DR. UMAR FAROOQ

Associate Professor
Centre for Analytical Chemistry
School of Chemistry
University of the Punjab,
Lahore,
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Joined University of the Punjab

under HEC **IPFP** program on October 12, 2011

on contract on October 12, 2012
on TTS on August 06, 2013
Associate professor, May 03, 2021

HEC Approved Supervisor

RESEARCH INTERESTS

- Development of environment friendly modified biosorbents
- Applications of biosorbents for the treatment of wastewaters
- Studies and analysis of various pollutants in water
- Development of cost-effective methods for the detection of metals in water samples
- Conversion of biomass into bio-fuels

ACADEMIC QUALIFICAITON

PhD Chemistry
The Islamia University of Bahawalpur, 2011

Various courses for lab from University of Saskatchewan, Saskatoon, Canada while working on the project

DISTINCTION

1. Research Productivity Award, 2012 by PCST Pakistan

2. Research Incentive Award for 2011, by University of the Punjab, Lahore
3. HEC Fellowship "*IRSIP*" to conduct research at University of Saskatchewan, Canada
4. Ph.D. Scholarship (Indigenous) by HEC (2004)
5. Silver Medal, Department of Chemistry, The Islamia University of Bahawalpur (M. Sc. 2003)
6. Merit scholarship during M. Sc.
7. 3rd position in House Test during B. Ed. At Govt. College of Education, Faisalabad (2000-2001)
8. Merit scholarship after S. Sc. and F. Sc.

RESEARCH EXPERIENCE IN Ph.D.

- Synthesis of environment-friendly biosorbents using '*green techniques*'
- Column operations to study binding of pollutants under continuous flow conditions
- Mathematical modeling of batch and continuous flow biosorption process
- Production of bio-fuels by SCWO (supercritical water oxidation)
- Development of novel locating agents for phenols and related compounds

M. Sc. RESEARCH TITLE

"*STUDIES OF THE EFFECT OF SOME TRADITIONALLY USED HERBS FOR THE REMOVAL/DISSOLUTION OF KIDNEY STONES"*

Ph. D. RESEARCH TITLE

"*DEVELOPMENT OF ENVIRONMENT FRIENDLY MODIFIED BIOSORBENTS"*

EXPERIENCE

1. Assistant Professor (TTS) in *Institute of Chemistry, University of the Punjab, Lahore,* from 06-08-2013 to date.
2. Assistant Professor (contract) in *Institute of Chemistry, University of the Punjab, Lahore* from 12-10-2012 to 05-08-2013.
3. Assistant Professor (IPFP) in *Institute of Chemistry, University of the Punjab, Lahore* from 12-10-2011 to 11-10-2012.
4. Lecturer (Contract) in Chemistry, *University of Education Lahore, Okara Campus, Okara* from 01-02-2011 to 28-06-2011.
5. Lecturer (Visiting) in Chemistry, *University of Education Lahore, Okara Campus, Okara* from 05-10-2010 to 23-01-2011.
6. Lecturer (Contract) in Chemistry, *University of Education Lahore, Okara Campus, Okara* from 24-02-2010 to 30-06-2010.
7. Research Scholar at *College of Engineering, University of Saskatchewan, Saskatoon, SK, S7N 5A9, Canada* from 03-02-2009 to 25-07-2009.
8. Lecturer (BPS-18) in Chemistry, *Department of Food, Agriculture and Chemical Technology, Karakoram International University, Gilgit* from 15-03-2008 to 13-08-2008.
9. Lecturer (Visiting) in Chemistry, *Institute of Chemistry, University of the Punjab, Lahore* from 01-12-2008 to 31-01-2009.
10. Lecturer (Visiting) in Chemistry, *Department of Chemistry, The Islamia University of Bahawalpur* from 01-10-2004 to 13-03-2008.
11. Lecturer (Visiting) in Chemistry, *Govt. Post Graduate College, Baghdad Road, Bahawalpur* from 01-11-2005 to 31-12-2007.
12. Teacher in *Umm Al-Qura Public School Bahawalpur* from 1-01-2004 to 30-09-2004.
13. Chemist in *Club Chemicals Bahawalpur* (Filling Unit) dealing in Pesticides from 01-06-2004 to 31-07-2004

HANDS-ON EXPERIENCE

- Atomic Absorption Spectrophotometer (Perkin Elmer AAnalyst 100)
- Flame Photometer (Corning 410)
- BET Surface Area Analyzer (Micromeritics ASAP 2000)
- Elemental Analyzer (Vario II Elementar)
- Raman Microscope (Renishaw Invia 2000)\
- TG/DTA (Perkin Elmer Pyro TGDTA)
- FTIR (Perkin Elmer)

COMPUTER SKILLS

- EndNote 9 and X5
- Chem BioOffice
- Origin Software
- MS-Office

  and other academic related soft-wares.

