

Curriculum Vitae

DR. NILUFA KHATUN

HOD, Department of Chemistry, Harimohan Ghose College,
J/206, Paharpur Rd, Garden Reach, Kolkata,
West Bengal 700024

Ph.D from IIT Guwahati, Department of Chemistry

Email: nilufa.iitg@gmail.com; nilufachem.hmgc@gmail.com



Articles link:

https://scholar.google.co.in/citations?user=5oI_rnAAAAAJ&hl=en

Awards and Certifications

- ❖ X standard Exam : **55 RANK under W.B.B.S.E.**
 - ❖ Bachelor of Science : **First class** from Midnapore College, V. U.
 - ❖ All India JAM Rank : **154 for M.Sc admission in Indian Institute of Technology**
 - ❖ GATE : **Qualified (AIR 149).**
 - ❖ NET : **CSIR (JRF) (AIR 114), UGC (JRF-2 times)**
 - ❖ Awarded **National Scholarship by West Bengal Govt., India** for both **X and XII level.**
 - ❖ Awarded **Indian Women Association Bon (IWAB) scholarship** among all girl candidates **by IIT Guwahati.**
 - ❖ Awarded **Ph.D** degree. Thesis entitled as “**Transition Metal-Catalyzed Synthesis of Anhydrides, Ketones, Esters and 2H-Benzotriazoles via C–H Bond Functionalization**” under the guidance of **Prof. Bhisma K. Patel** at **IIT Guwahati, Assam, India** with **course work C.P.I 10/10.**
-

Experience

- **Assistant professor (HOD) in Department of Chemistry, Harimohan Ghose College University under Calcutta University: Teaching (Chemistry undergraduate students).**
- **Post-doctoral Researcher in Department of Chemistry, University of Ulsan under Prof. Sang Kook Woo: Worked on visible light mediated organic synthesis.**

- **Post-doctoral Researcher in Department of Chemistry, Kyung Hee University under Prof. Jeewoo Lim: Worked on polymer based contact lens for practical applications.**

Research Interest

- **Metal catalyzed sp^2 and sp^3 C–H bond activation.**
- **Synthesis of bioactive heterocycles and natural products.**
- **Organometallic chemistry (metal catalyzed C–C and C–Heteroatom bond formations).**
- **Visible light mediated organic synthesis.**

List of Publications

1. Tandem regioselective synthesis of tetrazoles and related heterocycles using Iodine. Yella, R.; **Khatun, N.**; Rout, S. K.; Patel, B. K. *Org. Biomol. Chem.* **2011**, *9*, 3235.
2. The oxidative cleavage of an *anti*-Hugerschoff product: a mild environmentally benign one pot synthesis of ureas from isothiocyanates. Jamir, L.; **Khatun, N.**; Patel, B. K. *RSC Adv.* **2011**, *1*, 447.
3. A one pot synthesis of [1,3,4]-oxadiazoles mediated by molecular iodine. Guin, S.; Rout, S. K.; Ghosh, T.; **Khatun, N.**; Patel, B. K. *RSC Adv.* **2012**, *2*, 3180.
4. Tandem synthesis of [1,2,4]-triazoles mediated by iodine a regioselective approach. Guin, S.; Rout, S. K.; **Khatun, N.**; Ghosh, T.; Patel, B. K. *Tetrahedron* **2012**, *68*, 5066.
5. A one-pot strategy for the synthesis of 2-aminobenzothiazole in water by copper catalysis. **Khatun, N.**; Jamir, L.; Patel, B. K. *RSC Adv.* **2012**, *2*, 11557.
6. Cu(II) catalysed chemoselective oxidative transformation of thiourea to thioamidoguanidine/2-aminobenzothiazole. Sahoo, S. K.; **Khatun, N.**; Patel, B. K. *RSC Adv.* **2013**, *3*, 438.
7. Stable Cu(I) Complexes with Thioamidoguanidine Possessing Halide-Bridge Structure. Sahoo, S. K.; **Khatun, N.**; Jena, H. S.; Patel, B. K.

