Raktim Abha Saikia, Ph.D.

Donat Street 67-103, Cluj-Napoca, Romania
raktim.saikia@itim-cj.ro
+40 264 58 40 37, 129

Current profile

Synthetic Organic Chemist with over 5-6 years practical experience. Awarded Doctor of Philosophy (Ph.D.) from Department of Chemical Sciences, Tezpur University, India on 24th March 2023. Involved research areas focused on synthetic methodology and catalysis. PhD works dedicated on application of diaryliodonium salts (aryl-transferring reagent) to discover arylation methods for heterocyclic scaffolds. Has a track record of publications in peer-reviewed journals. Able to effectively work with a team and proactively communicate findings and ideas to drive project improvements.

Key Expertise

- ✓ Organic Synthesis
- ✓ Hypervalent Iodine Chemistry
- ✓ Total synthesis
- ✓ Designing of reaction methodology
- ✓ Synthesis of organic materials
- ✓ Catalysis
- ✓ Experimental analysis (NMR, HRMS, FTIR etc.)
- ✓ Multi-step synthesis
- ✓ Manuscript writing
- ✓ ChemDraw, PowerPoint, etc.
- ✓ Teamwork & Collaboration

Education

Doctor of Philosophy, Organic Chemistry

- **Indian Institute of Technology, Bombay** — July 2016- Sep 2017
  Research Supervisor: Prof. Krishna P. Kaliappan
  Research area: Total Synthesis
  CSIR-JRF Institute transfer to Tezpur University
- **Tezpur University, Assam** — Jan 2018-March 2023
  Research advisor: Prof. Ashim Jyoti Thakur
  Research topic: "*Exploration of Diaryliodonium Salts for N- and S-Arylations of Biologically Significant Heterocyclic Scaffolds*"

Master of Science, Chemistry

- Master of Science, Chemistry — Aug 2014-June 2016
  CGPA: 9.23 out of 10
  Research advisor: Dr. Sanjay Pratihar
  Research topic: "*Ruthenium-catalyzed oxidative transformation of alcohol to aldehyde and acetal*"

Bachelor of Science, Chemistry

- **B. Borooah College, Guwahati, Assam** — Aug 2011-July 2014
  CGPA: 8.1 out of 10
  Research advisor: Dr. Diganta Choudhury
  Research topic: "*Study of formation of different Thiohydantoin using Amino acids and Thiourea*"

Higher Secondary (12th Standard)

- **B. Borooah College, Guwahati, Assam** 2009-2011
  Percentage: 76.8% ((subject including Chemistry, Physics, Mathematics, Biology, Assamese, and English)
  Remark: First Class

Matriculation (10th Standard)

- **Swarna Vidyapith High School, Kamrup (M), Assam** 2009
  Percentage: 80.83% (subjects include Mathematics, Science, Social Science, Assamese, Hindi, and English)
  Remark: First Class

Publications

- **Saikia, R. A**.; Talukdar, K.; Pathak, D.; Sarma, B.; Thakur, A. J. Utilization of Aryl(TMP)iodonium Salts for Copper-catalyzed *N*-Arylation of Isatoic Anhydrides: An Avenue to fenamic acid derivatives and *N,N'*-diarylindazol-3-ones. *J. Org. Chem.* **2023**, 88, 3567-3581. (https://doi.org/10.1021/acs.joc.2c02762)
- **Saikia, R. A.**; Dutta, A.; Sarma, B.; Thakur, A. J. Metal-Free Regioselective N^2-Arylation of 1*H*-Tetrazoles with Diaryliodonium Salts. *J. Org. Chem.* **2022**, *87* (15), 9782–9796. (https://doi.org/10.1021/acs.joc.2c00848)
- **Saikia, R. A.**; Hazarika, N.; Biswakarma, N.; Deka, R. C.; Thakur, A. J. Metal-Free *S*-Arylation of 5-Mercaptotetrazoles and 2-Mercaptopyridine with Unsymmetrical Diaryliodonium Salts. *Org. Biomol. Chem.* **2022**, *20* (19), 3890–3896. (https://doi.org/10.1039/D2OB00406B)
- **Saikia, R. A.**; Barman, D.; Dutta, A.; Thakur, A. J. N^1- and N^3-Arylations of Hydantoins Employing Diaryliodonium Salts *via* Copper(I) Catalysis at Room Temperature. *Eur. J. Org. Chem.* **2020**, *2021* (3), 400–410. (https://doi.org/10.1002/ejoc.202001353)
- Dutta, A.; **Saikia, R. A.**; Thakur, A. J. A Mechanistic Approach to Liquid-Assisted Mechanochemical Synthesis of 5-Aryl/Spiro-[1,2,4]-Triazolidine-3-Thiones. *Eur. J. Org. Chem.* **2022**, *2022* (34). (https://doi.org/10.1002/ejoc.202101472)
- Borah, M. J.; Devi, A.; **Saikia, R. A.**; Deka, D. Biodiesel Production from Waste Cooking Oil Catalyzed by *in-situ* Decorated TiO_2 on Reduced Graphene Oxide Nanocomposite. *Energy* **2018**, *158*, 881–889. (https://doi.org/10.1016/j.energy.2018.06.079)

Presentations

- **International Conference on Emerging Trends in Chemical Sciences** (**ETCS 2020**), Organized by Department of Chemistry, Gauhati University, Guwahati, 13th-15th February 2020. **Participation: Poster**.
- **First virtual J-NOST (National Organic Symposium Trust) symposium**; **XVI-J-NOST**, Organized by Indian Institute of Science, Bangalore, 31st October-1st November 2020. **Participation: Poster**.
- **National Seminar on Science for Sustainable Development (SSD-2020)**, Organized by Department of Chemistry, B. Borooah College, Guwahati, 25th-26th September 2020**. Participation: Oral**.
- **International Conference (Virtual) on The Present and Future of Excellence in Organic Synthesis (PFEOS-2021)**, Organized by Department of Chemical Sciences, Tezpur University, Tezpur, 7th-8th January 2021. **Participation: Oral**.

Academic Achievements and Awards

- Research & Innovation Grant, Department of Chemical Sciences, Tezpur University, **2019** & **2021**.
- Eligible for **CSIR-NET** (Council of Industrial And Scientific Research-National Eligibility Test) fellowship with **All India Rank-38** in **2016**.
- Qualified **GATE** (Graduate Aptitude Test in Engineering) with **All India Rank-42** in **2016**.
- Qualified **SLET** (State Level Eligibility Test) examination in 2016.
- Qualified **IIT-JAM** (Indian Institutes of Technology- Joint Admission Test for M.Sc. selection) with **All India Rank-1002**.