Sowmya Bhowmick (He/Him)
LinkedIn: www.linkedin.com/in/sowmya-bhowmick-cosmochemistry
Research group website: https://sites.google.com/niser.ac.in/suryarout/people/sowmya-phd-student
E-mail: bhowmick1996@gmail.com

ACADEMIC QUALIFICATION :

COURSE	INSTITUTION	YEAR	PERCENTAGE
PhD. in Planetary Science at the School of Earth and Planetary Sciences (SEPS)	NISER Bhubaneswar	2023 - ongoing	NA
M.Sc. Physics with specialization in Applied Physics	National Institute of Technology Silchar	2018 - 2020	7.37 GPA
B.Sc. majors in M.P.Cs (Osmania University)	Bhavan's Vivekananda College	2013-2016	81. 82
C.B.S.E 12th grade- Stream: M.P.C.IP	Bhavan's Sri Ramakrishna Vidyalaya	2012-2013	84.8
C.B.S.E 10th grade	Bhavan's Sri Ramakrishna Vidyalaya	2010-2011	9.2 CGPA

ACTIVITIES :

- Delegate at Frontiers of Fundamental Physics International Symposium - 2013.
- Delegate at National Seminar on RadioChemistry -2013.
- Research Intern at IISER Mohali (SRFP-2015) under the supervision of Dr. Kamal P. Singh.
- Professionally worked at Amazon for 20 months (September 2016 - May 2018).
- I was actively involved in departmental activities, including the DST-sponsored INSPIRE Science Camp, ANVESHAN-2019, National Science Day 2019, and 2020 at NIT Silchar.
- Research Intern at IIA Bengaluru from May to July 2019, under the supervision of Dr. U.S. Kamath.
- Max Planck partner group JRF at SEPS-NISER Bhubaneswar under Dr. Guneshwar Thangjam from February 2022 to February 2023.
- Actively involved in the department outreach events at School of Earth and Planetary Sciences (SEPS), NISER Bhubaneswar, 2022, 2023, 2024, 2025.

ACHIEVEMENTS :

- Winner and Runner-up at Bhavonatsav Fest for Science Quiz and Physics Poster Presentation, respectively.
- I was part of the Annual NIT Silchar trekking team, which consisted of 25 members. We went for a 10-day adventure course at IHCAE, South Sikkim. I was also felicitated as the course senior for the adventure course.
- Awarded The Meteoritical Society Research Grant - June 2025 for the research proposal "Heavy and light element isotope concentration of presolar graphites from carbonaceous chondrites"

National Exams Qualified:

- Graduate Aptitude Test in Engineering (GATE) 2023 (Physics) - All India Rank - 466 (97.48 percentile)
- National Eligibility Test (NET) - Lectureship/ Assistant Professorship (LS/AP) June 2022 - All India Rank - 70
- Joint Entrance Screening Test (JEST) 2021 (PhD Physics) - All India Rank - 256 (94.94 percentile)

- Graduate Aptitude Test in Engineering (GATE) 2021 (Physics) - All India Rank - 1240 (92.91 percentile)
- Joint Admission Test for MSc (JAM) 2018 (Physics) - All India Rank - 1333

CONFERENCE PUBLICATIONS :

- *"RAMAN spectroscopy of Zircon grains in monomict eucrite DaG 647",* conference poster presented at 86th Annual meeting of the International Meteoritical Society (MetSoC 2024), Brussels.

PROJECTS :

- **Project**: Data processing and correction of DAWN VIR data of dwarf planet Ceres.
  Guide: Dr. Guneshwar Thangjam
  Place of work: National Institute of Science Education and Research (NISER), Bhubaneswar
  Year: 2022 - 2023
  I was a Max Planck partner group Junior Research Fellow (JRF) at the School of Earth and Planetary Sciences (SEPS). The project was an attempt to prepare a data processing pipeline for DAWN VIR data of dwarf planet Ceres. During my tenure, I was able to successfully create an algorithm to thermally correct the collected spectra, which is a significant part of the data processing pipeline. The photometric correction algorithm was partially completed, and the road map for finishing it was prepared.

- **Project**: Organic resistive memory device using SnS-doped reduced graphene oxide nanohybrid derived from disposed of dry cells.
  Guide: Dr. Avijit Chowdhury
  Place of work: National Institute of Technology Silchar
  Year: 2019 - 2020
  This is my MSc. research project, which I did at NIT Silchar. Our primary motive behind this project was to ensure that waste material (which was used pencil batteries in this project) would be converted into something useful. We converted the graphite obtained from the battery into Graphene-Oxide. This was further reduced to Reduced Graphene Oxide via SnS doping to increase its conductivity. This nanomaterial was then used to create a resistive memory device using a PET substrate whose characteristics were studied. Furthermore, characterizations of all the materials were done via multiple methods such as XRD, FESEM, Photoluminescence, and UV-Vis spectroscopy.

- **Project**: Chemical analysis of Nova ejecta.
  Guide: Dr. US Kamath
  Place of work: Indian Institute of Astronomy, Bengaluru
  Year: 2019
  I attended the Summer training school at IIA Kodaikanal Solar Observatory, which was an introductory course for Astronomy and Astrophysics. This was a 2-week training school. After this, I started my Summer project at IIA Bengaluru (Head campus) under Dr. US Kamath. The Indian Institute of Astronomy (IIA) funded the training school and the project. It was a 1-month project, which consisted of me getting to understand the formations of nova and supernova, and multiple techniques to understand the ejected gases from the nova and supernova explosions, and what information they gave.

- **Project**: Polarization and Power Meter.
  Guide: Dr. KP Singh
  Place of work: Indian Institute of Science Education and Research, Mohali
  Year: 2015
  I worked at IISER Mohali, under the SRFP 2015 scheme jointly sponsored by the three national academies of science. It was a 10-week project, wherein I worked primarily on multiple optical phenomena of polarization of light via multiple experiments and its application in biophysics. The latter part of the project was around creating a light intensity power meter using LDR's and photodiodes.