

Name of Faculty Dr. Md. Atif Qaiyum

Designation Assistant Professor

Nature of Job/Appointment Contract

Date of Joining 28 – 10 – 2024

E-mail atifqaiyum_chm@cbit.ac.in



Education Qualifications

Name of the Degree

TM Class

Ph. D

Doctor of Philosophy (Chemistry)

Awarded

PG

M.Sc. (Organic Chemistry)

First with Distinction

UG

B. Sc. (Chemistry Physics, Mathematics)

First

Work Experience

Teaching

1.6 Years

Research

5 years

Others

-

Area of Specialization

Adsorption, Materials Chemistry, Nanomaterials & Nanocomposites, Ferrofluid, Waste Water Remediation, Heavy Metal Detoxification, Dye and Industrial Effluents Decontamination, Photo-catalysis, Flocculation.

Responsibilities held at Department Level

1. Class In-charge & Mentor for First year Students
2. ERP Coordinator for Dept. of Chemistry
3. WBC Coordinator for Dept. of Chemistry

Research Guidance

PG Projects guided - 10

Awards Received

1. Best Poster presentation at 27th ISCB International conference, BIT MESRA, Ranchi, India 2022
2. Best Paper Presentation at International Conference on Waste Management 2024 Organized at Kolkata, India
3. Qualified IIT JAM 2016
4. Qualified CUCET 2019

Courses Handled at Under Graduate /

Post Graduate Level.

Engineering Chemistry, Applied Chemistry, Organic Chemistry

Project Carried

S.No.	Title	Sanction No.	Amount (Rs)
1.	Synthesized Nanocomposites for Multi-pollutant Remediation : Response Surface Methodology – based optimization in batch and Industrial Wastewater systems.	No. CBIT/R&E/ 44/2025	318555
2.	Optimization of Activated Carbon Production From Waste Materials For Textile Dye	No. CBIT/R&E/ 06//2025 (Students Project)	30000
3.	Development of Vanadium based Electrodes for Lithium-Ion Batteries	No. CBIT/R&E/ 41//2025	318552
4.	Efficiency Solar Light Harvesting Cobalt mediated Conjugated Polymer Nanostructures for Photocatalytic Applications.	No. CBIT/R&E/ 43//2025	318552
5.	Development of Nanophase – Separated Pt-Based Catalyst For Enhanced Fuel cell Efficiency	No. CBIT/R&E/ 42//2025	318552

Programs/Faculty DevelopmentPrograms/Seminars/Workshops.Other Trainings (Attended and/or Organized).

1. Presented Paper in Online International Conference of Chemistry for sustainable Development organized by the Dept, of Chemistry, Central University of Jharkhand 2021
2. Participation in Advanced Instrumental Techniques in Chemistry and Material Science (AITCMS22) funded by DST organized by BIT, Mesra, Ranchi from 9-15th May 2022.
3. Participation in Online short-term course on Advanced material characterization, ROORKEE 2022
4. Attended Session Groundwater remediation in difficult conditions Organized by Remtech EXPO Europe 2021
5. Participated in Online Faculty Development Program Organized by IES University Bhopal, Inida. 2022
6. Attended Short term Online Course on Advance Material Characterization Organized by Genisis of Education Uttarakhand India 2021
7. Attended Faculty Development Program Organized by Central University of Jharkhand 2022
8. Attended faculty development program (FDP Online) on “ROLE OF CHEMISTRY IN ADVANCED ENGINEERING sfrom 03rd to 08th February 2025 Organized by the Department of Chemistry, Vasavi College of Engineering (A), Hyderabad
9. Participated in 2nd International Conference on Biotechnology and interdisciplinary Technologies Organized by Department of Biotechnology,CBIT 2024

Details of Journal Publications/ Conferences (National and International) from the year 2017

1. **Qaiyum MA**, Kumari R, Mohanta J, Samal PP, Dey B, Dey S (2021). Alkali treated water chestnut (*Trapa natans* L.) shells as a promising phytosorbent for malachite green removal from water. International Journal of Phytoremediation
<https://doi.org/10.1080/15226514.2021.1977912>
2. **Qaiyum MA**, Kumari R, Mohanta J, Samal PP ,Dutta S, Dey B, Dey S (2022). Adsorptive Removal of Malachite Green from Water Using Ethylenediamine

