

CURRICULUM VITAE

PERSONAL DATA

Name	Jameel Ahmed BAIG
Nationality	Pakistani
Position	Associate Professor
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EDUCATION

Year	Academic Degree	Institution
2003	B. Sc. (Hons) Chemistry	Shah Abdul Latif University, Khairpur Mirs, Pakistan
2004	M. Sc. (Final) Physical Chemistry	Shah Abdul Latif University, Khairpur Mirs, Pakistan
2011	MS Leading to Ph.D. (Analytical Chemistry)	National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan
2012	Post Doctorate (Analytical Chemistry)	Pamukkale University, Denizli, Turkey
2015	MBA (Human Resource Management)	Khadim Ali Shah Bukhari Institute of Technology (KASBIT), Sindhi Muslim Housing Society, Karachi, Pakistan

WORK EXPERIENCE

Period	Position	Address
Jun 2006 – May 2008	Research Fellow	National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan
Jun 2008 – Aug 2011	Research Associate	National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan
Sept 2011 – Aug 2012	Post Doctorate Fellow	Pamukkale University, Denizli, Turkey
Aug 2012 – Feb 2013	Assistant Professor	International Islamic University, Islamabad, Pakistan

Mar 2013 – May 2022	Assistant Professor	National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan
Jun 2022 – Aug 2025	Associate Professor	National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan
Sept 2025 – Current	Associate Professor	Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia

RESEARCH INTERESTS

Synthesis and Applications of Nanoparticle/nanocomposite (Applied Analytical Chemistry)

Environmental Analytical Chemistry

Applied Agricultural Research

Electroanalytical Chemistry

Clinical, Biochemical and Epidemiology

Phytoremediation of Organic and Inorganic contaminants

Separation Technology (Solid Phase and Liquid-liquid phase Extraction)

PUBLICATIONS

1. Abbasi, F., Algethami, F.K., Solangi, I.B. and **Baig, J.A.**, (2025). Sodium-Barium Binary Ferrite as an Emerging Photo-Catalyst for Simultaneous Degradation of Rhodamine 6G and Crystal Violet. **Water, Air, & Soil Pollution**, 236(12), p.764. <https://doi.org/10.1007/s11270-025-08405-0>
2. Perveen, S., **Baig, J.A.**, Sherazi, S.T.H., Memon, S., Akhtar, K., Hussain, S. and Abbasi, F., (2025). Green Synthesis of Electroactive Magnesium Ferrite Nanoparticles for the Selective Determination of Mefenamic Acid in Blood, Pharmaceutical Products, and Wastewater. **Analytical Letters**, 58(14), pp.2395-2410. <https://doi.org/10.1080/00032719.2024.2413455>
3. Solangi, S.A., **Baig, J.A.**, Solangi, I.B., Afridi, H.I., Hussain, S., Akhtar, K., Khan, L.U., Abbasi, F. and Hyder, A., (2025). Bismuth ferrite polyaniline nanohybrid based electrochemical detection of theophylline. **Materials Research Bulletin**, 188, p.113386. <https://doi.org/10.1016/j.materresbull.2025.113386> (I.F = 5.3)
4. Akhtar, K., **Baig, J.A.**, Afridi, H.I., Solangi, I.B., Perveen, S. and Kazi, M., (2025). Lanthanum doped copper ferrite as efficient Electrocatalyst for simultaneous detection of Bentazone and Diuron in vegetable samples. **Food Chemistry**, 481, p.144066. <https://doi.org/10.1016/j.foodchem.2025.144066>
5. Memon, A.A., Kazi, T.G., Nur-e-Alam, M., Afridi, H.I., **Baig, J.A.**, Thebo, K.H. and Memon, A.A., 2025. A green digestion method based on deep eutectic solvent for determination of essential trace elements in blood serum samples of tuberculosis children. **Journal of AOAC International**, p.qsaf065. <https://doi.org/10.1093/jaoacint/qsaf065>
6. Perveen, S., **Baig, J.A.**, Sherazi, S.T.H., Afridi, H.I., Fricovsky, E., Sanam, S. and Akhtar, K., (2025). Graphene oxide/magnesium ferrite nanocomposite modified electrochemical sensor for simultaneous detection of cadmium and lead. **Microchemical Journal**, 2014, p.114148. <https://doi.org/10.1016/j.microc.2025.114148>
7. Hussain, S., Sadiq, I., **Baig, J.A.**, Solangi, S.A., Khan, Z.U., Solangi, I.B., Riaz, S., Pullar, R.C., Thebo, K.H. and Kazi, M., (2025). Green Synthesis, Microstructural Characterization, and Synergizing Effect of Na-β-Type Hexagonal Ferrite Nanomaterials as a Probe for Cefixime Electrochemical Sensors. **Microscopy Research and Technique**. <https://doi.org/10.1002/jemt.24810>
8. Samejo, S., **Baig, J. A.**, Algethami, F. K., Kazi, T. G., & Akhtar, K. (2025). Green synthesized magnesium oxide nanohybrid as an effective adsorbent for removing toxic metals from contaminated water. **International**

