

Satyaki Chatterjee

Personal information

Contact sac9@hi.is; +354 792 2760
Nationality Indian
Language English, Hindi and Bengali

Qualification

09/2026 **University of Iceland, Iceland**
PhD in organic chemistry
Thesis: Nitroxide- and trityl-based polarizing agents for MAS-DNP: Synthesis, mechanistic insights, and applications

05/2019 **University of Delhi, India**
MS in organic chemistry
Thesis: Synthesis of heterocycles in metal-free conditions

06/2017 **Scottish Church College, University of Calcutta, India**
BS in chemistry (Hons.)

Professional experiences

01/2021-current **University of Iceland, Science Institute, Reykjavik, Iceland**
Post doctoral associate (Prof. Snorri Th. Sigurdsson)

- Synthesized fluorinated organic radicals
- Synthesizing highly persistent carbon radicals

PhD Scholar (Prof. Snorri Th. Sigurdsson)

- Developed new persistent organic radicals and biradicals
- Synthesized isotope labelled organic molecules
- Solid-phase synthesis of nucleic acids and modification post-synthetically
- Multistep and multi-gram scale synthesis: AsymPol-POK (2.5 g) and AsymPol-TEK (1.5 g) for CortecNet, France
- Optimized and refined methodologies to improve scalability
- Analytical techniques: DNP-NMR, EPR, CV, HPLC and LC-MS
- Collaborated with faculty on grant proposals
- Maintained laboratory equipment and ensuring operational efficiency
- Led interdisciplinary collaboration team meetings on research
- Mentored junior PhD, master's and undergraduate students in research techniques, promoting skill development and engagement in projects

6/2018-12/2020 **University of Delhi, Department of Chemistry, Delhi, India**
Project Assistant (Prof. Akhilesh K. Verma)

- Developed metal free C-H activation method
- Synthesized oxygen and nitrogen based heterocyclic compounds
- Analytical techniques: NMR, IR and UV-vis spectroscopy
- Software learnt: ChemDraw, SciFinder search and Avogadro
- Mentored undergraduate students

Publications (from PhD)

1. **Chatterjee S**, Reynard-Feytis Q, Gunaga SS, Dubroca T, van Tol J, Damodaran KK, Paul S, Hediger S, Mentink-Vigier F, De Paëpe G, Sigurdsson ST. Facile synthesis of AsymPol derivatives for high-field MAS-DNP: The role of spin dynamics and matrix effects. *In preparation*.
2. Morais T, **Chatterjee S**, Lourenço MAO, Sardo M, Montesinos IM, Sigurdsson ST, Mafra L. Step-by-step real-time EPR-monitored protocol for the synthesizing nitroxide-functionalized periodic mesoporous organosilica. *Chem. Mat.* 2026, Accepted. DOI: 10.1021/acs.chemmater.6c00530.
3. Dasgupta R, Steinmetzger C, Wilson A T, **Chatterjee S**, Reginsson GW, Sigurdsson ST, Petzold K. Targeted NMR Signal Enhancement of RNA by Site-Directed Bis-Nitroxide Labelling. *Proc. Natl. Acad. Sci. U.S.A.* 2026, 123, e2531087123.

4. Wei R, Casano G, Zhang Y, Gierbolini-Colón IM, Rao Y, Gunaga SS, Scott FJ, Zhou J, **Chatterjee S**, Kumari S, Karoui H, Huang M, Sigurdsson ST, Paëpe GD, Liu Y, Mentink-Vigier F, Venkatesh A, Ouari O, Emsley L. Systematic Evaluation of Polarizing Agents for Dynamic Nuclear Polarization Enhanced NMR. *Angew. Chemie. Int. Ed.* 2025, 137, e202505944.
5. **Chatterjee S**, Scott F J, Sigurdsson ST, Venkatesh A, Mentink-Vigier F. Indirect Detection of the Protons In and Around Biradicals and their Mechanistic Role in MAS-DNP. *J. Phys. Chem. Lett.* 2025, 16, 635-641.
6. **Chatterjee S**, Venkatesh A, Sigurdsson ST, Mentink-Vigier F. Role of Protons In and Around Strongly Coupled Nitroxide Biradicals for Cross-Effect Dynamic Nuclear Polarization. *J. Phys. Chem. Lett.* 2024, 15, 2160-2168.
7. Harrabi R, Halbritter T, Shadi A, **Chatterjee S**, Wolska-Pietkiewicz M, Damodaran KK, Lee D, Paul S, Hediger S, van Tol J, Sigurdsson ST, Mentink-Vigier F, De Paëpe G. AsymPol-TEKs as Efficient Polarizing Agents for MAS-DNP in Glass Matrices of Non-Aqueous Solvents. *Phys. Chem. Chem. Phys.* 2024, 26, 5669-82.

Click here for complete [publication](#) list

Conferences and research presentations

04/2025	Invited lecture at National High Field Magnetic Laboratory (MagLab), US Title: <i>The role of protons in and around nitroxide biradicals for MAS-DNP.</i>
04/2025	Oral Presentation at Joint ENC - ISMAR Conference, US Title: <i>The role of protons in and around nitroxide biradicals for MAS-DNP.</i>
09/2024	Oral Presentation at 10 th National Chemical Society Conference, IS Title: <i>Dynamic Nuclear Polarization: The Next Frontier in NMR.</i>
07/2024	Flash presentation at 20 th European Magnetic Resonance Congress (EUROMAR), ES Title: <i>Unravelling hyperpolarization pathways in strongly coupled bisnitroxides: Implications for MAS DNP NMR.</i>
07/2023	Poster Presentation at 22 nd European Symposium on Organic Chemistry (ESOC), BE Title: <i>Novel hydrophilic AsymPol derivatives for dynamic nuclear polarization-enhanced NMR spectroscopy.</i>
06/2023	Organized ISMSC 2023, on behalf of University of Iceland, IS
08/2022	Poster Presentation at 9 th National Chemical Society Conference, IS Title: <i>Biradicals for selective detection of the binding site in PIIA by high-resolution DNP-enhanced NMR spectroscopy.</i>
10/2019	Organized XV J-NOST, on behalf of University of Delhi, IN
01/2019	Organized 6th World Conference on Nano-medical Science for Chemical Biology Interfaces: Synergistic in New Frontiers, on behalf of University of Delhi, IN

Fellowships/Scholarships

2022	University of Iceland Doctoral Fund Grant, for 3 years.
2023	University of Iceland Travel Grants for Doctoral Students, three consecutive years.
2025	University of Iceland Teaching Assistantship Fund, for 1 year.
2025	Norell student stipend to attend ENC 2025.

Personal interests

- Numismatics, driving, swimming & wildlife photography