

Dr. Charu Garkoti

Designation: Assistant Professor, Department of Chemistry

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Academic Details

- **Ph. D, Department of Chemistry, University of Delhi, New Delhi , India** with thesis title “Design and Development of Ionic Liquid Based Heterogeneous Catalysts for Organic Transformations”.
- **M.Sc., Chemistry, Kumaun University, Nainital , Uttarakhand, India First Division.**
- **B.Sc., Physics , Chemistry, Mathematics , Kumaun University, Nainital , Uttarakhand, India First Division.**

Achievements and Award

- **Qualified GATE -2019** (97 percentile) in **Chemical Sciences** Organized by IIT Madras
- **Qualified CSIR-UGC-NET (Rank-14)** in **Chemical Sciences** Conducted by CSIR-New Delhi, 2014
- **Best Poster Presentation Pward** in “Magnetic Nano-Fibrous Silica Supported Ionic Liquid ($\text{Fe}_3\text{O}_4@SiO_2@KCC-IL$): An Efficient and Recyclable Catalyst for Ring Opening of Epoxides” at **International conference on Materials Research & Technology-2017**

Professional Experiences

- Worked as Assistant Professor at Surajmal Agarwal Private Kanya Mahavidyalaya, Kichha, U. S. Nagar, Uttarakhand (2019-2020)
- Worked as Assistant Professor (Guest) at Govt. P.G.College Dwarat, Uttarakhand (2022)

International/National Conferences and Workshops

- Poster Presentation in “Self-assembled Nano Particulate System for Solubility Enhancement of Hydrophobic Drug Curcumin” in **International Conference on Nanoscience & Nanotechnology Aligarh Nano IV** held at Aligarh Muslim University, Aligarh, 8 March- 10 March, 2014
- Poster Presentation in “Design and Synthesis of Magnetic Nanoparticle Supported Imidazolium Based Ionic Liquid as Heterogenous Catalyst for N-formylation of Amines” at **National conference on solid state chemistry and Allied areas** held at University of Delhi, Delhi, 8 March – 10 March, 2015
- Participation in **National School onNMR Spectroscopy** Maharaja Sayajirao University, Baroda, 18 September - 21 September, 2015
- Poster Presentation in “Magnetic Nanoparticle supported Basic Ionic Liquid: Novel and Highly Efficient Catalyst for Transesterification” at **International conference at International**

Conference on Nanoscience and Technology (ICONSAT) held at Indian Institute of Science Education and Research (IISER) Pune, Pune, 29 February - 2 March, 2016

- Poster Presentation in “Fibrous Nano-Silica Supported Acidic Ionic Liquid as an Efficient Heterogeneous Catalyst for 3-Amino Alkylated Indoles via Mannich Type Reaction” at **International conference on Advances in Nanomaterials and Nanotechnology (ICANN)** held at Jamia Millia Islamia, Delhi, 4 November – 5 November, 2016
- Participation in **National Workshop on Nanotechnology: Emerging Frontiers and Application** held at University of Delhi, 2017
- Poster Presentation in “Magnetic Fibrous Nanosilica Supported Ionic Liquid ($\text{Fe}_3\text{O}_4@\text{SiO}_2@\text{KCC-IL}$): An Efficient and Recyclable Catalyst for Ring Opening of Epoxides” at **International conference on Materials Research & Technology-2017**, Aggarwal college, Ballabhgarh, Haryana, 10 July - 11 July, 2017

Research Publications in International Journal

- (1) C. Garkoti, J. Shabir and S. Mozumdar*, Imidazolium Based Ionic Liquid Supported on $\text{Fe}_3\text{O}_4@\text{SiO}_2$ Nanoparticle as an Efficient Heterogeneous Catalyst for N-formylation of Amines, **New J. Chem., 2017, 41, 9291-9298**
- (2) C. Garkoti, J. Shabir, P. Gupta, M. Sharma and S. Mozumdar*, Heterogenization of amine-functionalized ionic liquids using graphene oxide as a support material: A highly efficient catalyst for the synthesis of 3-substituted indoles via Yonemitsu-type reaction, **New J. Chem., 2017, 41, 15545-15554**
- (3) J. Shabir, C. Garkoti, Surbhi, D. Sah and S. Mozumdar*, Development of amine functionalised wrinkled silica nanospheres and their application as efficient and recyclable solid base catalyst, **Catalysis Letters, 2018, 148, 194-204**
- (4) J. Shabir, S. Rani, C. Garkoti, and S. Mozumdar*, Nitrolotriactic acid assisted one step synthesis of highly stable silver nanoparticles in aqueous medium: Investigation of catalytic activity, **Materials Letters, 2017, 209, 207-211**
- (5) C.Garkoti, J. Shabir and S.Mozumdar*,Amine-Terminated Ionic Liquid Modified Magnetic Graphene Oxide (MGO-IL-NH₂): A Highly Efficient and Reusable Nanocatalyst for the Synthesis of 3-Amino Alkylated Indoles, **ChemistrySelect, 2020, 14, 4337-4346**
- (6) J. Shabir, S. Rani, M. Sharma, C Garkoti, Surabhi and S.Mozumdar*,Synthesis of dendritic fibrous nanosilica over a cubic core ($\text{cSiO}_2@\text{DFNS}$) with catalytically efficient silver nanoparticles for reduction of nitroarenes and degradation of organic dyes. **J. Shabir, S. Rani, M. Sharma, C. Garkoti, S. Mozumdar, RSC advances, 2020, 10 (14), 8140-8151**
- (7) J. Shabir, C. Garkoti, P. Gupta, M. Sharma, S. Rani, M. Kumari, S. Mozumdar*, RuxPdy Alloy Nanoparticles Uniformly Anchored on Reduced Graphene Oxide Nanosheets (RuxPdy@rGO): A Recyclable Catalyst, **ACS omega, 2021, 2,1415-1425**
- (8) P. Gupta, C. Garkoti, J. Shabir, D. Sah, S. Mozumdar*, Amine grafted Fe_3O_4 immobilized graphene oxide as a recyclable and effectual nanocomposite for the regioselective ring opening reaction. **Research on Chemical Intermediates, 2021, 47 (10), 4013-4028**