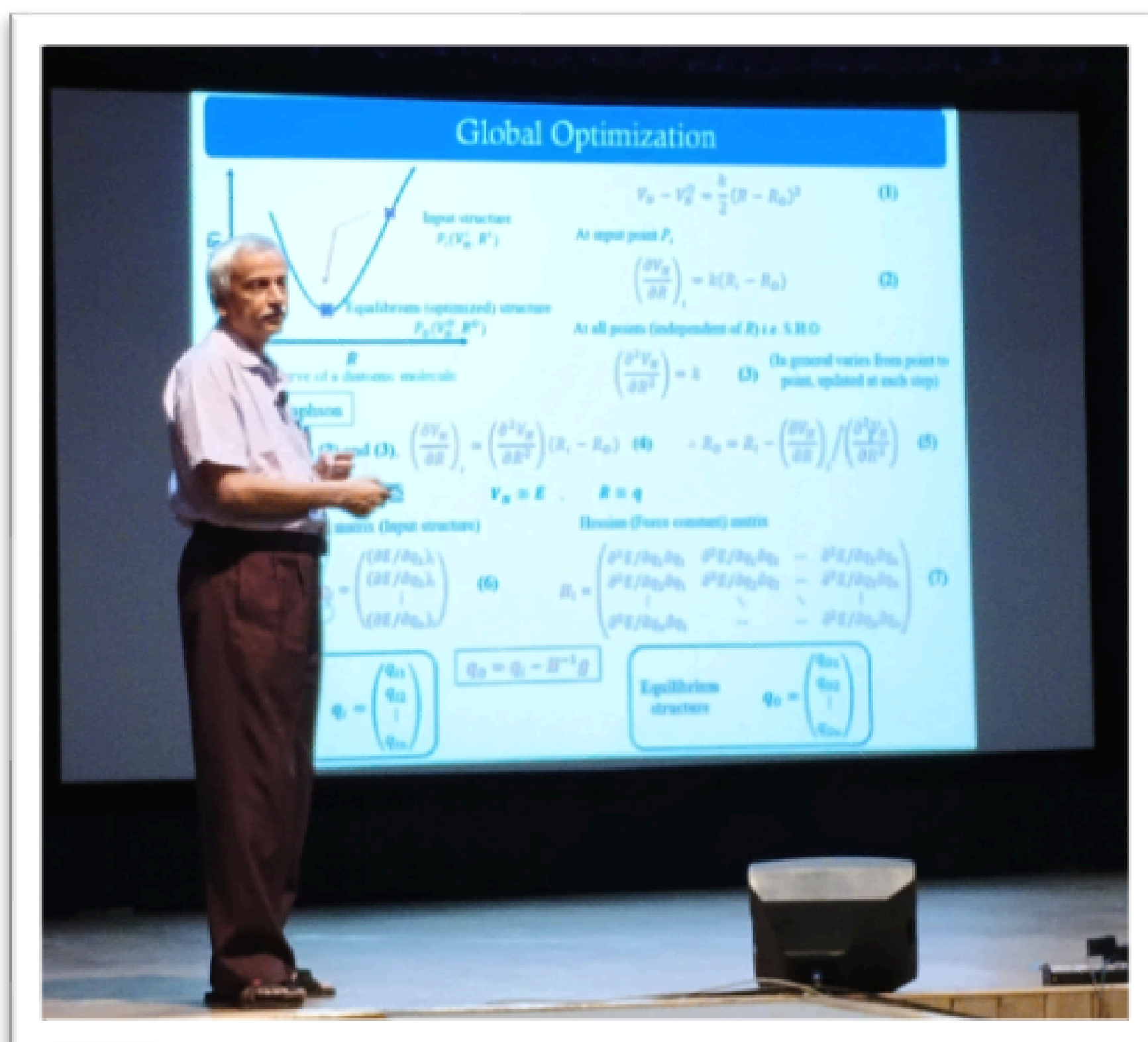
from 2nd-4th May' 2024

DAY 1

PROF. BRINDABAN
CHANDRA RANU, (IACS,
Kolkata) Delivered a Talk
on, “Green philosophy in
organic synthesis”



PROF. PRATIM
CHATTARAJ, (BIT
Mesra) Delivered a
Talk on, “Towards a
catalyst-free
catalytic process &
Global optimisation:
A soft computing
perspective”