RESEARCH PUBLICAITONS

Total Impact Factor = 115.307 (2019 JCR)

In International Journals

1. U. Farooq, "Detoxification of toxic cations Pb(II) and Cd(II) from liquid phase by employing *Pennisetum glaucum* biomass – A kinetic Investigation", accepted in *International Journal of Phytoremediation* 2021, **(IF=2.528)**
2. M. Shahid, Z. H. Farooqi, R. Begum, M. Arif, M. Azam, A. Irfan, U. Farooq, "Multi-functional organic-inorganic hydrogel microspheres as efficient catalytic system for reduction of toxic dyes in aqueous medium", *accepted* in *Zeitschrift fur Physikalische Chemie*, 2021 **(IF=2.030)**

3. M. Akram, M. Salman, R. Rehman, U. Farooq, S. Tahir, H. Nazir, “Kinetic and isothermal investigations of cost effective sorptive elimination of Gentian violet dye from water using *Haplophragma adenophyllm* biowaste” *Journal of Chemistry*, Article ID 5549536, volume 2021, 2021 **(IF=1.790)**
4. S. Shahida, F. Hayat, A. Ali, M. I. Khan, S. Zafar, K. H. Shah, N. Ahmad, U. Farooq, A. Shanableh, “Liquid-Liquid extraction of Nd^{3+} and Eu^{3+} from aqueous medium using oxytetracycline in dichloromethane” accpeted in *Radiochimica Acta* 2021, **(IF=1.320)**
5. B. A. Farooqi, A. Ashraf, U. Farooq, K. Ayub, “Comparative study on sensing abilities of polyaniline and graphene polyaniline composite sensors toward methylamine and ammonia” *Polymers for Advanced Technologies*, 31(12), 3351-3360, 2020 **(IF = 2.578)**
6. B. A. Farooqi, M. Yar, A. Ashraf, U. Farooq, K. Ayub, “Polyaniline emeraldine salt as selective electrochemical sensors for HBr over HCl: A systematic density functional theory study through oligomer approach” *Journal of Molecular Modeling*, 26(11):332, 2020 **(IF=1.346)**
7. B.A. Farooqi, M. Yar, A. Ashraf, U. Farooq, K. Ayub, “Remarkable enhancement in sensor ability of polyaniline upon composite formation with ZnO for industrial effluents” *Journal of Molecular Graphics and Modeling* 101: Article 107724 2020 **(IF=2.079)**
8. B.A. Farooqi, M. Yar, A. Ashraf, U. Farooq, K. Ayub, “Graphene-polyaniline composite as superior electrochemical sensor for detection of cyano explosives” *European Polymer Journal*, 138: Article 109981, 2020 **(IF=3.862)**
9. M. Zaib, T. Shahzadi, I. Muzammal, U. Farooq, “*Catharanthus roseus* extract mediated synthesis of cobalt nanoparticles: evaluation of antioxidant, antibacterial, hemolytic and catalytic activities”, I*norganic and NanoMetal Chemistry*, 50(11): 1171-1180, 2020 **(IF=0.839)**
10. A. Ashraf, U. Farooq, B. A. Farooqi, K. Ayub, "Electronic structure of polythiophene gas sensors for chlorinated analytes" *Journal of Molecular Modeling*, 26, Article 44, 2020 (**IF= 1.346**)
11. A. Ali, **U. Farooq**, M. Ahmad, M. Athar, M. Salman, S. Arif, K. Nadeem, H. Naz, “Stability indicating RP-HPLC assay for simultaneous determination of

chlorpheniramine maleate and prednisolone in veterinary injection" *Acta Chromatographica* 32(2):122-127 2020 **(IF=1.418)**

