

## **Dr. SAIF ALI CHAUDHRY**

### **Professor**

Department of Chemistry, Faculty of Sciences,

Jamia Millia Islamia (Central University), New Delhi-110025

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[https://www.jmi.ac.in/chemistry/faculty-members/Dr\\_Saif\\_Ali\\_Chaudhry-1913](https://www.jmi.ac.in/chemistry/faculty-members/Dr_Saif_Ali_Chaudhry-1913)

<https://scholar.google.com/citations?user=BpqqQ6sAAAAJ&hl=en>



Specialization: **Inorganic Chemistry**

Research Area: **Nanotechnology for water treatment**

### **Administrative Experience:**

- (i) Member of **the Faculty Committee, Faculty of Management Studies**, Jamia Millia Islamia, New Delhi, India
- (ii) Member **Board of Studies, Department of Chemistry, Jamia Hamdard, New Delhi**
- (iii) Member **Board of Studies, Department of Applied Chemistry, Aligarh Muslim University, Aligarh**
- (iv) Member **Departmental Research Committee, Department of Chemistry, JC Bose University of Science and Technology, YMCA, Faridabad, Haryana**
- (v) Member **Departmental Research Committee, Department of Applied Sciences & Humanities, Jamia Millia Islamia, New Delhi**
- (vi) **Member**, Committee for the preparation of **University's Policy Document for Start-Ups & Entrepreneurship**, Jamia Millia Islamia, New Delhi
- (vii) **Senior Warden**, Allama Iqbal Hostel, Jamia Millia Islamia, New Delhi (July 20, 2019 to September 20, 2021)
- (viii) M.Sc. Chemistry **CBCS course advisor**, Jamia Millia Islamia, New Delhi (2014 to till date)
- (ix) **Assistant Proctor**, Jamia Millia Islamia, New Delhi (2015-2016)
- (x) Acted as chairman, **Enquiry Committee**, Dr. Zakir Husain Hall of Boy's Residence, Jamia Millia Islamia, New Delhi
- (xi) Member, Disciplinary committee, Zakir Hussain Hall of Boy's Residence, and MMA Jauhar Halls of Boys residence, Jamia Millia Islamia (July 2019 to September 2021)

(xii) **Assistant Superintendent**, University Entrance Test for Engineering, etc. for several times

**Review Editor:** Photocatalysis (The Photocatalysis section of Frontiers in Catalysis)

**Project:** “*Synthesis of sustainable nano-hybrid composite material for inhibiting bacterial growth and simultaneous adsorptive removal of harmful pollutants from Yamuna water at Okhla, New Delhi*” sanctioned by Science and Engineering Board (SERB) DST. Amount: INR 22.5 Lakh

**Some selected publications**

- ❖ Sarfaraz Mahmood, Arisha Bi, Sneha Shukla, Samina Husain, Jai Prakash, **Saif Ali Chaudhry\***, Synthesis of carbon quantum dots decorated titanium disilicide: A novel hybrid solar-driven photocatalyst for sustainable wastewater treatment, **Journal of Materials Chemistry A**, **2025**, doi.org/10.1039/D5TA02427G. (Q1, RSC, IF 9.5)
- ❖ Sneha Shukla, Adiba Khan, Ankita Manchanda, Maqsood Ahmad Malik, Farooq Ahmad Wani, **Saif Ali Chaudhry\***, Amino acid-functionalized CQDs/yttrium-doped ZnO nanocomposite for photocatalytic mineralization of antibiotics in water, **Journal of Water Process Engineering** 77, **2025**, 108262. (Q1, Elsevier, IF 6.7, CiteScore 9.6)
- ❖ Adiba Khan, Zeenat Sheerazi, Sneha Shukla, Ankita Manchanda, **Saif Ali Chaudhry\***, Multifunctional nanocomposite for sustainable Yamuna water treatment: Insight into adsorption, statistical optimization, and antibacterial action, **Chemosphere** 385, **2025**, 144565 (Q1, Elsevier, CiteScore 18.5)
- ❖ Arisha Bi, Sarfaraz Mahmood, Nitika Garg, Sahil Thakur, **Saif Ali Chaudhry\***, Sarita Yadav, Madhulika Gupta, Mikhael Bechelany, Jai Prakash, Zeba Haque, Graphene oxide/Polyindole nanocomposite: A highly efficient multi-cyclic, stable and sustainable photocatalyst platform for wastewater remediation under visible light, **Materials Advances**, **2025**. (Q1, RSC, IF 4.7)
- ❖ Zeenat Sheerazi, Ishtiyah Ahmad, **Saif Ali Chaudhry**, Aasif Hassan Sheikh, Tabrez Alam Khan, Green synthesis of a nicotinamide-functionalized cobalt ferrite nano-adsorbent for aqueous phase removal of some virulent dyes: evaluation of adsorption isotherms, kinetics, and mechanisms, **New Journal of Chemistry**, **2025**. (Q2, RSC, IF 2.5)

