YUNUS AHMED, PhD

Present Address: Professor, Department of Chemistry (Branch: Chemical Engineering), Chittagong University of Engineering & Technology (CUET), Chittagong-4349, Bangladesh.
ORCID: 0000-0002-8556-1944; **Google Scholar:** Yunus Ahmed; LinkedIn**:** Yunus Ahmed
Website: Yunus Ahmed, **E-Mail:** yunusahmed@cuet.ac.bd

BACKGROUND

Experienced educator and researcher specializing in Environmental Science, committed to advancing knowledge and fostering collaboration across the fields of environment and engineering. Focused on the synthesis of materials, antimicrobial resistance, nanomaterial development, artificial intelligence for environmental remediation, as well as water resources and treatment.

RESEARCH EXPERTNESS

- Remediation of Biological and Chemical Hazards
- Antimicrobial Resistance
- Nanomaterial Development
- Artificial Intelligence (AI)
- Water Disinfection
- Advanced Oxidation Processes (AOPs)

EMPLOYMENT HISTORY

03/2025 - Present	**Professor**, Department of Chemistry (Branch: Chemical Engineering), CUET, Chattogram-4349, Bangladesh.
05/2023 - 03/2025	**Associate Professor**, Department of Chemistry (Branch: Chemical Engineering), CUET, Chattogram-4349, Bangladesh.
06/2022 - 12/2024	**Secretary-** Bureau of Research, Testing & Consultation (BRTC), Department of Chemistry, CUET, Chattogram-4349, Bangladesh.
02/2022 – 05/2023	**Assistant Professor**, Department of Chemistry (Branch: Chemical Engineering), CUET, Chattogram-4349, Bangladesh.
07/2017 – 01/2022	**HDR Research Scholar**, Australian Centre for Water and Environmental Biotechnology (ACWEB),The University of Queensland (UQ), Australia.
10/2010 – 07/2016	**Lecturer** then **Assistant Professor**, Department of Chemistry (Branch: Chemical Engineering), CUET, Chattogram-4349, Bangladesh.
03/2009 – 09/2010	**Assistant Executive**, RSTS Lab, SGS Bangladesh Limited, Noor Tower, Dhaka-1205, Bangladesh.

TEACHING AREAS

- Chem 101: General Chemistry for Engineer
- Chem 103: Environmental Chemistry
- Chem 133: Chemistry of Corrosion, Environment and Materials
- Chem 5403: Advanced Photochemistry
- Chem 5410: Green Chemistry and Nanomaterials

ACADEMICAL QUALIFICATIONS

2017 - 2022 Doctor of Philosophy (PhD) in Chemical Engineering, Australian Centre for Water and Environmental Biotechnology (ACWEB), The University of Queensland (UQ), St. Lucia, Brisbane, Queensland, Australia.
Thesis: *Simultaneous removal of antibiotic resistant bacteria, antibiotic resistance genes and micropollutants by using photo-Fenton processes*

2013 - 2016 **Master of Science (MSc) in Chemical and Process Engineering**, The National University of Malaysia (Malay: *Universiti Kebangsaan Malaysia* abbreviated as UKM), Malaysia.
Thesis: *Degradation of methylene blue using a heterogeneous photo-Fenton catalyst under visible and solar light irradiation*

2007 - 2008 **Master of Science (MSc) in Applied Chemistry and Chemical Engineering**, Islamic University, Bangladesh.
Thesis: *Chemical and biological investigation of Sapium baccatum*

2003 - 2007 **Bachelor of Science (Honours) in Applied Chemistry and Chemical Engineering**, Islamic University, Bangladesh.
Majors: Chemical Engineering and Chemical Technology

HONOURS AND AWARDS

2017-2021: Research Training Program (RTP) Scholarship, UQ, Queensland, Australia.

2017-2021: Research Higher Degree Scholarship (Top-Up), UQ, Queensland, Australia.

2013-2016: University Research Fellowship, National University of Malaysia, Malaysia.

2013-2014: Graduate Research Assistantship, National University of Malaysia, Malaysia.