12. M. Akram, M. Salman, U. Farooq, U. Saleem, S. Tarhir, H. nazir, H. M. Arslan, "Phthalate-funcitonalized Sorghum bicolor L.; An effective biosorbent for the removal of Alizarin Red S and Bromophenol blue dyes from simulated wastewater" *Desalination and Water Treatment*, 190:383-392, 2020, **(IF=0.854)**
13. S. Shahida, Y. A. Abbasi, A. Ali, M. I. Khan, K. H. Shah, U. Farooq, M. Hafeez, "Synergistic extraction of Eu(III) and Nd(III) from aqueous medium using a mixture of sulfasalazine and 1,10-phenanthroline", *Journal of Radioanalytical and Nuclear Chemistry*, 324:1215-1223 2020 **(IF=1.137)** https://doi.org/10.1007/s10967-020-07171-z
14. M. Salman, R. Rehman, U. Farooq, A. Tahir, L. Mitu, "Biosorptive removal of Cadmium(II) and Copper(II) using microwave assisted thiourea modified *Sorghum bicolor* agrowaste in ecofriendly way" *Journal of Chemistry*, Volume 2020, Article ID 8269643 2020 **(IF=1.790)**
15. H. Nazir, M. Salman, M. Athar, U. Farooq, A. Wahab, M. Akram, "Citric acid functionalized *Bougainvillea spectabilis*: a novel, sustainable and cost-effective biosorbent for removal of heavy metal (Pb^{2+}) from waste water" *Water Air Soil Pollution*, 230: Article 303, 2019 **(IF=1.900)**
16. A. Ashraf, K. C-Fenk, J. Herbert, B. Farooqi, U. Farooq, K. Ayub, "Interaction of graphene quantum dots with oligothiphene: A comprehensive theoretical study" *The Journal of Physical Chemistry C* 123:29556-29570, 2019 **(IF=4.189)**
17. A. M. Khurram, U. Farooq, M. Athar, M. Salman, "Biosorption of Cd(II) ions from its aqueous solutions using powdered branches of *Trifolium resupinatum:* equilibrium and kinetics" *Green Chemistry Letters and Reviews* 12(3):217-224, 2019 **(IF=3.286)**
18. Z. H. Farooqi, R. Khalid, R. Begum, **U. Farooq**, Q. Wu, W. Wu, M. Ajmal, A. Irfan, K. Naseem, "Facile synthesis of silver nanoparticles in crosslinked polymeric system by in-situ reduction method for catalytic reduction of 4-nitroaniline" *Environmental Technology*, 40(15):2027-2036, 2019 (**IF = 2.213**)
19. K. Naseem, Z. H. Farooqi, R. Begum, M. Z. Rehman, A. Shahbaz, **U. Farooq**, M. Ali, H. M. A. Rehman, A. Irfan, A. G. Al-Sehemi, "Removal of cadmium(II) ions

from aqueous medium using *Vigna radiate* leave biomass: Equilibrium isotherms, kinetics and thermodynamics" *Zeitschrift fur Physikaliche Chemie*, 233(5):660-669, 2019, **(IF=2.030)**

20. M. Tariq, **U. Farooq**, M. Athar, M. Salman, M. Tariq, "Biosorption of Cu(II) from aqueous solution onto immobilized Ficus religiosa branch powder in a fixed bed column: Breakthrough curves and mathematical modeling" *The Korean Journal of Chemical Engineering*, 36:48-55, 2019 **(IF=2.690)**
21. M. Tariq, U. Farooq, M. Athar, M. Salman, M. Tariq, S. Shahida, Z. Farooqi, "Fluoride removal using simple and xanthate modified protonated Ficus religiosa branch powder in a fixed bed column" *Desalination and Water Treatmen*t, 150:204-212, 2019 **(IF=0.854)**
22. H. Nazir, M. Salman, M. Athar, U. Farooq, M. Akram, N. Saleem, "A novel biosorbent *B. spectabilisis* stalks leaves for removal of Cd(II) and Cu(II) from wastewater" *Desalination and Water Treatment*, 148:222-228, 2019 **(IF=0.854)**
23. A. Ali, M. M. Athar, M. Ahmad, K. Nadeem, G. Murtaza, **U. Farooq**, M. Salman, "Stability-indicating HPLC-PDA assay for simultaneous determination of Paracetamol, thiamine and pyridoxal phosphate in tablet formation" *Acta Pharmaceutica*, 69:249-259, 2019 **(IF=1.375)**
24. M. Tariq, A. I. Durrani, **U. Farooq**, M. Tariq, "Efficacy of spent black tea for the removal of nitrobenzene from aqueous media" *Journal of Environmental Management*, 223: 771-778, 2018, **(IF = 5.674)**
25. A. Yousaf, M. Athar, M. Salman, **U. Farooq**, N. Makshoof, Z. Zaman, M. Sohail, "Biosorptive removal of cobalt from aqueous solution by using native and thiourea modified *Pennisetum glaucum*" *Desalination and Water Treatment*, 103(2): 199-207, 2018, **(IF= 0.854)**
26. A. Yousaf, M. Athar, M. Salman, **U. Farooq**, F. S. Chawla, "Biosorption characteristics of *Pennisetum glaucum* for the removal of Pb(II), Ni(II) an Cd(II) ions from aqueous medium", *Green Chemistry Letters and Reviews*, 10(4):462-470, 2017 **(IF=3.286)**
27. A. Ali, **U. Farooq**, M. Ahmad, M. M. Athar, K. Nadeem and G. Murtaza, "Stability indicating UFLC-PDA assay for simultaneous determination of

antazoline hydrochloride and naphazoline hydrochloride in ophthalmic formulations" *Acta Chimica Salovenica*, 64(2):332-341, 2017 **(IF= 1.263)**