- Journal of Environmental Science and Technology**, 22, 10795–10808. <https://doi.org/10.1007/s13762-025-06335-2> (I.F = 3.1)
9. Algethami, F.K., Sara, B., Perveen, S. and **Baig, J.A.**, (2025). Detection of Amoxicillin by Lead Ferrite-Based Electrochemical Sensor. **Environmental Science: Nano**. <https://doi.org/10.1039/D5EN00362H>
10. Perveen, S., Hol, A., **Baig, J.A.**, Sherazi, S.T.H., Memon, S., Kazi, T.G., Kazi, M., Thebo, K.H. and Akhtar, K., (2025). Alginate integrated sodium ferrite nanocomposite-based dispersive solid-phase extraction for trace detection of metal ions in water and juices. **RSC advances**, 15(28), pp.22534-22545. <https://doi.org/10.1039/D5RA01948F>
11. Sara, B., **Baig, J. A.**, Solangi, I. B., Akhtar, K., Perveen, S., Hussain, S., ... & Solangi, S. A. (2025). Lead ferrite-based heterogeneous photocatalysis: a green approach for rhodamine 6G dye remediation. **RSC advances**, 15(9), 6668-6677. <https://doi.org/10.1039/D4RA09072A> (I.F = 3.9)
12. Perveen, S., **Baig, J. A.**, Nur-e-Alam, M., Kazi, M., Memon, S., Kazi, T. G., ... & Hussain, S. (2025). Electrocatalytic detection of Acetaminophen by sodium ferrite. **Results in Physics**, 68, 108073. <https://doi.org/10.1016/j.rinp.2024.108073> (I.F = 4.4)
13. Lashari, A. A., Kazi, T. G., **Baig, J. A.**, Afridi, H. I., Laghari, M. A., Qureshi, A. A., ... & Unar, A. (2024). Chemical association and combustion behaviour of cadmium in coal of different mining fields using sequential and single step extraction methods. **International Journal of Environmental Analytical Chemistry**, 104(19), 8203-8213. <https://doi.org/10.1080/03067319.2023.2196719> (I.F = 3.1)
14. Razzaque, N., Talpur, F. N., Afridi, H. I., **Baig, J. A.**, Abbasi, M. U. N., Kunbhar, S., & Chandio, Z. (2024). Exposure of endocrine disruptive phthalates from fruit juices packed in plastic bottles and their risk assessment in Pakistan. **International Journal of Environmental Analytical Chemistry**, 1-17. <https://doi.org/10.1080/03067319.2024.2432593> (I.F = 3.1)
15. Bhanbhro, P., **Baig, J.A.**, Solangi, I.B., Kazi, T.G., Akhtar, K., Nadeem, A., Perveen, S., Abbasi, F., Hussain, S. and Solangi, S.A., 2024. Cadmium oxide/calcium ferrite nanocomposite-based enhanced electrochemical sensing of metronidazole. **Microchemical Journal**, 207, p.111820. <https://doi.org/10.1016/j.microc.2024.111820> (I.F = 4.9)
16. Perveen, S., **Baig, J. A.**, Sherazi, S. T. H., Memon, S., Akhtar, K., Hussain, S., & Abbasi, F. (2024). Green Synthesis of Electroactive Magnesium Ferrite Nanoparticles for the Selective Determination of Mefenamic Acid in Blood, Pharmaceutical Products, and Wastewater. **Analytical Letters**, 1-16. <https://doi.org/10.1080/00032719.2024.2413455> (I.F = 1.9)
17. Samejo, S., **Baig, J. A.**, Kazi, T. G., Afridi, H. I., Ali, H. E., Perveen, S., ... & Hussain, S. (2024). Chitosan-integrated TiO₂ nanocomposite for adsorptive removal of Cd and Pb from drinking water. **Chemical Papers**, 78(14), 7827-7843. <https://doi.org/10.1007/s11696-024-03637-6> (I.F = 2.1)
18. Lashari, A. A., Kazi, T. G., **Baig, J. A.**, Afridi, H. I., Chandio, A. U. R., Chanihoon, G. Q., & Lashari, A. (2024). Volatilisation of selenium from coals by heating at different temperature: application of sequential extraction scheme on ash. **International Journal of Environmental Analytical Chemistry**, 104(11), 2613-2622. <https://doi.org/10.1080/03067319.2022.2066475> (I.F = 3.1)
19. Fareed, G., **Baig, J.A.**, Kazi, T.G., Afridi, H.I., Akhtar, K., Solangi, I.B. (2024). Heavy metals contamination levels in the products of sugar industry along with their impact from sugar to the end users. **International Journal of Environmental Analytical Chemistry** 104 (10), 2407-2416. <https://doi.org/10.1080/03067319.2022.2062238> (I.F = 3.1)
20. Abbasi, F., Solangi, I.B., **Baig, J.A.**, Hussain, S., Perveen, S., Akhtar, K., Solangi, S.A., Bhanbhro, P. (2024). Innovative approach for trace level detection of mefenamic acid by ferrite nanocomposite-based electrochemical sensor. **Materials Today Communications** 40, 109739. <https://doi.org/10.1016/j.mtcomm.2024.109739> (I.F = 3.7)
21. Unar, A.A., Kazi, T.G., Afridi, H.I., **Baig, J.A.**, Lashari, A.A. (2024). Evaluate the aluminum concentrations in whey milk samples of cows from different areas using deep eutectic solvent-based ultrasound-assisted dispersive liquid-liquid microextraction method. **Talanta** 273, 125847. <https://doi.org/10.1016/j.talanta.2024.125847> (I.F = 5.6)
22. Hussain, S., Sadiq, I., Baig, J.A., Bertotti, M., Riaz, S (2024). An R-type hexagonal ferrite nanoparticles-based electrochemical sensor for Levofloxacin detection in pharmaceutical and clinical specimens. **Microchemical Journal** 201, 110690. <https://doi.org/10.1016/j.microc.2024.110690> (I.F = 4.9)
23. Abbasi, F., Lashari, A.A., Solangi, I.B., **Baig, J.A.**, Kazi, T.G., Afridi, H.I. (2024). Simultaneous quantification of

