

Resume

Dr. Syed Munir Hussain Shah

Address: Department of Chemistry, Quaid-i-Azam University, Islamabad 45320, Pakistan
E-mail: munir_qau@yahoo.com & mhshahg@qau.edu.pk
Phone: +92-51-90642137 & +92-300-5273149 Fax: +92-51-90642241

Academic Qualifications

Degree	Major Subjects	Year	University
Ph.D.	Analytical/Inorganic Chemistry	2007	Quaid-i-Azam University, Islamabad, Pakistan
M. Phil.	Analytical/Inorganic Chemistry	2002	Quaid-i-Azam University, Islamabad, Pakistan
M. Sc.	Analytical Chemistry	2000	University of Peshawar, Peshawar, Pakistan

Professional Experience

- Associate Professor, Department of Chemistry, Quaid-i-Azam University, Islamabad, Pakistan (May 2014 to date).
- Assistant Professor, Department of Chemistry, Quaid-i-Azam University, Islamabad, Pakistan (May 2008 to May 2014).
- Lecturer, Department of Chemistry, Quaid-i-Azam University, Islamabad, Pakistan (January 2004 to May 2008).
- Research Associate at Quaid-i-Azam University Islamabad, Pakistan (2000-2004).

Distinctions and Awards

- 'TWAS Prize for Young Scientist in Chemistry' (2010) Third World Academy of Sciences/Pakistan Academy of Sciences.
- 'Best Young Research Scholar Award' (2011) Higher Education Commission, Islamabad, Pakistan.
- 'Research & Productivity Award' 2007 to 2016, Pakistan Council of Science and Technology, Islamabad, Pakistan.
- 'Star Laureate 2009' XXTH STAR AWARDS, South Asia Publication.
- First position on merit in M.Phil., Quaid-i-Azam University, Islamabad, Pakistan.
- Recipient of M. Phil. Fellowship at Quaid-i-Azam University Islamabad, Pakistan.
- First division throughout academic carrier.

Research Interests

Trace Metals and Health

Role of trace metals in health and disease; Multivariate statistical analyses of trace metals in the blood and tissues of diseased personals in comparison with the healthy counterparts; Antioxidant potential of food products in relation to phytochemicals and trace metals.

Atmospheric Pollution

Measurement and monitoring of atmospheric pollutants, particularly trace metals, their spatial and temporal variations and source apportionment.

Hydrogeochemistry

Assessment of water, soil and sediment quality; Physicochemical and trace metals analyses; Receptor modelling; Anthropogenic contamination of natural ecosystem; Ecological/health risk assessment; Pollution indicators; Characterization of industrial effluents and their effects on other environmental segments.

Thesis Supervised

S. #	Name of Student	Thesis Title	Degree	Year
1.	Mr. Muhammad Saleem	Distribution, Correlation, Source Apportionment, Bioaccessibility and Health Risk Assessments of Selected Metals in Water, Sediments, Soil and Fish from Mangla Lake, Pakistan	Ph.D.	2017
2.	Ms. Kalsoom Bibi	Evaluation of Metals Imbalances in the Blood of Thyroid Cancer Patients in Comparison with Controls	M.Phil.	2017
3.	Ms. Saba Ghaffar	Comparative Study of Selected Metals, Total Phenolics and Antioxidant Properties of Different Varieties of <i>Allium cepa</i>	M.Phil.	2017
4.	Ms. Hajira Mumtaz	Study of Distribution, Correlation, Source Apportionment and Risk Assessment of Selected Metals in Groundwater of Wah Cantt.	M.Phil.	2017
5.	Mr. Adnan Khan	Comparative Assessment of Selected Metals, Polyphenols and Antioxidant Potential of Various Types of Honey	M.Phil.	2017
6.	Mr. Imran Khan	Evaluation of Trace Metals in Automotive Fuels by FAAS and their Environmental Impact	M.Phil.	2017
7.	Mr. Asim Ilyas	Comparative Studies on the Distribution, Correlation and Multivariate Apportionment of Selected Elements in Blood and Scalp Hair of Cardiovascular Patients and Healthy Donors	Ph.D.	2016
8.	Mr. M. Abdul Qayyum	Comparative Evaluation of Selected Metals in the Blood, Scalp Hair and Nails of Cancer Patients and Healthy Subjects	Ph.D.	2016
9.	Mr. G.M. Mujtba Hashmi	Comparative Evaluation of Essential and Toxic Metals in the Blood and Scalp Hair of Arthritis Patients and Healthy Subjects	Ph.D.	2016
10.	Mr. Yasir Karim Khan	Evaluation of the Mobility and Bioaccessibility of Potentially Toxic Metal Contents in Urban Soil of Lahore, Pakistan	M.Phil.	2016
11.	Ms. Qurat ul Ain	Study of Phytochemical Contents and Antioxidant Properties of Fresh Vegetables in relation to the Essential and Toxic Metals and their Health Risk Assessment	M.Phil.	2015
12.	Ms. Annum Afzal	Comparative Evaluation of Selected Metals in the Blood and Scalp Hair of Stomach Cancer Patients and Healthy Subjects	M.Phil.	2015
13.	Ms. Nabila Akbar	Evaluation of Physicochemical Parameters and Trace Metal Concentrations in Groundwater of Islamabad in relation to Health Risk Assessment	M.Phil.	2015
14.	Mr. Nabeel Raza	Evaluation of Trace Metals in the Atmospheric Aerosols of Islamabad, Pakistan	M.Phil.	2014
15.	Mr. M. Umar Farooq	Assessment of the Mobility and Bioaccessibility of Selected Metals in Urban Soil of Islamabad	M.Phil.	2014
16.	Mr. Arshad Mehmood Abbasi	Ethnobotanical and Nutraceutical Investigation of Wild Edible Fruits and Vegetables used by the Tribal Communities of Lesser Himalayas - Pakistan (As Co-Supervisor)	Ph.D.	2013
17.	Ms. Khezina Rafiq	Investigation of Antioxidant Activities in Relation to the Phytochemical Constituents and Selected Metals in Fresh Fruits and their Health Risk Assessment	M.Phil.	2013
18.	Ms. Maria Hasan	Evaluation of Physicochemical Characteristics and Bioavailability of Selected metals in Paddy soil by Sequential Extraction method	M.Phil.	2013
19.	Ms. Sidra Hanif	Assessment of Selected Trace Metals and Thyroid Stimulating Hormone in Hypothyroid and Hyperthyroid Patients in Comparison with Healthy Donors	M.Phil.	2013
20.	Mr. Tassadiq Baig	Evaluation of Bioavailability of Selected Metals in Surface Sediments by Sequential Extraction Method	M.Phil.	2013
21.	Mr. Javed Iqbal	Distribution, Correlation, Multivariate Apportionment and Risk Assessment of Selected Metals in Water, Soil, Sediments and Fish as a Measure of Pollution Index in Freshwater Reservoirs (As Co-Supervisor)	Ph.D.	2012

