Personal Information

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Professional Experience

- Assistant Professor, Government College University Lahore (25/09/2019–present).
- Assistant Professor, University of Lahore (02/10/2017–20/09/2019).
- Lecturer, University of the Punjab (16/03/2009–28/02/2013).

Education

- PhD in Chemistry, TU Bergakademie Freiberg, Germany (01/04/2013–28/04/2017).
  (Summa Cum Laude/ Highest Distinction)
  Title: Perfluoroalkyl Acids: Adsorption Behavior and Loads in the Aquatic Environment
- M.Phil. Chemistry, University of the Punjab, Lahore (2009–2011).
- M.Sc. Chemistry, University of the Punjab, Lahore (2005–2007).

Research Output

- Peer-Reviewed Articles and Reviews: 29 | *h*-index: 22.0 (Google Scholar)
- Books and Chapters: 03, Conference Presentations: 15, Others: 34
- Current Research Interests and Expertise:
  - Behaviour of persistent and emerging pollutants at interfaces, focusing on thermodynamics, kinetics, and modelling to elucidate underlying mechanisms.
  - Circular economy–based strategies for water treatment and pollution mitigation, transforming waste into low-cost environmental remediation resources.
  - Environmental monitoring and risk assessment, with expertise in AAS, ICP, XRF, GC, LC, active and passive sampling techniques, and chemometrics.

Selected Publications

1. Tayyab, M., Anwar, S., Shafiq, F., Shafique, U., Kaya, C., & Ashraf, M. (2025). Adsorption isotherms and removal of lead (II) and cadmium (II) from aqueous media using nanobiochar and rice husk. *International Journal of Phytoremediation, 27*(2), 244-259. DOI: 10.1080/15226514.2024.2412820

2. Arif, H., Sajid, A., Ali, A., Ahmed, N., Iqbal, M., Akyurekli, S., Kaleli, M., Alwadai, N., Shafique, U., & Nazir, A. (2025, Sep 26). Selective non-enzymatic electrochemical detection of dopamine using nickel molybdate nano-dots anchored on CNT fiber microelectrodes. *RSC Advances, 15*(43), 36596-36606. DOI: 10.1039/d5ra05187h

3. Areej, I., Raza, S., Abid, A., Qureshi, A. K., Shafique, U., & Tan, B. (2024). Fabrication of New Hyper-cross-linked Polymer for Efficient Heavy Metal Adsorption from Industrial Wastewater. *Arabian Journal for Science and Engineering, 50*(9), 6443-6458. DOI: 10.1007/s13369-024-09259-0

4. Waheed Uz, Z., Salman, M., Farooq, U., Dar, A., Haq, I., Burhan, T., Anwar, J., Manuel Anzano, J., & Shafique, U. (2023). Determination of Cyanide at Trace Levels by Computational Scanning Densitometry. *Current Analytical Chemistry, 19*(6), 466-471. DOI: 10.2174/1573411019666230616085924

5. Shafique, U., Dorn, V., Paschke, A., & Schüürmann, G. (2017). Adsorption of Perfluorocarboxylic Acids at the Silica Surface. *Chemical Communications*, *53*(3), 589–592. DOI: 10.1039/C6CC07525H

6. Shafique, U., Schulze, S., Slawik, C., Chepchirchir, B. S., Böhme, A., Paschke, A., & Schüürmann, G. (2017). Perfluoroalkyl Acids in Aqueous Samples from Germany and Kenya. *Environmental Science and Pollution Research*, *24*(12), 11031–11044. DOI: 10.1007/s11356-016-7076-4

7. Shafique, U., Schulze, S., Slawik, C., Kunz, S., Paschke, A., & Schüürmann, G. (2017). Gas chromatographic determination of perfluorocarboxylic acids in aqueous samples – A tutorial review. *Analytica Chimica Acta*, *949*(March), 8–22. DOI: 10.1016/j.aca.2016.10.026