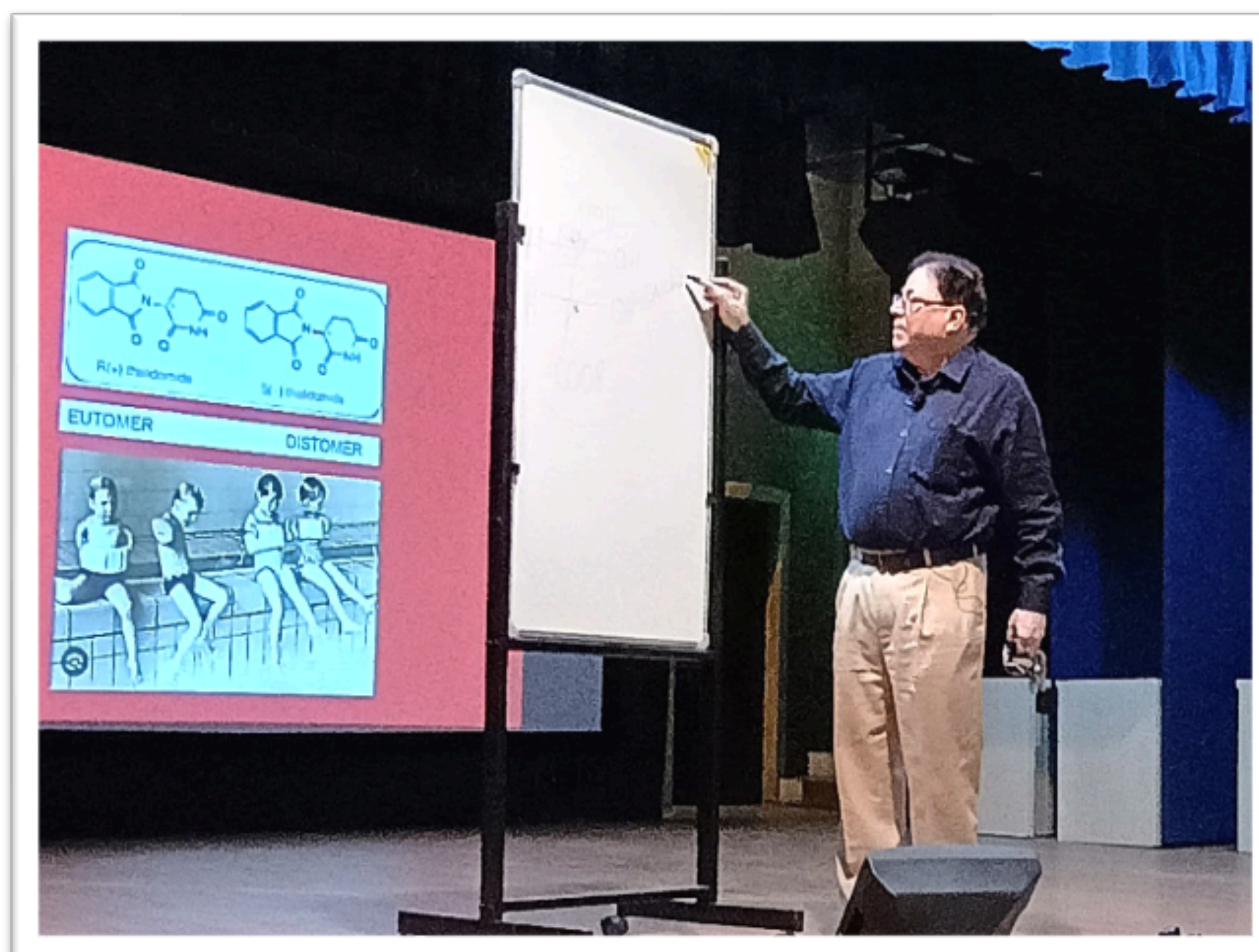
DEPARTMENTAL ACTIVITIES

DAY 2



PROF. SWAPAN KUMAR GHOSH, (BARC) Delivered a Talk on,
"Concept of density across length scales & Density Functional
Theory and its applications in Chemistry"

PROF. AMIT BASAK,
(IISER Kolkata)
Delivered a Talk on,
"Concepts and
Misconceptions in
Stereochemistry &
Modern Approaches
to Drug Discovery"



DEPARTMENTAL ACTIVITIES

“AICTE-VAANI” Workshop on
“Recent Advancement in Materials, Rare-earth,
Critical Minerals & their Characterization (RAMC-
24) in Hindi”
from 26th -28th June’ 2024



Inauguration CEREMONY

Prof. Indranil Manna presided the
inauguration ceremony.

Dr. Deep Shikha
and Dr. S.S.
Mahapatra
coordinated the
workshop.



DEPARTMENTAL ACTIVITIES



A group photograph of AICTE-VAANI participants along with the faculty members of Chemistry department.



DAY 1

PROF. GAJENDRA PRASAD, Dept. of Metallurgical & Material Engineering, Central University of Jharkhand, Delivered a Talk on, "Role of Nanomaterials in Photocatalytic Water Splitting Hydrogen production"

DEPARTMENTAL ACTIVITIES

DAY 2

Dr. ASHISH KUMAR PANDA,
National Metallurgical
Laboratory, Jamshedpur,
Delivered a Talk on,
"Contribution of Advanced
Magnetic Materials in Energy
Sector"



DAY 3

PROF. TAPOBRATA SOM,
Institute of Physics,
Bhubaneswar, delivered a
Talk on, "Different Types of
Coating for Solar Cell
Applications & Different Ion
Beam Techniques for Trace
Elemental Analysis."





Prof. P.K. Srivastava had an illustrious career of three decades at BIT Mesra, and he retired on 30th April 2024. Department of Chemistry bid him farewell with warm wishes for a happy and healthy life ahead.



After a dynamic career of three decades at BIT Mesra, Dr. Bimal Verma retired on 22nd May 2024. Department of Chemistry bid him farewell with good wishes for a happy and healthy life ahead.

CONDOLENCE MESSAGE

With a feeling of despair and grief, the Department of Chemistry BIT Mesra observed a great loss with the untimely demise of its two colleagues during this period. Prof. J. P. Pandey left us forever on 25th of March 2024 and Dr.

Chandralata Bal (Associate Professor) breathed her last on 20th of June 2024. We pray to the almighty for the departed souls to rest in peace and give enough strength to the bereaved family members to bear this irreparable loss in this hour of grief.



Prof. J. P. Pandey



Dr. Chandralata Bal

They will remain forever in our hearts!