Fabricated Ni–Cr Bimetallic Composite. Journal of Cluster Science.
<https://doi.org/10.1007/s10876-022-02270-1>

3. **Qaiyum MA**, Sahu P, Samal PP, Dey B, Dey S (2022). Towards a win-win chemistry: extraction of C.I. orange from Kamala fruit (*Mallotus philippensis*), and simultaneous exercise of its peels for the removal of Methylene Blue from water. *International Journal of Phytoremediation*
4. <https://doi.org/10.1080/15226514.2022.2119936>
5. **Qaiyum MA**, Samal, PP, Dey B, & Dey S. (2023). Elegant synthesis of phyto-magnetic $\text{Fe}_3\text{O}_4@ \text{Syzygium cumini}$ and its application for decontamination of Eriochrome Black T dye from aqueous solution and wastewater. *Biomass Conversion and Biorefinery*, 1-20. <https://doi.org/10.1007/s13399-023-04372-w>
6. **Qaiyum MA**, Samal, PP, Dutta S, Dey B, & Dey S. (2023). Non-conventional, burnt *Shorea robusta* leaf extract mediated green synthesis of zinc oxide nanoparticles and facile removal of Eriochrome black T dye from water. *International Journal of Phytoremediation*, 1-14. <https://doi.org/10.1080/15226514.2023.2256903>
7. **Qaiyum, MA**, Bharadwaj, B., Samal, P. P., Dey, B., & Dey, S. (2024). Nature's allies: unleashing the potential of oxalic acid-modified *Saccharum spontaneum* (kashful stalks) for methylene blue removal from water and wastewater. *International Journal of Environmental Science and Technology*, 1-18.
8. **Qaiyum, MA** Barik, H., Dey, B., & Dey, S. (2024). Integrated activation strategy of mahua seed cake for efficient wastewater treatment: a sustainable approach for methylene blue removal. *Biomass Conversion and Biorefinery*, 1-14.
9. Barik, H., **Qaiyum, M A.**, Samal, P. P., Dey, B., & Dey, S. (2024). Highly efficient removal of crystal violet dye using citric acid-modified Lotus (*Nelumbo nucifera*) seed pod. *Biomass Conversion and Biorefinery*, 1-15.
10. Mahato R., **Qaiyum, MA**, Samal, PP, Dutta S, Dey B, Dey S 2022 Exploring the promising potential of fallen Bamboo leaves (*Bambusa bambos*) for efficient removal of Crystal violet from water and industrial wastewater. *International Journal of Phytoremediation* doi.org/10.1080/15226514.2022.2125498
11. Rout A, **Qaiyum MA**, Samal PP, Dutta S, Dey B, Dey S. 2022. Brinjal (*Solanum melongena*) stalk waste as an effective scavenger for Eriochrome Black-T from water and wastewater: an Approach towards waste to best. *Int J Phytoremediation* <http://dx.doi.org/10.1080/15226514.2022.2123445>
12. Kumari, R., Sircar, A., Dey, S., **Qaiyum, MA.**, Bist, N., & Yadav, K. (2024). Efficient removal of a food dye from wastewater onto coconut coir dust and its comparative illustration with other low-cost adsorbents.

