

Rupak Sarkar

*Undergraduate Research
Fellow, IISER
Kolkata*



9091754723

rupak54723@gmail.com

rupak-sarkar

Rupak-723

@rupak754723

Personal Information

Date of Birth 19th September, 2005

Nationality Indian

Present 3rd-year BS-MS student

Affiliation Indian Institute of Science Education and Research (IISER), Kolkata

Education

Aug 2023 – **BS-MS, IISER Kolkata**

Present SGPA: **9.71**

CGPA: **9.07**

Relevant Chemistry Courses: Elements of Chemistry I & II, Quantum Chemistry I & II, Basic Inorganic Chemistry I & II, Organic Chemistry I, II & III, Biochemistry, Fundamentals of Spectroscopy, Basic Transition Metal Chemistry, Chemical Kinetics, Physical Organic Chemistry, Advanced Physical Chemistry Laboratory, Inorganic and Spectroscopy Laboratory, General Chemistry Laboratory, Organic Chemistry Laboratory I, Main Group elements I, Applications of Chemical Thermodynamics, Instrumentation in Chemistry.

Other Courses: Structural Biology, Immunology, Analysis I, Linear Algebra I, Probability and Statistics I, Programming and Data Structures I, Introduction to Computer Programming, Introduction to Computation.

2023 **WBCHSE**, Fulbari High School (H.S), South Dinajpur
Class 12: **95.8%**

2021 **WBBSE**, Fulbari High School (H.S), South Dinajpur
Class 10: **97.3%**

Research Interest

Catalysis, Reaction Kinetics, and Surface Chemistry.

Projects

May 2024 – **Polymorphism of Ibuprofen**

July 2024 **Supervisor:** Prof. Soumyajit Roy, IISER Kolkata

Studied the existence of different polymorphs of Ibuprofen, a nonsteroidal anti-inflammatory drug (NSAID), and explored various methods for their preparation.

May 2025 – **Synthesis of Strained-Ring Bicyclobutane (BCB) Derivatives via Amine Intermediates**

July 2025 **Supervisor :** Dr. Biplab Maji, IISER Kolkata

Synthesized strained-ring bicyclobutane (BCB) derivatives which involve many kinds of reactions like cycloaddition, ring-expansion, making complex structures, etc, via multi-step organic transformations involving imine formation, reductive amination, and ring closure.

9091754723 • rupak54723@gmail.com

rupak-sarkar

Rupak-723

@rupak754723

May 2025 – **Identifying Operational States of a Wastewater Treatment Plant Using Unsupervised Clustering**

July 2025

Supervisor : Prof. Monidipa Das, IISER Kolkata

Identify operational states of a wastewater treatment plant using clustering on sensor data (pH, turbidity, flow, etc.) to detect anomalies and optimize performance.

Language Skills

English Proficient

Hindi Moderate

German Moderate

Bengali Native

Software Skills

Languages Python; familiar with C, C++, Java

Tools L^AT_EX, Origin, Gnuplot, Typst, NumPy, Matplotlib, ImageJ, ChemDraw, MestReNova, etc.

Extracurricular Activities

Hobbies Reading books, watching anime

Sports & Games Chess, Rubik's Cube, Carrom, Card games, Cricket, Badminton.

Academic Achievements

January 2024 DST INSPIRE Scholar

– Present Issued by the Department of Science and Technology, Government of India.

2023 Qualified for B.Tech in Computer Science & Engineering at Jadavpur University.

2023 Qualified for BS-MS at Indian Association for the Cultivation of Science (IACS), Kolkata.

2023 Qualified for BS-MS in Medical Science and Engineering at IIT Madras.

2023 Qualified for B.Sc. in Chemistry at Presidency University, Kolkata.

References available upon request