22.	Ms. Amna Bashir	Physicochemical Characteristics of Soil and Accumulation of Selected Metals in Vegetables in Relation to their Phytochemical Contents and Antioxidant Activity	M.Phil.	2012
23.	Mr. Hamad Ahmad	Study of Selected Metal Variations in the Scalp Hair and Nails of Myocardial Infarction and Angina Pectoris Patients in Comparison with Healthy Donors	M.Phil.	2012
24.	Ms. Tahira Amir	Fractionation of Selected Metals by Sequential Extraction Procedure in Agricultural Soil in Relation to their Bioavailability	M.Phil.	2012
25.	Ms. Sadia Arif	Covariation of Selected Elements in the Blood and Scalp Hair of COPD Patients in Comparison With the Healthy Donors	M.Phil.	2011
26.	Ms. Riffat Parveen	Assessment of Selected Metals in Some Wild Edible Fruits in Relation to Sequentially Extracted Metals in Related Soils	M.Phil.	2011
27.	Mr. Akif Zeb	Removal of Arsenic from Water by Adsorption on Nascent and Metal Doped Titanium Dioxide Nanoparticles	M.Phil.	2011
28.	Mr. Faraz Ahmed	Diurnal and Nocturnal Variations of Trace Metals in Atmospheric Particulate Matter	M.Phil.	2011
29.	Mr. Asim Ilyas	Assessment of Trace Element Variations in the Blood of Cardiovascular Patients in Comparison with Healthy Donors	M.Phil.	2011
30.	Mr. M. Saleem	Distribution and correlation of selected metals and physicochemical parameters in surface water, sediments and soil of a natural water reservoir	M.Phil.	2010
31.	Mr. G.M. Mujtba Hashmi	Study of trace metal imbalances in blood and scalp hair of arthritis patients	M.Phil.	2010
32.	Ms. Rashida Nazir	Comparative evaluation of trace metals in indoor and outdoor atmospheric particulate matter	M.Phil.	2009
33.	Ms. Mehwish Saghir	Comparative studies on the distribution and apportionment of selected metals in the scalp hair and blood of hepatitis patients and controls	M.Phil.	2009

Research Projects (Completed)

- ❖ Study of bioaccumulation of selected metals in fresh vegetables and their health risk assessment; QAU-URF (2015-16), 1-year duration.
- ❖ Assessment of polyphenol contents and antioxidant properties of selected fresh fruits; QAU-URF (2014-15), 1-year duration.
- ❖ Evaluation of essential and toxic metals in citrus fruits in relation to human health risk assessment; QAU-URF (2013-14), 1-year duration.
- ❖ Distribution, Correlation, Risk Assessment and Bioavailability of Selected Metals in Surface Sediments; QAU-URF (2012-13), 1-year duration.
- ❖ Evaluation of the trace elements distribution, enrichment and apportionment in atmospheric particulates of Islamabad in comparison with other cities around the world; QAU-URF (2011-12), 1-year duration.
- ❖ Diurnal variability of trace metals in atmospheric aerosols; QAU-URF (2010-11), 1-year duration.
- ❖ Study of selected trace metal distribution and apportionment in water, sediments and soil of a natural water reservoir; QAU-URF (2009-10), 1-year duration.
- ❖ Comparative evaluation of trace metals in indoor and outdoor airborne particulate matter; QAU-URF (2008-09), 1-year duration.

Research Projects (In progress)

- ❖ Evaluation of Atmospheric Pollution by Respirable Particulates and their Characterization for Toxic Trace Metals in Relation to Source Identification and Health Risk Assessment; Higher Education Commission (HEC-NRPU), 2-year duration.
- ❖ Evaluation of Antioxidant Properties, Polyphenolic Contents and Essential/Toxic Metals in Onion (*Allium cepa* L.); QAU-URF (2016-17), 1-year duration.

Courses Taught

- Inorganic Electronic Spectroscopy (M.Phil./Ph.D.)
- Hydrogeochemistry (M.Phil./Ph.D.)
- Atomic Spectroscopy (M.Sc.)
- Environmental Chemistry (M.Sc.)
- Instrumental Methods (M.Sc.)
- Analytical Chemistry-II (M.Sc.)
- Analytical Chemistry Lab-I & II (M.Sc.)
- Analytical/Inorganic Chemistry Lab-III (M.Sc.)
- Advanced Instrumental Lab-IV (M.Sc.)

Professional and Administrative Memberships

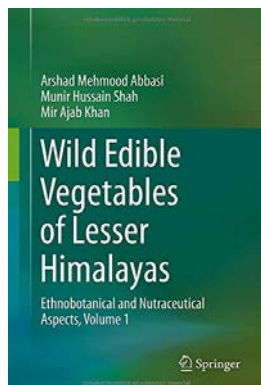
- Member (Life), Chemical Society of Pakistan.
- Member, Academic Council (2008-2011), Quaid-i-Azam University, Islamabad.
- Member, Board of Faculty, Faculty of Natural Sciences, QAU, Islamabad.
- Member, Board of Studies, Department of Chemistry, QAU, Islamabad.
- Incharge, Glassware store, Department of Chemistry, QAU, Islamabad.