13. Samal PP, **Qaiyum MA**, Dutta S, Sey B, Dey S, (2022) Thiosulfate impregnated spent tea leaves for the remarkable uptake of malachite green. International Journal of Phytoremediation . <https://doi.org/10.1080/15226514.2022.2161465>
14. Kumari, R., Khan, M. A., Mahto, M., **Qaiyum, MA.**, Mohanta, J., Dey, B., ... & Dey, S. (2023). Strategically dewaxed honeycomb powder is a promising and eco-friendly alternative for the removal of malachite green through fixed bed column.
15. Sethi GK, **Qaiyum MA**, Samal, P P, Dutta S, Dey B, Dey S (2023) Phyto- magnetic and techno-economic peanut-shell embedded ferrite as a scavenger for classic removal of recalcitrant crystal violet dye from wastewater. Biomass Conversion and Biorefinery. <https://doi.org/10.1007/s13399-023-04461-w>
16. Samal PP, **Qaiyum MA.**, Dutta S, Dey B, Dey S. (2023) Augmented dye eradication from wastewater using alkali-aided, reinforced waste acacia (*Acacia auriculiformis*) leaves. International Journal of Phytoremediation
17. Kumari R, Khan MA, Mahto M, **Qaiyum MA**, Mohanta J, Dey B, Dey S. 2020. Dewaxed honeycomb as an economic and sustainable scavenger for malachite green from water. ACS Omega. 5(31): 19548–19556. <https://doi.org/10.1021/acsomega.0c02011>
18. Mohanta J, Kumari R, **Qaiyum MA**, Dey B, Dey S. 2021. Alkali assisted hydrophobic reinforcement of coconut fiber for enhanced removal of cationic dyes: equilibrium, kinetics, and thermodynamic insight. International Journal of Phytoremediation.
19. Kumari R, Mohanat J, Sambasivaiah B, **Qaiyum MA**, Dey B, Samal PP, Dutta S, Dey S (2023). Dye sequestration from aqueous phase using natural and synthetic adsorbents in batchmode: Present Status and Future Perspectives. International Journal of Environmental Science and Technology
20. Bharadwaj, B., Dutta, S., **Qaiyum MA**, Samal, P. P., Dey, B., & Dey, S. (2023). Pristine wild sugarcane (*Saccharum spontaneum*) as a biosorbent for removal of methylene blue from wastewater: isotherm, kinetics and regeneration studies. International Journal of Phytoremediation, 1-15.
21. Das, S, Samal, P., **Qaiyum MA.**, Dutta, S., Dey, B., & Dey, S. (2024). *Neolamarckia cadamba* waste pulp as a natural and techno-economic scavenger for methylene blue from aqueous solutions. International Journal of Phytoremediation, 26(2), 208-218.
22. Samal, P. P., Das, S., **Qaiyum MA.**, Ghosh, A., Dey, B., & Dey, S. (2023). Polypyrrole-embedded magnetic *Neolamarckia cadamba* flower biochar for outstanding Cr (VI) removal from wastewater. Biomass Conversion and Biorefinery, 1-14. <https://doi.org/10.1007/s13399-023-05180-y>

23. Samal, P. P., Swain, J., **Qaiyum, MA**, Ghosh, A., Mandal, D., Dey, B., & Dey, S. (2024). Green synthesis of MnO₂-embedded Rauvolfia tetraphylla leaves (MnO₂@RTL) for crystal violet dye removal and as an antibacterial agent. Environmental Science and Pollution Research, 31(4), 5457-5472. <https://doi.org/10.1007/s11356-023-31442-3>
24. Samal, PP., **Qaiyum, MA**, Ghosh, A., Kumari, R., Mohanta, J., Das, S., ... & Dey, S. (2024). Acacia auriculiformis leaf extract mediated green synthesis of goethite and boehmite embedded activated sawdust for Cr (VI) adsorption. Journal of Hazardous Materials Advances, 100405. <https://doi.org/10.1016/j.hazadv.2024.100405>
25. Panda, A., Samal, PP., **Qaiyum MA**, Dey, B., & Dey, S. (2024). Think before throw: waste chili stalk powder for facile scavenging of cationic dyes from water. Environmental Monitoring and Assessment, 196(2), 118. <https://doi.org/10.1007/s10661-023-12243-0>
26. Swain, J., Samal, PP., **Qaiyum MA**, Dey, B., & Dey, S. (2024). Biosorption of Crystal Violet, a Cationic Dye onto Alkali Treated Rauvolfia tetraphylla Leaf: Kinetics, Isotherm and Thermodynamics. Water Conservation Science and Engineering, 9(1), 1. <https://doi.org/10.1007/s41101-023-00233-9>
27. Mohanta, J., **Qaiyum, MA.**, Samal, P. P., Dey, B., Dutta, S., & Dey, S. (2024). Starch Grafted Pyrolusite Composite for Enhanced Removal of Malachite Green from Water and Wastewater. Water, Air, & Soil Pollution, 235(1), 50.
28. Soumen Dey, Gayatri Kumari Sethi, Priyanka Priyadarsini Samal, Saismruti Das, Bidisha Bharadwaj, Himanshu Barik, Jashminirani Swain, Ankita Panda, Md Atif Qaiyum, Banashree Dey. (2025) Expired Medicine-Derived Wonder Scavenger for The Removal of Harmful Dyes With No Hazardous Footprint. Water, Air, & Soil Pollution.185-236

స్వయం తేజస్విన్ భవ

1979