- ❖ Adiba Khan, Suhail Ayub Khan, Md Sajid, Sneha Shukla, Ankita Manchanda, Tabrez Alam Khan, **Saif Ali Chaudhry\***, Multifunctional hydrogel adsorbents for wastewater remediation: Current trends and future directions, **Journal of Molecular Liquids**, 435, **2025**, 128129.  
(Q1, Elsevier, IF **5.2**, CiteScore **10.5**)
- ❖ Sharf Ilahi Siddiqui, Naha Meslet Alsebaai, Azza A. Al-Ghamdi, Reema H. Aldahiri, Elham A. Alzahrani, Sumbul Hafeez, Seungdae Oh, **Saif Ali Chaudhry\*** Fe<sub>3</sub>O<sub>4</sub>/BC for Methylene blue removal from water: Optimization, thermodynamic, isotherm, and kinetic studies, **Materials** 18 (9), **2025**, 2049.  
(Q2, MDPI, IF **3.2**, CiteScore **6.4**)
- ❖ **Nusrat Tara**, Elham A. Alzahrani, Naha Meslet Alsebaai, Poonam Dwivedi, Azza A. Al-Ghamdi, Reema H. Aldahiri, Hiep T. Nguyen, Seungdae Oh, **Saif Ali Chaudhry\*** Novel hybrid rGO-BC@ZrO<sub>2</sub> composite: A material for Methylene blue adsorption, **Water** 17 (5), **2025**, 627.  
(Q1, MDPI, IF **3.0**, CiteScore **6.0**)
- ❖ Sneha Shukla, Atul Sharma, Geetanjali Rathi, Ankita Manchanda, Adiba Khan, Maqsood Ahmad Malik, **Saif Ali Chaudhry\***, Facile fabrication of novel Y-doped ZnO biochar-based nanocomposite for efficient removal of Sulfasalazine, Congo red and Bismarck brown-R: Insight into adsorption performance and mechanism, **Surfaces and Interfaces**, 71, 15, **2025**, 106817.  
(Q1, Elsevier, IF **6.3**, CiteScore **8.5**)
- ❖ Vivek Mehta, N Srivastava, **Saif Ali Chaudhry**, V Rana, Comparative evaluation of fluoride release from different modifications of glass ionomer dental restorative material in primary teeth at different time intervals: An ex vivo study, **Journal of Oral Biology and Craniofacial Research**, **2025**, 15 (6), 1224-1230.  
(Q2, Elsevier, CiteScore **4.5**)
- ❖ M Sajid, A Sharma, S Shukla, A Khan, **Saif A Chaudhry\***, Nano-enhanced water purification: Uncovering the dye adsorption efficiency of Ni-Zn-S@Cyclodextrine nanomaterial, **ChemistrySelect**, **2024**, 9(33), e202400093.  
(Q2, Wiley, IF **2.307**)
- ❖ Sheerazi, Z, **Saif Ali Chaudhry**, Khan, TA, Adsorptive sequestration of cationic dyes from aqueous medium using a novel carom seed-activated carbon/Mg-doped SnO<sub>2</sub> nanocomposite. **Biomass Conv. Bioref.** **14**, 2024, 19157–19176.  
(Q3, Springer, IF **4**)

- ❖ S Ratnani, S K Sharma, C Verma, **Saif Ali Chaudhry**, S Gurjar, Evaluation of inhibition performance of methylimidazolium ionic liquids on surface of mild steel in sulfuric acid, **Surface and Coatings Technology**, **2024**, 485, 130875.  
(Q1, Elsevier, IF **5.3**, CiteScore **10**)
- ❖ M Sajid, Atul Sharma, **Saif A Chaudhry**, Environmental remediation through bimetallic sulphide-derived adsorbents: Prospects and progress, **Chemical Engineering Research and Design**, **2024**, 203, 651-662.  
(Q2, Elsevier, IF **3.7**, CiteScore **6.1**)
- ❖ Z Sheerazi, TA Khan, **Saif Ali Chaudhry**, Modelling and optimization of Victoria blue uptake using response surface methodology (RSM) with novel magnetic folic acid-mannitol/mosquito coil ash nanocomposite, **Journal of Water Process Engineering**, **2024**, **57**, 104606.  
(Q1, Elsevier, IF **7**, Cite score **9.7**)
- ❖ A Choudhry, A Sharma, SI Siddiqui, I Ahamad, M Sajid, TA Khan, **Saif Ali Chaudhry\***, Origanum vulgare manganese ferrite nanocomposite: An advanced multifunctional hybrid material for dye remediation, **Environmental Research**, **2023**, 220, 115193.  
(Q1, Elsevier, IF **8.3**, CiteScore **11**)
- ❖ Z Sheerazi, S A Khan, **Saif Ali Chaudhry**, TA Khan, Non-linear modelling of adsorption isotherm and kinetics of chromium(VI) and Celestine blue attenuation using a novel poly (curcumin-citric acid)/MnFe<sub>2</sub>O<sub>4</sub> nanocomposite, **Modeling Earth Systems and Environment**, **2023**, 9 (1), 881-899.  
(Q1, Springer, IF **3**)
- ❖ Atul Sharma, S Rasheed, D Mangla, A Choudhry, S Shukla, **Saif A. Chaudhry\***, Cobalt ferrite Incorporated *Ocimum sanctum* nanocomposite Matrix as an Interface for Adsorption of Organic Dyes: A Sustainable Alternative, **ChemistrySelect**, **2023**, 8(5), e202203709.  
(Q2, Wiley-Blackwell, IF **2.307**)
- ❖ Nusrat Tara, MA Abomuti, FM Alshareef, O Abdullah, ES Allehyani, **Saif A. Chaudhry\***, Seungdae Oh, Nigella sativa-Manganese ferrite-reduced graphene oxide-based nanomaterial: A novel adsorbent for water treatment, **Molecules**, **2023**, 28(13),5007.  
(Q2, MDPI, IF **4.6**, CiteScore **6.7**)