- essential and toxic elements from mangoes fruit and its juices. **International Journal of Environmental Analytical Chemistry** 104 (7), 1573-1579. <https://doi.org/10.1080/03067319.2022.2041005> (I.F = 3.1)
24. Solangi, S.A., **Baig, J.A.**, Afridi, H.I., Kazi, T.G., Sarki, M.S., Solangi, I.B., Akhtar, K., Abbasi, F., Lashari, A.A. (2024). Environmental monitoring and assessment of heavy metals in paddy fields treated with synthetic and mixed fertilizers. **International Journal of Environmental Science and Technology** 21 (9), 6695-6712. <https://doi.org/10.1007/s13762-023-05427-1> (I.F = 3.1)
 25. Akhtar, K., **Baig, J.A.**, Solangi, S.A., Hussain, S.I., Kazi, T.G., Perveen, S., Abbasi, F. (2024). Phytoextract based synthesis of TiO₂. Al₂O₃ nanocomposites for efficient electrocatalytic detection of acetaminophen from environmental and pharmaceutical samples. **Ceramics International**, 50(7), 11012-11021. <https://doi.org/10.1016/j.ceramint.2024.01.001> (I.F = 5.1)
 26. Samejo, S., **Baig, J.A.**, Kazi, T.G., Hussain, S.I., Perveen, S., Frooq, M.U., Akhtar, K., Solangi, S.A., Abbasi, F., Hussain, S. (2024). Iron Oxide-Chitosan-Based Nanocomposite for Efficient Fluoride Removal From Drinking Water. **Water, Air, & Soil Pollution**, 235(3), 184. <https://doi.org/10.1007/s11270-024-06988-8> (I.F = 3.8)
 27. Akhtar, K., **Baig, J.A.**, Solangi, I.B., Hussain, S.I., Khalid, A., Solangi, S.A., Perveen, S., Bhanbhro, P., Hussain, S. (2024). Biosynthesis of titanium oxide-aluminium oxide nanocomposites for electrocatalytic detection of 2, 4, 6-trichlorophenol. **Materials Today Communications**, 38, 108137. <https://doi.org/10.1016/j.mtcomm.2024.108137> (I.F = 3.7)
 28. Lashari, A., Kazi, T.G., Afridi, H.I., Baig, J.A., Arain, M.B., Lashari, A.A., (2024). Evaluate the Work-Related Exposure of Vanadium on Scalp Hair Samples of Outdoor and Administrative Workers of Oil Drilling Field: Related Health Risks. **Biological Trace Element Research**, 1-7. <https://doi.org/10.1007/s12011-024-04101-y> (I.F = 3.7)
 29. Hussain, S., Sadiq, I., **Baig, J.A.**, Sadiq, F., Akhtar, K., Solangi, I. B., Naseem, S. (2024). Electroactive ferrites nanostructure driven electrochemical platform for the selective detection of dopamine. **Inorganic Chemistry Communications**, 160, 111997. <https://doi.org/10.1016/j.inoche.2023.111997> (I.F = 4.4)
 30. Malghani, N. A., Mahesar, S. A., **Baig, J. A.**, Sherazi, S. T. H., Sidhu, A. R., Mahesar, H. U. R. (2024). Impact of Irrigation Water and Rhizospheric Soil on Quality of Different Fruits Concerning Metal Ions. **Applied Fruit Science** 66 (1), 229-237. <https://doi.org/10.1007/s10341-023-00964-y> (I.F = 1.4)
 31. Perveen, S., Hol, A., Baig, J. A., Sherazi, S. T. H., Akhtar, K., Hussain, S., & Abbasi, F. (2024). Sodium nanoferrite-based solid phase extraction: a green method for the simultaneous determination of cadmium, copper, and lead. **Journal of Analytical Atomic Spectrometry**, 39(11), 2884-2892. <https://doi.org/10.1039/D4JA00210E> (I.F = 3.1)
 32. Lashari, A. A., Kazi, T. G., **Baig, J. A.**, Afridi, H. I. (2023). Determination of lead in groundwater samples of three aquifers of a coal mining area at various depths using advance extraction methodology. **International Journal of Environmental Analytical Chemistry**, 103(18), 6662-6674. <https://doi.org/10.1080/03067319.2021.1959566> (I.F = 3.1)
 33. Hussain, S., Sadiq, I., **Baig, J.A.**, Solangi, S.A., Akhtar, K., Khan, Z.U., Solangi, I.B., Bertotti, M., Pullar, R.C., Riaz, S. and Naseem, S., Green Synthesis, Characterization and Physico-Chemical Properties of Superionic Na B-Type Hexagonal Ferrite Nanoparticles for Electrochemical Sensor of Cefixime. Available at SSRN 4594126.
 34. Waris, M., Baig, J. A., Talpur, F. N., Kazi, T. G., & Afridi, H. I. (2023). Speciation of heavy metals and evaluation of their ecological risk impact on salt-affected wetland soil. **Arabian Journal of Geosciences**, 16(10), 1-10. <https://doi.org/10.1007/s12517-023-11696-4>
 35. Lashari, A.A., Kazi, T.G., **Baig, J.A.**, Afridi, H.I., Lashari, A. and Kandhro, F., (2023). An ultrasound assisted modified solid phase micro-extraction technique for enrichment of cadmium and lead in aqueous extract of coal gangue soil samples. **Geoderma**, 437, p.116601. <https://doi.org/10.1016/j.geoderma.2023.116601> (I.F = 5.6)
 36. Akhtar, K., **Baig, J.A.**, Solangi, S.A., Hussain, S., Ali, H.E., Perveen, S., Kazi, T.G. and Afridi, H.I., (2023). Biosynthesis and characterization of NiFe₂O₄-NPs for electrochemical detection of ceftriaxone from biological and pharmaceutical samples. **Microchemical Journal**, 191, 108808. <https://doi.org/10.1016/j.microc.2023.108808> (I.F = 4.4)
 37. Samejo, S., **Baig, J.A.**, Kazi, T.G., Afridi, H.I., Hol, A., Ali, F.I., Hussain, S., Akhtar, K., Perveen, S. and Bhutto, A.A., (2023). Green synthesis of iron oxide nanobiocomposite for the adsorptive removal of heavy metals from the drinking water. **Materials Chemistry and Physics**, 303, 127807.