2008-2009: National Science and Information Technology (NSIT) Fellowship, Bangladesh.

2008-2009: Professor Mokarram Hossen Fellowship, BCSIR, Dhaka, Bangladesh.

2006-2007: Faculty of Science and Engineering Merit Scholarship, IU, Kustia, Bangladesh.

RELATIVE TO OPPORTUNITY

Mr Ahmed currently devotes 40% of his time to teaching, 40% to research, including undergraduate and postgraduate (MSc and PhD) researcher supervision, and 20% to leadership (Member of the department Executive Committee, Planning Committee, Evaluation Committee, and higher degree research committee), secretary of the Bureau of Research, Testing & Consultation-BRTC, and Group Leader of Water and Environmental Biotechnology Laboratories.

RESEARCH PROJECTS EXPERIENCES

External Funds

1. **Project Name:** Removal of micropollutants from urban wastewater through novel nano-photocatalyst (ET-20221947)

   Funding: Ministry of Education, BENBAIS, Government of Bangladesh
   Duration: July 2022 – June 2025

2. **Project Name:** New emerging contaminants and their mitigation from urban wastewater by nano-photocatalyst (SRG-222387).

   Funding: Ministry of Science and Technology (MOST), Government of Bangladesh.
   Duration: July 2023 – June 2024

Internal Funds

3. **Project Name:** Inactivation of antibiotic-resistant bacteria and its genes from urban water systems through a novel disinfection process (CUET/DRE/2022-23/CHEM/021)
   Funding: Department of Research and Extension (DRE), CUET, Bangladesh
   Duration: July 2022 – June 2024

4. **Project Name:** Development of an innovative solar photocatalytic process for the degradation of emerging micropollutants (CUET/DRE/2022-23/CHEM/022)
   Funding: Department of Research and Extension (DRE), CUET, Bangladesh
   Duration: July 2022 – June 2024

5. **Project Name:** Visible light-driven photocatalytic degradation of organic pollutant over $CuWO_4$@TiO_2 nanocomposite: a combined experimental and theoretical studies. (21MSCHEM014F)
   Funding: Department of Research and Extension (DRE), CUET, Bangladesh
   Duration: July 2023 – June 2025

6. **Project Name:** Innovative electrochemical sensor development using disposable electrodes for antibiotic concentration measurement across diverse sources. (21MSCHEM002F)
   Funding: Department of Research and Extension (DRE), CUET, Bangladesh
   Duration: July 2023 – June 2025

PUBLICATIONS – SUMMARY

- Author or co-author of over 39 peer-reviewed journal articles, including 20 Q1 articles and 3 book chapters since 2010
- H-index of 16 with 1700+ citations according to Google Scholar (June 2025)
- Over the past five years, he has maintained an average of three journal papers annually, garnering approximately 250 citations annually, with over two-thirds published in top-tier journals (Q1 and Q2) and half as first-authored articles.
- He has attended more than 10 international and national conferences.

PUBLICATIONS LIST

Book and Book Chapter

1. "Simultaneous removal of antibiotic resistant bacteria, antibiotic resistance genes and micropollutants by using photo-Fenton processes". **Yunus Ahmed** (2022). **PhD Thesis**, Australian Centre for Water and Environmental Biotechnology, The University of Queensland. https://doi.org/10.14264/89c6795

2. "Control Strategies to Combat Dissemination of Antibiotic Resistance in Urban Water Systems" Jianhua Guo, Yue Wang, **Yunus Ahmed**, Jie Li and Min Jin, In: Célia M. Manaia, Erica Donner, Ivone Vaz-Moreira, and Peiying Hong (eds.), *Antibiotic Resistance in the Environment: A Worldwide Overview*, Hdb Env Chem, Springer. (2020) 91: 147–188, https://doi.org/10.1007/698_2020_474

3. "Removal of antibiotics from urban water by using hybrid advanced oxidation processes" Akser Alam Siddiqua Maya, Keya Rani Dutta, Md. Mahfujur Rahman, Tahmina Akter and **Yunus Ahmed**, In: Amit K. Thakur, Rahul Kumar, Nadeem A Khan, Afzal Husain Khan, Ravi Shankar, Md. Nahid Pervez (eds.), Advanced Oxidation Process-Based Integrated and Hybrid Technologies for Degradation of Pharmaceuticals and Personal Care Products, Paperback ISBN: 9780443218873