Other Professional Activities

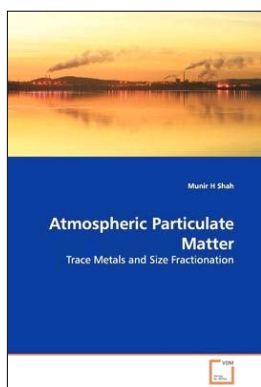
- Member, Editorial Board of “*HELIYON*” (An interdisciplinary Elsevier Journal)
- In addition, acting as reviewer of the following journals;

- Journal of Hazardous Materials
- Biological Trace Element Research
- Ecotoxicology and Environmental Safety
- Science of the Total Environment
- Journal of Geochemical Exploration
- Environmental Monitoring and Assessment
- Atmospheric Environment
- Environmental Pollution
- Environmental Research
- Atmospheric Research
- Human and Ecological Risk Assessment
- Environmental Science and Pollution Research
- Atmospheric Pollution Research
- CLEAN - Soil, Air, Water
- Environmental Earth Sciences
- Chemistry and Ecology
- Applied Water Science
- Clinical Chemistry and Laboratory Medicine
- Environmental Engineering and Management Journal
- International Journal of Environmental Analytical Chemistry
- Toxicology Reports
- Journal of Chemistry
- Open Chemistry (formerly Central European Journal of Chemistry)
- Environmental Geochemistry and Health
- The Scandinavian Journal of Clinical & Laboratory Investigation
- Journal of the Chemical Society of Pakistan

Books Authored



Title: WILD EDIBLE VEGETABLES OF LESSER HIMALAYAS: *Ethnobotanical and Nutraceutical Aspects*, (Volume 1)
 Authors: Arshad Mehmood Abbasi, Munir Hussain Shah, Mir Ajab Khan
 Year: 2015
 No. of Pages: 360
 Publisher: Springer International Publishing, Switzerland
 ISBN: 978-3-319-09542-4 (Print); 978-3-319-09543-1 (Electronic)
 DOI: 10.1007/978-3-319-09543-1



Title: ATMOSPHERIC PARTICULATE MATTER: *Trace Metals and Size Fractionation*
 Author: Munir H. Shah
 Year: 2009
 No. of Pages: 207
 Publisher: VDM Verlag Dr. Muller Aktiengesellschaft & Co. KG, Dudweiler Landstr. 99, 66123 Saarbrücken, Germany
 ISBN: 978-3-639-14825-1

Research Publications

1. Maria Hasan, Dilshad Kausar, Gulraiz Akhter, **Munir H. Shah**, 2018. Evaluation of the mobility and pollution index of selected essential/toxic metals in paddy soil by sequential extraction method. *Ecotoxicology and Environmental Safety*, (Elsevier), Volume 147, 283-291. (DOI: 10.1016/j.ecoenv.2017.08.054).
2. Muhammad Saleem, Javed Iqbal, Gulraiz Akhter, **Munir H. Shah**, 2018. Fractionation, bioavailability, contamination and environmental risk of heavy metals in the sediments from a freshwater reservoir, Pakistan. *Journal of Geochemical Exploration*, (Elsevier), Volume 184, 199-208. (DOI: 10.1016/j.gexplo.2017.11.002).
3. Sidra Hanif, Asim Ilyas, **Munir H. Shah**, 2017. Statistical Evaluation of Trace Metals, TSH and T₄ in Blood Serum of Thyroid Disease Patients in Comparison with Controls. *Biological Trace Element Research*, (Springer), (DOI: 10.1007/s12011-017-1137-5).
4. Riffat Parveen, Arshad M. Abbasi, Nazia Shaheen, **Munir H. Shah**, 2017. Accumulation of selected metals in the fruits of medicinal plants grown in urban environment of Islamabad, Pakistan. *Arabian Journal of Chemistry*, (Elsevier), (DOI: 10.1016/j.arabjc.2017.04.010).
5. Asim Ilyas, **Munir H. Shah**, 2017. Chemometric Evaluation of Elemental Imbalances in the Scalp Hair of Valvular Heart Disease Patients in Comparison with Healthy Donors. *Biological Trace Element Research*, (Springer), (DOI: 10.1007/s12011-017-1027-x).
6. Asim Ilyas, **Munir H. Shah**, 2017. Disparities of Selected Metal Levels in the Blood and Scalp Hair of Ischemia Heart Disease Patients and Healthy Subjects. *Biological Trace Element Research*, (Springer), Volume 180, No. 2, 191-205. (DOI: 10.1007/s12011-017-1021-3).
7. Muhammad Abdul Qayyum, **Munir H. Shah**, 2017. Study of trace metal imbalances in the blood, scalp hair and nails of oral cancer patients from Pakistan. *Science of the Total Environment*, (Elsevier), Volume 593, 191-201. (DOI: 10.1016/j.scitotenv.2017.03.169).