28. A. R. Qureshi, **U. Farooq**, M. Athar, M. Salman, N. Rehmat, "Biosorptive removal of Pb(II) and Cd(II) ions from aqueous solution by dried biomass from *Ficus religiosa"*, *Desalination and Water Treatment*, 82:201-209, 2017 **(IF= 0.854)**
29. W. Hassan, **U. Farooq**, M. Ahmad, M. Athar and M. A. Khan "Potential biosorbent, Haloxylon *recurvum* plant stems, for the removal of Methylene blue dye" *Arabian Journal of Chemistry*, 10:S1512-1522, 2017 **(IF = 4.762)**
30. M. Sarwar, **U. Farooq**, K. Mehmood, M. Ajmal, M. Farooq, M. Athar, M. Salman, "Biosorptive Removal of Congo Red Dye using Eco-friendly biomass from *Polyalthia longifolia, International Research Journal of Pure and Applied Chemistry*, 13(1):1-9, 2016, **(Open Access)**
31. Maria Zaib, Muhammad Athar, Asma Saeed, **Umar Farooq**, Muhammad Salman and Nouman Makshoof, "Equilibrium, kinetic and thermodynamic biosorption studies of Hg(II) on red algal biomass of *Porphyridium cruentum*" *Green Chemistry Letters and Reviews*, 9(4): 179-189, 2016, **(IF=3.286)**
32. M. Rafiq, **U. Farooq**, M. Athar, M. Salman, M. Aslam, H. M. Hamid Raza, *Gardenia jasmenoides:* An ornamental plant for biosorption of lead and cadmium ions, *Desalination and Water Treatment*, **57**(22):10432-10442 (2016) **(IF= 0.854)**
33. M. Zaib, M. M. Athar, A. Saeed, U. Farooq, "Electrochemical determination of inorganic mercury and arsenic – A review" *Biosensors and Bioelectronics*, 74:895-908 (2015) **(IF = 10.257)**
34. M. H. Raza, A. Sadiq, **U. Farooq**, M. Athar, T. Hussain, A. Mujahid, M. Salman, "*Phragmites karka* as a Biosorbent for the removal of mercury metal ions from aqueous solution: Effect of modification", *Journal of Chemistry*, Volume 2015 (2015), Article ID 293054, 12 pages, 2015, (Open Access) (http://dx.doi.org/10.1155/2015/293054) **(IF = 1.790)**
35. M. Salman, M. Athar, **U. Farooq**, "Biosorption of heavy metals from aqueous solution using indigenous and modified lignocellulosic materials", *Reviews in Environmental Science and Bio/Technology*, **14**(2):211-228, 2015, **(IF = 4.957)**

36. **U. Farooq**, F. Farooq, M. Batool, M. Athar, M. Salman, Q. Ahmed, A. Ashraf, "Use of Wheat straw for effective binding of metal ions via a novel modification", *The Korean Journal of Chemical Engineering* **32**(9):1818-1826, 2015, **(IF = 2.690)**
37. M. Ahmad, R. T. Bachmann, M. A. Khan, R. G. J. Edyvean, **U. Farooq** and M. M. Athar "Dye removal using carbonized biomass, isotherms and kinetic study" *Desalination and Water Treatment*, **53**(8):2289-2298, 2015 (**IF = 0.854)**
38. H. M. H. Raza, M. Athar, **U. Farooq,** M. Salman, M. Adnan and T. Hussain, "Chemically Modified biomass from *Triticum aestivum* for eco-friendly detoxification of Cd(II)- and Sn(II)- contaminated waters", *Polish Journal of Environmental Studies* **23**(6):2163-2174, 2014 (**IF = 1.383**)
39. M. Salman, M. Athar, **U. Farooq**, S. Rauf and U. Habiba, "A new approach to modification of an agro-based raw material for Pb(II) adsorption" *The Korean Journal of Chemical Engineering* **31**(3): 467-474, 2014 **(IF = 2.690)**
40. M. Athar, **U. Farooq,** S. Z. Ali, M. Salman, "Insight into the binding of copper(II) by non-toxic biodegradable material (*Oryza sativa*): Effect of modification and interfering ions" *Clean Technologies and Environmental Policy* 16:579-590 2014 **(IF=2.429)**
41. I. Din, **U. Farooq,** M. Athar and M. L. Mirza, "Environmentally Benevolent Modified *Saccharum bengalense* as a High-Capacity Biosorbent for Removal of Pb(II) ions: Metal Uptake Modeling" *Desalination and Water Treatment* 52(31-33): 5856-5868, 2014, **(IF = 0.854)**
42. H. Raza, S. Khawer, **U. Farooq**, M. Athar, S. Atif, "Assessment of Soil Contamination near Samanabad Sewage Drain and its Nutritional Potential for Aesthetic Beauty" *Journal of Earth Science and Climate Change*, 5:167 (**2013**) doi:10.4172/2157-7617.1000167
43. M. Athar, **U. Farooq**, M. Aslam, M. Salman**.** "Adsorption of Pb(II) ions onto biomass from *Trifolium resupinatum*: Equilibrium and kinetic studies" *Applied Water Sciences* **3**(3): 665-672, 2013, **(Open Access Springer)**
44. S. Z. Ali, M. Athar, **U. Farooq,** M. Salman, "Insight into equilibrium and kinetics of the binding of Cadmium ions on radiation-modified straw from *Oryza sativa*" Volume 2013, 417180, 12 pages *Journal of Applied Chemistry* **(Open Access)**

