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Research and Academic Background:

- **Assistant Professor in Chemistry, University of North Bengal**
(Since September, 2018)
- **SERB-Post Doctoral Fellow, IISER Kolkata, India (2017-2018)**
Catalysis, C-H Functionalization
(Mentor: **Prof. Sayam Sen Gupta**)
- **Indian Institute of Technology, Bombay (2011-2017)**
Ph.D., Synthetic Chemistry (Catalysis), Bio-inspired Chemistry
(Supervisor: **Prof. Debabrata Maiti**)
- **Indian Institute of Technology, Kanpur (2009-11)**
Master of Science (M.Sc.), Chemistry
(Guide: **Prof. Sabyasachi Sarkar**)
- **University of Calcutta (2006-09)**
Bachelor of Science (B.Sc.), Chemistry
(College: **Ramakrishna Mission Vidyamandira, Belur, Howrah**)

Research Interest:

- Electro and Photocatalysis with Base Metals
- Bio-inspired Catalysis
- Reaction Methodology

Research Grant Received:

- Start-up Grant, SERB, India (SRG/2019/000310) (27 Lakh) (ongoing)
- Start-up Grant, UGC, India (2019, August) (10 Lakh) (ongoing)

Awards/Fellowships:

- 2017: National Post-Doctoral Fellowship, SERB-India
- 2015: SRF Qualified
- 2013: SRF Qualified
- 2011: CSIR-NET Qualified
- 2011: GATE Qualified
- 2010: Recipient of Merit-Cum Means Scholarship during M.Sc.
- 2009: Joint Admission test for M.Sc. (JAM) Qualified

Teaching Interest:

- Organometallics Chemistry
- Bioinorganic Chemistry
- Molecular Symmetry & Group Theory
- Solid State: X-ray Crystallography
- Electrochemistry

Publications (2011-2021)

1. Recent Advances in Directed sp^2 C-H Functionalization Towards Synthesis of N-Heterocycles and O-Heterocycles, *Chemical Communications*, **2021**, 57, 8699-8725. B. Desai, M. Patel, B. Z. Dholakiya, **S. Rana*** and T. Naveen*. (Impact factor: 6.223) (DOI: 10.1039/D1CC02176A) (ISSN:1364-548X) (**Corresponding Author**)
2. Effect of ligand backbone on the reactivity and mechanistic paradigm of non-heme iron(IV)-oxo during olefin epoxidation, *Angewandte Chemie International Edition*, **2021**, 60 (25), 14030-14039. J. P. Biswas, M. Ansari, A. Paik, S. Sasmal, S. Paul, **S. Rana***, G. Rajaraman* and D. Maiti* (Impact factor: 15.336) (DOI:10.1002/anie.202102484) (ISSN: 1521-3773) (**Corresponding Author**)

3. Organic synthesis with the most abundant transition metal- Iron: From rust to multitasking catalysts, *Chemical Society Review*, **2021**, *50*, 243-472 **S. Rana***, J. P. Biswas, S. Paul, A. Paik, D. Maiti*. (**Impact factor: 54.564**) (DOI: 10.1039/D0CS00688B) (ISSN:1460-4744) (**Corresponding Author**)

4. Fe-Catalyzed Aziridination Is Governed by the Electron Affinity of the Active Imido-Iron Species, G. Coin, R. Patra, **S. Rana**; J. P. Biswas, P. Dubourdeaux, M. Clémancey, S. P. de Visser, D. Maiti*, P. Maldivi*, and J-Marc Latour* *ACS Catalysis* **2020**, *10*, 17, 10010-10020. (**Impact factor: 13.084**) (DOI: 10.1021/acscatal.0c01427) (ISSN: 2155-5435)

Before Joining University of North Bengal...

5. Selective C–H Halogenation over Hydroxylation by Non-heme Iron(IV)-oxo, **S. Rana**, J. P. Biswas, A. Sen, A. Clémancey, M.; Blondin, G.; Latour, J.; G. Rajaraman,; and D. Maiti*, *Chemical Science*, **2018**, *9*, 7843-7858. DOI: 10.1039/C8SC02053A (**Impact factor: 9.825**) (DOI: 10.1039/C8SC02053A) (ISSN: 2041-6539)

6. Manganese-salen catalyzed oxidative benzylic chlorination. S. Sasmal, **S. Rana**, G. K. Lahiri, and D. Maiti, *Journal of Chemical Science*, **2018**, *130*, 88, 1-9. (**Impact factor: 1.406**) (DOI: 10.1007/s12039-018-1511-7) (ISSN: 0973-7103)

7. Palladium catalyzed deformylation reaction with detailed experimental and in-silico mechanistic studies. A. Modak, **Sujoy Rana**; A. Phukan, and D. Maiti. *European Journal of Organic Chemistry*, **2017**, 4168-4174. (**Impact factor: 3.021**). (DOI: 10.1002/ejoc.201700451). (ISSN: 1099-0690)