- <https://doi.org/10.1016/j.matchemphys.2023.127807> (I.F = 4.3)
38. Hussain, S., Sadiq, I., **Baig, J.A.**, Sadiq, F., Solangi, I.B., Akhtar, K., Solangi, S.A., Idrees, M., Riaz, S. and Naseem, S., 2023. Electrocatalytic sensing of metronidazole by R-type hexagonal nanoferrites modified electrode. **Inorganic Chemistry Communications**, 153, 110832. <https://doi.org/10.1016/j.inoche.2023.110832> (I.F = 4.4)
39. **Baig, J.A.**, Chandio, I.G., Kazi, T.G., Afridi, H.I., Akhtar, K., Junaid, M., Naher, S., Solangi, S.A. and Malghani, N.A., 2023. Risk assessment of macronutrients and minerals by processed, street, and restaurant traditional Pakistani foods: a case study. **Biological Trace Element Research**, 201(7), 3553-3566. <https://doi.org/10.1007/s12011-022-03429-7> (I.F = 3.7)
40. Lashari, A., Kazi, T.G., Afridi, H.I., **Baig, J.A.**, Arain, M.B. and Lashari, A.A., (2023). Estimation of metal and metalloid in crude oil of newly developed oil field after acid digestion/extraction methods using different devices. **Journal of Trace Elements and Minerals**, 4, 100064. <https://doi.org/10.1016/j.jtemin.2023.100064>
41. Waris, M., **Baig, J.A.**, Talpur, F.N., Kazi, T.G., Afridi, H.I. and Shakeel, S., 2023. Estimation of phytoextraction potential of selected halophytes for accumulation of heavy metals from wetland saline soil. **Rendiconti Lincei. Scienze Fisiche e Naturali**, 34(2), 553-562. <https://doi.org/10.1007/s12210-023-01147-3> (I.F = 2.1)
42. Bhutto, A.A., **Baig, J.A.**, Kazi, T.G., Sierra-Alvarez, R., Akhtar, K., Perveen, S., Afridi, H.I., Ali, H.E., Hol, A. and Samejo, S., (2023). Biosynthesis of aluminium oxide nanobiocomposite and its application for the removal of toxic metals from drinking water. **Ceramics International**, 49(9), 14615-14623. <https://doi.org/10.1016/j.ceramint.2023.01.052> (IF = 5.532)
43. Kandhro, F., Kazi, T.G., Afridi, H.I., **Baig, J.A.**, Lashari, A.A. and Lashari, A., (2023) Determination of toxic elemental levels in whey milk of different cattle and human using an innovative digestion method: risk assessment for children < 6.0 months to 5 years. **Environmental Science and Pollution Research**, 30(14), 41923-41936. <https://doi.org/10.1007/s11356-022-25059-1>
44. Lashari, A.A., Kazi, T.G., **Baig, J.A.**, Afridi, H.I. and Junejo, S.H., (2023). Chemical association of copper and selenium in coals of Sindh by time saving single step strategy and their impact on groundwater. **Environmental Science and Pollution Research**, 30(13), 38650-38662. <https://doi.org/10.1007/s11356-022-25039-5>
45. Hussain, S., Sadiq, I., **Baig, J.A.**, Sadiq, F., Shahbaz, M., Solangi, I.B., Idrees, M., Saeed, S., Riaz, S. and Naseem, S., (2023). Synthesis and characterization of vanadium ferrites, electrochemical sensing of acetaminophen in biological fluids and pharmaceutical samples. **Ceramics International**, 49(5), 8165-8171. <https://doi.org/10.1016/j.ceramint.2022.10.340> (IF = 5.532)
46. Lashari, A., Kazi, T.G., Afridi, H.I., **Baig, J.A.**, Arain, M.B., Lashari, A.A. Kandhro, F. (2023). Impact of oil well drilling activities on vanadium in soil, groundwater, vegetables, fruits, and feed crops: a risk assessment. **International Journal of Environmental Science and Technology**, 20, 11963-11972. <https://doi.org/10.1007/s13762-023-04796-x> (I.F = 3.1)
47. Parveen, S., Afridi, H.I., Kazi, T.G., Talpur, F.N., **Baig, J.A.**, Chanihoon, G.Q., Memon, A.A. and Rahoojo, A., (2023). Impacts of Smoking and Stomach Disorders on Essential Elements in Biological Samples of Cement and Glass Industrial Workers. **Biological Trace Element Research**, 201(3), 1065-1079. <https://doi.org/10.1007/s12011-022-03238-y> (I.F = 3.7)
48. Malghani, N.A., Mahesar, S.A., **Baig, J.A.**, Talpur, F.N., Sohu, S. and Sherazi, S.T.H., (2023). Phytochemical screening, gc-ms and ftir analysis of bioactive compounds present in vegetables and fruits. **Carpathian Journal of Food Science & Technology**, 15(1), 36-47. <https://doi.org/10.34302/crpjfst/2023.15.1.3> (I.F = 0.5)
49. Chanihoon, G.Q., Afridi, H.I., Kazi, T.G., Talpur, F.N., **Baig, J.A.**, Lashari, A., Chandio, A.U.R., Lashari, A.A. and Memon, A.A., (2023), Essential Micronutrients and Toxic Elemental Concentrations in the Biological Samples of Pakistani Ewing Sarcoma Patients. **Clinical laboratory**, 69(1), 220. <https://doi.org/10.7754/Clin.Lab.2022.210929> (I.F = 0.8)
50. Bhutto, A.A., **Baig, J.A.**, Sirajuddin, Kazi, T.G., Alvarez, R.S., Akhtar, K., Hussain, H., Afridi, H.I., Hol, A., Samejo, S. (2023). Biosynthesis and analytical characterization of Iron oxide Nanobiocomposite for in-depth adsorption strategy for the removal of toxic metals from drinking water. **Arabian Journal for Science and Engineering**, 48, pages7411-7424. <https://doi.org/10.1007/s13369-022-07477-y> (IF = 2.807)
51. Channa, M.K., Akhtar, K., **Baig, J.A.**, Kazi, T.G., Afridi, H.I., Perveen, S., Solangi, S.A., Sara, B. (2023), Distribution

