Personal Profile

Dr. Lakhinath Saikia
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Educational Profile

Ph.D.	Tezpur University, Tezpur, Assam; 2016
	Supervisor: Prof. Ashim J. Thakur
M.Sc.	Dibrugarh University, Dibrugarh, Assam; 2006
	Subject: Chemistry
	Specialization: Organic Chemistry
B.Sc.	Dibrugarh University, Dibrugarh, Assam; 2004
	Subject: Chemistry

Professional Experience

Assistant Professor, Department of Chemistry, Rajiv Gandhi University, Arunachal Pradesh, India	June, 2012-till date
Guest Assistant Professor, Department of Chemistry, Rajiv Gandhi University, Arunachal Pradesh, India	August, 2011-June, 2012

Awards & Honours

1. Science Academies Focus Area Science and Technology Summer Research Fellowship by IASc-NASI-INSA, India in 2017
2. Science Academies Summer Research Fellowship by IASc-NASI-INSA, India in 2016
3. Qualified CSIR-UGC-NET for CSIR-JRF in June, 2011
4. Qualified CSIR-UGC-NET for LS in December, 2010
5. Qualified GATE in 2006.

Research Interests

- Heterocyclic chemistry
- Sustainable chemistry

- Catalysis in organic synthesis
- Cascade reactions
- C-H activation reactions

Research Publications

1. Base promoted $CuFe_2O_4$ catalyzed one pot synthesis of 3, 5-diaryl-1*H*-pyrazoles: Bhuyan, P.; Saikia, L. *J. Heterocycl. Chem.* **2021**, (just accepted).

2. Pd-NPs@MMT-K10 catalysis of Suzuki-Miyaura cross-coupling reaction: *In situ* generation and *ex situ* use: Bhuyan, P.; Bhuyan, A. J.; Gogoi, P. J.; Mahanta, A.; Tamuly, C.; Saikia, L. *Catal. Lettt.* **2021**, (just accepted).

3. Magnetically recoverable copper ferrite catalyzed cascade synthesis of 1,3-dimethyl-6-nitro-5-arylpyrido[2,3-*d*]pyrimidine-2,4(1*H*,3*H*)-diones under microwave irradiation and solvent-less condition: Bhuyan, A. J.; Bhuyan, P.; Boruah, B.; Saikia, L. *Appl. Organomet. Chem.* **2021**, *35 (2)*:e6091.

4. Microwave assisted, $BF_3{\cdot}OEt_2$ catalyzed efficient synthesis of tosylhydrazones and SC-XRD study of two of the synthesized tosylhydrazones: Bhuyan, P.; Bhuyan, A. J.; Dutta, B. J. ; Bharali, S. J.; Saikia, L. *Indian J. Chem. B* **2020**, *59B*, 1579-1585.

5. $Fe(OTf)_3$: An efficient catalyst for Michael addition reactions of homoaromatic C-H nucleophiles with nitrostyrenes under microwave irradiation in solvent-free condition: Bhuyan, P.; Bhuyan, Amar J.; Nyodu, M.; Chelleng, N.; Saikia, L. *ChemistrySelect* **2019**, *4*, 1596-1600.

6. Magnetically recoverable copper ferrite catalyzed cascade synthesis of 4-Aryl-1*H*-1,2,3-triazoles under microwave irradiation: Bhuyan, P.; Bhorali, P.; Islam, I.; Bhuyan, A. J.; Saikia, L. *Tetrahedron Lett.* **2018**, *59*, 1587-1591.

7. Microwave-assisted rapid synthesis of pyrido[2, 3-*d*:6,5-*d*]dipyrimidine-2,4,6,8-tetraones over sulfonic acid functionalized imidazolium salts under solvent-free condition: **Saikia, L.**; Namsa, N. D.; Thakur, A. J. *ChemistrySelect*, **2017**, *2*, 7553-7557.

8. A one pot, two-step synthesis of 5-arylpyrrolo[2,3-*d*]pyrimidines and screening of their preliminary antibacterial properties: **Saikia, L.**; Roudragouda, P.; Thakur, A. J. *Bioorg. Med. Chem. Lett.* **2016**, 26, 992 -998.

9. A convenient synthesis of novel 5-aryl-pyrido[2,3-*d*]pyrimidines and screening of their preliminary antibacterial properties: **Saikia, L.**; Das, B.; Bharali, P.; Thakur, A. J. *Tetrahedron Lett.* **2014**, *55*, 1796-1801.

10. KI-$VO(acac)_2$-H_2O_2-AcOH, A new iodinating system for selective iodination at C-5 position of activated pyrimidinediones: A combined experimental and density functional study: **Saikia, L.**; Talukdar, D.; Deka, R. C.; Thakur, A. J. *J. Heterocycl. Chem.* **2013**, *50*, 1031-1038.

11. Environment-friendly and solvent-free synthesis of symmetrical bis-imines under microwave irradiation: Das, S.; Das, V. K.; **Saikia, L.**; Thakur, A. J. *Green Chem. Lett. Rev.* **2012**, *5(3)*, 457-474.

