

Priyanshu Gupta

Bachelor of Science (Research)

Indian Institute of Science, Bengaluru - 560012

Karnataka, India

EDUCATION

- Indian Institute of Science, Bengaluru** Nov 2021 - Jul 2025
Bachelor of Science (Research); Major: Chemistry CGPA (out of 10): 9.0
- Govt. Boys Senior Secondary School, Delhi** 2021
Central Board of Secondary Education (CBSE) Examination (Class 12) Aggregate: 93.8%
- Govt. Boys Senior Secondary School, Delhi** 2019
Central Board of Secondary Education (CBSE) Examination (Class 10) Aggregate: 91.7%

PUBLICATIONS

- Control Over S(VI)-Stereogenic Center: NHC-Catalyzed Enantioselective Synthesis of N-Acyl Cyclic Sulfonimidamides
Barik, S.; Paravakkal, F. D.; **Gupta, P.**; Roy, P.; Biju, A. T. *Angew. Chem. Int. Ed.* **2025**, *64*, e202506929
- NHC-Catalyzed Aldimine Umpolung/ 6π -Electrocyclization Cascade to Access Tetracyclic Dihydrochromeno Indoles.
Das, R. C.; **Gupta, P.**; Chakraborty, S.; Jindal, G.; Biju, A. T. *Angew. Chem. Int. Ed.* **2025**, *64*, e202416519.

RESEARCH EXPERIENCE

- Indian Institute of Science** Bengaluru, India
BS Thesis Aug 2024 - Mar 2025
Advisor: **Prof. A. T. Biju**
 - Title: HFIP-Mediated Ring-Opening of Bicyclo[1.1.0]butanes with Hydroperoxides for the Diastereoselective Access to Peroxycyclobutanes
- Ruhr-Universität** Bochum, Germany
Solvation Scholars Undergraduate Exchange Student May 2024 - July 2024
Advisor: **Dr. Mario P. Wiesenfeldt**
 - An exchange student funded by Ruhr Explores SOLVation (RESOLV).
 - Title: Photo-catalyzed semi-hydrogenation of benzenes to cyclohexenes.
- Indian Institute of Science** Bengaluru, India
Research Intern Sep 2023 - July 2024
Advisor: **Dr. Garima Jindal**
 - Computational studies of organic reactions using various tools such as Gaussian, Gaussview, and CYLview.
 - Rationalized *exo-dig* and *endo-dig* cyclizations in NHC-catalyzed synthesis of indole derivatives, which I performed in Prof. A. T. Biju's lab.
- Indian Institute of Science** Bengaluru, India
Research Intern May 2023 - Jul 2023
Advisor: **Prof. Akkattu T. Biju**
 - Title: NHC-catalyzed synthesis of tetracyclic dihydrochromeno indole derivatives.

Advisor: **Dr. Sheetal Kumar Jain**

- Introduction to 1D and 2D NMR spectroscopy and its applications.
- NMR techniques: 1H , ^{13}C , and COSY.

ACHIEVEMENTS

- **Graduate Aptitude Test in Engineering (GATE) — Chemistry (CY) | All India Rank: 51** 2024
Conducted by the Indian Institute of Science.
- **Joint Entrance Exam (JEE) — Main | Percentile: 99.1412010** 2021
JEE is an exam conducted by the National Testing Agency to select students for admission to colleges for undergraduate engineering programs nationwide. The main level is the first round of the selection.
- **KVPY SA fellow | All India Rank: 252** 2020
Kishore Vaigyanik Protsahan Yojana (KVPY) is a fellowship awarded to high-school students by the Department of Science and Technology, Government of India.

EXTRA-CURRICULAR ACTIVITIES

- **Facilitator | Yusuf Hamied Chemistry Camp** Jun 26 - 28, 2023
 - Helped out RSC members in experiments shown to school students.
 - Showcased a few fun chemistry experiments to school students and explained it to them.
- **Coordinator | Chemenigma, Pravega X** Mar 2023 - Jan 2024
 - Pravega X is the tenth edition of the IISc UG students' annual fest.
 - Chemenigma is an event where participants are asked thought-provoking questions about chemistry.
 - Prepared question paper with a co-coordinator and managed all the logistics.
- **Coordinator | Website, Pravega X** Mar 2023 - Jan 2024
 - Managed Pravega X's official site's content and design.
 - Utilized my knowledge of front-end, back-end skills, and database management skills to keep the website up-to-date.

TECHNIQUES AND SKILLS

- Essential laboratory techniques and instruments including glove box, silica gel column chromatography, Schlenk line, Dean-Stark apparatus, extraction.
- Various chromatographic and spectroscopic skills, including gas chromatography, NMR, UV-Vis, IR spectroscopy, and Mass Spectrometry.
- Computational chemistry: Gaussian, GaussView, and CYLview. Various functionals and basis sets used in DFT based computation. Geometry Optimization, Scans, IRC calculations, and determination of transition states.

REFERENCES

Prof. Akkattu T. Biju

Professor

Department of Organic Chemistry

Indian Institute of Science

Bangalore - 560012, India

Email: atbiju@iisc.ac.in

Dr. Garima Jindal

Assistant Professor

Department of Organic Chemistry

Indian Institute of Science

Bangalore - 560012, India

Email: gjindal@iisc.ac.in

Dr. Mario P. Wiesenfeldt

ECR Group Leader

Faculty of Chemistry and Biochemistry

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Bochum - 44801, Germany

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