8. Asim Ilyas, **Munir H. Shah**, 2017. Statistical evaluation of essential/toxic metal levels in the blood of valvular heart disease patients in comparison with controls. *Journal of Environmental Science and Health, Part A: (Taylor & Francis)*, Volume 52, No. 6, 571-579. (DOI: 10.1080/10934529.2017.1284438).
9. Muhammad Abdul Qayyum, **Munir H. Shah**, 2017. Appraisal of essential metals in the blood of prostate cancer patients in comparison with healthy subjects. *Biointerface Research in Applied Chemistry*, Volume 7, No. 3, 2053-2062.
10. G.M. Mujtba Hashmi, **Munir H. Shah**, 2017. Study of Imbalances of Essential/Toxic Metals in the Blood of Osteoarthritis Patients in Comparison with Healthy Subjects. *Biointerface Research in Applied Chemistry*, Volume 7, No. 1, 1945-1954.
11. Javed Iqbal, Muhammad Saleem, **Munir H. Shah**, 2016. Spatial distribution, environmental assessment and source identification of metals content in surface sediments of freshwater reservoir, Pakistan. *Chemie der Erde – Geochemistry*, (Elsevier), Volume 76, No. 1, 171-177. (DOI: 10.1016/j.chemer.2016.02.002).
12. Muhammad Saleem, Javed Iqbal, **Munir H. Shah**, 2016. Assessment of water quality for drinking/irrigation purpose from Mangla dam, Pakistan. *Geochemistry: Exploration, Environment, Analysis*, (Geological Society of London), Volume 16, No. 2, 137-145. (DOI: 10.1144/geochem2014-336).
13. Asim Ilyas, **Munir H. Shah**, 2016. Multivariate statistical evaluation of trace metal levels in the blood of atherosclerosis patients in comparison with healthy subjects. *Heliyon*, (Elsevier), Volume 2, No. 1, e00054, 15 pages. (DOI: 10.1016/j.heliyon.2015.e00054).
14. Muhammad Saleem, Javed Iqbal, **Munir H. Shah**, 2016. Spatio-Temporal Variability and Pollution Assessment of Selected Metals in Freshwater Sediments, Pakistan. *CLEAN - Soil, Air, Water*, (Wiley-VCH Verlag), Volume 44, No. 4, 402-410. (DOI: 10.1002/clen.201400201).
15. Arshad Mehmood Abbasi, **Munir H. Shah**, Xinbo Guo, Nadeem Khan, 2016. Comparison of nutritional value, antioxidant potential and risk assessment of the Mulberry (*Morus*) fruits. *International Journal of Fruit Science*, (Taylor & Francis), Volume 16, No. 2, 113-134. (DOI: 10.1080/15538362.2015.1061960).
16. Muhammad Abdul Qayyum, **Munir H. Shah**, 2016. Comparative assessment of essential/toxic elemental levels in the scalp hair and nails of ovarian cancer patients and controls among Pakistani women. *Biointerface Research in Applied Chemistry*, Volume 6, No. 6, 1847-1859.
17. Muhammad Abdul Qayyum, **Munir H. Shah**, 2016. Evaluation of essential and toxic metal imbalances in the blood of various types of lung cancer patients. *Biointerface Research in Applied Chemistry*, Volume 6, No. 6, 1759-1769.
18. Javed Iqbal, **Munir H. Shah**, Nazia Shaheen, 2015. Distribution, source identification and risk assessment of selected metals in sediments from freshwater lake. *International Journal of Sediment Research*, (Elsevier), Volume 30, 241-249. (DOI: 10.1016/j.ijsrc.2012.12.001).
19. Muhammad Saleem, Javed Iqbal, Gulraiz Akhter, **Munir H. Shah**, 2015. Spatial/Temporal Characterization and Risk Assessment of Trace Metals in Mangla Reservoir, Pakistan. *Journal of Chemistry*, (Hindawi), Volume 2015, Article ID 928019, 11 pages. (DOI: 10.1155/2015/928019).
20. Asim Ilyas, **Munir H. Shah**, 2015. Abnormalities of selected trace elements in patients with coronary artery disease. *Acta Cardiologica Sinica*, Volume 31, No. 6, 518-527. (DOI: 10.6515/ACS20150302A).
21. Asim Ilyas, Hamad Ahmad, **Munir H. Shah**, 2015. Comparative Distribution, Correlation and Chemometric Analyses of Selected Metals in Scalp Hair of Angina Patients and Healthy Subjects. *Biological Trace Element Research*, (Springer), Volume 168, No. 1, 33-43. (DOI: 10.1007/s12011-015-0350-3).
22. Muhammad Saleem, Javed Iqbal, **Munir H. Shah**, 2015. Geochemical speciation, anthropogenic contamination, risk assessment and source identification of selected metals