Selected Key Publications in Chemical or Environmental Engineering

4. "Heterogeneous Fenton-assisted antibiotic removal from wastewater: Effect of $FeWO_4$ nanomaterial morphology across four Fenton treatment processes" (2025), Akser Alam Siddiqua Maya, Parul Akhtar, Md. Arif Hossen, Md Jahangir Alam, Hamad AlMohamadi, **Yunus Ahmed**, Water Research X, 100354; https://doi.org/10.1016/j.wroa.2025.100354. (IF: 7.2, **Q1**).

5. Experimental and AI-driven enhancements in gas-phase photocatalytic CO_2 conversion over synthesized highly ordered anodic TiO_2 nanotubes" (2025), MA Hossen, MM Hasan, **Yunus Ahmed**, A Abd Aziz, N Yaacof, KH Leong, Energy Conversion and Management 327, 119544; https://doi.org/10.1016/j.enconman.2025.119544. (IF: 9.9, **Q1**).

6. "Advancements and challenges in Fenton-based advanced oxidation processes for antibiotic removal in wastewater: From the laboratory to practical applications"(2025) **Yunus Ahmed**, Akser Alam Siddiqua Maya, Parul Akhtar, Hamad AlMohamadi, Abdul Wahab Mohammad, S.M. Ashekuzzaman, Agnieszka I. Olbert, Md Galal Uddin, Journal of Environmental Chemical Engineering, 13(1) 115064; https://doi.org/10.1016/j.jece.2024.115068. (IF: 7.4, **Q1**).

7. "Advanced ciprofloxacin quantification: A machine learning and metaheuristic approach using ultrasensitive chitosan-gold nanoparticle-based electrochemical sensor"(2025) **Yunus Ahmed**, Tahmina Akter, Meherunnesa Prima, Keya Rani Dutta, Sanjida Mukut, Mohebul Ahsan, Md Mahbubur Rahman, M.K. Mohammad Ziaul Hyder, Journal of Environmental Chemical Engineering, 13(1) 115094; https://doi.org/10.1016/j.jece.2024.115094.(IF: 7.4, **Q1**).

8. "Optimizing photocatalytic dye degradation: A machine learning and metaheuristic approach for predicting methylene blue in contaminated water"(2025) **Yunus Ahmed**, Keya Rani Dutta, Sharmin Nahar Chowdhury Nepu, Meherunnesa Prima, Hamad AlMohamadi, Parul Akhtar, Results in Engineering, 25, 103538; https://doi.org/10.1016/j.rineng.2024.10353.(IF: 6.0, **Q1**).

9. "Emerging strategies in sustainable removal of antibiotics using semiconductor-based photocatalysts" (2025) **Yunus Ahmed**, Keya Rani Dutta, Parul Akhtar, Md. Arif Hossen, Md Jahangir Alam, Obaid A. Alharbi, AlMohammadi، Abdul Wahab Mohammad, Beilstein Journal of Nanotechnology, 16, 264–285. https://doi.org/10.3762/bjnano.16.21 (IF 3.2, **Q2**).

10. "MXenes: Are They Ready for Direct Air Capture of CO_2?"(2025) Konok Chandra Bhowmik, Md. Arafat Rahman, Yunus Ahmed, Tasmia Binte Hai" Chemistry – An Asian Journal, e202401822. https://doi.org/10.1002/asia.202401822 (IF 3.5, **Q1**).

11. "A novel interpretable machine learning and metaheuristic-based protocol to predict and optimize ciprofloxacin antibiotic adsorption with nano-adsorbent"(2024) **Yunus Ahmed**, Akser Alam Siddiqua Maya, Parul Akhtar, Md. Shafiul Alam, Hamad AlMohamadi, Md Nurul Islam, Obaid A. Alharbi, Syed Masiur Rahman, Journal of Environmental Management,370, 122614; https://doi.org/10.1016/j.jenvman.2024.122614.(IF: 8.0, **Q1**).