STUDENT'S CORNER

Institute's Athletic Meet



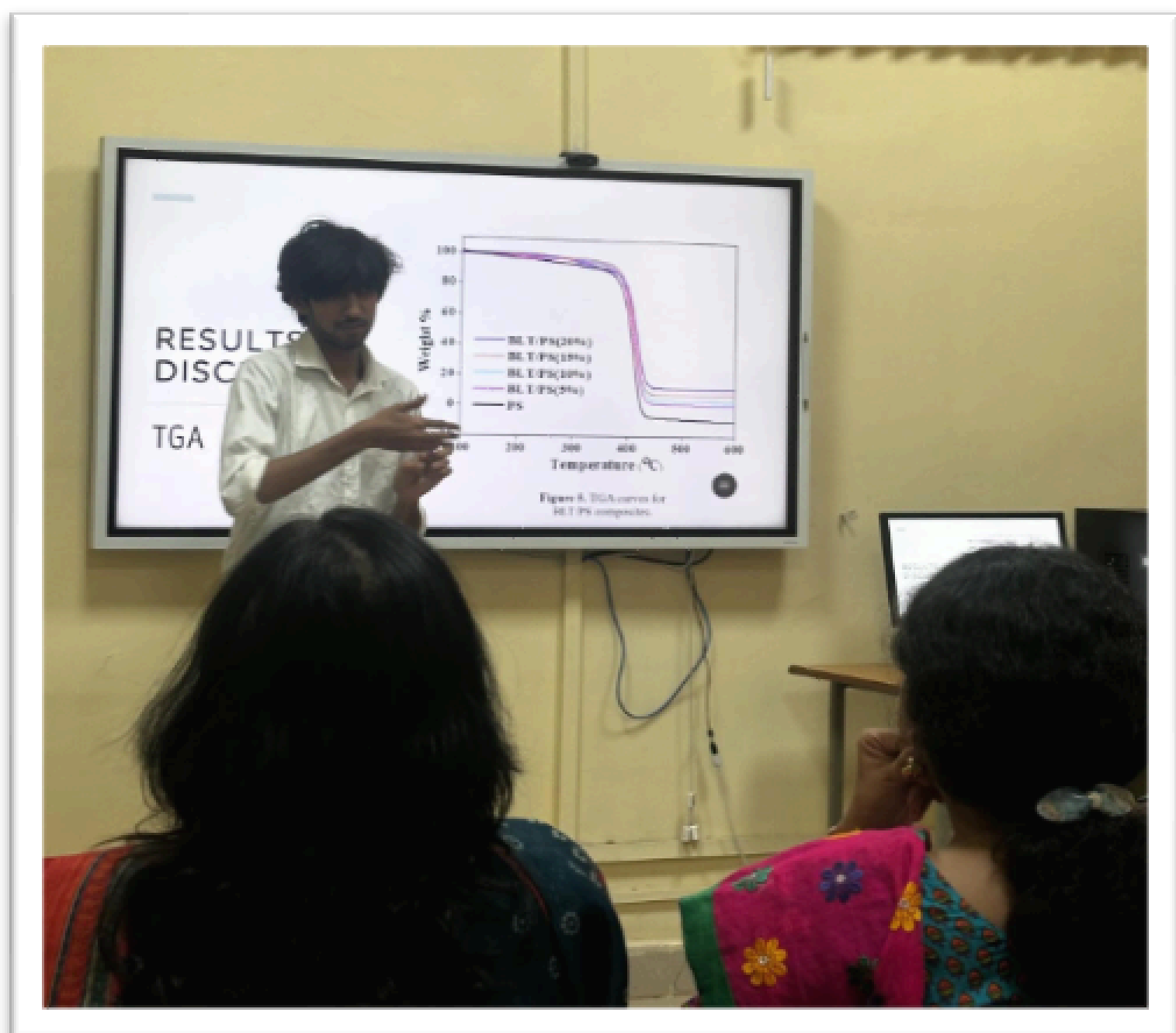
“Victory is not just about winning medals or trophies; it's about the journey, the lessons learned, and the growth achieved”. Our IMSc-Semester IV student Shreya, won the best women athlete in a recently held athletic meet at the institute. May her success inspire others and pave the way for future victories.

STUDENT'S CORNER

IMSC FINAL PRESENTATION DAY

BEST WISHES FOR THE FUTURE

This day marks a transition from students to professionals, from dreamers to doers. The journey has been filled with challenges and triumphs. Yet, through it all, you have persevered, honed your skills and emerged as confident, capable individuals. Best Wishes To All of You.



ACHIEVEMENTS

The Department of Chemistry is supported by several extramural funding agencies like SERB, DST, DBT, BRNS, CSIR, AICTE, UGC and others. The institute supports us in the creation of new facilities, seed money grants and all other possible avenues, as and when required.

Presently a good number of projects from SERB, DBT and DST are under implementation amounting to approx. Rs 2 crore 85 lakh. In the last six months, 33 research articles were published in peer-reviewed internationally acclaimed journals with the highest impact factor of 20.3 by Dr. Subhendu Naskar.