- in freshwater sediments—A case study from Mangla Lake, Pakistan. *Environmental Nanotechnology, Monitoring & Management*, (Elsevier), Volume 4, 27-36. (DOI: 10.1016/j.enmm.2015.02.002).
23. Asim Ilyas, Hamad Ahmad, **Munir H. Shah**, 2015. Comparative study of elemental concentrations in the scalp hair and nails of Myocardial infarction patients versus controls from Pakistan. *Biological Trace Element Research*, (Springer), Volume 166, No. 2, 123-135. (DOI: 10.1007/s12011-015-0259-x).
 24. Javed Iqbal, **Munir H. Shah**, 2015. Study of selected metals distribution, source apportionment and risk assessment in suburban soil, Pakistan. *Journal of Chemistry*, (Hindawi), Volume 2015, Article ID 481324, 8 pages. (DOI: 10.1155/2015/481324).
 25. Muhammad Abdul Qayyum, **Munir H. Shah**, 2015. Comparative assessment of trace metals in the blood of ovary cancer patients and controls. *Trace Elements and Electrolytes*, (Dustri-Verlag), Volume 32, No. 2, 65-73. (DOI: 10.5414/TEX01366).
 26. Arshad Mehmood Abbasi, **Munir H. Shah**, Tong Li, Xiong Fu, Xinbo Guo, Rui Hai Liu, 2015. Ethnomedicinal values, phenolic contents and antioxidant properties of wild culinary vegetables. *Journal of Ethnopharmacology*, (Elsevier), Volume 162, 333-345. (DOI: 10.1016/j.jep.2014.12.051).
 27. Muhammad Abdul Qayyum, **Munir H. Shah**, 2014. Comparative study of trace elements in blood, scalp hair and nails of prostate cancer patients in relation to healthy donors. *Biological Trace Element Research*, (Springer), Volume 162, No. 1-3, 46-57. (DOI: 10.1007/s12011-014-0123-4).
 28. Muhammad Saleem, Javed Iqbal, **Munir H. Shah**, 2014. Non-carcinogenic and carcinogenic health risk assessment of selected metals in soil around a natural water reservoir, Pakistan. *Ecotoxicology and Environmental Safety*, (Elsevier), Volume 108, 42-51. (DOI: 10.1016/j.ecoenv.2014.06.017).
 29. Muhammad Abdul Qayyum, **Munir H. Shah**, 2014. Comparative Assessment of Selected Metals in the Scalp Hair and Nails of Lung Cancer Patients and Controls. *Biological Trace Element Research*, (Springer), Volume 158, No. 3, 305-322. (DOI: 10.1007/s12011-014-9942-6).
 30. Javed Iqbal, **Munir H. Shah**, 2014. Occurrence, risk assessment and source apportionment of heavy metals in surface sediments from Khanpur Lake, Pakistan. *Journal of Analytical Science and Technology*, (Springer), Volume 5, No. 1, 28(12 pages). (DOI: 10.1186/s40543-014-0028-z).
 31. Muhammad Saleem, Javed Iqbal, **Munir H. Shah**, 2014. Dissolved concentrations, sources and risk evaluation of selected metals in surface water from Mangla Lake, Pakistan. *The Scientific World Journal*, (Hindawi), Volume 2014, Article ID 948396, 12 pages. (DOI:10.1155/2014/948396).
 32. Nadeem Khan, Arshad M. Abbasi, Ghulam Dastagir, Abdul Nazir, Ghulam M. Shah, Mohammad M. Shah, **Munir H. Shah**, 2014. Ethnobotanical and antimicrobial study of some selected medicinal plants used in Khyber Pakhtunkhwa (KPK) as a potential source to cure infectious diseases. *BMC Complementary and Alternative Medicine*, (BioMed), Volume 14(122), 1-10. (DOI:10.1186/1472-6882-14-122).
 33. Javed Iqbal, **Munir H. Shah**, 2014. Study of seasonal variations and health risk assessment of heavy metals in *Cyprinus carpio* from Rawal Lake, Pakistan. *Environmental Monitoring and Assessment*, (Springer), Volume 186, No. 4, 2025-2037. (DOI: 10.1007/s10661-013-3515-6).
 34. Faraz Ahmed, **Munir H. Shah**, Nazia Shaheen, 2014. Diurnal and Nocturnal Variations of Trace Metals in Urban Atmospheric Particulate Matter from Islamabad, Pakistan. *Environmental Earth Sciences*, (Springer), Volume 71, No. 2, 817-826. (DOI: 10.1007/s12665-013-2484-y).
 35. Arshad M. Abbasi, M.A. Khan, **Munir H. Shah**, M.M. Shah, A. Pervez, M. Ahmad, 2013. Ethnobotanical appraisal and cultural values of medicinally important wild edible

- vegetables of Lesser Himalayas-Pakistan. *Journal of Ethnobiology and Ethnomedicine*, (BioMed Central), Volume 9(66), 1-13. (DOI: 10.1186/1746-4269-9-66).
36. Javed Iqbal, **Munir H. Shah**, 2013. Health risk assessment of metals in surface water from freshwater source lakes, Pakistan. *Human and Ecological Risk Assessment*, (Taylor & Francis), Volume 19, No. 6, 1530-1543. (DOI: 10.1080/10807039.2012.716681).
37. Arshad Mehmood Abbasi, Mir Ajab Khan, Nadeem Khan, **Munir H. Shah**, 2013. Ethnobotanical survey of medicinally important wild edible fruits species used by tribal communities of Lesser Himalayas-Pakistan. *Journal of Ethnopharmacology*, (Elsevier), Volume 148, 528-536. (DOI: 10.1016/j.jep.2013.04.050).
38. Sadia Arif, Javed Iqbal, Nazia Shaheen, **Munir H. Shah**, 2013. Comparative evaluation of trace elementals in the blood of chronic bronchitis patients and healthy donors. *Trace Elements and Electrolytes*, (Dustri-Verlag), Volume 30, No. 3, 122-129. (DOI: 10.5414/TEX01289).
39. Arshad Mehmood Abbasi, Javed Iqbal, Mir Ajab Khan, **Munir H. Shah**, 2013. Health risk assessment and multivariate apportionment of trace metals in wild leafy vegetables from Lesser Himalayas, Pakistan. *Ecotoxicology and Environmental Safety*, Volume 92, 237-244. (DOI: 10.1016/j.ecoenv.2013.02.011).
40. Javed Iqbal, **Munir H. Shah**, Gulraiz Akhter, 2013. Characterization, source apportionment and health risk assessment of trace metals in freshwater Rawal Lake, Pakistan. *Journal of Geochemical Exploration*, (Elsevier), Volume 125, No. 1, 94-101. (DOI: 10.1016/j.gexplo.2012.11.009).
41. Muhammad Saleem, Javed Iqbal, **Munir H. Shah**, 2013. Study of seasonal variations and risk assessment of selected metals in sediments from Mangla Lake, Pakistan. *Journal of Geochemical Exploration*, (Elsevier), Volume 125, No. 1, 144-152. (DOI: 10.1016/j.gexplo.2012.12.006).
42. Javed Iqbal, Syed A. Tirmizi, **Munir H. Shah**, 2013. Statistical apportionment and risk assessment of selected metals in sediments from Rawal Lake (Pakistan). *Environmental Monitoring and Assessment*, (Springer), Volume 185, No. 1, 729-743. (DOI: 10.1007/s10661-012-2588-y).
43. Javed Iqbal, **Munir H. Shah**, 2012. Water quality evaluation, health risk assessment and multivariate apportionment of selected elements from Simly Lake, Pakistan. *Water Science and Technology-Water Supply*, (IWA Publishing), Volume 12, No. 5, 588-594. (DOI: 10.2166/ws.2012.019).
44. G. M. Mujtba Hashmi, **Munir H. Shah**, 2012. Comparative assessment of essential and toxic metals in the blood of rheumatoid arthritis patients and healthy subjects. *Biological Trace Element Research*, (Springer), Volume 146, No. 1, 13-22. (DOI: 10.1007/s12011-011-9220-9).
45. **Munir H. Shah**, Javed Iqbal, Nazia Shaheen, Nadeem Khan, Muhammad Aziz Choudhary, Gulraiz Akhter, 2012. Assessment of background levels of trace metals in water and soil from a remote region of Himalaya. *Environmental Monitoring and Assessment*, (Springer), Volume 184, No. 3, 1243-1252. (DOI: 10.1007/s10661-011-2036-4).
46. Javed Iqbal, Syed A. Tirmizi, **Munir H. Shah**, 2012. Non-carcinogenic Health Risk Assessment and Source Apportionment of Selected Metals in Source Freshwater Khanpur Lake, Pakistan. *Bulletin of Environmental Contamination and Toxicology*, (Springer), Volume 88, No. 2, 177-181. (DOI: 10.1007/s00128-011-0480-z).
47. **Munir H. Shah**, Nazia Shaheen, Rashida Nazir, 2012. Assessment of the trace elements level in urban atmospheric particulate matter and source apportionment in Islamabad, Pakistan. *Atmospheric Pollution Research*, Volume 3, No. 1, 39-45. (DOI: 10.5094/APR.2012.003).
48. Javed Iqbal, **Munir H. Shah**, Syed A. Tirmizi, Gulraiz Akhter, 2012. Evaluation of water quality for drinking and irrigation purpose from Simly Lake, Pakistan. *Journal of the Chemical Society of Pakistan*, Volume 34, No. 6, 1565-1572.

