

Adnan Shahzaib

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EDUCATION

- Ph.D.** Jamia Millia Islamia, Delhi, India Thesis Submitted
Title: Development and Application of Metal-Organic frameworks utilizing bioresources
Supervisor- Prof Nahid Nishat
- MSc** Aligarh Muslim University, Aligarh, India 2018
7.938 CGPA- First Division
Thesis: Synthesis and Structural Studies of a Coordination Polymer Built with Indium Metal Ion and New Linear Ligand
Advisor – Dr Musheer Ahmad
- BSc** Aligarh Muslim University, Aligarh, India 2016
64 % - First Division

RESEARCH EXPERIENCE

Doctoral Fellow

Jamia Millia Islamia, Delhi, India

Development and Application of Metal-Organic frameworks utilizing bioresources

- Designed cyclodextrin MOF utilizing transition metals *via* vapor diffusion approach
- Analyzed cyclodextrin MOF for efficient reduction of various nitroaromatics and dyes
- Developed aspartic based MOF through solvothermal method for improved antimicrobial action
- Performed statistical analysis on data sets using Origin, X'Pert HighScore, Excel
- Initiated and created ZIF-67 composite embedded with nanoparticles *via* green modulus
- Mentored and trained graduate students for project work
- Presented research work at international scientific conferences

Master Research

Aligarh Muslim University, Aligarh, India

Synthesis and Structural Studies of a Coordination Polymer Built with Indium Metal Ion and New Linear Ligand

- Designed and synthesized a new coordination polymer under hydro-thermal conditions which incorporates both imidazole and aromatic carboxylate groups
- Facilitates the formation of unique frameworks and flexibility

- Managed and negotiated ordering for lab consumables, equipment, and services. Assisted in lab maintenance and organization

SKILLS and INTERESTS

Software : Origin, Mercury, Chem Draw, Vesta, X'Pert Highscore

Language : English, Hindi, Urdu

Interest : Cooking, Reading, Travelling, Chess, Cricket

PUBLICATIONS

- **Adnan Shahzaib**, Shaily, Iftkhar Ahmad, Fahmina Zafar and Nahid Nishat, One Pot Synthesis Of Cyclodextrin MOF As A Promising Heterogeneous Catalyst For The Reduction Of Nitroaromatic Compounds And Azo Dyes, *Research on Chemical Intermediates, Springer, 2023, IF 3.1 Vol 49, Pages 2507–2528*
- **Adnan Shahzaib**, Shaily, Iftkhar Ahmad, Paramjit Singh, Fahmina Zafar and Nahid Nishat, Ultrarapid And Highly Efficient Reduction Of Nitroaromatic Compounds Using Cyclodextrin MOF, *Catalysis Communications, Elsevier, 2022 IF 3.5, Vol 174, 106569*
- **Adnan Shahzaib**, Shaily, Iftkhar Ahmad, Md Amiruddin Hashmi , Mo Ahamad Khan, and Nahid Nishat, Multifunctional Aspartic based MOF for reduction of methyl orange and antimicrobial activity, *Catalysis Letters, Springer, 2023 IF 3.0*
- **Adnan Shahzaib**, Shaily, Liyaqat Ali Kamran, Nahid Nishat, The Biomolecule-MOF Nexus: Recent Advancements in Bio-Metal-Organic Frameworks (Bio-MOFs) and their Multifaceted Applications, *Journal of Environmental Chemical Engineering, Elsevier, IF 7.9 (Under Review)*
- Shaily, **Adnan Shahzaib**, Fahmina Zafar, Shabnam Khan, Brahmjot, Anujit Ghosal, Manawwer Alam, Mudasser Azam, Qazi Mohd Rizwanul Haq and Nahid Nishat Superhydrophobic Mn-coordinated Technical Cashew Nutshell Liquid-based Bactericidal And Corrosion-resistant Advanced Polyurethane Coatings, *Materials Today Communications, Elsevier, 2023 IF 3.6, Vol 35, 105947*