- ❖ Md Sajid, Atul Sharma, Arshi Choudhry, **Saif A. Chaudhry\***, Synthesis, Characterization and potential application of functionalised binary metallic sulphides for water reclamation, *Colloids and Surfaces C: Environmental Aspects*, 1, **2023**, 100011.  
(Elsevier)
- ❖ Atul Sharma, Divyanshi Mangla, Arshi Choudhry, Md. Sajid, **Saif A. Chaudhry\***, Facile synthesis, physico-chemical studies of Ocimum sanctum magnetic nanocomposite and its adsorptive application against Methylene blue, **Journal of Molecular Liquids**, 362, **2022**, 119752.  
(Q1, Elsevier, IF 6, CiteScore 9.7)
- ❖ Atul Sharma, Divyanshi Mangla, Shehnaz, **Saif A. Chaudhry\***, Recent advances in magnetic composites as adsorbents for wastewater remediation, **Journal of Environmental Management**, 306(7), **2022**, 114483.  
(Q1, Elsevier, IF 8.7, CiteScore 13.4)
- ❖ Arshi Choudhry, Atul Sharma, Tabrez Alam Khan, **Saif Ali Chaudhry\***, Flax seeds based magnetic hybrid nanocomposite: An advance and sustainable material for water cleansing, **Journal of Water Process Engineering**, 42, **2021**, 102150.  
(Q1, Elsevier, IF 7, Cite score 9.7)
- ❖ Bushra Fatima, Sharf Ilahi Siddiqui, Ranjeet Kumar Nirala, Kumar Vikrant, Ki-Hyun Kim, Rabia Ahmad, **Saif Ali Chaudhry**, Facile green synthesis of ZnO-CdWO<sub>4</sub> nanoparticles and their potential as adsorbent to remove organic dye, **Environmental Pollution**, 271, **2021**, 11640.  
(Q1, Elsevier, IF 8.9, CiteScore 14.9)
- ❖ N.K. Abdulla, S.I. Siddiqui, B. Fatima, R. Sultana, N. Tara, A.A. Hashmi, R. Ahmad, M. Mohsin, R.K. Nirala, N.T. Linh, Q.-V. Bach, **Saif Ali Chaudhry\***, Silver based hybrid nanocomposite: A novel antibacterial material for water cleansing, **Journal of Cleaner Production**, **2020**, 124746.  
(Q1, Elsevier, IF 11.1, CiteScore 18.5)
- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\***, Nanohybrid composite Fe<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>/BC for inhibiting the growth of bacteria and adsorptive removal of arsenic and dyes from water, **Journal of Cleaner Production**, 223, **2019**, 849-868.  
(Q1, Elsevier, IF 11.1, CiteScore 18.5)

<https://www.google.com/search?q=Nanohybrid+composite+Fe2O3-ZrO2%2FBC+for+inhibiting+the+growth+of+bacteria+and+adsorptive+removal+of+arsenic+and+dyes+from+water%2BFAO&oeq=Nanohybrid+composite+Fe2O3-ZrO2%2FBC+for+inhibiting+the+growth+of+bacteria+and+adsorptive+removal+of+arsenic+and+dyes+from+water%2BFAO&aqs=chrome.69i57.22638j0j15&sourceid=chrome&ie=UTF-8>.

- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\***, Nigella sativa plant based nanocomposite-MnFe<sub>2</sub>O<sub>4</sub>/BC: An antibacterial material for water purification, **Journal of Cleaner Production**, 200, **2018**, 996-1008.  
(Q1, Elsevier, IF **11.1**, CiteScore **18.5**)
- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\***, Nigella sativa seed based nanocomposite-MnO<sub>2</sub>/BC: An antibacterial material for photocatalytic degradation, and adsorptive removal of Methylene blue from water, **Environmental Research**, 171, **2019**, 328-340.  
(Q1, Elsevier, IF **8.3**, CiteScore **11**)
- ❖ S.I. Siddiqui, F. Zohra, **Saif Ali Chaudhry\***, Nigella sativa seed based nanohybrid composite -Fe<sub>2</sub>O<sub>3</sub>-SnO<sub>2</sub>/BC: A novel material for enhanced adsorptive removal of Methylene blue from water, **Environmental Research**, 178, **2019**, 108667.  
(Q1, Elsevier, IF **8.3**, CiteScore **11**)
- ❖ Z. Zaidi, S.I. Siddiqui, B. Fatima, **Saif Ali Chaudhry\***, Synthesis of ZnO nanospheres for water treatment through adsorption and photocatalytic degradation: Modelling and process optimization, **Material Research Bulletin**, 120, **2019**, 110584.  
(Q1, Elsevier, IF **5.4**, CiteScore **9.4**)
- ❖ B. Fatima, S.I. Siddiqui, R. Ahmed, **Saif Ali Chaudhry\***, Green synthesis of f-CdWO<sub>4</sub> for photocatalytic degradation and removal of dyes from water, **Water resource and Industry**, 22, **2019**, 100119.  
(Q1, Elsevier, IF **5.1**, CiteScore **8**)
- ❖ N.K. Abdulla, S.I. Siddiqui, N. Tara, A.A. Hashmi, **Saif Ali Chaudhry\***, Psidium guajava leave-based magnetic nanocomposite GL: A green technology for methylene blue removal from water, **Journal of Environmental Chemical Engineering**, 7, 6, **2019**, 103423.  
(Q1, Elsevier, IF **7.7**, CiteScore **9.5**)