49. Javed Iqbal, **Munir H. Shah**, 2011. Distribution, correlation and risk assessment of selected metals in urban soils from Islamabad, Pakistan. *Journal of Hazardous Materials*, (Elsevier), Volume 192, No. 2, 887-898. (DOI: 10.1016/j.jhazmat.2011.05.105).
50. G. M. Mujtba Hashmi, **Munir H. Shah**, 2011. Comparative evaluation of trace elements in the scalp hair of arthritis patients and healthy donors. *Toxicological and Environmental Chemistry*, (Taylor & Francis), Volume 93, No. 10, 2123-2134. (DOI: 10.1080/02772248.2011.626417).
51. Mehwish Saghir, Nazia Shaheen, **Munir H. Shah**, 2011. Comparative evaluation of trace metals in the blood of hepatitis-C patients and healthy donors. *Biological Trace Element Research*, (Springer), Volume 143, No. 2, 751-763. (DOI 10.1007/s12011-010-8930-8).
52. Rashida Nazir, Nazia Shaheen, **Munir H. Shah**, 2011. Indoor/outdoor relationship of trace metals in the atmospheric particulate matter of an industrial area. *Atmospheric Research*, (Elsevier), Volume 101, No. 3, 765-772. (DOI: 10.1016/j.atmosres.2011.05.003).
53. Mehwish Saghir, Nazia Shaheen, **Munir H. Shah**, 2011. Assessment of Trace Elements in the Scalp Hair of Hepatitis-C Patients in Comparison with Healthy Donors. *Trace Elements and Electrolytes*, (Dustri Verlag), Volume 28, No. 4, 213-220. (DOI: 10.5414/TEX01181).
54. **Munir H. Shah**, Nazia Shaheen, 2010. Seasonal behaviours in elemental composition of atmospheric aerosols collected in Islamabad, Pakistan. *Atmospheric Research*, (Elsevier), Volume 95, No. 2-3, 210-223. (DOI: 10.1016/j.atmosres.2009.10.001).
55. Q. Pasha, S.A. Malik, N. Shaheen, **Munir H. Shah**, 2010. Investigation of trace metals in the blood plasma and scalp hair of gastrointestinal cancer patients in comparison with controls. *Clinica Chimica Acta*, (Elsevier), Volume 411, No. 7-8, 531-539. (DOI: 10.1016/j.cca.2010.01.010).
56. S.R. Tariq, N. Shaheen, A. Khalique, **Munir H. Shah**, 2010. Distribution, correlation and source apportionment of selected metals in tannery effluents, related soils and groundwater – a case study from Multan, Pakistan. *Environmental Monitoring and Assessment*, (Springer), Volume 166, No. 1-4, 303-312. (DOI: 10.1007/s10661-009-1003-9).
57. Qaisara Pasha, Salman A. Malik, Nazia Shaheen, **Munir H. Shah**, 2010. Comparison of trace elements in the scalp hair of malignant and benign breast lesions versus healthy women. *Biological Trace Element Research*, (Springer), Volume 134, No. 2, 160-173. (DOI: 10.1007/s12011-009-8469-8).
58. Gulraiz Akhter, Zulfiqar Ahmad, Javed Iqbal, Nazia Shaheen, **Munir Hussain Shah**, 2010. Physicochemical characterization of groundwater in urban areas of Lahore, Pakistan, with special reference to Arsenic. *Journal of the Chemical Society of Pakistan*, Volume 32, No. 3, 306-312.
59. Q. Pasha, Salman A. Malik, J. Iqbal, N. Shaheen, **Munir H. Shah**, 2009. Screening of trace metals in the plasma of breast cancer patients in comparison with a healthy population. *Human and Ecological Risk Assessment*, (Taylor & Francis), Volume 15, No. 5, 1-17. (DOI: 10.1080/10807030903153188).
60. Saadia R. Tariq, **Munir H. Shah**, Nazia Shaheen, 2009. Comparative statistical analysis of chrome and vegetable tanning effluents and their effects on related soil. *Journal of Hazardous Materials*, (Elsevier), Volume 169, No. 1-3, 285-290. (DOI: 10.1016/j.jhazmat.2009.03.093).
61. **Munir H. Shah**, N. Shaheen, 2009. Study of particle size and trace metal distribution in atmospheric aerosols of Islamabad. *Journal of the Chemical Society of Pakistan*, Volume 31, No. 3, 427-433.
62. **Munir H. Shah**, N. Shaheen, 2008. Annual and seasonal variations of trace metals in atmospheric suspended particulate matter in Islamabad, Pakistan. *Water, Air, & Soil Pollution*, (Springer), Volume 190, 13-25. (DOI: 10.1007/s11270-007-9575-x).
63. Qaisara Pasha, Salman A. Malik, Javed Iqbal, Nazia Shaheen, **Munir H. Shah**, 2008. Comparative evaluation of trace metal distribution and correlation in human malignant and benign breast tissues. *Biological Trace Element Research*, (Springer), Volume 125, No. 1,