- Inorg. Chem.* **2012**, *51*, 10800.
8. CuO nanoparticles catalysed synthesis of 2*H*-indazoles under a ligand free condition.
Khatun, N.; Gogoi, A.; Basu, P.; Das, P.; Patel, B. K.
RSC Adv. **2014**, *4*, 4080.
 9. Divergent reactivities of *o*-halo anilides with CuO nanoparticle in water: A green synthesis of benzoxazoles and *o*-hydroxy anilides.
Khatun, N.; Guin, S.; Rout, S. K.; Patel, B. K.
RSC Adv. **2014**, *4*, 10770.
 10. Chemoselective *O*-Aroylation of Phenols and Enols Using Alkylbenzenes as Acyl Surrogate via Cu Catalyzed Cross Dehydrogenative Approach.
Rout, S. K.; Guin, S.; Banerjee, A.; **Khatun, N.**; Gogoi, A.; Patel, B. K.
Org. Lett. **2013**, *15*, 4106.
 11. Nano CuO catalyzed Cross Dehydrogenative Coupling (CDC) of aldehydes to Anhydrides.
Khatun, N.; Santra, S. K.; Banerjee, A.; Patel, B. K.
Eur. J. Org. Chem. **2015**, 1309.
 12. Ceric Ammonium Nitrate (CAN) an Efficient Oxidant for Pd(II)-Catalyzed Substrate Directed *o*-Benzylation and *o*-aroylation.
Santra, S. K.; Banerjee, A.; **Khatun, N.**; Patel, B. K.
Eur. J. Org. Chem. **2015**, 350.
 13. Palladium catalyzed *ortho*-halogenation of 2-arylbenzothiazole and 2,3-diarylquinoxaline.
Santra, S. K.; Banerjee, A.; **Khatun, N.**; Samanta, A.; Patel, B. K.
RSC Adv. **2015**, *5*, 11960.
 14. Pd(II)-catalysed *o*-aroylation of directing arenes using terminal aryl alkenes and alkynes.
Khatun, N.; Banerjee, A.; Santra, S. K.; Behera, A.; Patel, B. K.
RSC Adv. **2014**, *4*, 54532.
 15. Benzylic ethers as arylcarboxy surrogates in substrate directed *ortho* C–H functionalisation catalysed by copper.
Khatun, N.; Banerjee, A.; Santra, S. K.; Ali, W.; Patel, B. K.
RSC Adv. **2015**, *5*, 36461.
 16. Benzyl bromides as aroyl surrogates in substrate directed Pd catalysed *o*-aroylation.
Behera, A.; Ali, W.; Guin, S.; **Khatun, N.**; Mohanta, P. R.; Patel, B. K.
RSC Adv. **2015**, *5*, 33334.
 17. Copper(I)-promoted cycloalkylation–peroxidation of unactivated alkenes *via* sp³ C–H functionalisation.
Banerjee, A.; Santra, S. K.; Mishra, A.; **Khatun, N.**; Patel, B. K.
Org. Biomol. Chem. **2015**, *13*, 1307.