- Prof. Pratim Chattaraj was an Invited Speaker in the Chemistry Association Special Lecture, held on June 28, 2024, at SRM Institute of Science and Technology, Kattankulathur, Chennai
- Dr. Joydeep Dhar delivered an invited lecture in the Advances in Spectroscopic Techniques and Materials (ASTM-2024) at IIT ISM Dhanbad on 20th January 2024.
- Dr. S. Naskar (PI) and Dr. S. S. Mahapatra as Co-PI received a grant of 46 lakh from SERB in January 2024.
- Dr. Pradip Kar received SERB ANRF Research Grant amounting to Rs. 26 Lakh in January 2024.
- Dr. Barnali Dasgupta Ghosh delivered a lecture at the International Conference on Hydrogen Energy and Advanced Materials (ICHEAM-24) held at BHU, Varanasi on 22-24 April'2024.
- Dr. Pradip Kar and Dr. Sumit Mishra published a few patents during this period.
- Dr. Anirban Pradhan delivered a talk at the 28th ISCB International Conference (ISCBC-2024) at Marwadi University, Rajkot, India.
- Dr. Subhendu Naskar attended the 35th Mid-year meeting of the Indian Academy of Science & Scientific program of Lectures and Interaction Meeting with the Education Panel of IASc at IISc Bangalore, 27-29th June '2024.
- PhD Scholar Miss. Smita Singh joined as a guest Assistant professor (chemistry) at Gossner College, Ranchi.
- Miss. Anuradha Mahanty from Dr. Deep Shikha's lab and Mr. Rajan Kumar from Prof. Ashok Sharon's lab successfully defended their thesis on 5th February 2024.



MESSAGE FROM ALUMINI



Name: Dr. Binitendra Naath Mongal

PhD: BIT Mesra

Designation: Assistant Professor

Organization: Department of Chemistry at Manipal

University Jaipur, Rajasthan, India

Mobile No: 7366092535 E-mail: kakaiari@gmail.com

After completing his PhD, in Science in 2018 from the Department of Chemistry, Birla Institute of Technology-Mesra working under the supervision of Prof. Subhendu Naskar, Dr. Mongal secured the National Postdoctoral Fellowship awarded by SERB-DST. After working for 2 years in CSIR-Indian Institute of Chemical Technology as a national postdoc fellow, he joined GD Goenka University, Gurugram as an Assistant Professor. Dr. Mongal has extensive research experience in synthesizing and characterizing photosensitiser dyes, photocatalysts and electrocatalysts. His scholarly contributions include numerous research articles and book chapters, particularly focusing on developing molecular electrocatalysts and hybrid photocatalytic systems for solar fuel generation.



Name: Prachi Priya

B.Sc. : BIT Mesra

Designation: PhD Scholar

Organization: Indian Institute of Science, Bengaluru

E-mail: prachipriya0802@gmail.com

I pursued my bachelor's degree in chemistry at Birla Institute of Technology, Mesra, where my passion for research truly took shape. The rigorous coursework at BIT deepened my understanding of key concepts, while the supportive and approachable teaching style of the professors encouraged me to ask questions and resolve any doubts I had. The institute introduced me to essential laboratory techniques that are fundamental to research, laying a strong foundation for my future endeavors. Under the guidance of mentors like Dr. Joydeep Dhar and Prof. Ashoke Sharon, I was inspired to pursue advanced studies and research. It was through their encouragement that I prepared for the IIT JAM exam, opening the door to top research institutes in India. My early introduction to a research-oriented environment at BIT significantly contributed to my academic success, enabling me to achieve good grades in my master's program at IISc. My experience at BIT was further enriched by a project with Dr. Joydeep Dhar, where I had the opportunity to synthesize and characterize analgesics, further solidifying my commitment to the field of research.

RECENT PUBLICATIONS

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2. Sudipta Moshat, Joydeep Dhar, Sayantan Sil, Dirtha Sanyal (2024). Positron annihilation spectroscopic studies of ferromagnetic methylammonium lead iodide perovskite. *Journal of Materials Science*. 59. 3919-3929.
3. Vishal Singh, Mainak Das, Krishnakanta Mondal, Sourabh Barua, Dirtha Sanyal, Partha Pratim Ray, Joydeep Dhar (2024). Investigating the effect of lead substitution on the optical, electrical, and photoresponse properties of Quasi-2D double perovskites. *Journal of Physics and Chemistry of Solids*. 192. 112082.
4. S. Begum, S. Paul, H. Parvej, F. Mondal, R. Dalui, A. Pradhan, N. Sepay, U. C. Halder, (2024) Anion-Induced Amyloid Fibrillation of Human Insulin In vitro, *Chemistry Select*, 9, e202303699.
5. S. Khatun, S. Samanta, M. A. Addicoat, and A. Pradhan, (2024) Bottom-Up Synthesis of Twisted Porous Graphene through a Heterogeneous Scholl Reaction and Its Supercapacitor Application. *ACS Appl. Mater. Interfaces*, 16, 19877-19883.
6. S. Samanta, S. Khatun, I. Mukherjee, S. Maity, M. A. Addicoat, and A. Pradhan, (2024) A metal-free perylene-porphyrin based covalent organic framework for electrocatalytic hydrogen evolution. *Sustainable Energy & Fuels*, 2024, DOI: 10.1039/D4SE00829D.
7. A. Ghosh, N. Bhunia, S. Giri, P. Kar, M. Dwen, P. Mukherjee, A. Adhikari, B. Lahiri, D. Chattopadhyay, (2024) Comprehending photophysical properties of naphthalene sulfonic acid doped polypyrrole: A fluorescent sensor for detection of ascorbic acid, *ACS Applied Optical Materials* 2, 1060-1071
8. Sadhana Kundu, Pradip Kar, (2024) Colorimetric sensing of chloride and fluoride by 2-quinonimine functionalized gold nanoparticles, *Next Nanotechnology* 6 100090.
9. Leena Priya, Pradip Kar, (2024) Sensing of nitrate/nitrite ions in aqueous medium using poly(m-aminophenol)/silver core-shell hybrid modified graphite electrode, *Materials Science and Engineering B* 308, 117599.