- ❖ S.I. Siddiqui, G. Rathi, **Saif Ali Chaudhry\***, Acid washed Black cumin seed powder preparation for adsorption of methylene blue dye from aqueous solution: Thermodynamic, kinetic and isotherm studies, **Journal of Molecular Liquids**, 264, **2018**, 275-284.  
(Q1, Elsevier, IF 6, CiteScore 9.7)
- ❖ **Saif Ali Chaudhry\***, T.A. Khan, I. Ali, Equilibrium, kinetic and thermodynamic studies of Cr(VI) adsorption from aqueous solution onto manganese oxide coated sand grain (MOCSG), **Journal of Molecular Liquids**, 236, **2017**, 320-330.  
(Q1, Elsevier, IF 6, CiteScore 9.7)
- ❖ **Saif Ali Chaudhry\***, Z. Zaidi, S.I. Siddiqui, Isotherm, kinetic and thermodynamics of arsenic adsorption onto Iron-zirconium binary oxide-coated sand (IZBOCS): Modeling and process optimization, **Journal of Molecular Liquids**, 229, **2017**, 230-240.  
(Q1, Elsevier, IF 6, CiteScore 9.7)
- ❖ **Saif Ali Chaudhry\***, M. Ahmed, S.I. Siddiqui, S. Ahmed, Fe(III)-Sn(IV) mixed binary oxide-coated sand preparation and its use for the removal of As(III) and As(V) from water: Application of isotherm, kinetic and thermodynamics, **Journal of Molecular Liquids**, 224, **2016**, 431-441.  
(Q1, Elsevier, IF 6, CiteScore 9.7)
- ❖ T.A. Khan, **Saif Ali Chaudhry**, I. Ali, Equilibrium uptake, isotherm and kinetic studies of Cd(II) adsorption onto iron oxide activated red mud from aqueous solution, **Journal of Molecular Liquids**, 202, **2015**, 165-175.  
(Q1, Elsevier, IF 6, CiteScore 9.7)
- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\***, Promising prospects of nanomaterials for arsenic water remediation: A comprehensive review, **Process Safety and Environmental Protection**, 126, **2019**, 60-97.  
(Q1, Elsevier, IF 7.8, CiteScore 10.8)
- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\***, A review on graphene oxide and its composites preparation and their use for the removal of As<sup>3+</sup> and As<sup>5+</sup> from water under the effect of various parameters: Application of isotherm, kinetic and thermodynamics, **Process Safety and Environmental Protection**, 119, **2018**, 138-163.  
(Q1, Elsevier, IF 7.8, CiteScore 10.8)

- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\***, Iron oxide and its modified forms as an adsorbent for arsenic removal: A comprehensive recent advancement, **Process Safety and Environmental Protection**, 111, **2017**, 592-626.

(Q1, Elsevier, IF **7.8**, CiteScore **10.8**)

- ❖ S.I. Siddiqui, P.N. Singh, N. Tara, S. Pal, **Saif Ali Chaudhry\***, I. Sinha, Arsenic removal from water by starch functionalized maghemite nano-adsorbents: Thermodynamics and kinetics investigations, **Colloid and Interface Science Communications**, 36, **2020**, 100263.

(Q1, Elsevier, IF **4.5**, CiteScore **7.3**)

- ❖ Nusrat Tara, S.I. Siddiqui, R. K. Nirala, N. K. Abdulla, **Saif Ali Chaudhry\***, Synthesis of antibacterial, antioxidant and magnetic Nigella sativa-graphene oxide based nanocomposite BC-GO@Fe<sub>3</sub>O<sub>4</sub> for water treatment, **Colloid and Interface Science Communications**, 37 **2020**, 100281.

(Q1, Elsevier, IF **4.5**, CiteScore **7.3**)

- ❖ Nusrat Tara, S.I. Siddiqui, Q.-V. Bach, **Saif Ali Chaudhry\***, Reduced-graphene oxide-manganese oxide-black cumin based hybrid nanocomposite (rGO-MnO<sub>2</sub>/BC): A novel material for water remediation, Manuscript number: **Materials Today Communications**, 25, 101560.

(Q2, Elsevier, IF **3.8**, CiteScore **4.1**)

- ❖ Shakeel Ahmed, Annu, **Saif Ali Chaudhry**, Saiqa Ikram, A review on biogenic synthesis of ZnO nanoparticles using plant extracts and microbes: A prospect towards green chemistry, **Journal of Photochemistry & Photobiology, B: Biology**, 166, **2017**, 272-284.

(Q1, Elsevier, IF **5.4**, CiteScore **13.4**)

- ❖ Tabrez Ali Khan, **Saif A. Chaudhry**, I. Ali, Thermodynamic and kinetic studies of As(V) removal from water by zirconium oxide-coated marine sand, **Environ Science Pollution Research**, 20, **2013**, 5425-5440.

(Q1, Springer, IF **5.8**)

- ❖ B. Fatima, S.I. Siddiqui, R. Ahmed, **Saif A. Chaudhry\***, Preparation of functionalized-CuO nanoparticles using Brassica Rapa leave extract for water purification, **Desalination and Water Treatment**, 164, **2019**, 192-205.

(Q3, Taylor & Francis, IF **1.273**)



- ❖ **Saif Ali Chaudhry\***, T.A. Khan, I. Ali, Zirconium oxide-coated sand based batch and column adsorptive removal of arsenic from water: Isotherm, kinetic and thermodynamic studies, **Egyptian Journal of Petroleum**, 26, **2016**, 553-563.  
(Q1, Elsevier, CiteScore **7.9**)
- ❖ **Saif Ali Chaudhry\***, T.A. Khan, I. Ali, Adsorptive removal of Pb(II) and Zn(II) from water onto manganese oxide-coated sand: Isotherm, thermodynamic and kinetic studies, **Egyptian Journal of Basic and Applied Sciences**, 3, **2016**, 287-300.  
(Elsevier, CiteScore **1.44**)
- ❖ S.I. Siddiqui, G. Rathi, **Saif Ali Chaudhry\***, Qualitative analysis of acid washed black cumin seeds for de colorization of water through removal of highly intense dye methylene blue, **Data in Brief**, 20, **2018**, 1044-1047.  
(Q4, Elsevier, IF **1.2**, CiteScore **2.6**)
- ❖ S.I. Siddiqui, **Saif Ali Chaudhry\*** Arsenic removal from water using nanocomposites: A review, **Current Environmental Management**, 4(2), **2016**, 81-102.  
(Bentham Science Publishers)
- ❖ Nusrat Tara, S.I. Siddiqui, G. Rathi, **Saif Ali Chaudhry\***, Inamuddin, A.M. Asiri, Nano-engineered adsorbent for removal of dyes from water: A review, **Current Analytical Chemistry**, 15, **2019**, 1-25.  
(Q4, Bentham Science Publishers, IF **1.8**, CiteScore **3.8**)
- ❖ Manisha,V. Ali, U. Vashisht, M.K. Kidwai, **Saif Ali Chaudhry**, Formation of light weight polyurethane foam based on vegetable oils used for ideal planting medium for green environment, In: Energy water waste nexus for environmental management, Editors: R. Devi, M.K. Kidwai, P.K. Rose, A.K. Saran, Narosa Publishing House, New Delhi.