45. M. Salman, M. Athar, **U. Farooq**, H. Nazir, Anam Noor and S. Nazir, "Microwave assisted Urea-modified Sorghum biomass for Cr (III) elimination from aqueous solutions" *The Korean Journal of Chemical Engineering* **30**(6): 1257-1264, 2013 **(IF = 2.690)**
46. M. Nasrullah, M. A. Khan, M. N. Khan, M. G. Humphrey, **U. Farooq**, S. Aslam, M. Ahmad, M. A. Munawar, T. Maqbool and W.-O. Lin. "Synthesis and Characterization of Diaryl Pyrazole-4-carbaldehyde Semicarbazones Metal Complexes" *Asian Journal of Chemistry* **25**(13):7293-7296, 2013 **(IF = 0.355)**
47. M. Salman, M. Athar, **U. Farooq**, S. Nazir and H. Nazir "Insight into rapid removal of Pb(II), Cd(II) and Cu(II) from aqueous solution using an agro-based adsorbent *Sorghum bicolor L.* biomass" *Desalination and Water Treatment* **51**(22-24): 4390-4401, 2013 (**IF=0.854**)
48. **U. Farooq**, Misbahul Ain Khan, Makshoof Athar, Janusz. A. Kozinski, "Biosorption of Pb(II) and Cr(III) from aqueous solutions: Breakthrough curves and modeling studies" *Environmental Monitoring and Assessment*, **185**(1): 845-854 2013 **(IF = 1.903)**
49. M. Nasrullah, Misbahul Ain Khan, Mark. G. Humphrey, Faizul Hassan Nasim, Moeena Ghazal Abidi, M. Naeem Khan, **U. Farooq**, M. A. Munawar, "Diarylpyrazole-4-carbaldehyde benzoylhydrazones metal complexes: Synthesis and their antibacterial and antioxidant screening" *Asian J. Chem.* **25**(1):419-423, 2013 **(IF = 0.355)**
50. Muhammad Ahmad, Misbahul Ain, Khan, **U. Farooq**, Makshoof Athar, "Carbonized Green Tea Dredge, A Potential Adsorbent for Removal of Remazol Brilliant Yellow Dye" *J. Mater. Environ. Sci.* **3**(1):149-156, 2012 **(Open Access Journal)**
51. **U. Farooq**, Misbaul Ain Khan, Makshoof Athar and Janusz A. Kozinski, "Effect of modification of environmentally friendly biosorbent wheat (*Triticum aestivum*) on the biosorptive removal of cadmium(II) ions from aqueous solution" *Chemical Engineering Journal* **171**(2):400-410, 2011 **(IF=10.652)**
52. **U. Farooq**, Janusz A. Kozinski, Misbahul Ain Khan and Makshoof Athar, "Biosorption of heavy metal ions using wheat based materials – A review of the recent literature" *Bioresource Technology* **101**(14):5043-5053, 2010 **(IF =7.539)**

53. **U. Farooq**, Misbahul Ain Khan, Makshoof Athar, Mehnaz Sakina and Muhammad Ahmad, "Environmentally benign urea-modified *Triticum aestivum* biomass for lead(II) elimination from aqueous solutions" *CLEAN-Soil, Air Water* **38**(1):49-56, 2010 **(IF=1.603)**
54. **U. Farooq**, Misbahul Ain Khan and Makshoof Athar, "*Triticum aestivum*: A novel biosorbent for lead(II) ions" *Agrochimica* **51**(6):309-318, 2007 **(IF=0.654)**
55. Makshoof Athar, **U. Farooq** and Baqir Hussain, "*Azadirachata indicum* (NEEM): An effective biosorbent for the removal of lead(II) from the aqueous solution" *Bulletin of Environmental Contamination and Toxicology*, **79**(3):288-292, 2007 **(IF=1.657)**

In National Journals

1. M. Hussain, S. A. Trimzi, S. Ahmad, **U. Farooq**, S. Rafiq, A. Qamar, "Development of a spectroscopic method for quantitative determination of pharmaceutical preparation of vitamin C" in proceedngs of 3rd International and 13th National Chemistry Conference, December 28-31, 2002.