12. "Harnessing neural network model with optimization for enhanced ciprofloxacin antibiotic removal from polluted water: A transparent and objective framework" (2024) **Yunus Ahmed**, Md. Mahfujur Rahman, Md. Shafiul Alam, Mohammad Islam Miah, Md. Shamimul Haque Choudhury, Syed Masiur Rahman, Journal of Water Process Engineering, 65, 105724; https://doi.org/10.1016/j.jwpe.2024.105724 (IF: 6.3, **Q1**).

13. "Synergistic combination of graphitic carbon nitride and peroxymonosulfate for efficient photocatalytic destruction of emerging contaminants under simulated solar irradiation" (2023) Jiexi Zhong, **Yunus Ahmed**, Jochen Mueller and Jianhua Guo ACS ES&T Water, 3, 1, 6-15. https://doi.org/10.1021/acsestwater.2c00237 (IF: 4.8, **Q1**).

14. "Simultaneous removal of antibiotic resistant bacteria, antibiotic resistance genes and micropollutant by FeS_2@GO-based heterogeneous photo-Fenton process" (2022) **Yunus Ahmed**,Jiexi Zhong, Zhiguo Yuan and Jianhua Guo. Environmental Science and Technology,56, 21,15156-15166.https://doi.org/10.1021/acs.est.2c03334.(IF:10.8, **Q1**).

15. "Roles of reactive oxygen species in antibiotic resistant bacteria inactivation and micropollutant degradation in Fenton and photo-Fenton processes" **Yunus Ahmed**, Jiexi Zhong, Zhiguo Yuan and Jianhua Guo; Journal of Hazardous Materials; 2022; 430, 128408. https://doi.org/10.1016/j.jhazmat.2022.128408. (IF: 12.2, **Q1**).

16. "Simultaneous removal of micropollutants, antibiotic resistant bacteria, and antibiotic resistance genes using graphitic carbon nitride under simulated solar irradiation" Jiexi Zhong, **Yunus Ahmed**, Gilda Carvalho, Zhiliang Wang, Lianzhou Wang, Jochen F. Mueller and Jianhua Guo; Chemical Engineering Journal, 2022, 433(3), 133839, https://doi.org/10.1016/j.cej.2021.133839. (IF: 13.3, **Q1**).

17. "Simultaneous removal of antibiotic resistant bacteria, antibiotic resistance genes, and micropollutants by a modified photo-Fenton process" **Yunus Ahmed**, Jiexi Zhong, Zhiguo Yuan and Jianhua Guo; Water Research; 2021; 197, 117075. https://doi.org/10.1016/j.watres.2021.117075. (IF: 11.4, **Q1**).

18. "Efficient inactivation of antibiotic resistant bacteria and antibiotic resistance genes by photo-Fenton process under visible LED light and neutral pH" **Yunus Ahmed**, Ji Lu, Zhiguo Yuan, Philip L. Bond and Jianhua Guo; Water Research 2020; 179, 115878. https://doi.org/10.1016/j.watres.2020.115878. (IF: 11.4, **Q1**).

19. "Removal of Chromium (VI) from effluent by a magnetic bio adsorbent based on jute stick powder and its adsorption isotherm, kinetics and regeneration study" Md Masudur Rahman, Md Rezaul Karim, MKM Ziaul Hyder, **Yunus Ahmed**, Ranjit K Nath; Water, Air, & Soil Pollution; 2020, 231(164),1-18. https://doi.org/10.10007/s11270-020-04544-8. (IF: 2.98, **Q2**).

20. "Non-sulphide zeolite catalyst for bio-jet-fuel conversion" Md. Shahinuzzaman, Zahira Yaakob, **Yunus Ahmed**, Renewable and Sustainable Energy Reviews 2017; 77: 1375-1384. https://doi.org/10.1016/j.rser.2017.01.162. (IF: 16.799, **Q1**).

