



SHRUTI

Research Scholar



My Contact

- ✉ shrutisingh@iitb.ac.in
- ☎ +91 8001281032
- 📍 Dept. of Chemistry, IITB
- 🌐 www.infoshruti.wixsite.com

Instrumental Skills

- Confocal & Wide-field Microspectroscopy
- FE-SEM (Imaging & EDAX)
- AFM (Topography, KPFM, CAFM)
- FLIM & TCSPC
- e-beam & Photo Lithography
- Fluorimeter & UV-VIS Spectrophotometer
- powder-XRD

Soft Skills

- Origin & Chem Draw
- Adobe Illustrator (AI)
- Blender
- MATLAB
- Microsoft Office (Word, Powerpoint, Excel)

Education Background

- *Ph.D. in Chemistry, IIT Bombay*
Pursuing (2022-)
Score in Coursework - 10, 9.82, 9.85 CGPA
(Sem I-III)
- University of Hyderabad
Hyderabad, Telangana, India
Masters in Chemistry (M.Sc.)
Completed in 2022
Score - 8.83 CGPA
- Regional Institute of Education, Bhubaneswar,
Orissa, India
Bachelors in Chemistry & Education (B.Sc B.Ed)
Minors - Physics & Mathematics
Completed in 2020
Score - 80.97%
- Kendriya Vidyalaya
10+2 Science stream
Completed in 2016
Score - 10 CGPA in 10th grade
94.8% in 12th grade

About Me

As a research scholar, I am a dedicated and curious individual with a passion for exploring the frontiers of knowledge. I have strong academic background, having completed Bachelor's & Master's in Chemistry, and I am currently pursuing a PhD in order to deepen my understanding and expertise. My research interests lie at the intersection of semiconductor physics, spectroscopy and microscopy. Outside my academic pursuits, I enjoy attending conferences & workshops, engaging in collaborative research projects, and staying up-to-date with the latest developments in the field.

Work Experiences

Prime Ministers' Research Fellow
Indian Institute of Technology Bombay
Supervisor - Prof. Arindam Chowdhury

June 2022 - Present

- Investigating the origins of electroluminescence intermittency in hybrid halide perovskite crystals.
- Unravelling the mechanisms governing spectral diffusion (phase segregation) in mixed halide perovskites.

Linear and Helical Organic Microcrystals as Potential Waveguides for Photonic Integrated Circuits

Masters' Thesis

Supervisor - Prof. R. Chandrasekar

Jan - May 2022

Intern TGT Science (1 month)
JNV Murshidabad, West Bengal, India

2019

Publications

- Mechanically controlled multifaceted dynamic transformations in twisted organic crystal waveguides.
Nature Communications (2024), 15, 4040

Languages

English	████████████████████
Hindi	████████████████████
Bengali	████████████
Odia	████████████

Teaching Assistant

- NPTEL – Ultrafast Laser Spectroscopy (Prof. Anindya Dutta, IITB) – Spring Semester
- NPTEL – Symmetry & Group Theory (Prof. Anindya Dutta, IITB) – Autumn Semester
- CH111 – Quantum Chemistry (B.Tech Freshman, IITB)
- CH230L – Physical Chemistry Laboratory (BS-MS, IITB)

Awards & Achievements

- Best Poster Award, International Conference on Nanoscale, Single-Molecule and Related Spectroscopies (NSM), 1–5th Sept, 2025 at Hokkaido University, Sapporo, Japan.
- Best Poster Award, International Conference on Hybrid Metal Halide Perovskites (HyPe), 19–22nd Dec, 2024 at NISER Bhubaneswar, Orissa, India.
- Best Poster Award, Physical Chemistry Symposium (SoPhyC), 22–25th Oct, 2024 at IIT Bombay, Maharashtra, India.
- Best Poster Award, Dept. of Chemistry In-House Symposium (IHS), 27–28th Sept, 2024 at IIT Bombay, Maharashtra, India.
- Selection for Prime Minister's Research Fellowship (PMRF) via Direct Entry, June 2022
- Best Poster Award by Royal Society of Chemistry, School of Chemistry CHEMFEST 2022 at University of Hyderabad, Telangana, India.
- Qualified GATE–2022 in Chemistry (AIR–248)
- Qualified BARC OCES/DGFS–2022 and got short-listed for in-person Interview.
- Qualified CUCET PG Entrance–2020 (AIR–2), UoH PG Entrance–2020 (AIR–4), BHU PET–2020 (AIR–64)
- Qualified RIE CEE–2016 (AIR–3)
- Received reward & merit certificate by CBSE for excelling in 12th standard.
- Received reward & merit certificate by CBSE for scoring 10 CGPA in 10th Standard.

Workshops & Conferences

- International Conference on Nanoscale, Single-Molecule and Related Spectroscopies (NSM), 1–5th Sept, 2025 at Hokkaido University, Sapporo, Japan.
- Delivered a talk, IITB-Kyoto Meeting, 4th Jan, 2025 at Victor Menezes Convection Centre IIT Bombay, Maharashtra, India.
- International Conference on Hybrid Metal Halide Perovskites (HyPe), 19–22nd Dec, 2024 at NISER Bhubaneswar, Orissa, India.
- Volunteered for National Workshop for Fluorescence and Raman Spectroscopy (FCS XV), 16–18th Nov, 2024 at Victor Menezes Convection Centre IIT Bombay, Maharashtra, India.
- Volunteered for Optics within Life Sciences (OWLS 17), 18–21st Nov, 2024 at Victor Menezes Convection Centre IIT Bombay, Maharashtra, India.
- Volunteered for Physical Chemistry Symposium (SoPhyC), 22–25th Oct, 2024 at Victor Menezes Convection Centre IIT Bombay, Maharashtra, India.
- Delivered a talk, CHEMDOJO 3.0, 1–4th Oct, 2024 at Olive Resort, Sillari, Nagpur, Maharashtra, India.
- Dept. of Chemistry In-House Symposium (IHS), 27–28th Sept, 2024 at Victor Menezes Convection Centre IIT Bombay, Maharashtra, India.
- Dept. of Physics Symposium (SymPhy), 8–10th March, 2024 at IIT Bombay, Maharashtra, India.
- National Workshop for Fluorescence and Raman Spectroscopy (FCS XIV), 9–14th Dec, 2023 at IISER and INST Mohali, India.
- International Conference sponsored by DST on Electrical & Optical Properties of Perovskites (EOPP 2022), 5–6th Dec, 2024 at IIT Roorkee, India.