#### **Some selected published Book chapters**

- ❖ Removal of arsenic from water through adsorption onto metal oxide-coated material, In: Applications of adsorption and ion exchange chromatography in waste water treatment, Editors: Inamuddin and Amir Al-Ahmed, **Materials Research Foundations, USA, 2017**, 15, 227-276.
- ❖ Organic/inorganic and sulfated zirconia nanocomposite membranes for proton-exchange membrane fuel cells, In: Organic-inorganic composite polymer electrolyte membranes, Editors: Inamuddin and Mohammad Asiri, **Springer, Cham, Switzerland, 2017**, 219-240.

- ❖ Green Adsorbents from Plant Sources for the Removal of Arsenic: An Emerging Wastewater Treatment Technology, In: Plant-Based Natural Products: Derivatives and Applications, Editor: Shahid-ul-Islam, **John Wiley & Sons, Inc., 2017**, 193-215.
- ❖ Arsenic: Toxic effects and remediation, In: Advanced Materials for Wastewater Treatment, Editor: Shahid-ul-Islam, **Scrivener Publishing LLC, Beverly, USA, 2017**, 1-27.
- ❖ Decolorization of textile wastewater using composite material, Nanomaterials in the wet processing of textiles, Editors: Shahid-ul-Islam and B.S. Butola, **John Wiley & Sons, Inc., 2018**, 187-218.
- ❖ Removal of arsenic from water using graphene oxide nano-hybrids, A new generation material graphene: Applications in water technology, Editor: Naushad M., **Springer, Cham, Switzerland, 2018**, 221-237.
- ❖ Green material from plant source for the remediation of Methylene Blue dye: An emerging wastewater treatment technology, Handbook of Textile Effluent Remediation, Editor: Mohd Yusuf, **Taylor & Francis, Pan Stanford, New York, USA, 2018**, 271-295.
- ❖ Recent advances in remediation of synthetic dyes from wastewaters using sustainable and low-cost adsorbents, In: The Impact and Prospects of Green Chemistry for Textile Technology, Editors: Shahid-ul-Islam and B.S. Butola, **Elsevier, 2019**, 471-507.
- ❖ Adsorption of pharmaceutical pollutants using Lignocellulosic materials, In: Green materials for wastewater treatment, environmental chemistry for a sustainable world, Editors: M. Naushad, E. Lichtfouse; **Springer Nature Switzerland, 2019**, 277-289.
- ❖ Atul Sharma, Arshi Choudhry, Geetanjali Rathi, Nusrat Tara, Noufal Komby Abdulla, Md. Sajid and **Saif Ali Chaudhry**, Ferrite based magnetic nanocomposites for wastewater treatment through adsorption, In: Contamination of Water, Health Risk Assessment and Treatment Strategies, Academic Press, **Elsevier, 2021**, Pages 449-460.

- ❖ Nusrat Tara, Atul Sharma, Arshi Choudhry, Noufal Komby Abdulla, Geetanjali Rathi, A.M. Khan and **Saif Ali Chaudhry**, Graphene, graphene oxide, and reduced graphene oxide-based materials: a comparative adsorption performance, In: Contamination of Water, Health Risk Assessment and Treatment Strategies, Academic Press, **Elsevier, 2021**, Pages , 495-507.
- ❖ Geetanjali Rathi, Arshi Choudhry, Shoaib Khan, Atul Sharma, Nusrat Tara, Noufal Komby Abdullah, Sharf Ilahi Siddiqui, A.M. Khan and **Saif Ali Chaudhry**, Multifunctional organic-inorganic materials for water treatment, In: Contamination of Water, Health Risk Assessment and Treatment Strategies, Academic Press, **Elsevier, 2021**, Pages 529-540.
- ❖ Arshi Choudhry, Atul Sharma, Nusrat Tara, Geetanjali Rathi, Noufal Komby Abdulla, Md. Sajid, A.M. Khan and **Saif Ali Chaudhry**, Phytogenic plant-based nanocomposites for water treatment, In: Contamination of Water, Health Risk Assessment and Treatment Strategies, Academic Press, **Elsevier, 2021**, Pages 485-493.
- ❖ Polysaccharide nanocomposite materials for the removal of Methylene blue (MB) dye from water, Innovation in Nano-Polysaccharides for Eco-sustainability, From Science to Industrial Applications, Elsevier, 2022, Pages 277-295.
- ❖ Nanopolysaccharide-based composite materials for photocatalysis applications, Innovation in Nano-Polysaccharides for Eco-sustainability, From Science to Industrial Applications, 2022, Elsevier, Pages 255-275.

