

Subir Maji

Supervisor- Prof. Swadhin Kumar Mandal

Research Interest- *Small molecule activation and catalysis using main-group compounds*

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A brief overview about myself:

I joined Prof. Mandal's lab in June 2018. I completed my BSc with honours in Chemistry from Midnapore College, Vidyasagar University, and my MSc from University of Hyderabad. I am working on the development of *N*-heterocyclic carbene-derived main-group compounds for catalysis. I have studied the reactivity and catalytic application of various electron-rich main-group species by using their p-electrons. I am expertise in carrying out the synthesis of highly air and moisture-sensitive compounds such as carbenes, carbene-based main group compounds, mesoionic olefins, mesoionic thiones, borenium ions, radical anions, free radicals, etc., using Schlenk line or glove box techniques. I have synthesised a number of air and moisture-sensitive reactive main group compounds starting from abnormal/mesoionic/normal *N*-heterocyclic carbenes and studied their reactivity.

List of publications:

1. **S. Maji**, A. Das, M. M. Bhatt, S. K. Mandal, *Nature Catalysis* **2024**, 7, 375-385.
2. **S. Maji**, B. Gope, M. Sharma, A. Das, A. Jose, A. Biawas, K. Bhattacharyya, S. K. Mandal, *Angew. Chem. Int. Ed.*, **2024**, e202418673.
3. **S. Maji**, A. Das, S. K. Mandal, *Chem. Sci.*, **2021**, 12, 12174–12180.
4. **S. Maji**, P. Sarkar, A. Das, S. K. Pati, and S. K. Mandal, *Inorg. Chem.* **2022**, 61, 36, 14282–14287.
5. **S. Maji**, M. Saha, S. K. Mandal, *Manuscript under submission*.
6. Sreejyothi P. N. Gautam, **S. Maji**, K. Bhattacharyya, S. K. Mandal. *J. Am. Chem. Soc.*, **2024**, 146, 16743-16752.
7. A. Das, P. Sarkar, **S. Maji**, S. K. Pati and S. K. Mandal, *Angew. Chem. Int. Ed.*, **2022**, 61, e202213614.