RESEARCH PROJECTS

1. Research Project entitled "Stability Indicating Liquid Chromatography Assay for Simultaneous Determination of Paracetamol, Vitamin B_1 and B_6 in Pharmaceutical Preparations" 2017-2018 at Institute of Chemistry, University of the Punjab, funded by University of the Punjab, Lahore
2. Research Project entitled "*Polyaniline based sensor for Hydrochloric acid and hydrobromic acid – Density Functional Theory Studies*" 2015-16 at Institute of Chemistry, University of the Punjab, funded by University of the Punjab, Lahore
3. Research Project entitled "*Use of modified wheat straw for effective removal of lead and chromium from contaminated waters*" 2014-15 at Institute of Chemistry, University of the Punjab, funded by University of the Punjab, Lahore

4. Research project entitled "*Studies on the potential use of biomass from Gardenia jasminoides for the remediation of lead contaminated waters"* 2013-14 at Institute of Chemistry, University of the Punjab, funded by University of the Punjab, Lahore
5. Research project entitled "*Studies of the remediation of chromium contaminated waters using non-toxic biodegradable biosorbent (straw from Oryza sativa)"* 2012-13 at Institute of Chemistry, University of the Punjab, funded by University of the Punjab, Lahore
6. Research project entitled "*Application of ecofriendly modified lignocellulosic material of the remediation of metal contaminated waters from industries*" (2012) amounting PKR 500,000/- at Institute of Chemistry, University of the Punjab, Lahore funded by HEC Pakistan.

Completed/Participated

1. Participated in Research Project entitled "*Sunfuels-Conversion of biomass into energy*" at College of Engineering, University of Saskatchewan, Saskatoon, Canada funded by NSREC Canada (Feb-July 2009).
2. Completed a Research Project entitled "*Development of environment friendly modified biosorbents*" at Department of Chemistry, The Islamia University of Bahawalpur (2005-2010).
3. Completed a Research Project entitled "*Studies of the effect of some traditionally used herbs for the removal/dissolution of kidney stones*" Department of Chemistry, The Islamia University of Bahawalpur (2002-2003).

PRESENTATIONS/POSTERS IN CONFERENCES

1. Invited Talk (Webinar) in Department of Chemistry, GC Women University Sialkot, on January 21, 2020.
2. Participated in "1st International Conference on Emerging Science and Technologies" at Govt Islamia College, Civil Lines, Lahore, November 24, 2020
3. Oral Presentation in "3rd International Conference on Chemistry Virtual" at Lahore Garrison University, Lahore, September 21-22, 2020.

4. Participated in “International Online Symposium on Recent Research Trends in Chemistry” at University of Okara, Okara on September 10, 2020.
5. Poster Presentation and Participation in “2nd International Conference on Chemistry (ICC)” at Lahore Garrison University, Lahore, April 26-27, 2019.
6. Participated in “Three Days workshop on Advanced Characterization Techniques for Professional” at SCME, NUST, Islamabad, April 23-35, 2019.
7. Oral Presentation in “International Symposium on Technologies and Materials for Renewable Energy, Environment and Sustainability”, Department of Chemistry, Uni. Agriculture, Faisalabad, February 6-7, 2019
8. Participated in Three-Day conference “Nanomaterials: New Trends in Development and Applications” Department of Chemistry, FCC Univeristy, Lahore, January 29-31, 2019
9. Poster Presentation in 10th Chemistry Conference at PINSTECH, Islamabad, August 07-09, 2018
10. Poster Presentation in Scientific Colloquium Spring-2018 – A conference on contemporary Chemistry” in Govt Post Graduate College, Jhelum, March 30-31, 2018.
11. Oral Presentation in “1st National Conference on Recent Innovations in Medicinal Chemistry and Biochemistry” in University of Science and Technology, Bannu, February 20-22., 2018.
12. 28th National & 16th International Chemistry Conference at Department of Chemistry, University of Karachi, Karachi, Poster Presentation on “Removal of Pb(II) and Cd(II) ions using methylmethacrylate modified mesoporous silica”
13. PakLab, Pakistan International Laboratory and Analytical Equipment Exhibition, at Lahore Expo Centre Johar Town, December 09-10, 2017.
14. Symposium on Drug Development and Radiolabeled Compounds at Department of Chemistry, Government College University, Faisalabad, March 21, 2017.
15. Oral Presentation in Pakistan Coating Show, at Lahore Expo Centre Johar Town Lahore, January 19-21, 2017.
16. Oral and Poster Presentation in 8th Chemistry Conference at PINTECH, Islamabad, November 28-30, 2016.