#### **Some selected Lectures delivered in conferences**

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29.	Nanocomposites for water treatment: Synthesis strategy and options" on November, 22, 2024 in "2 weeks refresher course on Physical, Chemical & Material Sciences being conducted through online mode <b>w.e.f. 18.11.2024 to 30.12.2024</b> for enhancing the professional competence of College/University teachers".	Resource person	Malaviya Mission Teacher Training Centre, Himachal Pradesh University, Shimla-5, HP
28.	<b>5th World Environment Summit 2024</b> , an international conference, organized by the Environment and Social Development Association (ESDA), Delhi, from <b>November 16th to 18th, 2024, NDMC Convention Centre, New Delhi</b>	Chaired a session	In collaboration with CSIR-NEERI, Dr. Bhim Rao Ambedkar College, University of Delhi, Amity University, UN Environment, Villa College Maldives, and Tribhuvan University, Kathmandu, Nepal, World Environment Summit 2024, ESDA, India
27.	<b>Socio-economical backwardness, and environmental impact on the life of Tribal Gujjars</b> , "Shimla Climate Meet: Himalayan Towns in the Northwest-Climate Change, Impacts and Challenges" March 19-21, 2024.	Invited talk	Hotel Combermere, Shimla, ActionAid Association (India)
26.	"Composite materials for water treatment: Strategy and options" on <b>05 November, 2024</b> in 2-Week Refresher Course in Basic	Resource person	Malaviya Mission Teacher Training Centre, Jamia Millia Islamia, NEW DELHI-110025

	Sciences (Interdisciplinary) from 24 October to 08 November 2024.		
25.	<b>“Water Contamination and its Remediation” “Refresher Course in General Science”</b> from 4th to 17th September, <b>On October 7, 2023</b>	Resource person	Malaviya Mission Teacher Training Centre (MMTTC), Maulana Azad National Urdu University, Hyderabad.
24.	"International Urdu Science Conference-2024" (IUSC-2024). <b>March 4-5, 2024</b>	Keynote address	School of Sciences, Maulana Azad National Urdu University, Hyderabad
23.	<b>Water contamination and its remediation</b> , 22nd and 23rd of <b>November 2023</b> ; International Conference on Diversity & Inclusivity in Chemistry Drugs I Polymers I Environment (ICDIC-2023)	Keynote address	Department of Chemistry, Gurugram University, Gurugram
22.	Nanotechnology for water treatment, October 1, 2021	Keynote address	World environment summit 2021, ESDA, New Delhi
21.	Composites for water treatment, <b>October 23, 2021</b> ; International virtual conference on Nanomaterials: Recent developments and new directions	Keynote address	Department of Chemistry, Bishop Kurialacherry College for Women, Amalagiri, Kottayam, Kerala, in collaboration with Cape Comorin Trust, India
20.	Removal of pollutants from water using modified green adsorbents: A sustainable approach, <b>December 8, 2020</b> ; (Second online faculty induction program from 16 <sup>th</sup> November to 15 <sup>th</sup> December, 2020).	Resource Person	UGC-Human Resource Development Centre Jamia Millia Islamia, New Delhi - 110025

19.	Application of nanocomposites for the removal of pollutants from water through adsorption, <b>March 10, 2019</b>	Resource Person	ACTRA (Analytical Chemistry Teacher Association) and SBES College of Science, Aurangabad, Maharashtra
18.	A facile chemical method to produce super-paramagnetic modified graphene oxide nanocomposite and its applications in the removal of heavy metal and dye from aqueous solution.	Lecturer	International conference on advanced materials (ICAM-2019), <b>Organized by:</b> Centre for Nanoscience & nanotechnology, Jamia Millia Islamia, New Delhi.
17.	Nanocomposites for water through adsorption, <b>March 2, 2019;</b> (124 <sup>th</sup> 4-week orientation program from February 12 to March 12, 2019).	Resource Person	UGC human resource development Centre, Jamia Millia Islamia, New Delhi
16.	Nanotechnology for water treatment through adsorption, <b>January 11-13, 2019</b>	Invited Talk	Global Environmental Challenges Human Health and Sustainable Development with Global Environmental Exhibition; <b>Organized jointly by:</b> Environment and Social Development Association (ESDA) Delhi & Centre for the Study of Regional Development, JNU, New Delhi
15.	Nigella Sativa plant seed based Fe <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> /C composite: a non-toxic, novel antibacterial adsorbent for water purification; <b>December 8-10, 2017.</b>	Lecture	International Conference on Molecular Spectroscopy (ICMS 2017), <b>Organized by:</b> International and Inter university Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Kottayam, Kerala.
14.	Magnetic nanohybrid composites for adsorption of arsenic from	Lecture	National Seminar on Biophysics (BIOPHYSIKA-2017), <b>Organized by:</b> Centre