- 30-40. (DOI: 10.1007/s12011-008-8158-z).
64. Qaisara Pasha, Salman A. Malik, **Munir H. Shah**, 2008. Statistical analysis of trace metals in the plasma of cancer patients versus controls. *Journal of Hazardous Materials*, (Elsevier), Volume 153, No. 03, 1215-1221. (DOI: 10.1016/j.jhazmat.2007.09.115).
65. Saadia R. Tariq, **Munir H. Shah**, N. Shaheen, M. Jaffar, A. Khalique, 2008. Statistical source identification of metals in groundwater exposed to industrial contamination. *Environmental Monitoring and Assessment*, (Springer), Volume 138, 159-165. (DOI: 10.1007/s10661-007-9753-8).
66. Q. Pasha, S. A. Malik, J. Iqbal, N. Shaheen, **Munir H. Shah**, 2008. Comparative distribution of the scalp hair trace metal contents in the benign tumour patients and normal donors. *Environmental Monitoring and Assessment*, (Springer), Volume 147, 377-388. (DOI: 10.1007/s10661-007-0127-z).
67. **Munir H. Shah**, N. Shaheen, 2007. Statistical analysis of atmospheric trace metals and particulate fractions in Islamabad, Pakistan. *Journal of Hazardous Materials*, (Elsevier), Volume 147, No. 9, 759-767. (DOI: 10.1016/j.jhazmat.2007.01.075).
68. **Munir H. Shah**, N. Shaheen, 2007. Annual TSP and trace metal distribution in urban atmosphere of Islamabad in comparison with mega-cities of the world. *Human and Ecological Risk Assessment*, (Taylor & Francis), Volume 13, No. 4, 884-899. (DOI: 10.1080/10807030701456841).
69. **Munir H. Shah**, M. Jaffar, N. Shaheen, N. Rasool, 2007. Estimation of iodine in fortified salts by an improved electrometric method. *Nutrition & Food Science*, (Emerlad), Volume 37, No. 2, 115-122. (DOI: 10.1108/00346650710736381).
70. Qaisara Pasha, Salman A. Malik, Javed Iqbal, **Munir H. Shah**, 2007. Characterization and distribution of the selected metals in the scalp hair of cancer patients in comparison with normal donors. *Biological Trace Element Research*, (Springer), Volume 118, No. 3, 207-216. (DOI: 10.1007/s12011-007-0035-7).
71. M. Saqib, M. Jaffar, **Munir H. Shah**, 2007. Comparative high volume and scrubbing-based estimation of aerosol Lead. *Journal of the Chemical Society of Pakistan*, Volume 29, No. 2, 125-130.
72. **Munir H. Shah**, N. Shaheen, M. Jaffar, 2007. Characterization of selected metals in airborne suspended particulate matter in relation to meteorological conditions. *Journal of the Chemical Society of Pakistan*, Volume 29, No. 6, 598-604.
73. **Munir H. Shah**, N. Shaheen, M. Jaffar, A. Khalique, Saadia R. Tariq, S. Manzoor, 2006. Spatial variations in selected heavy metal contents and particle size distribution in an urban and rural atmosphere. *Journal of Environmental Management*, (Elsevier), Volume 78, No. 2, 128-137. (DOI: 10.1016/j.jenvman.2005.04.011).
74. **Munir H. Shah**, N. Shaheen, M. Jaffar, 2006. Characterization, source identification and apportionment of selected metals in TSP in urban Islamabad, Pakistan. *Environmental Monitoring and Assessment*, (Springer), Volume 114, No. 1-3, 573-587. (DOI: 10.1007/s10661-006-4940-6).
75. **Munir H. Shah**, N. Shaheen, A. Khalique, A.A.A. Alrabti, M. Jaffar, 2006. Comparative metal distribution in hair of Pakistani and Libyan population and source identification by multivariate analysis. *Environmental Monitoring and Assessment*, (Springer), Volume 114, No. 1-3, 505-519. (DOI: 10.1007/s10661-006-4936-2).
76. S. Manzoor, **Munir H. Shah**, N. Shaheen, A. Khalique, M. Jaffar, 2006. Multivariate analysis of trace metals in textile effluents in relation to soil and groundwater. *Journal of Hazardous Materials*, (Elsevier), Volume 137, No. 1, 31-37. (DOI: 10.1016/j.jhazmat.2006.01.077).
77. A. Khalique, **Munir H. Shah**, M. Jaffar, N. Shaheen, Saadia R. Tariq, S. Manzoor, 2006. Scalp hair metal analysis in the assessment of the occupational exposure of arc welders. *Toxicological and Environmental Chemistry*, (Taylor & Francis), Volume 88, No. 4, 697-704. (DOI: 10.1080/02772240600883627).