21. "Degradation and mineralization of methylene blue using a heterogeneous photo-Fenton catalyst under visible and solar light irradiation" **Yunus Ahmed**, Zahira Yaakob and Parul Akhtar, Catalysis Science & Technology, 2016; 6 (4): 1222-1233. https://doi.org/10.1039/C5CY01494H. (IF: 6.117, **Q1**).

22. "Production of biogas and performance evaluation of existing treatment processes in palm oil mill effluent (POME)" **Yunus Ahmed,** Zahira Yaakob, Parul Akhtar, Kamaruzzaman Sopian, Renewable and Sustainable Energy Reviews, 2015; 42:1260-1278. https://doi.org/10.1016/j.rser.2014.10.073. (IF: 16.799, **Q1**).

23. "Fabrication of amine cross-linked magnetic biopolymer adsorbent for the removal of a cationic dye and its isotherm, kinetics and thermodynamic study" Md. Masudur Rhaman,

Md. Din Islam, Md. Rezaul Karim, Yunus Ahmed and M. K. Mohammad Ziaul Hyder, Research Square. 2022. https://doi.org/10.21203/rs.3.rs-1742914/v1

24. "Efficiency of effluent treatment plants and threat to human health and aquatic environment in Bangladesh" Parul Akhtar, **Yunus Ahmed**, Faridul. Islam, K. Alam, M. Mary, M. Z. Islam, M. M.H. Bhuiyan and Z. Yaakob, Asian Journal of Chemistry, 2016; 28(1): 60-68. https://doi.org/10.14233/ajchem.2016.19230. (IF: 0.535, **Q4**).

25. "Assessment of copper in diverse pulses, bananas, vegetables and arums of five upazila of Chittagong area in Bangladesh by spectro-photometric method" Faridul Islam; S. C. Bhattacharje; A. Hossain; S. Islam; A.S.M Mahmud; **Yunus Ahmed**; Mahbubur Rahman, International Food Research Journal. 2013; 20(4): 1867-1871 IF: 1.014, **Q3**).

26. "Assessing Groundwater Vulnerability: Investigating Pharmaceutical Contaminants in Wastewater through Laboratory Analysis" Obaid A. Alharbi, **Yunus Ahmed**, Edward Jarvisb, Aikaterini Galani, Nikolaos S. Thomaidis, Maria-Christina Nika, Ayman M. Alrehaili, Fahad Alshabouna, Abdulaziz S. Alquwaizany, Deborah V. Chapman; Journal of Hazardous Materials; Under Review, (IF: 12.2, **Q1**).

Selected Key Publications in Natural Product Chemistry

27. "Antimicrobial and cytotoxic constituents from leaves of *Sapium baccatum*" **Yunus Ahmed**, Md. Hossain Sohrab, Sharif Md Al-Reza, Faqir Shahidulla Tareq, Choudhury Mahmood Hasan and Md. Abdus Sattar; Food and Chemical Toxicology, 2010, 48(2), 549-552. https://doi.org/10.1016/j.fct.2009.11.030. (IF: 5.572, **Q1**).

28. "Inhibition of plant pathogens in vitro and in vivo with essential oil and organic extracts of *Cestrum nocturnum* L." Sharif M. Al-Reza, Atiqur Rahman, **Yunus Ahmed** and Sun Chul Kang; Pesticide Biochemistry and Physiology, 2010, 96(2), 86-92. https://doi.org/10.1016/j.pestbp. 2009.09.005. (IF: 4.966, **Q1**).

29. "New insights of phenolic compounds from optimized fruit extract of *Ficus auriculate"* Mohammed Shahinuzzaman, Parul Akhtar, Nowshad Amin, **Yunus Ahmed**, Farah Hannan Anuar, H Misran, Md Akhtaruzzaman; Scientific Reports; 2021; 11 (1), 1-14. https://doi.org/10.1038/s41598-021-91913-w. (IF: 4.379, **Q1**).

30. "Ficus species good sources of natural antioxidant drugs" Parul Akhtar, Zahira Yaakob, **Yunus Ahmed,** Md Shahinuzzaman; Turkish Journal of Pharmaceutical Sciences; 2019; 2, https://doi.org/10.4274/tjps.galenos.2018.67699. (IF: 0.95, **Q4**).