	water: A new advancement; <b>March 16, 2017.</b>		for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi.
13.	Removal of Cd(II) from water using zirconium oxide nanoparticles-coated sand; <b>December 12-14, 2015.</b>	Lecture	3rd International Conference on Nanostructured Materials and Nanocomposites (ICNM 2015); <b>Organized by:</b> Hindustan College of Science and Technology, Farah, Mathura.
12.	Adsorption of Ni(II) from aqueous solution by activated red mud: Isotherm, kinetic and thermodynamic studies; <b>February 27-28, 2015.</b>	Lecture	Recent Advances in Chemical and Environmental Sciences (Science for Nation Building); <b>Organized by:</b> Arya Post Graduate College, Panipat, Haryana.
11.	Adsorption of heavy metal ion, Ni(II), from water using FeMnO <sub>4</sub> /C nanocomposite: A new approach towards water purification; <b>December 19-21, 2014.</b>	Lecture	IInd International Conference on Nanostructured Materials and Nanocomposites (ICNM 2014); <b>Organized by:</b> International and Inter university Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Kottayam, Kerala.
10.	Removal of Cd(II) from aqueous solution through adsorption onto iron oxide activated red mud (IOARM) and parameter studies, <b>April 19-20, 2014.</b>	Lecture	International Conference (on Innovative trends in Applied physical, Chemical, Mathematical Sciences and emerging energy technology for Sustainable Development, <b>APCMET</b> ) <b>Organized jointly by:</b> Krishi Sanskriti, JNU, New Delhi.
9.	Removal of As(III) by zirconium oxide-coated sand through adsorption and kinetic and isothermal study of the process; <b>December 14-16, 2012.</b>	Lecture	International Conference on Chemistry and materials: Prospects and Perspectives-2012; <b>Organized by:</b> Department of Applied Chemistry, Dr. B.R. Ambedkar Central University, Lucknow, UP.

8.	Removal of Zinc(II) by manganese oxide-coated sand through adsorption and kinetic and isothermal study of the process; <b>December 8-10, 2012.</b>	Lecture	International, Inter disciplinary science conference on protein folding and diseases; <b>Organized by:</b> Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi.
7.	Adsorptive removal of lead from aqueous solution by using manganese oxide-coated sand and isotherm and sorption kinetic study; <b>November 28-29, 2012.</b>	Lecture	International conference on environment and human health, <b>Organized by:</b> National Environmental Science Academy & Department of Botany, Jamia Hamdard, New Delhi.
6.	Removal of arsenic(V) from water through adsorption using zirconium oxide-coated sand as an adsorbent; <b>September 10-12, 2012.</b>	Lecture	Chemical constellation Cheminar-2012 (An <b>International Conference</b> ), <b>Organized by:</b> Department of Chemistry, Dr. B.R. Ambedkar NIT; Jalandhar, Punjab.
5.	Removal of Cr(VI) from aqueous solution by Manganese oxide-coated sand and study of different parameters; <b>September 3-5, 2012.</b>	Lecture	National conference on recent trends in material Science research, <b>Organized by:</b> NIT Hazratbal, Srinagar, J&K.
4.	Nano materials Excellent adsorbents for toxic metals and dyes, <b>March 22, 2012.</b>	Lecture	Recent Advances in Chemistry, <b>Organized by:</b> Department of Chemistry, Jamia Millia Islamia, New Delhi.
3.	ZnO nanoparticles: A potential candidate for removal of dyes from waste water, <b>February 11-13, 2012.</b>	Lecture	International conference on green technologies for environmental rehabilitation, <b>Organized by:</b> Faculty of Egg. & Tech., Gurukul Kangri University, Haridwar, Uttrakhand.
2.	Arsenic removal from water using nano materials as adsorbents, <b>December 23-24, 2011.</b>	Lecture	National symposium on chemistry in 21 <sup>st</sup> century, <b>Organized by:</b> Department of Chemistry, Guru Nanak Dev University Amritsar, Punjab.



1.	Arsenic removal from water using different adsorbents, <b>November 24-26, 2011.</b>	Lecture	7 <sup>th</sup> National symposium and conference on solid state chemistry and allied areas, <b>Organized by:</b> Department of Chemistry Jamia Millia Islamia, New Delhi.
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**Student enrolled for Ph.D.**

❖ **Dr. SHARF ILAHI SIDDIQUI**

**Thesis title:** Synthesis, characterization of composite materials and their application for the removal of water pollutants from water through adsorption **(Ph.D. awarded)**

❖ **Dr. NOUFAL KOMBY ABDULLA**

**Thesis title:** Removal of pollutants from water by using modified green adsorbents. **(Ph.D. awarded)**

❖ **Dr. NUSRAT TARA**

**Thesis title:** Synthesis and characterization of graphene oxide based materials and their application in water purification. **(Ph.D. awarded)**

❖ **Dr. ARSHI CHOUDHARY**

**Thesis title:** Modifications of metal oxide nanoparticles for the removal of water pollutants from aqueous solution through adsorption **(Ph.D. awarded)**

❖ **Dr. ATUL SHARMA:**

**Thesis title:** Ferrite based magnetic composite materials for the removal of water pollutants from water **(Ph.D. awarded)**

❖ **ZEENAT SHEERAZI**

**Thesis title:** Functionalization of bimetallic oxide nanoparticles and their application in water treatment. **(Ph.D. Awarded)**

❖ **GEETANJALI RATHI**

**Thesis title:** Synthesis, characterization and application of multifunctional organic-inorganic hybrid composite material for water treatment. **(Ph.D. Awarded)**

❖ **MOHD SAJID**

**Thesis title:** Synthesis, characterization, and application of hybrid nanocomposites for the removal of toxic pollutants from water through adsorption. **(Ph.D. Awarded)**

❖ **Ms. ADITY RATURI**

**Thesis title:** In silico screening of potentially active constituents from plant resources as oral drugs via physicochemical, pharmacokinetic, and molecular docking studies

**(Ph.D. Awarded)**

❖ **Mrs. ARUNA VINOD KAPSE**

**Thesis title:** Development of composite materials and their evaluation for removal of dyes from textile effluent.

**(Work in progress)**

❖ **Ms. SANEHA SHUKLA**

**Thesis title:** Amino acids functionalized Yttrium doped metal oxide-carbon Quantum Dots (YMO/CQDs) for adsorption and photodegradation of toxic water pollutants.

