# Dr. Maruf Chauhan

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Area Expertise- Green synthesis of Nano Materials, Catalysis, drug delivery & environmental remediation



### **Academic Qualifications**

**Ph.D. in Chemistry** at Department of Chemistry, University of Delhi, India (2022)

Thesis Title: "Biogenic Synthesis of Metal Oxide Nanoparticles, nanocomposites of Metal Oxide and their Catalytic Applications".

PhD Supervisor: Professor Priti Malhotra, Department of Chemistry, University of Delhi, India.

M.Sc. Chemistry (Specialization: Organic Chemistry), DN PG college, Ch. Charan Singh University, Meerut Uttar Pradesh India 2013, 67.45%

B.Sc. DN PG college, Ch. Charan Singh University, Meerut Uttar Pradesh India 2011, 66.86%

## **Teaching Experience**

- Guest Faculty at Department of Chemistry, Miranda house, University of Delhi, Delhi. (Nov. 2023-Present)
- Guest Faculty at Department of Chemistry, GGS IP University, Delhi. (July 2022-Dec. 2022)
- Assistant Professor (Adhoc) at Gyan Bharti Institute, Meerut, AKT University (Jan. 2022-June 2022)

## **Subjects Taught**

# **Undergraduate & Postgraduates Courses**

- 1. Reaction Mechanism (Organic Chemistry)
- 2. Heterocyclic chemistry
- 3. Organometallic Chemistry both previous and Final Year M.Sc. Chemistry
- 4. Engineering chemistry for B. Tech (theory)

## **Work & Publications**

- Maruf Chauhan, Sushma Yadav, Priti Malhotra, In-situ biogenically synthesized Cu<sub>2</sub>O/RGO composite using beetroot peel extract for selective and efficient reduction of cinnamaldehyde in water. Appl Nanosci (2022). https://doi.org/10.1007/s13204-022-02699-w
- 2. Maruf Chauhan, Sushma Yadav, MercyKutty Jacob, Priti Malhotra, Distinguished performance of biogenically synthesized reduced-graphene-oxide-based mesoporous Au–Cu<sub>2</sub>O/RGO ternary nanocomposites for sonocatalytic reduction of nitrophenols, RSC New Journal of Chemistry (NJC), 9685-9694.
- 3. Maruf Chauhan, Sushma Yadav, Rama Pasricha, and Priti Malhotra, Water Chestnut Peel Facilitated Biogenic Synthesis of Zinc Oxide Nanoparticles and their Catalytic Efficacy in the Ring-Opening Reaction of Styrene Oxide, Chemistry Select, doi.org/10.1002/slct.202102031.
- 4. Maruf Chauhan, Sushma Yadav, Divya Mathur, Arti Jain, and Priti Malhotra\*, Sugarcane bagasse-facilitated benign synthesis of Cu<sub>2</sub>O nanoparticles and its role in photocatalytic degradation of toxic dyes: a trash to treasure approach. Environ Dev Sustain (2020). https://doi.org/10.1007/s10668-020-00664-7.
- 5. Divya Mathur, Priti Malhotra, **Maruf Chauhan** and Sushma Yadav; Biogenic Synthesis of Iron Nanoparticles and their Applications; Conference Proceedings of the National Conference on Innovations in Sciences and Emerging Challenges in Health and Environment, Page 78-85, 2018, ISBN:
- 6. Maruf Chauhan, Sushma Yadav, Divya Mathur, Arti Jain, and Priti Malhotra\*, Biogenic synthesis of Cu2O/ZnO nanocomposites using Beetroot extract and its photocatalytic application in the degradation of Doxycycline, RSC New Journal of Chemistry (NJC)

## **Laboratory Skills and Research Experience**

- Synthesis of Nanomaterial.
- Understanding of optical spectroscopic tools such as UV-Vis, Fluorescence and different analytical characterizations such as FT-IR, XRD, SEM, TEM, DLS, NMR techniques and their application.
- Experience in the synthesis of some ionic liquid, nanoparticles for various catalytic applications.

# **Analytical Techniques**

- Picosecond-resolved fluorescence spectroscopy (Time-correlated single photon counting technique), Steady-state fluorescence spectroscopy, Steady state and Time dependent anisotropy, Dynamic light scattering technique etc.
- NMR, FT-IR, SEM, TEM, XRD, DLS, TGA and CHNS analyzer.

**Software:** MS Office (MS Word, MS Excel & MS PowerPoint), Origin, Corel Draw, M nova, Chem Draw, End Note.

### **Conferences & Workshops**

- Participation in the National Conference on "Recent Trends in Chemistry and Nano-Biotechnology (RTCN-2022)" held on 13th December 2022, as an Organizing Committee member at Department of Chemistry, University of Delhi, Delhi-7 India.
- Participation in the International Conference on "Contributions of Acharya Prafulla Chandra Ray as a Chemist and Freedom Fighter" held on 02-03 August, 2022 as a part of the Azadi ka Amrit Mahotsava organized by Vijnana Bharati & Ministry of Culture, Government of India in Association with Indraprastha Vigyan Bharati and Department of Chemistry, University of Delhi.
- Participation in the National Workshop on "Understanding the Vulnerability and Risk Associated with Urban Areas" held on 23-27 Nov 2021 at National Institute of Disaster Management, Ministry of Home Affairs, and Govt. of India in collaboration with the Center for Environmental Studies & Disaster Management Miranda House and Department of Environmental Studies University of Delhi.
- Poster Presentation in the National Conference on "Recent Trends and Advancements in Chemical Science" held on 29-31 March 2019 at the Department of Chemistry and Bhaskracharya College of Applied Science University of Delhi.
- Poster Presentation in the International Conference on "Advanced in applied Science and Technology" held on 17-18<sup>th</sup> August 2017, at Department of Chemistry, KR Mangalam University.
- Participation in the International Seminar on "Effects of Pollution on human health" held on 11<sup>th</sup> December 2017, at the Department of Chemistry, University of Delh

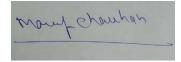


# **Major Achievements and Awards**

- Senior Research Fellowship (CSIR-UGC, INDIA). The period from Dec 2018- Dec 2021.
- Junior Research Fellowship (CSIR-UGC, INDIA). The period from Dec 2016- Dec 2018.
- Secured All India Rank 26 in CSIR-NET/JRF 2015.
- Secured All India Rank 43 in CSIR-NET/JRF 2016.
- Secured All India Rank 73 in CSIR-NET/JRF 2017.
- Secured All India Rank 14 in CSIR-NET/JRF 2019.
- Secured All India Rank 207 in GATE 2015.
- Secured All India Rank 282 in GATE 2017.
- Secured All India Rank 2231 in GATE 2019.
- Qualified TIFR Entrance exam for Ph.D. in Dec 2014
- Best Poster Presentation Award in National Conference on "Recent Trends in Chemistry and Nano-Biotechnology (RTCN-2022)" held at Department of Chemistry, University of Delhi, Delhi-7, India.

#### **Declaration:**

I declare that the information given above is true to the best of my knowledge and belief and nothing has been hidden.



05-02-2024 References:

#### Prof. Priti Malhotra

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### Prof. Rakesh Kumar

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