78. A. Khalique, **Munir H. Shah**, M. Jaffar, N. Shaheen, Saadia R. Tariq, S. Manzoor, 2006. Multivariate analysis of the selected metals in the hair of cerebral palsy patients versus controls. *Biological Trace Element Research*, (Springer), Volume 111, No. 1-3, 11-22. (DOI: 10.1385/BTER:111:1:11)
79. Saadia R. Tariq, **Munir H. Shah**, N. Shaheen, A. Khalique, S. Manzoor, M. Jaffar, 2006. Multivariate analysis of trace metal levels in tannery effluents in relation to soil and water—a case study from Peshawar, Pakistan. *Journal of Environmental Management*, (Elsevier), Volume 79, No. 1, 20-29. (DOI: 10.1016/j.jenvman.2005.05.009).
80. S. Manzoor, **M.H. Shah**, N. Shaheen, A. Khalique, M. Jaffar, 2006. Characterization, distribution and comparison of selected metals in textile effluents, adjoining soil and groundwater. *Journal of the Chemical Society of Pakistan*, Volume 28, No. 1, 10-15.
81. **Munir H. Shah**, N. Shaheen, A. Khalique, Saadia R. Tariq, S. Manzoor, W. Ahmed, M. Jaffar, 2005. Age and gender based comparison of nickel content of scalp hair of edible oil and hydrogenated oil consuming population. *Human and Ecological Risk Assessment*, (Taylor & Francis), Volume 11, No. 6, 1237-1246. (DOI: 10.1080/10807030500346755).
82. N. Shaheen, **Munir H. Shah**, M. Jaffar, 2005. A study of airborne selected metals and particle size distribution in relation to climatic variables and their source identification. *Water, Air, & Soil Pollution*, (Springer), Volume 164, No. 1-4, 275-294. (DOI: 10.1007/s11270-005-3542-1).
83. A. Khalique, **Munir H. Shah**, M. Jaffar, N. Shaheen, S. Manzoor, Saadia R. Tariq, 2005. Status of selected heavy metal distribution in scalp hair of traffic control personnel exposed to vehicular emissions. *Human and Ecological Risk Assessment*, (Taylor & Francis), Volume 11, No. 5, 1065-1075. (DOI: 10.1080/10807030500257820).
84. N. Shaheen, **M.H. Shah**, A. Khalique, M. Jaffar, 2005. Metal levels in airborne particulate matter in urban Islamabad, Pakistan. *Bulletin of Environmental Contamination and Toxicology*, (Springer), Volume 75, No. 4, 739-746. (DOI: 10.1007/s00128-005-0813-x).
85. Saadia R. Tariq, **Munir H. Shah**, N. Shaheen, A. Khalique, S. Manzoor, M. Jaffar, 2005. Multivariate analysis of selected metals in tannery effluents and related soil. *Journal of Hazardous Materials*, (Elsevier), Volume 122, Issue 1-2, 17-22. (DOI: 10.1016/j.jhazmat.2005.03.017).
86. A. Khalique, S. Ahmad, T. Anjum, M. Jaffar, **Munir H. Shah**, N. Shaheen, Saadia R. Tariq, S. Manzoor, 2005. A comparative study based on gender and age dependence of selected metals in scalp hair. *Environmental Monitoring and Assessment*, (Springer), Volume 104, No. 1-3, 45–57. (DOI: 10.1007/s10661-005-8813-1).
87. **Munir H. Shah**, N. Shaheen, M. Jaffar, M. Saqib 2004. Distribution of lead in relation to size of airborne particulate matter in Islamabad, Pakistan. *Journal of Environmental Management*, (Elsevier), Volume 70, No. 2, 95-100. (DOI: 10.1016/j.jenvman.2003.10.004).
88. **Munir H. Shah**, Nazia Shaheen, M. Jaffar, 2004. Screening of urban aerosol particulate composites for selected metal distribution and their dependence on meteorological parameters. *Annali di Chimica*, (Rome), Volume 94, Issue 11, 805-815. (DOI: 10.1002/adic.200490101).
89. M Jaffar, **Munir H Shah**, N Shaheen, A Khaliq, Saadia R Tariq, S Manzoor, M Saqib, 2004. Pre- and post- expiry metal levels in canned dry milk. *Nutrition & Food Science*, (Emerlad), Volume 34, No. 2, 65-71. (DOI: 10.1108/00346650410529023).
90. S. Manzoor, **M.H. Shah**, N. Shaheen, Saadia R. Tariq, A. Khalique, M. Jaffar, 2004. Distribution of heavy toxic metals in industrial effluents and relevant soils from selected oil and ghee industries in Hattar. *Journal of the Chemical Society of Pakistan*, Volume 26, No. 4, 429-435.
91. J. Samina, M. Jaffar, **M.H. Shah.**, 2004. Physicochemical profiling of ground water of Hazara strip, Pakistan. *Journal of the Chemical Society of Pakistan*, Volume 26, No. 3, 288-292.

Cumulative Impact Factor = 187.256

Total Number of Citations = 1010

h-Index = 20

(As per ISI Web of Science data on November 14, 2017)

Conferences/Workshops/Seminars Attended

- Workshop on '*Incorporating Technology in Education*' held at Quaid-i-Azam University, Islamabad (December 29, 2011 to January 13, 2012), Organized by National Academy of Higher Education, Higher Education Commission, Islamabad, Pakistan.
- '*8th International and 20th National Chemistry Conference*' held at Quaid-i-Azam University, Islamabad (February 2010), Organized by the Chemical Society of Pakistan.
- National Consultative Workshop on '*Obligation and implementation status of Pakistan on chemicals related environmental treaties*', Ministry of Environment, Islamabad, Pakistan (June 2008).
- '*5th International and 15th National Chemistry Conference*' held at Quaid-i-Azam University, Islamabad (November 2004), Organized by the Chemical Society of Pakistan.
- Workshop on '*Combinatorial Chemistry*' held at the Department of Chemistry, Quaid-i-Azam University, Islamabad (May 2004).
- National seminar on the '*Frontiers of Chemistry*' held at the Department of Chemistry, Quaid-i-Azam University, Islamabad (December 2002), organized by the Chemical Society of Pakistan.
- Two days Seminar on the '*Strategies to Address the Water Quality Issues*' held in Holiday Inn, Islamabad (April 2002), Pakistan.
- '*1st International and 11th National Chemistry Conference*' (ChemCon-2000) held at University of Peshawar, Peshawar (April 2001), Organized by the Chemical Society of Pakistan.

The End

-----X-----X-----