8. Dar, A., Shafique, U., Anwar, J., & Ali Munawar, M. (2015). Removal of Sulfide Ions from Water using Rice Husk. *Journal of Sulfur Chemistry*, *36*(2), 187–195. DOI: 10.1080/17415993.2015.1004067

9. Shafique, U., Ijaz, A., Salman, M., Zaman, W. uz, Jamil, N., Rehman, R., & Javaid, A. (2012). Removal of Arsenic from Water using Pine Leaves. *Journal of the Taiwan Institute of Chemical Engineers*, *43*(2), 256–263. DOI: 10.1016/j.jtice.2011.10.006

10. Anwar, J., Shafique, U., Waheed-uz-Zaman, un Nisa, Z., Munawar, M. A., Jamil, N., Salman, M., Dar, A., Rehman, R., Saif, J., Gul, H., & Iqbal, T. (2011). Removal of Chromium on Polyalthia Longifolia Leaves Biomass. *International Journal of Phytoremediation*, *13*(5), 410–420. DOI: 10.1080/15226511003753995

Selected Talks and Conference Presentation

1) Shafique, U. (September 2025). *Using Recycled Plastic Waste for the Water Treatment* [Paper Presentation]. Global Seminar on Solutions for the ONE WORLD: Monitoring Chemical Pollution under Low-Capacity Settings, Helmholtz-Centre for Environmental Research UFZ, Leipzig, Germany.

2) Shafique, U. (June 2025). *Applications of Waste Polyethylene Terephthalate-based Membranes for Addressing Emerging Pollutants*. Alumni Week "Alumni in Transfer for Circular Economy", Technische Universität Bergakademie Freiberg, Germany.

3) Shafique, U., Paschke, A., & Schüürmann, G. (December 2024). *Perfluoroalkyl Acids: Emerging Pollutants in the Environment*. International Conference on Recent Advances in Interdisciplinary Sciences (ICRAIS) 2024, Faisalabad, Pakistan.

4) Shafique, U., Rashid, A., Paschke, A., & Schüürmann, G. (February 2024). *Perfluoroalkyl Acids: Emerging Pollutants in the Environment*. Emerging Scientist (ES) 2024, Faisalabad, Pakistan.

5) Shafique, U., Paschke, A., & Schüürmann, G. (May 2022). *Fate of Perfluorocarboxylic Acids in the Aquatic Environment*. International Conference on Chemical and Material Sciences, ICCMS 2022, IL-7, pp. 13, Lahore, Pakistan.

6) Schulze, S., Paskhaver, K., Shafique, U., Paschke, A., Vrana, B., & Schüürmann, G. (September 2016). *Modified POCIS and Chemcatcher® Versions for Time-Integrated Monitoring of Perfluorinated Compounds in Surface Water and Wastewater Effluent*. 8th International Passive Sampling Workshops and Symposium, Prague, Czech Republic.

7) Shafique, U., Schulze, S., Slawik, C., Paschke, A., & Schüürmann, G. (June 2016). *Gas Chromatography of Perfluorocarboxylic Acids: Scope, Limitations, Comparison with Liquid Chromatography*. LC-MS in der Umweltanalytik 2016, Leipzig, Germany.

8) Shafique, U., Schulze, S., Slawik, C., Paschke, A., & Schüürmann, G. (November 2015). *Occurrence of Perfluoroalkyl Surfactants in the River Saale, Halle*. HIGRADE Fall Conference 2015, Leipzig, Germany.

9) Shafique, U., Schulze, S., Slawik, C., Paschke, A., & Schüürmann, G. (September 2015). *Occurrence of Perfluoroalkyl Surfactants in the River Saale*. 15th EuCheMS International Conference on Chemistry and the Environment (ICCE, 2015), Leipzig, Germany.