- Laxmi, **Adnan Shahzaib**, Manawwer Alam, Anujit Ghosal, Fahmina Zafar, Nahid Nishat, Development Of Nanostructured Green Divalent Manganese Coordinated Polyurea, *Journal of Applied Polymer Science, Wiley, 2022, IF 3.1, Vol 139, Issue 41, e52993*
- Laxmi, **Adnan Shahzaib**, Shabnam Khan, Anonit Ghosal, Fahmina Zafar, Manawwer Alam, Shahab A.A.Nami, Nahid Nishat, One-pot Synthesis Of Zinc Ion Coordinated hydroxy-terminated Polyurethanes Based on Low molecular Weight Polyethylene Glycol And Toluene Diisocyanate, *Journal of Polymer Research, Springer, 2022, IF 3.1, Vol 29, Article number: 152*
- Paramjit Singh, Zeba Haque, Fahmina Zafar, **Adnan Shahzaib**, Nahid Nishat, Two-Dimensional Nanomaterials-Based Polymer Nanocomposites for Catalytic and Photocatalytic Applications, *Materials Today Chemistry, Elsevier, IF 7.6 (Under Review)*

BOOK & CHAPTER

- **Adnan Shahzaib**, Shaily, Nahid Nishat, Vegetable Oil Based Inks, *Vegetable Oil-based Polymers and Their Surface Applications 2023*
- Shaily, **Adnan Shahzaib**, Fahmina Zafar, Nahid Nishat | Biobased Advanced Coating Materials, *Advanced Applications of Biobased Materials, Elsevier, 2023*

CONFERENCES

- Poster Presentation titled "*Transition metal-based cyclodextrin MOF for efficacious reduction of nitroaromatic and dyes*" at Young Scientist Conference, *India International Science Festival, Bhopal 2022*
- Oral Presentation titled "*Transition metal incorporated cyclodextrin MOF for reduction of nitroaromatics and dyes*" at "*International Conference on Futuristic Materials in Science and Technology (ICFMST-2022)*" organized by Department of Chemistry, Bannari Amman Institute of Technology, Sathya Mangalam, Erode, Tamil Nadu during 21 - 22 December 2022.
- Poster Presentation titled "*One-Pot Synthesis of Cyclodextrin MOF for Efficacious Reduction of Nitroaromatics Compounds*" at *International Conference on Chemical and Environmental Sciences (ICCAES 2022)*, Department of Basic Science and Humanities Institute of Engineering & Management, Kolkata 16-18 December 2022
- Poster Presentation titled "*Synthesis of cyclodextrin MOF for rapid reduction of nitroaromatics compounds*" at *National Conference on Recent Trends in Chemistry and Nano-*

Biotechnology (RTCN-2022), Department of Chemistry, University of Delhi Delhi-110007, India, 2022

- Poster Presentation, ***INDO-AUSTRALIAN Webinar*** on “Formulation and characterization of Materials & their broad applications for Sustainable Environment and Therapeutics, MHRD-SPARC Scheme Jamia Millia Islamia, 2021
- Participated ***International E-Conference on Recent Advances in Chemical, Physical and Biological Science***, Organized by Dept of Chemistry, Nabira Mahavidyalaya and Association of Chemistry Teacher and TIFR Mumbai, 2021
- Participated ***DST & ACS Workshop***, Aligarh Muslim University, 2020

CO-CURRICULAR ACTIVITIES

- Sir Syed Day Celebration -2018 (Event Organizer) AMU
- Secretary, Common Room, Aftab Hall , AMU
- Industrial Training (PM Yuva Yojna) E-Cell , AMU

PERSONAL INFORMATION

D.O.B - 28/09/1994

Father's Name - Late Abu Osama Zaidi

Marital Status - Unmarried

Nationality - Indian