- of chromium species and physicochemical analysis of different industrial effluents in Sindh, Pakistan. **Journal of the Turkish Chemical Society Section A: Chemistry**, 10(1), 1-10. <https://doi.org/10.18596/jotcsa.1107392>, (I.F 0.78)
52. Afridi, H.I., Bhatti, M., Talpur, F.N., Kazi, T.G., **Baig, J.A.**, Chanihoon, G.Q. and Rahoojo, A., (2022). Cadmium Concentration in Different Brands of Cosmetic and their Effect on the Skin of Female Dermatitis Cosmetic Users. **Journal of the Chemical Society of Pakistan**, 44(5), 419-435. (I.F = 0.536)
 53. Channa, M.K., **Baig, J.A.**, Kazi, T.G., Afridi, H.I., Samaijo, S., Channa, G.M., Elci, L. (2022). An Efficient and Low-Cost Indigenous Material for Removal of Hexavalent Chromium from Industrial Effluents. **Pakistan Journal of Scientific & Industrial Research Series A: Physical Sciences**, 65(3), 235-247. (I.F = 0.679)
 54. Lashari, A.A., Kazi, T.G., **Baig, J.A.**, Afridi, H.I. and Memon, A.A. (2022), Speciation of the Selenium in Groundwater Samples of Different Aquifers from Coal Mining Fields: Applied a Green Analytical Technique. **Water, Air, & Soil Pollution**, 233(11), 1-11. <https://doi.org/10.1007/s11270-022-05898-x> (I.F = 2.984)
 55. **Baig, J.A.**, Muhammad, M., Akhtar, K., Afridi, H.I., Kazi, T.G., Mirza, J., Solangi, S.A. and Bhutto, A.A., (2022). Selective electrochemical sensing of cefixime by silver nanoparticle amalgam paste microelectrode. **Journal of Materials Science: Materials in Electronics**, 33(17), pp.13926-13938. <https://doi.org/10.1007/s10854-022-08323-5> (I.F. = 2.779)
 56. Mughal, Z.N., Shaikh, H., **Baig, J.A.**, Memon, S. and Shah, S., (2022), Fabrication of an imprinted polymer based graphene oxide composite for label-free electrochemical sensing of Sus DNA. **New Journal of Chemistry**, 46(34), pp.16509-16522. <https://doi.org/10.1039/D2NJ02958H>
 57. Lashari, A.A., Kazi, T.G., **Baig, J.A.**, Afridi, H.I., Chandio, A.U.R., Chanihoon, G.Q. and Lashari, A., (2022). Volatilization of selenium from coals by heating at different temperatures: application of sequential extraction scheme on ash. **International Journal of Environmental Analytical Chemistry**, pp.1-10. <https://doi.org/10.1080/03067319.2022.2066475> (I.F. = 2.826)
 58. Waris, M., **Baig, J.A.**, Talpur, F.N., Kazi, T.G. and Afridi, H.I., (2022). An environmental field assessment of soil quality and phytoremediation of toxic metals from saline soil by selected halophytes. **Journal of Environmental Health Science and Engineering**, pp.1-10. <https://doi.org/10.1007/s40201-022-00800-7> (I.F. = 3.433)
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241. Afridi, H.I., Kazi, T.G., Kazi, N., Jamali, M.K., Arain, M.B., Jalbani, N., Baig, J.A., Sarfraz, R.A. Evaluation of status of toxic metals in biological samples of diabetes mellitus patients. *Diabetes Research and Clinical Practice*, (2008) 80 (2), 280-288. <https://doi.org/10.1016/j.diabres.2007.12.021>. (IF=8.180)
242. M.B. Arain, T.G. Kazi, M.K. Jamali, H.I. Afridi, **J.A. Baig**, N. Jalbani, A.Q. Shah, Evaluation of Physico-Chemical Parameters of Manchar Lake Water and Their Comparison with Other Global Published Values. *Pakistan Journal of Analytical and Environmental Chemistry* (2008) 9 (2) 101 – 109. <http://pjaec.pk/index.php/pjaec/article/view/183>