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10. Sahanwaj Khan, Swaraj Sengupta, Md. Adnan Khan, Md. Palashuddin Sk, Narayan Ch. Jana, Subhendu Naskar; (2024) Earth Abundant Transition Metal Complexes as Molecular Water Oxidation Catalysts; *Coordination Chemistry Reviews*, 504, 215679.
11. Sahanwaj Khan, Swaraj Sengupta, Md. Adnan Khan, Md. Palashuddin Sk, Narayan Ch. Jana, Subhendu Naskar; (2024) Electrocatalytic Water Oxidation by Mononuclear Copper Complexes of bis-amide Ligands with N₄ donor: Experimental and Theoretical Investigation; *Inorganic Chemistry*; 63,4,1888-1897.
12. S. Roy, B. Dasgupta Ghosh, S. Mishra, K. L. Goh, J. Kim, (2024) Customized Extrusion Nozzle Assisted Robust Nylon 6/MWCNT Nanocomposite Based Triboelectric Nanogenerators for Advanced Smart Wearables, *Chemical Engineering Journal* 493 152598
13. Anindita Mukherjee, Barnali Dasgupta Ghosh, Anupam Ghosh, Sunanda Roy, (2024) PVDF Nanocomposites as Piezoelectric Nanogenerator: Properties, Fabrication and Market Applications, *Advanced Engineering Materials* 26, 2400445.
14. A. Mukherjee, B. Dasgupta Ghosh, S. Roy, K. L. Goh, (2024) Ultra strong Flexible Ba_{0.7}Sr_{0.3}Zr_{0.02}Ti_{0.98}O₃/MWCNT/PVDF Nanocomposites: Pioneering Material with Remarkable Energy Storage for Self-Powered Devices, *Chemical Engineering Journal*, 488, 151014.
15. S. Shalu, A. Mukherjee, S. Roy, P. Kar, D. K. Kushvaha, S. K. Rout, B. Dasgupta Ghosh; (2024) Hot-pressed Mn-Doped Pb((Zr_{0.3}Ti_{0.7})_{0.99}Mn_{0.01})O₃/polystyrene composites with improved dielectric and energy storage performance, *Materials Today Communication* 38, 107974.
16. S. Mondal, D. Chakraborty, P. K. Chattaraj, 'β-d-Glucopyranose–Silver+ (1: 1) complex assisted aromaticity involving electron deficient X₃ (X= Be, Mg)core' *Inorganica Chimica Acta*, 2024, <https://doi.org/10.1016/j.ica.2024.122313>.
17. P.W.Ayers, P.K.Chattaraj, S.Liu, K. Ruedenberg and W. Yang, "Robert Ghormley Parr", *Resonance*, (2023), 1-11, Invited article, R.G.Parr Special Issue
18. R. Pal, P. K. Chattaraj, (2024) Structure, Stability, Bonding and Aromaticity in All-metal and Nonmetal Clusters. , Vol. 2, pp. 471-481, in "Comprehensive Computational Chemistry", (Eds.) R. Boyd and M. Yanez, (Topic Eds.) E.D.Jemmis and R.S.Swathi, Elsevier.