18. Generation of bis-Acyl Ketals from Esters and Benzyl Amines Under Oxidative Conditions.
Ganesh, M.; Rajamanickam, S.; **Khatun, N.**; Santra, S. K.; Patel, B. K.
J. Org. Chem. **2015**, 80, 3440.
 19. Palladium-Catalyzed Synthesis of 2-Aryl-2H-Benzotriazoles from Azoarenes and TMSN₃.
Khatun, N.; Modi, A.; Ali, W.; Patel, B. K.
J. Org. Chem. **2015**, 80, 9662.
 20. Copper Catalysed Cascade Synthesis of Imidazolidine-benzothiazole and Imidazolidine-tetrazole Hybrid Heterocycles from bis-Thioureas via Desulfurisation Strategy.
Majji, G.; Sahoo, S. K.; **Khatun, N.**; Patel, B. K.
Eur. J. Org. Chem. 2015, 7534.
 21. CuO Nanoparticle Catalyzed Synthesis of 2,3-Disubstituted Quinazolinones via Sequential N-Arylation and Oxidative C–H Amidation.
Modi, A.; Ali, W.; Mohanta, P. R.; **Khatun, N.**; Patel, B. K.
ACS Sustainable Chem. Eng. **2015**, 3, 2528.
 22. Oxidant controlled regioselective mono- and di-functionalizations of coumarins.
Banerjee, A.; Santra, S. K.; **Khatun, N.**; Ali, W.; Patel, B. K.
Chem. Commun. **2015**, 51, 15422.
 23. PdII/CuBr₂ catalysed keto α -Csp³-H benzylation of N,N-dialkylamides directed by o-hydroxy group
Santra, S. K.; Banerjee, A.; Rajamanickam, S.; **Khatun, N.**; Patel, B. K.
Chem. Commun. **2016**, 52, 4501.
 24. Visible-light photoredox-catalyzed hydroalkoxymethylation of activated alkenes using α -silyl ethers as alkoxyethyl radical equivalents
Khatun, N.; Kim, M. J.; Woo, S. K.
Org. Lett. **2018**, 20, 6239.
 25. Controllable one-pot synthesis for scaffold diversity via visible-light photoredox-catalyzed Giese reaction and further transformation
Nam, S. B.; **Khatun, N.**; Kang, Y. W.; Park, B. Y.; Woo, S. K.
Chem. Commun. **2020**, 56, 2873.
 26. 2D paddle wheel lanthanide metal-organic framework: Synthesis, structure and exploration of catalytic N-arylation reaction
Ghosh, P.; Maity, T.; **Khatun, N.**; Debnath, R.; Koner, S.
Polyhedron. **2022**, 219, 115789.
 27. Book Chapter: Elsevier publication; Chapter 16
Khatun, N. *; Molla, A. Biomass-derived carbon materials as adsorbent materials, (Book chapter, as a corresponding author, awaited publication).
-
-

Seminars and Workshops (Selected)

1. Participated in a three days conference entitled **Frontiers in Chemical Sciences (FICS)**.
3rd-4th December 2010, held at Indian Institute of Technology Guwahati, Assam, India.
2. Presented **poster** in two days International Conference on **Recent Trends of Research in Chemistry (RTRC)**.
31st October-1st November 2011, held at Midnapore College, West Bengal, India.
3. Presented **poster** in two days national Conference on Frontiers in Chemical Sciences (**FICS**).
2nd-3rd December 2012, held at Indian Institute of Technology Guwahati, Assam, India.
4. Presented **poster** in 8th J-NOST (**Junior National Organic Symposium Trust**) Conference.
15-17th November, 2012, held at Indian Institute of Technology Guwahati, Assam, India.
5. Participated in **Oral presentation** in International Conference on **Harnessing Natural Resources for Sustainable Development: Global Trends**.
29th-31st January, 2014, held at Cotton College Guwahati, Assam, India.
6. Presented **poster** in 16th **CRSI-National Symposium in Chemistry (NSC-16)**.
7-9th February, 2014, held at Indian Institute of Technology Bombay, Maharashtra, India.
7. Participated in **Oral presentation** in Conference on **Frontiers in Chemical Sciences (FICS)**.
5th-7th December 2014, held at Indian Institute of Technology Guwahati, Assam, India.
8. Presented **poster** in three days International Conference on **Recent Advances in Chemistry (REACH)**.
3rd-5th March 2015, held at North East Hill University, Shilong, Meghalaya, India.
9. Presented **poster** in the Conference on **121st General Meeting of the Korean Chemical Society (KCS)**.
18th-20th April 2018, held at ICC Jeju, South Korea.

Selected as one of the best poster entitled as “*Visible light mediated photoredox catalyzed alkoxymethylation of alkene derivatives using α -silyl ether*”.