12. Zirconyl Chloride: An efficient, water-tolerant, and reusable catalyst for the synthesis of N-Methylamides: Talukdar, D.; **Saikia, L.**; Thakur, A. J. *Synlett.* **2011**, *11*, 1597-1601.

13. Deprotection chemistry mediated by $ZrOCl_2 \cdot 8H_2O$: An efficient and mild green method for the conversion of oximes to carbonyl compounds in aqueous acetone: **Saikia, L.**; Das, S.; Thakur, A. J. *Synth. Commun.* **2011**, *41*, 1071-1076.

14. Sodium triacetoxyborohydride: **Saikia, L.** *Synlett.* **2010**, *11*, 1729-1730.

15. 6,6'-Diamino-1,1',3,3'-tetramethyl-5,5'-(4-chlorobenzylidene)bis[pyrimidine-2,4(1*H*,3*H*)-dione]: Das, S.; Saikia, B. K.; Das, B.; **Saikia, L.**; Thakur, A. J. *Acta Cryst.* **2009**, *E65*, o2416-o2417.

Book/Book Chapter published

1. Bhuyan, P.; Bhuyan, A. J. & Saikia, L.: Sonochemical protocol for condensation reactions, in *Green sustainable process for chemical and environmental engineering and science: Sonochemical organic synthesis,* Eds.: Inamuddin; Boddula, R. & Asiri, A. M., Elsevier; UK, 2020, pp: 177-199.
2. Saikia, L.: Pyrimidines: a universal topic of research in organic and medicinal chemistry, in *Recent advances in biological and chemical sciences, Perspectives to north east India*, Eds: Roy, S. & Boruah, B., Global Publishing House; India, 2014, pp: 163-172.

Research guidance

Ph.D scholar

1. Mr. Prakash Bhuyan

   Topic of research: Organic synthesis

   Year of PhD degree: Ongoing

2. Ms. Rei Star

   Topic of research: Development of heterogeneous catalytic systems and their applications in cascade organic synthesis

   Year of PhD degree: Ongoing

3. Mr. Amar Jyoti Bhuyan

   Topic of research: Development of transition metal catalyzed C-H activation methodologies for the synthesis of fused pyrimidines

   Year of PhD degree: Ongoing

4. Ms. Pubanita Bhuyan

   Topic of research: Studies on transition metals catalyzed cascade synthesis of N-heterocycles

   Year of PhD degree: Ongoing

Course/Conference/Workshop organized

1. The Salters' Chemistry Camp by Department of Chemistry, Rajiv Gandhi University, Arunachal Pradesh, India

   Duration: 29th January - 31st January, 2019

   Role: Coordinator

Course/Conference/Workshop etc. attended

1. Delivered an oral presentation in 'FAST 2.0', 2nd International Conference on Future Aspects of Sustainable Technologies organized by Department of Chemistry, Central Institute of Technology Kokrajhar, Assam during 20-21 October 2020.

   Title of the presentation: Magnetically active $CuFe_2O_4$ as heterogeneous catalyst for the synthesis of pyrido[2,3-*d*]pyrmimidnes, 1,23-triazoles and 3,5-diaryl-1*H*-pyrazoles

2. Delivered an invited talk in "Organix-18", an International Conference in Chemistry held at Department of Chemical Sciences, Tezpur University, Assam during 20-21st December, 2018.

   Title of the invited talk: $Fe(OTf)_3$: An efficient catalyst for Michael addition reaction of homoaromatic C-H nucleophiles with nitrostyrenes

3. Delivered a talk in the International Conference "Emerging Trends in Chemical Sciences" held at Dibrugarh University, Assam during 26-28 February, **2018**.

   Title of the talk: Magnetically separable $CuFe_2O_4$ catalysed cascade synthesis of *N*-heterocycles under microwave irradiation

4. Delivered a talk in the Entrepreneurship Development Programme (EDP) on "Rapid Water Cleaning using Bio-Resources & other low cost material in Arunachal Pradesh" held at Rajiv Gandhi University, Arunachal Pradesh during 23rd October-23rd November, **2017**.

   Title of the talk: UV-Vis spectroscopy: An introduction

5. Presented a poster in 20th CRSI National Symposium in Chemistry held at Gauhati University, Assam during 3-5 February **2017.**

   Title of the poster: A one pot, two step synthesis of 5-arylpyrrolo[2,3-*d*]pyrimidines from aminopyrimidine and nitrostyrenes in alkaline medium

6. Delivered *Young Scientist Lecture* in National Symposium on Natural Products: Prospects & Perspectives held at CSIR-North East Institute of Science and Technology, Jorhat, Assam during 21-22 March, 2016.
   Title of the Lecture: A convenient way to 5-aryl-pyrido[2,3-*d*]pyrimidines and screening of their preliminary antibacterial properties

Sponsored Project

Title of the project	Funding agency	Year of sanction	Role
Development of Cu-catalyzed cascade synthesis of *N*-heterocycles	DST-SERB	2016	PI
Pd-catalyzed C-H activation in the synthesis of fused pyrimidine derivatives	CSIR	2016	PI