Souvik Pramanick

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Research Group Website | Google Scholar | LinkedIN

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EDUCATION

- PhD, Department of Chemistry, Temple University, Philadelphia, Pennsylvania, USA
  Fall 2023 - present.
  Advisor: Prof. Eric Borguet
  Area of Study: Nonlinear optics, ultrafast dynamics, Vibrational spectroscopy

- M.Sc. in Chemistry, Ramakrishna Mission Vivekananda Centenary college (Autonomous), India | 2020 – 2022.
  Area of Study: Physical Chemistry specialization

- B.Sc. in Chemistry, Rishi Bankim Chandra College (Affiliated to West Bengal State University), India | 2016 - 2020.
  Area of Study: Chemistry (Honors) with Physics and Mathematics (Minor)

ACADEMIC PROJECTS

1. Detecting presence of chemical species (atomic or molecular ions/solvents) inside MOF pores by analyzing MOF and guest vibrational peak shifts induced by guest uptake.

2. Determine the chemical composition of the external surface of UiO-66, a Zr-based Metal-Organic Framework (MOF).

3. Probing the active defects in layered Lithium Cobalt Oxides (LCO) in Oxygen evolution catalysis

4. Determine the interlayer water structure and Hydrogen-bonding strength on Oxygen evolution catalysis by trimetallic layered double hydroxides (LDH)

EXPERIMENTAL & TECHNICAL SKILLS

- Ultrafast pulse laser systems: Coherent LIBRA (Ti:Sapphire) & Monaco
- Optical Parametric Amplifiers (OPA): TOPAS Prime & Opera-HP
- Programming Language: Python
- Operating System: Windows
- Microsoft Office Package: Word, Excel, PowerPoint
- Instruments: UV-Vis spectrophotometer, FTIR, Raman, XRD, ICP-AES, Spectrofluorometer, TCSPC, DLS
- Software: OriginLAB, ChemDraw, Mercury CCDC, Igor pro, EndNote

SCHOLASTIC ACHIEVEMENTS

- Qualified JOINT ADMISSION TEST FOR MASTERS (IIT JAM) (2021) organized by Indian Institute of Technology (IITs) and Indian Institute of Science (IISc.).

- Qualified Graduate Aptitude Test in Engineering (GATE) (2022) organized by Indian Institute of Technology (IITs) and Indian Institute of Science (IISc.).

PRESENTATIONS

- ACS YCC poster presentation at University of Pennsylvania, Philadelphia. (2025)
- Literature seminar at Temple University, Philadelphia. (2024)
- M.Sc. project presentation at RKMVC College, Rahara. (2022)
- Summer project presentation at SNBNCBS, Kolkata. (2022)

TEACHING EXPERIENCE

- Teaching Assistant, Temple University Chemistry Department. **Course:** Introduction to Chemistry Laboratory (CHEM 1023), Fall 2023. **Course Instructor:** Dr. James Bloxton
- Teaching Assistant, Temple University Chemistry Department. **Course:** General Chemistry I Recitation (CHEM 1031), Spring 2024. **Course Instructor:** Dr. James Bloxton
- Teaching Assistant, Temple University Chemistry Department. **Course:** General Chemistry II Recitation (CHEM 1032), Fall 2024. **Course Instructor:** Dr. James Bloxton
- Teaching Assistant, Temple University Chemistry Department. **Course:** General Chemistry II Laboratory (CHEM 1034), Fall 2023. **Course Instructor:** Dr. John Michel

LEADERSHIP SKILL

- Organize 'Lunch for Learning (LFL)' activity for Borguet group.

PUBLICATION

1. Arunavo Chatterjee, Ankit Kumar Sharma, Souvik Pramanick, Odhavia Sahil Jaykishan and Pradipta Purkayastha**,** "Dual Stimuli-Responsive BSA-Protected Silver Nanocluster-Driven "FRET On–Off" within the Niosomal Membrane: An Amalgamation of Restoration of Aggregation-Induced Quenched Fluorescence and Energy Transfer", DOI: 10.1021/acs.jpcc.2c07525

OTHER RESEARCH EXPERIENCE

1. Summer Research Project on "Isotopic Exchange Study of Rice-Water Interaction Using Cavity ring-down Spectroscopy" under supervision of Prof. Manik Pradhan at S. N. Bose National Centre for Basic Sciences. We studied the time dynamics of isotopic exchange mechanism between water and rice which could be used to understand the effects of consuming water-soaked rice on human biology.

2. Summer Internship Program on "Cocrystallization in Solids" under supervision of Prof. Deepak Chopra at IISER Bhopal. The objective was to understand the nature of non-covalent weak forces and their importance in deciding the structures and characters of Supramolecules, Polymorphs and Cocrystals and ultimately the application in Crystal Engineering

EXTRACURRICULAR ACTIVITIES

1. Summer School on "Quantum Information & Quantum Technology 2021" hosted by IISER Kolkata (14 June – 18 July 2021)
2. Participated in Two days Lecture Workshop on "Basic Chemistry for Advanced Future" sponsored by the Indian National Science Academy, New Delhi, Indian Academy of Science, Bangalore and The National Academy of Science, India, Allahabad; organized by the Department of Chemistry, Chakdaha College, West Bengal, India. (19th-20th January 2018)
3. Attend Science Academies' LECTURE WORKSHOP ON "ATOM, MOLECULE & PHOTON: STRUCTURE & INTERACTION" sponsored and supported by Indian Academy of Sciences, organized by Department of Physics and Chemistry, Rishi Bankim Chandra College, Naihati, India. (29th- 31st January 2018)
4. Participated in Science Academies' LECTURE WORKSHOP ON "PRINCIPLES OF CHEMISTRY IN BIOSCIENCE FROM THE RESPECTIVE OF UNDERGRADUATE
5. STUDENTS" Sponsored by Indian Academy of Sciences; Organized by Department of Chemistry, Rishi Bankim Chandra College, Naihati, India. (3rd-5th October 2018)