31. "Potential of leaves of eighteen cultivars of *Ficus carica* as antioxidants and profiling of phenolic compounds as active molecules" Parul Akhtar, Zahira Yaakob, **Yunus Ahmed**, Mohammad Shahinuzzaman, María Mar Contreras; Iranian Journal of Pharmaceutical Sciences; 2019; 15 (2), 41-60. (IF: 0.323, **Q4**).

32. "Chemical constituents of *Saurauia roxburghii*" **Yunus Ahmed,** Parul Akhtar and Shakila Rahman, Zahira Yaakob; Chemistry of Natural Compounds. 2016; 52(5): 953-955, https://doi.org/10.1007/s10600-016-1831-0. (IF: 0.809, **Q3**).

33. "Total phenolic contents and free radical scavenging activity of different parts of jatropha species" Parul Akhtar, Zahira Yaakob, **Yunus Ahmed**, M Shahinuzzaman, MK Mohammad Ziaul Hyder; Asian Journal of Chemistry; 2018, 30 (2), 365-370. https://doi.org/10.14233/ajchem.2018.20980. (IF: 0.535, **Q4**).

34. "In vitro antibacterial and in vivo brine shrimp lethal active compounds isolated from the leaves of *S. roxburghii*", **Yunus Ahmed**, Zahira Yaakob, Parul Akhtar, Mahbubur Rahman and Faridul Islam, International Journal of Pharmacology, 2015; 11(7): 821-827. https://doi.org/10.3923/ijp.2015.821.827. (IF: 0.751, **Q4**).

35. "Isolation of steroids from n-hexane extract of the leaves of *Saurauia roxburghii*" **Yunus Ahmed**, Shakila Rahman, Parul Akhtar, Faridul Islam, Mahbubur Rahman and Zahira Yaakob; International Food Research Journal. 2013; 20(5): 2939-2943. (IF: 1.014, **Q3**).

36. "Phytochemical and Biological Investigations of *Saurauja roxburghii"* Md Chowdhury, Alim Uddin, Md Atiar Rahman, Marufa Zahan, Md Sohrab, Chowdhury Md Hasan, **Yunus Ahmed**; Asian Journal of Chemistry; 2012, 24 (4), 1825-1830. (IF: 0.535, **Q4**).

37. "Chemical investigations of the stem barks of *Aporosa roxbergii*", Momotaz Begum, **Yunus Ahmed**, MH. Sohrab, MJ. Islam, CM. Hasan AMS Chowdhury; The Dhaka University Journal of Science, 2011, 59(2), 179-180.

38. "Chemical and biological investigations on leaves of *Jatropha gossypefolia*", Momotaz Begum, Al-Mansur, **Yunus Ahmed**, M. H. Sohrab, AMS Chowdhury and C. M. Hasan; The Dhaka University Journal of Science, 2010, 58(2), 239-242.

39. "Phytochemical and biological investigation of *Carica papaya*", M. S. Ahmed,M. A. Al-Mansur, **Yunus Ahmed**, M. H. Sohrab, A. M. S. Chowdhury and C.M. Hasan; The Dhaka University Journal of Science, 2010, 58(2), 265-268.

RESEARCH COLLABORATIONS

Australian Centre for Water and Environmental Biotechnology (ACWEB), UQ, Australia; Eco-HydroInformatics Research Group (EHIRG), Civil Engineering, University of Galway, Ireland; The National Center for Water Research, King Abdulaziz City for Science and Technology (KACST), Saudi Arabia; Sustainability Research Center, Islamic University of Madinah, Madinah, Saudi Arabia, Living Lab and Energy crops, Universiti Kebangsaan Malaysia (UKM), Malaysia; Industrial microbiology laboratories-Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh; Chattogram Water and Sewerage Authority (CWASA), Chattogram, Bangladesh.

MENTORING AND COORDINATING

- Successfully supervised four MSc (Research) and co-supervised one PhD students.
- Principal Supervisor for seven Master of Science (Research) students at CUET.