17. Symposium on Prospects of Modern Chemical Science, Gove Islamia College Gujranwala, October 22, 2016.
18. 27th National and 15th International Chemistry Conference, Department of Chemistry, University of Malakand, KPK, Pakistan, August 22-25, 2016.
19. Workshop on Computational Chemistry, FC College University Lahore, February, 21-24, 2016
20. Oral and Poster Presentation in 8th Chemistry Conference at PINSTECH, Islamabad, November 28-30, 2016.
21. Second Prize in Poster Competition, 8th Chemistry Conference at PINSTECH, Islamabad, November 28-30, 2016.
22. Oral Presentation in Pakistan Coating Show, at Lahore Expo Centre Johar Town Lahore, January 15-17, 2016.
23. Poster Presentation in 7th Chemistry Conference at PINSTECH, Islamabad, November 24-26, 2015.
24. Oral and Poster presentation in 26th National and 14th International Chemistry Conference at Department of Chemistry, The Islamia University of Bahawalpur, Bahawalpur, October 5-8, 2015.
25. Oral Presentation in Pakistan Coating Show, at Lahore Expo Centre Johar Town Lahore, January 21-23, 2015.
26. Oral Presentation in 6th Chemistry Conference at PINTECH, Islamabad, November 11-13, 2014.
27. Poster Presentation in 25th National and 13th International Chemistry Conference at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
28. Oral Presentation in First International Conference on Applied Chemical, Biological and Aquatic Sciences (ICACBAS 2014), GC University Faisalabad, February 18-20, 2014.
29. Poster presentation in 1st International Conference on Applied Chemistry at Department of Applied Chemistry, GC University Faisalabad, November 18-20, 2013.
30. Poster presentation in 24th National and 12th International Chemistry Conference at Institute of Chemical Science, BZ University, Multan, October 28-30, 2013.

31. Oral and Poster presentation in International Conference on Physical and Environmental Chemistry at Hotel Elites, Nathia Gali, Baragali Campus, University of Peshawar, Peshawar, KPK, September 09-11, 2013.
32. Oral Presentation in 11th International and 23rd National Chemistry Conference at National Centre of Excellence, University of Peshawar, Peshawar, KPK, October 15-17, 2012.
33. Oral and Poster presentation in 9th International and 21st National Chemistry Conference at The Department of Chemistry, University of Karachi, Karachi, March 14-16, 2011.
34. Oral Presentation in 18th National Chemistry, Conference, February 25-27, 2008 at Institute of Chemistry, University of the Punjab, Lahore.
35. Poster Presentation in 18th National Chemistry, Conference, February 25-27, 2008 at Institute of Chemistry, University of the Punjab, Lahore.
36. Poster Presentation in 7th International and 17th National Chemistry Conference, February 26-28, 2007, at Department of Chemistry, Gomal University, Dera Ismail Khan, KPK.
37. Presentaion in 3rd International and 13th National Chemistry Conference, December 28-31, 2002, at Department, University of Karachi, Karachi.

CONFERENCES/SEMINARS ATTENDED

1. Oral and Poster Presentation in 8th Chemistry Conference at PINTECH, Islamabad, November 28-30, 2016.
2. Symposium on Prospects of Modern Chemical Science, Gove Islamia College Gujranwala, October 22, 2016.
3. 27th National and 15th International Chemistry Conference, Department of Chemistry, University of Malakand, KPK, Pakistan, August 22-25, 2016.
4. Workshop on Computational Chemistry, FC College University Lahore, February, 21-24, 2016
5. Oral Presentation in 6th Chemistry Conference at PINTECH, Islamabad, November 11-13, 2014.

6. Poster Presentation in 25th National and 13th International Chemistry Conference at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
7. Oral Presentation in First International Conference on Applied Chemical, Biological and Aquatic Sciences (ICACBAS 2014), GC University Faisalabad, February 18-20, 2014.
8. 1st International Conference on Applied Chemistry at Department of Applied Chemistry, GC University Faisalabad, November 18-20, 2013.
9. 24th National and 12th International Chemistry Conference at Institute of Chemical Science, BZ University, Multan, October 28-30, 2013.
10. International Conference on Physical and Environmental Chemistry at Hotel Elites, Nathia Gali, Baragali Campus, University of Peshawar, Peshawar, KPK, September 09-11, 2013.
11. 11th International and 23rd National Chemistry Conference at National Centre of Excellence, University of Peshawar, Peshawar, KPK, October 15-17, 2012.
12. Pak-US- workshop on Applications of Nanotechnology (WANT-2011) at IBCCS, HEJRIC, University of Karachi, Karachi, May 29-30, 2012.
13. National Seminar on Pharmaceutical Industry in 21st Century – Challenges and Threats at PCSIR Laboratories Complex, Ferozepur Road Lahore, May 03, 2012.
14. Recent Trends in Analytical Chemistry, at COMSTECH, Islamabad, April 3-5, 2012.
15. 9th International and 21st National Chemistry Conference 2011, Department of Chemistry, University of Karachi, Karachi, March 14-16, 2011.
16. 6th Executive Management Seminar on The Current Environmental Pollution Scenario of Pakistan – Findings and Remediation at PINSTECH, Islamabad, October 27-29, 2010.
17. Seminar on Applications of Raman Microscopy, June 10, 2009, Department of Chemistry, University of Saskatchewan, Saskatoon, Canada.
18. 18th National Chemistry Conference, February 25-27, 2008 at Institute of Chemistry, University of the Punjab, Lahore.
19. 2nd Meeting of Nobel Laureates with Pakistani Students/Young Scholars, March 27-28, 2007, Islamabad.