Book Chapters

1. **Baig, J.A.,** Akhtar, K., Talpur, F.N., (2024). Production of alginate oligosaccharides and their plant growth-promoting activity: Effect of ionizing radiation processing. in Handbook of Natural Polymers, Volume 2, Pages 377-399. <https://doi.org/10.1016/B978-0-323-99856-7.00018-5>
2. **Baig, J.A.,** Akhtar, K., Talpur, F.N., (2024). Gums: Functionalization and structural analysis, in Handbook of Natural Polymers, Volume 2, Pages 351-376. <https://doi.org/10.1016/B978-0-323-99856-7.00019-7>
3. **Baig, J.A.,** (2025). Advanced approach of magnetic nanohybrids in removal of pharmaceutical based pollutants. In Functionalized Magnetic Nanohybrids (pp. 285-328). Elsevier. <https://doi.org/10.1016/B978-0-443-22248-1.00013-7>

RESEARCH AWARDS

1. Visiting Research Scholar (post-doctorate study) under TUBITAK 2216. Research Fellowship Programme for Foreign Citizens at the Department of Chemistry, Pamukkale University, Denizli. (Year 2011-12).
2. Research Productivity Awards (RPA) in Chemistry, G category 2010 by Pakistan Council for Science and Technology (PCST), Islamabad.
3. Research Productivity Awards (RPA) in Chemistry, D category 2011 by Pakistan Council for Science and Technology (PCST), Islamabad.
4. Research Productivity Awards (RPA) in Chemistry, C category 2012 by Pakistan Council for Science and Technology (PCST), Islamabad.
5. Research Productivity Awards (RPA) in Chemistry, A category 2013 by Pakistan Council for Science and Technology (PCST), Islamabad.
6. Research Productivity Awards (RPA) in Chemistry, C category 2015 by Pakistan Council for Science and Technology (PCST), Islamabad.
7. Dr. Atta-ur-Rehman Gold Medal (2016) in Chemistry the Scientist Under 40 by Pakistan Academy of Sciences, Islamabad.

PROJECTS

1. A project entitled "Evaluation of chromium speciation in drinking water, domestic wastewater and industrial effluents of Sindh, Pakistan and its bio-remediation" funded by The World Academy of Sciences (TWAS), Italy in 2014 – 2016.
2. Project Title: Metal oxide nano-composite based strategies for detection and remediation of selected toxic metals and anions from contaminated water in Pakistan. Funding agency: NRPU Higher Education Commission (HEC) Pakistan Project No. HEC-NRPU No-8147, Duration: 2019 – 2022
3. Project Title: Detection and removal of heavy metals, dyes, and pharmaceutical residues in industrial wastewater by ferrite nanocomposites. Funding agency: NRPU Higher Education Commission (HEC) Pakistan Project No. HEC-NRPU No-14503, Duration: 2023 – 2025

