



NAVPREET KAUR

Ph.D. Research Scholar

CAREER OBJECTIVE

To be associated with an organization that gives me an opportunity for self-improvement while contributing to the symbolic growth of the organization with my technical, innovative, and logical skills.

PRESENT POSITION

Ph.D. Research Scholar at Indian Institute of Technology Ropar

ADDRESS

Department of Chemistry, Indian Institute of Technology Ropar, Rupnagar, Punjab-140001

GENDER

Female

CONTACT

PHONE:

7087912196

Research Gate:

<https://www.researchgate.net/profile/Navpreet-Kaur-40>

Google Scholar:

<https://scholar.google.com/citations?user=nxRLAncAAAAJ&hl=en>

EMAIL:

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EDUCATION

Ph.D. Organic Chemistry

07.2018- 07.2023

Indian Institute of Technology Ropar, Rupnagar Punjab

Thesis Title: Development of novel methodologies for accessing oxygen and nitrogen heterocycles

M.Sc. Chemistry

07.2016 - 05.2018

MCM DAV College, Panjab University, Chandigarh, India

B.Sc. Chemistry

07.2013 - 05.2016

A.S. College Khanna Punjab

RESEARCH EXPERIENCE

Indian Institute of Science and Education Research

June 2017- July 2017

Synthesis of diverse heterocycles for accessing various liquid crystals

Indian Institute of Technology

July 2018- July 2023

Working as a Ph.D. Research Scholar in Dr. Prabal Banerjee's group towards developing novel methodologies for accessing diverse oxygen and nitrogen heterocycles.

AWARDS AND ACHIEVEMENT

Awarded as the "Best Student of the Year" for performing well in the academics.

Cleared "Common Entrance Test (CET)" to pursue M.Sc. in 2016.

Cleared "Graduate Aptitude Test for Engineering (GATE)" to pursue Ph.D. in 2018.

EXPERIMENTAL AND SCIENTIFIC SKILLS

- Expert in designing and execution of multistep reactions (small-scale to gram-scale reaction).
- Practical experience of Extraction methods, various

MARITAL STATUS

Unmarried

INSTRUMENT HANDLED

NMR (JEOL-400 MHz)

HPLC (Waters)

FT-IR (Perkin Elmer, Bruker ATR)

UV-Vis (Shimadzu)

HRMS (Waters)

SC-XRD (Bruker)

LANGUAGES KNOWN

English, Hindi, Punjabi (Mother tongue)

PLACE

Indian Institute of Technology Ropar

Chromatographic Techniques, Short-path Fractional Distillation, Crystallization Techniques, Protective Atmosphere (Schlenk tubes, Glovebox).

- Expertise in analysis of data related to ¹H, ¹³C, and ²D NMR, IR, UV-Vis, HPLC, Polarimeter, GCMS/HRMS, SCXD, etc.
- Expertise in Handling NMR instrument JEOL 400 MHz.
- Expertise in Microsoft Office, and various analytical software like Mnova, Delta, Origin, Chem draw, Mercury, etc.

SCIENTIFIC CONTRIBUTION

- *Vinylogous Aza-Michael Addition of Urea Derivatives with p-Quinone Methides Followed by Oxidative Dearomative Cyclization: Approach to Spiroimidazolidinone Derivatives.* **Navpreet Kaur, Priyanka Singh, and Prabal Banerjee***. *Advanced Synthesis and Catalysis*, 2021, 363, 2813-2824.
- *Accessing Complex Tetrahydrofurobenzo-Pyran/Furan Scaffolds via Lewis-Acid Catalyzed Bicyclization of Cyclopropane Carbaldehydes with Quinone Methides/Esters.* **Navpreet Kaur, Pankaj Kumar, Shiv Dutt, and Prabal Banerjee***. *The Journal of Organic Chemistry*, 2022, 87, 7905-7918.
- *Switchable Reactivity of Cyclopropane Diesters towards (3+3) and (3+2) Cycloadditions with Benzoquinone Esters.* **Navpreet Kaur, Pankaj Kumar, Arijit Hazra, and Prabal Banerjee***. *Organic Letters*, 2022, 24, 8249-8254.
- *Regioselective Brønsted Acid-Catalyzed Annulation of Cyclopropane Aldehydes with N'-Aryl Anthranil Hydrazides: Domino Construction of Tetrahydropyrrolo[1,2-a]quinazolin-5(1H)ones.* Priyanka Singh, **Navpreet Kaur**, and Prabal Banerjee*. *The Journal of Organic Chemistry*, 2020, 85, 3393-3406.
- *Cascade Intramolecular Rearrangement/ Cycloaddition of Nitrocyclopropane Carboxylate with Alkynes/Alkenes: Access to Uncommon Bi(hetero)cyclic Systems.* Rohit Kumar Varshnaya, Priyanka Singh, **Navpreet Kaur**, and Prabal Banerjee*. *Organic Chemistry Frontiers*, 2021, 8, 1267-1274.
- *α,β-Unsaturated Carbonyls for One-Pot Transition-Metal-Free Access to 3,6-Dihydro-2H-pyrans.* Pankaj Kumar, **Navpreet Kaur**, Rakesh Kumar, and Prabal Banerjee*. *The Journal of Organic Chemistry*, 2022, 87, 7167-7178.

CONFERENCES

- Selected for heterocyclic compounds conference organized by Gordon Research Conference, to be held on June 19-24, 2022 at Salve Regina University, Newport, Rhode Island, United States of America.
- Selected for BOSS XVII Belgium Organic Synthesis Symposium organized by LD organization, to be held on July 3rd- 8th, 2022 at Namur, Belgium.
- Poster presentation in Chemical Science symposium 2022: Sustainable synthesis and catalysis on November 10-11, 2022 at London, United Kingdom. (Virtual Mode)
- Poster presentation in Recent Advances in Bio-organic and Medicinal Chemistry on November 19, 2022 at NIPER Mohali, India
- Poster presentation in Frontiers in Chemical Science (FICS-2022) on December 2-4, 2022 at Indian Institute of Technology Guwahati, India.

LEADERSHIP/ TEACHING EXPERIENCES

- One semester teaching assistantship in chemistry experimental lab for undergraduate students (B. Tech.) at IIT Ropar.
- Trained several PhD students.
- Trained and guided several M.Sc. students.

REFERENCES

- **Dr. Prabal Banerjee** (Ph.D. Supervisor), Associate Professor, Department of Chemistry, Indian Institute of Technology Ropar, Punjab, India. Email: prabal@iitrpr.ac.in
- **Dr. Indranil Chatterjee** (Doctoral Committee Member), Assistant Professor, Department of Chemistry, Indian Institute of Technology Ropar, Punjab, India. E-mail: indranil.chatterjee@iitrpr.ac.in.
- **Dr. T.J. Dhilip Kumar** (Doctoral Committee member), Associate Professor, Department of Chemistry, Indian Institute of Technology Ropar, Punjab, India. Email: dhilip@iitrpr.ac.in.

DECLARATION

- I do hereby declare that all the statements furnished are true and correct to the best of my knowledge and belief.

Place: IIT Ropar

Navpreet Kaur