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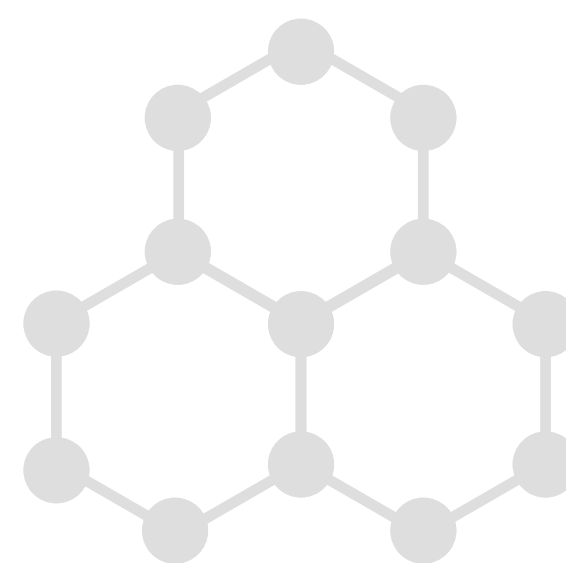
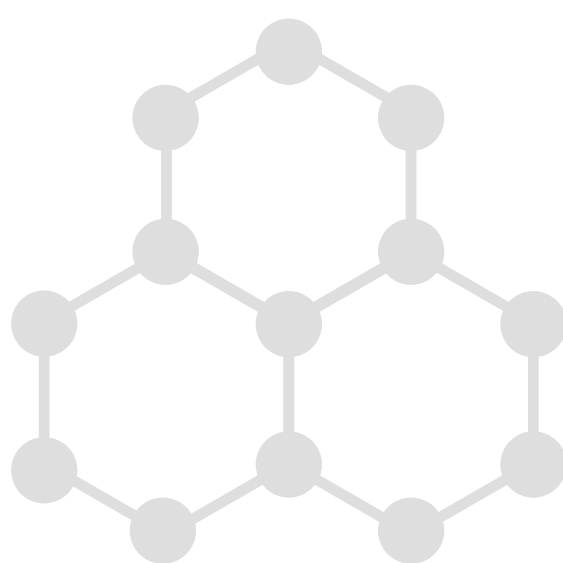
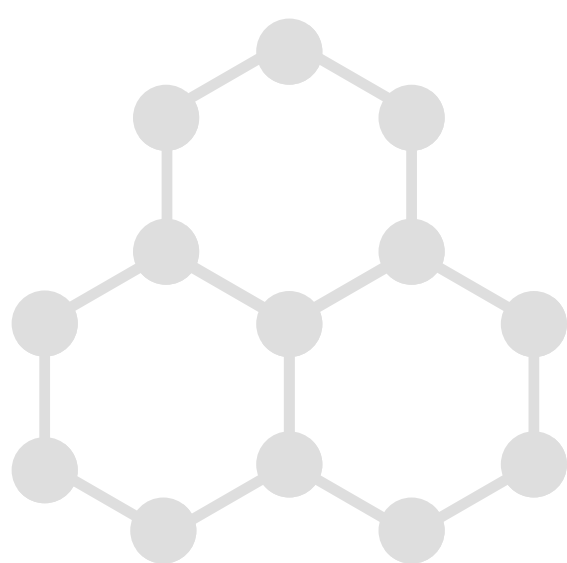
19. P.K.Chattaraj, R. Pal, (2024) Systems and processes in thermodynamics” Invited article, Resonance, 29,321
20. U. Sarkar, J. Deb, P.K.Chattaraj, (2024) Aromatic Superatoms in Superhalogens and Super alkalis : Bonding, Reactivity, Dynamics and Applications, (Eds.) P.K.Chattaraj and A.K.Srivastava, Taylor and Francis/ CRC Press, Florida,
21. A. Poddar, A. Chordia, P.K. Chattaraj, (2024) QSPR models for n-octanol/water partition coefficient and enthalpy of vaporization using CDFT and information theory-based descriptors, Journal of Chemical Sciences, 136, 23.
22. B. Chakraborty, R. Pal, D.K. Pratihari, P.K. Chattaraj, (2024) Bonobo Optimizer: A New Tool Toward the Global Optimization of Small Atomic Clusters”, The Journal of Physical Chemistry A, 128, 3864
23. Anuradha Mahanty, Ranbir Kumar, Deep Shikha, (2024) Enhancement of physiochemical, mechanical, dielectric and antibacterial properties of 10 wt% PVA-Ag/Mg/Zn doped hydroxyapatite, Inorganic Chemistry Communications, 163, 2024, 112345.
24. Anuradha Mahanty, Divya Rai, Ranbir Kumar, Gurmeet Singh, Deep Shikha, (2024) Effects of addition of PVA, Mg and Zn to HAp on biocompatibility for hard tissue implants, Materials Chemistry and Physics, 318, 129194.
25. Anuradha Mahanty, Deep Shikha, (2024) Structural Characterization, Dielectric Properties, Corrosion Resistance, and In Vitro Thrombogenicity of Zinc-Fabricated Hydroxyapatite Implants. J. Mater. Eng. Perform. 33, 1435–1447.
26. H. Mondal, P. K. Chattaraj, (2024) CO₂ reduction using aluminum hydride: Generation of in-situ frustrated Lewis pairs and small molecule activation therein, Journal of Computational Chemistry, 45, 1098.
27. S. G. Patra, P.K. Chattaraj, (2024) Three coordinated first row-transition metal complexes, $[M \{N(SiMe_3)_2\}_3]^-$: Structure, bonding, and magnetic properties, Polyhedron, 256, 116990.
28. H. Mondal, P.K. Chattaraj, (2024) Frustrated Lewis pair-mediated hydro-dehalogenation: crucial role of non-covalent interactions, Invited article, Journal of Molecular Modeling, 30, 1.

RECENT PUBLICATIONS

29. R. Pal, H. Mondal, P.K. Chattaraj, (2024) Acidity and Basicity, Invited article, in “Exploring Chemical Concepts Through Theory and Applications”, (Ed.) S. Liu, Wiley-VCH GmbH, 10, 251-284.
30. R. Pal, P.K.Chattaraj, (2024) Structure, stability, reactivity and bonding in noble gas compounds”, Phys. Chem. Chem. Phys., Invited Perspective Article, “PCCP 25th Anniversary Special Issue” 26, 9856
31. Adya Jha, Sumit Mishra, (2024) Exploring the potential of waste biomass-derived pectin and its functionalized derivatives for water treatment, International Journal of Biological Macromolecules, 133613.
32. Munmun Choudhary, Sumit Mishra, (2024) Silica functionalized almond gum derivatives for integrated flocculation cycles for natural and synthetic water systems, Journal of Polymer and Environment, 32, 2863–2883.
33. Asmita De, Sumit Mishra, (2024) Synthesis of fenugreek gum-based metal–organic framework (FG/Zr-AIPA MOF) composite beads for sequestration of heavy metal ions from aqueous solution. Environmental Science and Pollution Research, 1-17.

PATENTS

1. Sumit Mishra, Asmita De; A method for synthesizing a new fluorescent Metal-organic framework, Indian Patent Application No. 202431018460A. Publication date: 22/03/2024
2. Sumit Mishra, Munmun Choudhary, Asmita De, Srinath Das;A biopolymer-based metal-organic framework composite and method of fabrication thereof. Indian Patent Application No. 202431053454 Date of filing: 12/04/2024
3. Pradip Kar, Sadhana. Kundu, Nanoparticle-based sensor, method of preparation and use for detection of heavy metal contamination, Application no. 20243101430A, Date of publication: 27/02/24.