LIST OF PRODUCED Ph.D. STUDENTS

Name of Student/ Role	Degree Pursuing	Title
1. Jamshed Ali	Ph.D.	Chemical analysis of Arsenic and mercury in the coal of Thar Coalfield Pakistan
2. Muhammad Waris	Ph.D.	Analytical profiling of aquatic and terrestrial plants and estimation of their phytoremediation capacity for trace and toxic elements
3. Niaz Ali Malghani	Ph.D.	Phytochemical and nutritional profiling of vegetables and fruits of the Larkana division
4. Ghulam Qadir Chanihoon	Ph.D.	Correlation of electrolytes, essential trace and toxic elements in biological samples of Ewing Sarcoma patients in comparison to normal
5. Suraya Samejo	Ph.D.	Eco-friendly fabrication of metal oxide-based nanocomposites for the removal of toxic metals and fluoride
6. Sajjad Hussain Solangi	Ph.D.	Synthesis of Hexagonal Ferrite nanoparticles and Assessment of their Physicochemical Properties for Analytical Applications
7. Ayaz Ali Lashari	Ph.D.	Partitioning and transformation behavior of hazardous trace elements in coals of different mining areas of Sindh before /after combustion: Study of Environmental Impacts
8. Saima Perveen	Ph.D.	Development of Analytical Methods Based on Nanoferrites for the Detection of Drugs and Heavy Metals
9. Shahnawaz Baloch	Ph.D.	Evaluate the exposure of non-essential elements in workers related to workplaces
10. Ashfaq Ahmed Bhutto	Ph.D.	Selective recognition of metal oxide nanocomposites for Toxic elements in Environmental and Biological Samples

LIST OF PRODUCED M. Phil STUDENTS

Name of Student/ Role	Title
1. Kashif Hussain Channa	Chromium speciation and remediation in industrial effluent
2. Muhammad Waris	Evaluation of Roxarsone in poultry feed and litter
3. Ashfaq Ali Bhutto	Speciation of chromium in water samples by different analytical techniques
4. Hina Dawood Memon	Assessment of Toxic Metals in Poultry Feed and Supplement
5. Oan Muhammad Sahito	Study of poultry waste as a source of heavy metals in vegetables
6. Shahnawaz Baloch	Evaluation of lithium level in drinking water and scalp hair samples of the psychiatric patient
7. Nusrat Shahab Memon	Interaction of calcium, iron, manganese, and lead in biological samples of thyroid patients
8. Muhammad Bilal	Development of advanced extraction methods for the determination of heavy metals in water samples of different lakes
9. Asma Akhtar Rajput	Determination of iron, chromium, and mercury in different

smokeless tobacco products

10. Saba Bhatti	Total and extractable chromium, cobalt, copper, iron, selenium, and zinc in Indian spices
11. Ghulam Mustafa	Quantitative Assessment of azo dyes and toxic elements in wastewater of dyeing industry and their environmental impact
12. Sadam Hussain	Determination of toxic metals in aquatic system of fish farms in Sindh and their accumulation in different fish tissues
13. Ghulam Fareed	Sequential assessment of trace and toxic elements in sugar industry products and their impact on workers
14. Saleem Atif	Development of selective analytical methods for the detection of cefadroxil in pharmaceutical preparations and biological samples
15. Miss Iram Gul (Supervisor)	Proximate analysis and mineral composition of street and processed traditional Pakistani foods
16. Zubair Ali Shah	Proximate analysis and elemental composition of different date palm varieties in Sindh, Pakistan
17. Arsalan Ahmed Rajput	Evaluation of zinc, cadmium and lead in coal, gangue reclamation soil and laboratory made ash of coal of Lakhra coal mining area
18. Shoaib Ahmed Hub	Leaching of phthalates from medical devices
19. Ashfaque Ahmed Larik	The removal of azo dyes by chemically modified adsorbent from water
20. Kanwal Zohra	Facile synthesis of metallic nanoparticles using cruciferous vegetables
21. Sanjha Mangrio	Determination of toxic metals in cosmetic products available in commercial markets of city, Hyderabad, Pakistan
22. Meer Muhammad	Development of a selective analytical method for the detection of cefixime pharmaceutical preparations and biological sample
23. Khalil Akhtar	Synthesis and application of fluoride selective electrochemical sensor
24. Shakoor Ahmed Solangi	Impact of Heavy metals on rice varieties by organic and synthetic Fertilizers
25. Bibi Sara	Iron-based nanomaterials for monitoring and control of pharmaceutical residue and dye in water
26. Preh	Ferrites supported electrochemical sensor for monitoring of heavy metals and antibiotics

LIST OF CURRENT M. Phil/Ph.D. STUDENTS

Name of Student/ Role	Degree Pursuing	Title
1. Noor Zaman Shar	Ph.D.	Preparation and characterization of metal polymer nanocomposites and their applications
2. Fahad Abbasi	Ph.D.	Synthesis of metallic and bimetallic magnetic nanoparticles/composites for detection and

		determination of environmental pollutants
3. Khalil Akhtar	Ph.D.	Metal oxide-based nanostructures for measurements and control of environmental residues
4. Shakoor Ahmed Solangi	Ph.D.	Detection of pharmaceutical products by polymeric Ferrites-based Analytical Methods
5. Iram Gul	Ph.D.	Metal oxide magnetic nanohybrid based simultaneous sensing of pharmacological and healthcare products
6. Seerat ul Urooj	M. Phil	Significance and impact of trace and toxic metals in different age groups consuming confectionary and nut products
7. Maheen Khan	M. Phil	Natural polymer integrated ferrite nanohybrid-based detection of trace elements