10) Shafique, U., Dorn, V., Paschke, A., & Schüürmann, G. (June 2014). *Adsorption of Perfluorooctanoic Acid on Goethite*. 6th International Workshop on Per- and Polyfluorinated Alkyl Substances - PFAS: Synthesis, Analysis, Fate, Toxicity, Human Exposure, Regulation, Idstein, Germany.

Awards & Funding

- 67th Lindau Nobel Laureate Meeting, Lindau, Germany (2017)
- British Council FameLab Science Sachsen, Germany (2014)
- PhD Scholarship Award by the HEC-DAAD for Germany (2013–2017)
- NAYS National Young Scientist Award, Pakistan Science Foundation (2011)
- Distinction: MSc (Chemistry), University of the Punjab (2007)
- Distinction: BSc (Chemistry Physics Mathematics), Government Science College (2005)
- Research Grant: Nanocomposites Hydrogels for Water Treatment, University Research Grant (ORIC), Government College University Lahore, 07/03/2023 – 06/03/2024.

Supervision & Mentoring

- PhD: 02, MS/ MPhil: 44, BS/ MSc/ Diploma: 63
- Mentor/ Peer-Reviewer, Lindau Nobel Laureate Meetings (2021–2025)
- PhD Thesis Supervision:
    - Muskan Saher (2025). *Modifications and Applications of Waste Polyethylene Terephthalate based Membranes for Addressing Emerging Contaminants* [PhD Chemistry Dissertation, Co-Supervisor: Dr. Faheem Hassan Akhtar, Synopsis Approved]. Faculty of Chemistry and Life Science, Department of Chemistry, Government College University Lahore, Pakistan.

- Muhammad Umer Farooq (2025). *Removal of Heavy Metals from Water using Waste Polyethylene based Degradable Membranes* [PhD Chemistry Dissertation, Co-Supervisor: Prof. Dr. Arif Nazir, Synopsis Approved]. Faculty of Chemistry and Life Science, Department of Chemistry, Government College University Lahore, Pakistan.

Leadership, Service, Editorial Roles

- Member, The Chemical Society of Pakistan
- Member, Asian Council of Science Editors
- Member, Board of Studies (Chemistry), The University of Lahore, Pakistan
- Focal Person for the Universities of Punjab, Skillistan, Pakistan (Private Organization for Promoting UN SDGs)
- Editorial Board Member, Current Analytical Chemistry (ISSN: 1875-6727)
- Editorial Board Member, Environmental Chemistry Section, Cambridge Scholar Publishing, United Kingdom
- Peer Reviewer
  - Environmental Science and Pollution Research
  - Environmental Science: Processes & Impacts
  - International Journal of Environmental Science and Technology
  - Journal of Hazardous Materials
  - Urban Water Journal

Training and Mobility

- Training Workshop on Management of Chemicals and Hazardous Waste (2023), Ministry of Climate Change & Environmental Coordination, Lahore, Pakistan (01/09/2023).
- Faculty Training - Advanced Teaching & Learning Program (2023), Government College University, Lahore, Pakistan (17/07 – 16/08/2023).
- HIGRADE Courses and Training (2013–2017), Helmholtz-Zentrum für Umweltforschung GmbH, Leipzig, Germany (01/04/2013 – 28/04/2017).
- 12th Summer School of Environmental Chemistry and Ecotoxicology (2016), RECETOX Research Centre for Toxic Compounds in the Environment, Masaryk University, Brno, Czech Republic (13 – 18/06/2016).
- 6th International Workshop on Perfluorinated Alkyl Substances-PFAS (2014), Synthesis, Analysis, Fate, Toxicity, Human Exposure, Regulation, Hochschule Fresenius, Idstein, Germany (15 – 18/06/2014).
- Master Class for Science Communications (2014), British Council, Berlin, Germany.
- 5th International Workshop on Perfluorinated Alkyl Substances-PFAS (2013), Fluorinated Compounds in Materials, Humans, and the Environment, Universiteit van Amsterdam, Conventum, Helsingør, Copenhagen, Denmark (27 – 29/10/2013).