

ANANYA ROUT

BS-MS Student ~ DCS, IISER Kolkata

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RESEARCH INTERESTS

Photoredox catalysis
Electro-Organic Synthesis
Electrocatalysis
C-H Bond Activation

SKILLS

Tools: ChemDraw, SciFinder, ChatGPT, Microsoft Office Suite

Languages: Python, Java, MATLAB

EXPERIENCE

2023 – current

Redox Lab under Dr. Suman de Sarkar (MS Thesis)

IISER Kolkata

I have gained hands-on training by working in Dr. Suman De Sarkar's Redox Lab, at IISER Kolkata, and am efficient in operating all the necessary equipments and carrying out all the required procedures in an electrochemical synthetic laboratory such as setting an electrochemical reaction, TLC, Column chromatography, reactions using Schlenk line, operating the Rotary evaporator, and computational tools such as ChemDraw, Scifinder, and Mestronova. I can also perform a basic ¹H-NMR, ¹³C-NMR, and UV-Vis data analysis. Furthermore, I possess excellent communication skills, both written and verbal, which I believe are crucial to effective collaboration and dissemination of research findings. Current I work with Photoredox catalysis.

5/2024 – 7/2024

The Enal Diazo Group under Prof. S. Katukojvala

IISER Bhopal

In my summer internship, under Prof. Sreenivasa Katikojvala, at IISER Bhopal, in 2024, I synthesized certain special functionalized compounds called diazoenals and alpha-hydroxy ketones that were used as starting materials for the direct synthesis of 2H-Pyrans. The synthesis and reactions of diazoenals also involved the making and using of sulfur-containing reactants. Reactions of diazoenals with other reactants involved the use of metal catalysts such as Zinc and Rhodium. Through this internship, I gained exposure to organic synthesis on a relatively large scale and handled their column and purification, bromination reactions, and cross-coupling reactions (Heck coupling) on the products of diazoenals and usage of various stains for identification. This opportunity gave me further insight into the world of organic reactions and organosynthesis.

EDUCATION

8/2021 – current

Indian Institute of Science Education and Research, Kolkata

BS-MS Dual Degree

Level 1

Courses taken : Physics, Chemistry, Biology, Mathematics, Humanities, Computer Science

Level 2

Courses taken : Chemistry, Biology, Earth Sciences

Level 3

Courses taken : Organic Chemistry, Transition Metals, Physical Organic Chemistry, Applications of Chemical Thermodynamics, Quantum Chemistry, Main group elements, Chemical Kinetics, Instrumentation.

Level 4

Courses taken and continuing : Group Theory and Spectroscopy, Adv. Transition Metal Chemistry, Polymer Chemistry, Chemistry of Alternate Energy Solutions, Advanced Organic Chemistry 2, Sustainability and Chemistry.

3/2018 – 3/2020

DAV Public School Chandrasekharpur, Bhubaneswar, Odisha

Senior Secondary

Subjects: Physics, Chemistry, Biology, English Core, Mathematics

Percentage: 94.2% (CBSE – New Delhi)

3/2006 – 2/2018

St. Joseph's School Kendrapara, Odisha

Matriculation

Subjects: Science, Mathematics, Social Science, Communicative English, Hindi

Percentage: 90.6% (ICSE)

ACHIEVEMENTS

Qualified IAT 2021

All India Rank **430**

Olympiads

(Medals and certificates of distinction)

- International English Olympiad (IEO) in 2015, 2016, 2017
- International Science Olympiad (ISO) in 2016
- International Mathematics Olympiad (IMO) in 2015, 2016
- Silverzone International Talent Hunt Olympiad in 2016