

Angshuman Talukder

Residence/domicile: North bireshpally, Madhyamgram, Kolkata- 700129

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Education

BS-MS Dual degree in Chemistry (5th year ongoing)

Integrated BS-MS(Dual Degree) course

Currently pursuing

CGPA: **8.7**

IISER Kolkata

December 2020 - May 2025

12th Board

WBBHSE Board

Secured: **94.40%**

Calcutta Airport English High School

June 2018 - May 2020

10th Board

WBBSE Board

Secured: **92.12%**

Calcutta Airport English High School

June 2005 - May 2018

Research interests

SYNTHETIC ORGANIC CHEMISTRY, CATALYSIS, CH ACTIVATION, ELECTROCHEMISTRY, SELF ASSEMBLY, TRANSITION METAL CHEMISTRY

Experience

PROJECT 2023

Under the supervision of **Prof Dibyendu Das**

Feb 2023 - April 2023

IISER Kolkata

- **Topic: New anti-microbial Polypeptide: Fmoc solid state synthesis, anti-microbial activities and cytotoxicity analysis**
- Synthesized (GHGPY)₂ peptide by solid state peptide synthesis which includes four basic steps- resin loading, deprotection, coupling and cleavage.
- Performed various control experiments and mechanistic studies.
- Peptide purification by HPLC followed by lyophilization and characterisation by LC-MS
- Performed a bioassay to test the polypeptide's effectiveness against Bacteria(*E coli* was grown in LB medium for 16 hours)
- Cell density of the cultures measured by OD measuring single wavelength spectrometer and recorded amazing anti-microbial activity.
- Future research is to find out the minimum inhibitory concentration and its effectiveness against other microbes.

PROJECT 2023

Under the supervision of **Prof Suman De Sarkar**

May 2023 - ongoing

IISER Kolkata

- **Topic: Electrochemical activation of small organic molecule**
- The central focus of this project is to establish novel synthetic methodologies by carrying out redox transformations through electrolysis. This strategy removes the requirement of foreign redox reagents to minimize the generation of unwanted waste materials, thus making it '**clean and green**' chemistry. In addition, fine control over the applied potential and current flow allow various chemoselective transformations.

SUMMER PROJECT 2024

Under the supervision of Prof Suman De Sarkar

May 2024 - Jul 2024

IISER Kolkata

- **Topic: Electrochemical Synthesis of Quinolines**

Education Achievements

INSPIRE Fellowship	2020
Top 1 % ranker in 12 th Board Examination	
• As an INSPIRE fellow and currently doing a BS-MS degree, I get Rs 60,000 per annum as a scholarship.	
SOF NATIONAL SCIENCE OLYMPIAD(NSO) - SILVER Medalist	2018
SOF INTERNATIONAL MATHEMATICS OLYMPIAD(IMO) - BRONZE Medalist	2018

Relevant courses taken

Fundamentals of Spectroscopy; Transition Metal Chemistry; Main Group elements I; Organic Chemistry I ; Organic Chemistry II; Organic Synthesis Laboratory II; Inorganic synthesis and characterization Laboratory; Physical Organic Chemistry; Advanced Physical Chemistry Laboratory, Advanced Organic Synthesis, Fluorescence spectroscopy

Laboratory skills

Spectroscopic Techniques	¹ H NMR; ¹³ C NMR; UV-Vis; Fluorescence spectroscopy
Synthesis	Multi-step synthesis of small organic molecules; Electro-organo synthesis
Purification techniques	Column Chromatography; Preparative TLC
Other Techniques	FT-IR; LC-MS; HRMS

Technical skills

Programming Languages	Python, Introduction to C++, QBasic
MS Office	Powerpoint, Word and Excel
Scientific Writing Software	L ^A T _E X
Plotting Software	Gnuplot and Origin

Extracurricular activities

Under 14 Boys Table Tennis State Tournament (West Bengal) - 1ST RUNNER UP	2015
Under 16 Boys Table Tennis State Tournament(West Bengal) - CHAMPION	2016

Vice Head of the Anicon Team for Inquibytes 2022	October 2022 IISER Kolkata
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Designed and handled the budget for the preliminary college fest.

- Was in charge of managing the administrative demands for the items and services that would be used in the festival.

Language proficiencies

English	Flawless English writing ability and fluency
Hindi	Flawless Hindi speaking ability and fluency