LIST OF CONFERENCES ATTENDED

S. No.	Event	Date
1.	International Conference on "Bridging Technology and Sustainable Science: Industry 5.0, Innovation and Ethics (BTSS – 2025)" organised by the Dr. M. A. Kazi Institute of Chemistry, and National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro sponsored by Sindh Higher Education Commission (SHEC), Karachi Sindh, Pakistan. Oral Presentation February 13th – 15th, 2025	13 – 15 Feb 2025
2.	International Conference on Sustainable Development in Nanotechnology (ICSDN-2023) organised by the National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro and Department of Textile Engineering Mehran University of Engineering and Technology (MUET), Jamshoro. Participant	20 – 21 March 2023
3.	"20 th International and 32 nd National Chemistry Conference on Chemical Science and Sustainable Goals" held at Khawaja Fareed University of Engineering and Information Technology, Rahimyar Khan	2 – 4 Nov 2022
4.	"2 nd International Chemistry Conference and its Role in Sciences" Theme "Chemistry Today" organized by University of Karachi	2 nd – 4 th Aug 2019
5.	"1 st National Conference on Environment and Sustainable Development (NCESD-2019)	29-Mar-2019
6.	29 th National and 17 th International Chemistry Conference held at Baragali Summer Campus, University of Peshawar, Abbottabad	6 th – 8 th Sept, 2018
7.	ACS workshop on "Global Chemists' Code of Ethics" at Shaikh Zaid Islamic Centre, Karachi	21 st Nov, 2017
8.	28 th National 16 th International Chemistry Conference organized by FUUAST held at Shaikh Zaid Islamic Centre, Karachi	20 th – 22 nd Nov, 2017
9.	7 th International Conference on Biotechnology and Bioengineering & 2017 International Conference on Agricultural and Food Sciences organized by APASET and VU at Lahore	25 – 27 Oct, 2017
10.	Symposium and workshop on Biowaste Derived Carbons for Waste-to-bioenergy Conversion and Water purification organized by NCEAC, University of Sindh, Jamshoro	20 th – 21 st Feb, 2017
11.	Three days interactive workshop on Quality Assurance Procedures and Advanced Computing Skills for Research Supervisors	11– 13 Jan, 2017
12.	International Conference on Environmental Issues of Sindh and Remedies organized by SALU, Khairpur Mir's	9 -10 Apr 2014
13.	10 th International symposium on Analytical and Environmental Chemistry. MBCC, University of Sindh, Jamshoro	Dec 02-04, 2013
14.	1 ST INTERNATIONAL COAL CONFERENCE, MUET Auditorium, MUET, Jamshoro, Pakistan.	Nov 07-09, 2013
15.	12 th International and 24 th National Chemistry Conference, BZU, Multan	Oct 28-30, 2013

16.	Three days workshop on Applications of Atomic & Molecular Spectrophotometric Techniques in Trace Elements Analysis	Sep 24-26, 2013
17.	International Conference on Physical and Environmental Chemistry, Baragali Summer Campus, University of Peshawar.	Sept 09-11, 2013
18.	III. Physical Chemistry Days, BURHANIYE, BALIKESİR-TURKEY	12-15 Jul 2012,
19.	II-Trace Analysis Workshop (EsAn-2012), organized by Karadeniz (Black-Sea) Technology University (KTU) Trabzon, held at KTU Trabzon-Turkey	27-30 Jun 2012
20.	5 th Geo-chemistry Symposium, organized by Geology Department of Pamukkale University, held at Congress Hall, Pamukkale University, Denizli-TURKEY	23-25 May 2012
21.	1 st International Conference of Chemistry and its role in science organized by Jinnah University for Women, Karachi	3 rd – 5 th Jan 2011
22.	1 st National Conference on Physical & Environmental Chemistry (PEC-2010), National Centre of Excellence in Physical Chemistry, University of Peshawar Summer Campus, Bara Gali, Distt. Abbottabad	26 th -30 th Sep 2010
23.	International Conference on Sustainable Water Management organized by MUET, NCEAC, SAU, EU-UK at MUET, Jamshoro	15 17 Sep 2010
24.	8 th International and 20 th National Chemistry Conference, Department of Chemistry, Quaid-i-Azam University, Islamabad	15 th -17 th Feb, 2010
25.	2 nd Pak-Turk Seminar on Chemical Sciences (2 nd PTSCS), at NCEAC, University of Sindh, Jamshoro	11 th -13 th Feb, 2010
26.	18 th National Chemistry Conference Chemical Society of Pakistan held at Institute of Chemistry, University of Punjab Lahore Pakistan	25-27 Feb 2008
27.	International Seminar of Analytical Sciences ISAS held at Indus Hotel Hyderabad, Pakistan	6 – 8 Sep 2007
26.	International conference on “the role of chemistry & biochemistry in the national development held at Baluchistan University Quetta Pakistan	16 – 18 April 2007
27.	Seven days training program of Planning, Monitoring & Evaluation, Management, Budgeting and Computer Work by Education Sector Reform Assistance (ESRA)	07- 13 Feb 2005
28.	Proposal Writing Training conducted at Indus Resource Centre Khairpur	16 – 18 Oct 2004