Course coordinator: Green Chemistry and Nanomaterials; Advanced Photochemistry

MEMBERSHIPS

2023 - Current: Member (0000158), International Water Association (IWA), UK

2022 - Current: Member (200099854): Institution of Chemical Engineers (IChemE)

2022 - Current: Member, International Water Resources Association (IWRA)

2019 - Current: Blue Card: Working with children (1770159/2, V) – Queensland, Australia

2017 - Current: Member (243392), Australian Water Association (AWA), Australia

2011 - Current: Member (LM-1435), Bangladesh Chemical Society (BCS), Bangladesh.

CONFERENCES (2022-2024)

Nov 2024: The 17th International Conference on Nanostructured Materials (NANO2024): Khalifa University of Science & Technology in collaboration with the UAE Department of Culture & Tourism, Abu Dhabi, UAE

June 2024: The 19th IWA Leading Edge Conference on Water and Wastewater Technologies: Closing the water cycle through efficient and innovative technologies, Essen, Germany

Mar 2023: 7th International Conference on Natural Science & Technology (ICNST'23): Science for the Sustainable World Environment, Asian Women University (AWU), Chattogram, Bangladesh.

Jan 2023: UNESCO-IWRA Online Conference: Emerging Pollutants: Protecting Water Quality for the Health of People and the Environment, International Water Resources Association (IWRA).

Dec 2022: Integrated Approach for Adapting 4IR, BCSIR Congress-2022, Bangladesh Council of Scientific and Industrial Research (BCSIR), Dhaka, Bangladesh.

Nov 2022: International Conference on 4IR for Emerging Future, Science and Technology Affairs Sub-Committee Bangladesh Awami League, Bangladesh.

Sep 2022: International Conference on Environmental Protection for Sustainable Development (ICEPSD)-2022, Forest and Environment Affairs Sub-Committee Bangladesh Awami League and Dhaka University, Bangladesh.

VOLUNTARY SERVICES

Reviewer: Water Research, Journal of Water Process Engineering, Journal of Hazardous Materials, Engineering, Chemical Engineering Journal, Journal of Environmental Chemical Engineering, Desalination, Aquaculture, Journal of Environmental Science and Health-Part A, Environmental Pollution, Journal of Environmental Management, Renewable and Sustainable Energy Reviews, International Food Research Journal, Asian Journal of Chemistry.

Guest Editor: Frontier Chemical Engineering

Grant Reviewer: BENBAIS, Ministry of Education, Government of the People's Republic of Bangladesh.

TRAINING AND PROFESSIONAL DEVELOPMENT

2020 Provide Cardiopulmonary Resuscitation (CPR) (HLTAID001), Provide basic emergency life support (HLTAID002) and Provide First aid ((HLTAID003) Certificate number: 346447, Safety Corp Pty Ltd, Australia.

2019 Installation, Commissioning and Training for Atomic Force Microscopes (AFM), The Australian National Fabrication Facility (ANFF), UQ, Australia.

2018 Installation, Commissioning and Training for Reverse transcription polymerase chain reaction (RT-PCR) and Flow Cytometry (FCM), Australian Institute for Bioengineering and Nanotechnology (AIBN), UQ, Australia.

2010 Installation, Commissioning and Training for Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) and Gas Chromatography-Mass Spectrometry (GC-MS/MS), SGS Bangladesh Ltd, Bangladesh.

SKILLS

Extensive experience in UV-Vis spectrophotometer, NanoDrop spectrophotometer, FTIR, AAS, GC-MS/MS, LC-MS/MS, XPS, AFM, FCM, PCR, and RT-PCR with Eppendorf epMotion 5075 Robotics System.

Proficient in Python, Origin, Graph Pad Prism, Chem Draw, MS Office (Excel, Word, PowerPoint), SPSS.

REFEREES

Professor Dr. Zhiguo Yuan AM
Honorary Professor, The University of Queensland (UQ), Australia
Former Director, Australian Centre for Water and Environmental Biotechnology (ACWEB),UQ
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