8. A Doubly Biomimetic Synthetic Transformation: Catalytic Decarbonylation and Halogenation at RT by Vanadium Pentoxide, **Sujoy Rana**, B. Pandey, A. Dey, R. Haque; G. Rajaraman, D. Maiti, *ChemCatChem*, **2016**, *8* (21) 3367–3374. (**Impact factor: 5.686**) (DOI: 10.1002/cctc.201600843) (ISSN: 1867-3899)

9. Mechanistic elucidation of C-H oxidation by electron rich non-heme iron(IV)–oxo at room temperature, **Sujoy Rana**, A. Dey, and D. Maiti, *Chemical Communications*, **2015**, *51*, 14469-14472. (**Impact factor: 6.223**) (DOI: 10.1039/c5cc04803f) (ISSN: 1359-7345)

10. Iron catalyzed regioselective direct arylation at C-3 position of N-alkyl-2-pyridone, A. Modak, **S. Rana**; D.Maiti, *Journal of Organic Chemistry*, **2015**, *80*, 296–303. (**Impact factor: 4.354**) (DOI: 10.1021/jo502362k) (ISSN: 1520-6904)

11. Synthesis of Bis-heteroaryl Ketones via Removal of Benzylic -CHR- and -CO- Groups, A. Maji, **S. Rana**, Akanksha and D. Maiti, *Angewandte Chemie International Edition*, **2014**, *53*, 2428-2432. (**Impact factor: 15.336**) (DOI: 10.1002/anie.201308785) (ISSN: 1521-3773)

12. Catalytic Electrophilic Halogenations and Halo-alkoxylations by Non-heme Iron-halides, **S. Rana**, S. Bag, T. Patra, D. Maiti. *Advanced Synthesis & Catalysis*, **2014**, *356*, 2453-2458. (**Impact factor: 5.851**) (DOI: 10.1002/adsc.201400316). (ISSN: 1615-4169)

13. Efficient and Stereoselective Nitration of Mono- and Disubstituted Olefins with AgNO₂ and TEMPO, S. Maity; S. Manna, **S. Rana**, N. Togati, A. Mallick, and D. Maiti. *Journal of American Chemical Society*, **2013**, *135*, 3355-3358. (**Impact factor: 15.419**) (DOI: 10.1021/ja311942e) (ISSN: 1520-5126)

14. Decarbonylative Halogenation by a Vanadium Complex: **S. Rana**, R. Haque, G. Santosh, and D. Maiti, *Inorganic Chemistry*, **2013**, 52, 2927-2932. (Impact factor: 5.165) (DOI: 10.1021/ic302611a) (ISSN: 1520-510X)
15. A general and efficient aldehyde decarbonylation reaction by using a palladium catalyst: A. Modak, A. Deb, T. Patra, **Sujoy Rana**, **S. Maity**, and D. Maiti, *Chemical Communications*, **2012**, 48, 4253-4255. (Impact factor: 6.226) (DOI: 10.1039/C2CC31144E) (ISSN: 1364-548X)
16. *ipso*-Nitration of Arylboronic Acids with Bismuth Nitrate and Perdisulfate, S. Manna, S. Maity, **S. Rana**, S. Agasti, and D. Maiti, *Organic Letters*, **2012**, 14, 1736-1739. (DOI: 10.1021/ol300325t) (Impact factor: 6.005) (ISSN: 1523-7052)

Book Chapter(s)

1. **S. Rana**, A. Modak, S. Maity, T. Patra, and D. Maiti : *Iron Catalysis in Synthetic Chemistry in Progress in Inorganic Chemistry*: ISBN: 9781118869994, (2014), Volume 59, DOI:10.1002/9781118869994.ch01 (Edited by **Prof. Kenneth D. Karlin**, John Wiley & Sons, Inc., Hoboken, New Jersey. Print ISBN: 9781118870167, Online ISBN: 9781118869994)
2. S. Paul, A. Paik, R. Das and **S. Rana** : *Pd-Pincer Complexes in C-H Activation* (Edited by **Prof. Debabrata Maiti, Wiley-VCH**) (In Press)
3. M. Deb and **S. Rana** : Site selective C-H functionalizations using Pd-catalysis and Photochemistry (Edited by **Prof. Debabrata Maiti, Wiley-VCH**) (In Press)
4. R. Das, A. Paik, S. Paul and **S. Rana** : *Ru-Catalyzed Direct C-H Amidation of Arenes* (Edited by **Prof. Debabrata Maiti, Wiley-VCH**) (In Press)

Details of Patent

Title: PROCESS FOR SYNTHESIZING A NITRO OLEFIN

Inventors: Soham Maity, Srimanta Manna, **Sujoy Rana** and Prof. Debabrata Maiti,

Patent No. 289568

Award Date: 14/11/2017

Agency/Country: DE PENNING & DE PENNING, INDIA