**(Work under progress)**

❖ **Ms. ANKITA MANCHANDA**

**Thesis title:** Synthesis, characterization, and application of Metal-organic framework (MOF)-polymer composites for the removal of emerging contaminants from water through adsorption

**(Work under progress)**

❖ **Ms. ADIBA KHAN**

**Thesis title:** Novel hydrogel for water remediation through adsorption and photocatalytic degradation of dyes

**(Work under progress)**

❖ **Ms. KAHKASHAN SARFARAZ**

**Thesis title:** Bioinorganic Studies on Anticancer drugs

**(Work under progress)**

**Students guided at P.G. Level:**

**(i) Dr. DEEPTI GAUTAM**

Biodiesel: A source of energy (2007-08)

**(ii) Ms. RAJSHREE KANWAR**

Synthesis of ZnO Nanoparticles and their use for water purification (2008-09)

**(iii) Mr. ASHFAQUE AHMAD**

Synthesis of ZnO, CuO nanoparticles and their characterization (2009-10)

**(iv) Dr. SHOKIT HUSAIN**

Synthesis and characterization of iron oxide nanoparticles by sol-gel method and their coating on natural sand (2010-11)

- (v) **Mr. CHITRANJAN BHARTI**  
Removal of As(V) from water using zirconium oxide coated sand (2011-12)
- (vi) **Mr. SYED MOHD. JAWAD JAFERI**  
Removal of Zn(II) from water using manganese oxide- coated-sand (2011-12)
- (vii) **Dr. SUHAIL AYOUB KHAN**  
Removal of Cd(II) from water using zirconium oxide nanoparticles-coated sand (2012-13)
- (viii) **Dr. MAQSOOD AHMAD**  
Removal of arsenic from water by using iron-tin binary mixed oxide coated sand (2012-13)
- (ix) **Dr. MEGHA JAYACHANDRAN**  
Preparation of nanosilver immobilized chitosan/ gelatin membrane for antimicrobial activity (2013-14)
- (x) **Dr. ZAKIULLAH ZAIDI**  
Removal of arsenic from water by using Iron oxide-coated sand (2014-15)
- (xi) **Dr. ARSHI CHOUDHRY**  
Synthesis, characterization of  $\text{MnO}_2\text{@Tea}$  nanohybrid and its application in removal of arsenic from aqueous solution (2015-16)
- (xii) **Ms. ARTI PATHAK**  
Synthesis, characterization of  $\text{MnFe}_2\text{O}_4\text{@Tea}$  nanohybrid and its application in removal of Congo red dye from aqueous solution (2015-16)
- (xiii) **Ms. GEETANJALI RATHI**  
Kinetic and isotherm studies of acid washed *Bergenia* ciliate plant leaves for Methylene blue dye remediation from aqueous solution (2016-17)
- (xiv) **Ms. SONIKA BALODA**  
Modified *Bergenia* ciliate plant seeds as a bio-adsorbent for the adsorptive removal of Methylene blue from aqueous solution (2016-17)
- (xv) **Ms. RENU SINGH**

- Synthesis of functionalized metal oxide nano particles for water treatment (2017-18)
- (xvi) Ms. RAZIA KHATOON**
- Synthesis of functionalized metal oxide nano particles for water treatment (2017-18)
- (xvii) Ms. FATIMA ZOHRA**
- Synthesis of functionalized metal oxide nano particles for water treatments (2017-18)
- (xviii) Mr. LOKENDRA RAJPUT**
- Adsorption of Crystal violet from water onto the cellulosic surface embedded maghemite nanohybrid composite (2018-19)
- (xix) Mr. AKHIL GOSWAM**
- Removal of Methylene blue from aqueous solution using Calendula plant leaves based manganese oxide. (2018-19)
- (xx) Mr. TOFIK AHMAD**
- Synthesis of  $\text{Fe}_2\text{O}_3$ @AC nanocomposite for the removal of Congo red from aqueous solution (2019-20)
- (xxi) Ms. AYUSHI AGGARWAL**
- Synthesis and Adsorption studies of Congo red dye from water onto  $\text{Fe}_2\text{O}_3$ @tea magnetic nanocomposite (2019-20)
- (xxii) Mr. NIKU AHMAD**
- Economically viable nanocomposites as adsorbents for the removal of harmful pollutants from wastewater-A review (2020-21)
- (xxiii) Mr. SHOEBA RASHEED**
- Synthesis and application of modified egg shell membrane using oxides of silicon and copper for the removal of Congo red dye from aqueous solution (2021-22)
- (xxiv) Ms. RESMA AHMAD**

- Plant based nano-engineered adsorbents for the removal of dyes from wastewater treatment  
(2021-22)
- (xxv) Ms. FATIMA AZHAR**  
Plant based adsorbent used in the removal of heavy metals from wastewater (2021-22)
- (xxvi) Ms. DEEPSHIKHA VIJ**  
Recent advances of photocatalytic application in water treatment (2021-22)
- (xxvii) Ms. MAHIN ALAM**  
Synthesis and application of base activated biochar for the removal of Crystal violet dye from aqueous solution (2021-22)
- (xxviii) Ms. MANISHA**  
Synthesis of Ce-doped zinc oxide by using plant (withania somnifera): An adsorbent for Congo red **(2022-23)**
- (xxix) Ms. URVASHI**  
Synthesis of Cerium-doped Zinc oxide-Withania sominfera composite: A sustainable hybrid material for dye remediation (2022-23)
- (xxx) Mr. SARFARAZ MAHMOOD**  
Carbon quantum dots decorated Titanium disilicide nanohybrid for enhanced photocatalytic activity (2023-24)
- (xxxi) Mr. ASHISH MAURYA**  
Adsorptive removal of Alizarin red-S dye from aqueous solution using Cerium doped zinc oxide @ Withania Sominfera nanocomposite (2023-24)