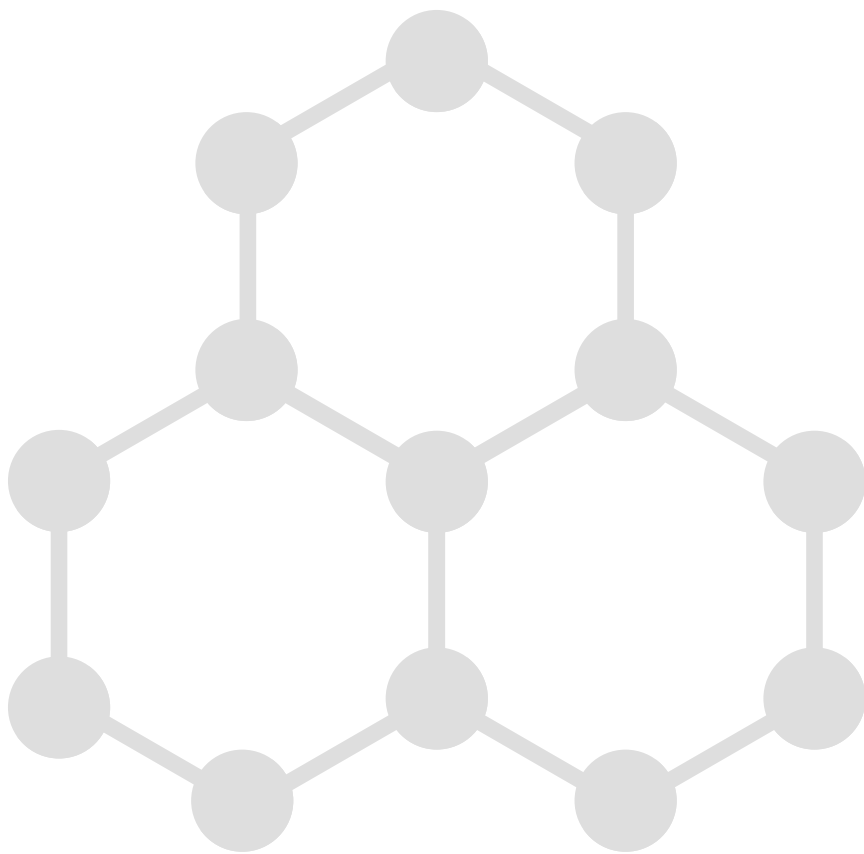
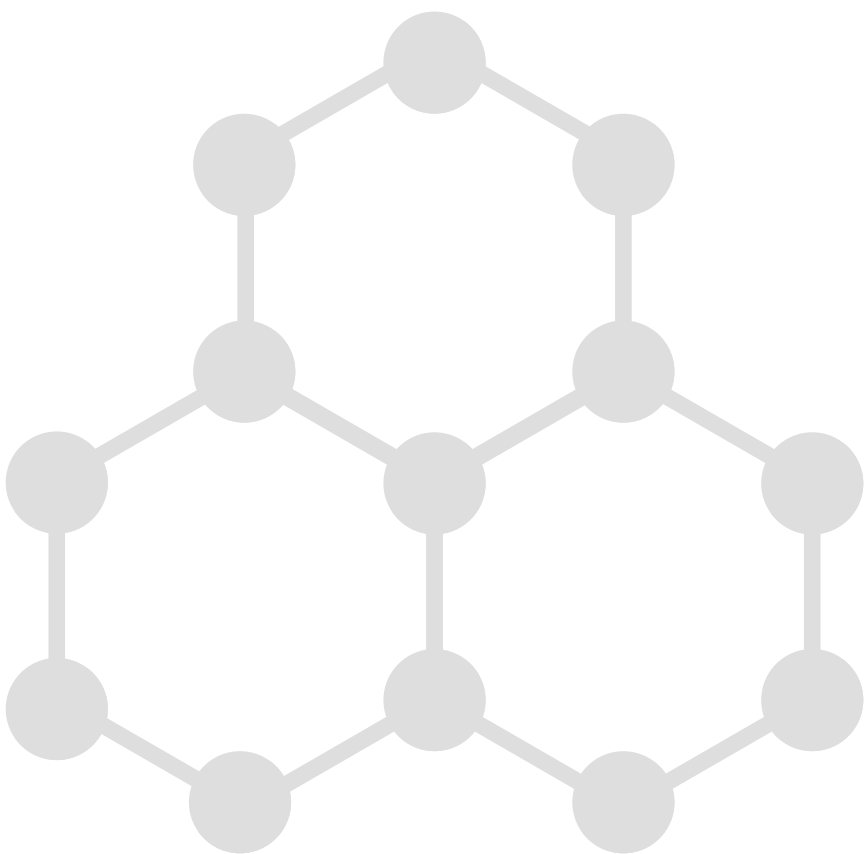
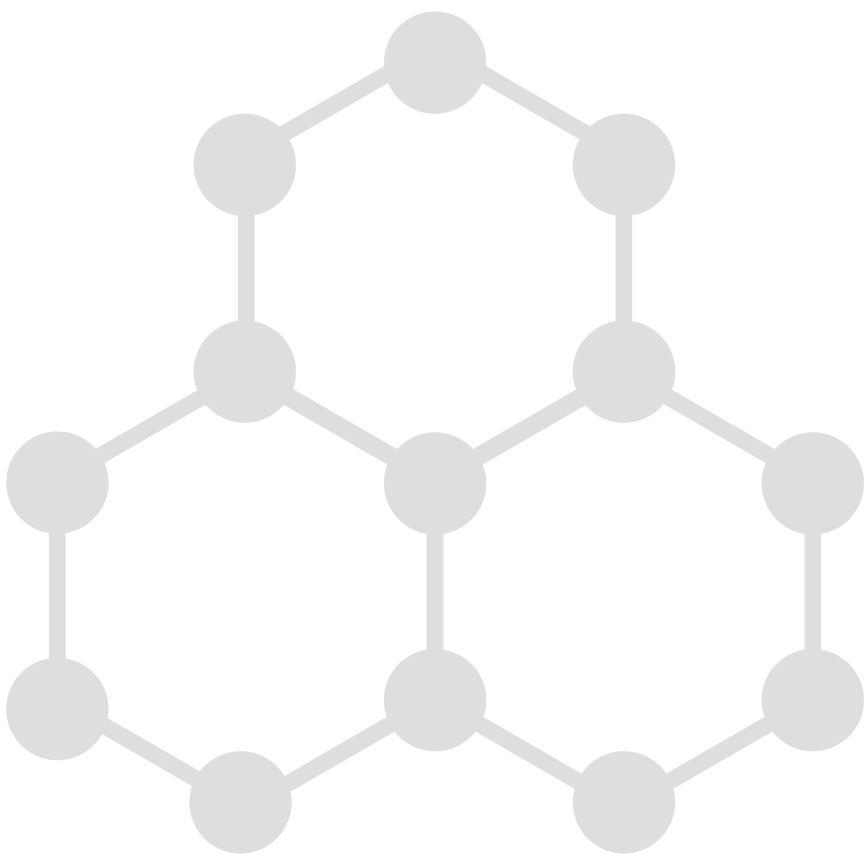


