Debayan Chatterjee

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Contact Number: +919874789233 ✻ *Hometown:* Kolkata, India

Education

M.Sc in Physics — *Indian Institute of Technology Kharagpur*
Master's degree program — *August 2022 - Present*
CGPA: 9.17/10.00
Thesis title: Cu-doped SnS_2 nanostructures as electrode material in hybrid supercapacitors

B.Sc (Honours) in Physics — *Jadavpur University*
Bachelor's degree program — *July 2019 - August 2022*
Final CGPA: 8.87/10.00
Ancilliary Subjects: Mathematics, Statistics

Higher Secondary [12th Standard] (XII) — *St. Stephen's School*
ISC Board — *Passed in April 2019*
Percentage: 96.5%
Subjects: English, Physics, Mathematics, Chemistry, Computer Science

Secondary [10th Standard] (X) — *St. Stephen's School*
ICSE Board — *Passed in May 2017*
Percentage: 95.6%
Subjects: English, Mathematics, Science (Physics, Chemistry, and Biology), Computer Applications, HCG (History and Civics, Geography)

Projects/Internships

Visual Detection Laboratory, Jadavpur University — *February 2022 - July 2022*
Estimation of Different Collision Parameters in Ultra-Relativistic Heavy-Ion Collisions using Optical Glauber Model — *Instructor(s): Prof. Argha Deb, Prof. Mitali Mondal*

- Studied the properties of Pb-Pb and Au-Au collisions.
- Developed a code for applying Optical Glauber Model to determine collision parameters.
- Deduced a comparison for different density profiles and atomic masses.

Materials Division, Saha Institute of Nuclear Physics — *May 2023 - July 2023*
Controlled Synthesis of Gold Nanoparticles of Varying Morphologies and Study of their Plasmonic Properties. — *Instructor: Prof. Biswarup Satpati*

- Chemical Synthesis of Gold Nanospheres, Nanorods and Nanostars.
- Morphological Characterization using Transmission Electron Microscopy (TEM).
- Determination of Optical Properties by UV-Vis-NIR Spectrophotometry.

Technical skills

Programming Languages/Tools	C, C++, Java, Python, Fortran 90, LaTeX, MS Office.
Laboratory Skills	Electronic Instrumentation, TEM, SEM, XRD, UV-Vis-NIR, BET, FTIR, XPS, Electrochemistry.

Achievements

Secured Engineering Rank of 2938 in WBJEE 2019.

Secured NTA Percentile Score of 92.0735521 in JEE Mains 2019.

Secured a First Class 5th in the Bachelors Degree.

Secured AIR 264 in IIT JAM 2022.

Participated in 2-day Academia-Industry Conclave (AIC) 2023 held at IIT Kharagpur.

Language proficiencies

English	Professional Working Proficiency
Bengali	Native or Bilingual Proficiency
Hindi	Elementary Proficiency

Research Interests

Nanomaterials and Nanotechnology	Characterization of Nanostructures of different sizes and morphologies and determination of their Optical, Electrical and Magnetic properties.
Energy Storage Devices	Studying properties of materials for Electrodes and Electrolyte for futuristic Battery development.
Non-Equilibrium Statistical Mechanics	Applying Stochastic techniques to study different systems perturbed out of equilibrium.

Seminars/Talks Attended

Title: From Answers to questions in Fundamental Physics: Bias, Babble, Brouhaha.
Speaker: *Prof. Biswarup Mukhopadhyay, IISER Kolkata.*
Date: 19th February, 2020
Place: *Amal Kumar Raychoudhuri Lecture Hall, Presidency University, Kolkata.*

Title: Introduction to Physical Phenomena at Lower Dimensions.
Speaker: *Prof. Kalyan K. Chattopadhyay, Jadavpur University*
Date: 24th December, 2020
Place: Department of Physics, Presidency University, Kolkata.

Title: Geometric Phases: Old and New.
Speaker: *Prof. Michael Berry, University of Bristol.*
Date: 22nd September, 2022
Place: SN Bose Auditorium, IIT Kharagpur.

Title: Soft Matter and X-ray Scattering Techniques - A Perfect Combination in the rich domain of Condensed Matter Physics.
Speaker: *Prof. Mrinmay K. Mukhopadhyay, Saha Institute of Nuclear Physics.*
Date: 4th July, 2023
Place: MN Saha Auditorium, Saha Institute of Nuclear Physics.