ONGOING PROJECTS

Sl. No.	Project Title	PI	Funding Agency	Sanctioned Amount (Lacs)
1	Bottom-up solution phase synthesis of curved polycyclic aromatics, nanographene, carbon nanoribbons and nanobelts for next-generation optoelectronics.	Dr. Anirban Pradhan	SERB-DST	31.18
2	Metal organic frameworks and sequential electrocoagulation for remediation of mining effluents.	Dr. Sumit Mishra	SERB	25.01
3	Biocompatibility and mechanical studies of nanostructured HAP, metal doped nanostructured HAP on alumina by RF Magnetron Sputtering.	Dr. Deep Shikha	SERB	27.72
4	Photo-responsive tetra-aryl pyrazole based emissive organic nano-cage as an artificial-light harvester for heterogeneous photocatalysis.	Dr. Atul Kumar	SERB-DST	31.76
5	Direct Dynamics Simulation Study on the Catalytic Hydrogenation of CO ₂ by Some Transition Metal Hydride Clusters.	Dr. Debdutta Chakravorty	SERB-DST	23.64
6	Electrospun PVDF based piezoelectric nanocomposite energy harvesters for self-powered smart wearable and implantable electronics.	Dr. Barnali Dasgupta Ghosh	SERB	45

ONGOING PROJECTS

Sl. No.	Project Title	PI	Funding Agency	Sanctioned Amount (Lacs)
7	Investigating the Effect of Molecular Doping in Halide Perovskites Based Energy Harvesting Devices.	Dr. Joydeep Dhar	SERB-DST	30.09
8	Polyphenylenediamine/silver hybrid based non-enzymatic gutamate sensor.	Dr. Pradip Kar	SERB ANRF	26.65
9	Development of Low cost Electrocatalysts for the Hydrogen production by Water Splitting	Dr. Subhendu Naskar (PI)/ Dr. S. S. Mahapatra (CO-PI)	SERB ANRF	44.16



RESEARCH FACILITIES

The Department of Chemistry is equipped with several state-of-the-art laboratories with advanced instruments.

The Department houses many sophisticated instruments for in-house and collaborative research

- NMR Spectrometer (400 MHz),
- UV-vis spectrophotometer,
- IR spectrometer,
- Spectrofluorometer,
- Solar simulator,
- Sourcemeter,
- Microwave reactor,
- Rotary evaporator,
- Polarimeter,
- Electrochemical analyzer and others

Recently, new instrumentation facilities added to the department:

- SOURCE METER (USB/GPIB Interface) with Kelvin Probe Set; Piezo Sample Holder (Model: B2910BL; Make: Elmark Engg Services Pvt. Ltd).
- KEITHLEY SOURCE METER (Model-2450)



KEITHLEY SOURCE METER (Model- 2450)



**SOURCE METER (USB/GPIB Interface) with Kelvin Probe Set,
Piezo Sample Holder**

GALLERY SECTION



Dr. Sumit Mishra addressing the audience on
“Perspectives in Chemistry” during AICTE
VAANI workshop.



A group photograph of IMSc. students
after their dissertation presentation.



A group
photograph of
Dr. Deep
shikha and
AICTE-VAANI
Participants.

GALLERY SECTION



Photograph of Dr. Sumit Mishra and Dr. Anirban Pradhan with Dr. Sunil Sinha from College of Engineering, the Charles via Jr. Dept of CEE, VIRGINIA TECH. USA.



PhD Scholar, Vishal Singh hosting the AICTE-VAANI workshop.



Scholar interaction with Dr. Nandkishore Thombare.

GALLERY SECTION



Dr. Sumit Mishra presenting the posters on the occasion of National Science Day.

A group photograph at the poster presentation event on the occasion of National Science Day.



PhD Scholars of chemistry department along with the participants at AICTE-VAANI workshop..

IMSc Batch 2019 Photograph