20. 7th International and 17th National Chemistry Conference, February 26-28, 2007, Department of Chemistry, Gomal University, Dera Ismail Khan, KPK.
21. 1st International Chemistry Conference, November 1-3, 2006, Department of Chemistry, GC University Faisalabad.
22. 6th International and 16th National Chemistry Conference, April 6-8, 2006, Department of Chemistry, BZU, Multan.
23. 1st Meeting of Nobel Laureates with Pakistani Students/Young Scholars, March 27-28, 2006 Islamabad.
24. 3rd International and 13th National Chemistry Conference, December 28-31 2002, Department of Chemistry, University of Karachi, Karachi.

Research Theses Supervised

Ph. D.

1. Warda Hassan, 2018, Biosorbents: The ecofriendly agents for removal of dyes
2. Madiha Tariq, 2020, Continuous flow studies for binding of cations and anions from aqueous solutions-Multicomponent approach
3. Amir Ali, 2020, Simultaneous determination of active ingredients in fixed dose pharmaceutical combinations using RP-HPLC
4. Asif Masaud Khurram, 2020, Binding of toxic metal ions using biodegradable modified biomass from *Trifolium resupinatum*
5. Ayesha Ashraf, 2021, Density functional theory studies on electrochemical sensor properties of ploythiophenes (Thesis Submitted)
6. Bilal Ahmed Farooqi, 2021, Structural, Electrical and Sensing Ability Study of Polyaniline and its Composites Based on Density Functional Theory (Thesis Submitted)

M. Phil

1. Amina Siddique, 2020, Studies of electrochemical behavior of carbon paste electrode modified with biomass from *Gardenia jasminoides*
2. Komal Bashir, 2020, Binding of Nickel (II) and Chromium (III) by modified biomass from *Camellia sinensis*

3. Anam Fatima, 2020, Studies of the effect of modification of tea-waste on the adsorption of Pb(II0 and Cd(II) ions
4. Shahzaib Tariq, 2020, Studies of the reduction of chlorantraniliprole using fixed bed silver magnetic nanocatalyst
5. Farhaj Fatima, 2020, Investigating the biosorptive properties of *Gardenia jasminoides* Ellis for three different systems of Cr(III) and Malachite green
6. Asma Bibi, 2019, Electrochemical studies of carbon paste electrode modified with graphene oxide and metal organic framework
7. Sana Qayyum, 2019, Studies of the electrochemical behavior of carbon paste electrode modified with ZnO and Cu containing metal organic framework
8. Zainab Khan, 2019, Modification of carbon past electrode with Co_3O_4 and its layer-by-layer assembly with Cu-BTC
9. Sarmad Maqbool, 2019, Biosorption of Cu(II) and Fe(II) using *Polyalthia longifolia* and *Ficus religiosa* stalk powder in single and binary system
10. Faitma Akram, 2019, Photodegradation of Rhodamine B using Fe and Ce containing nanoparticles
11. Sharjeel Hassan, 2019, Biosorption of heavy metals (Ni and Cd) by using activated carbon from *Azadirachta indica* in single and binary metal system
12. Talha Rafiq, 2019, *Gardenia jasminoides*: An environmentally benign biosorbent for the removal of cobalt and copper ions in single and binary systems,
13. Mamona Butt, 2018, Catalytic degradation of chlorntraniliprole and analysis of its degraded product by HPLC
14. Imtiaz Hussain, 2018, Development of RP-UPLC based method for determination of cetirizine dihydrochloride
15. Hira Rashid, 2018, Studies of adsorptive removal of congo red and malachite green dyes, in binary solution, by activated carbon from *Ficus religiosa*
16. Sadaf Ali, 2018, Reduction studies of Chlorantraniliprole pesticide using immobilized silver nanoparticles
17. Rabia Akram Bajwa, 2017, Silica immobilized hydrogel for the removal of toxic metal ions from contaminated water
18. Sabah, Haider, 2017, Detoxification of water contaminated with Cd(II0) and Ni(II) by using silica immobilized hydrogel

19. Madiha Ishaq, 2017, Reduction of brilliant blue dye by silver magnetic clusters
20. Tasneem Arshad, 2017, Adsorption of Pb(II) and Cd(II) ions by methylmethacrylate modified silica in binary systems
21. Fatima Anwar, 2016, Amino Functionalized Silica for Detoxification of Contaminated Water
22. Afia Zafar, 2016, Novel Drug Derivatives of Pyrazie-2-carboxamine, Synthesis, Characterization and Anti-microbial Activity
23. Bilal Ahmad Farooqi, 2015, Density Functional Theory Study of Polyaniline Emeraldine Salt as Chemical Sensor for HBr and HCl
24. Sehar Fatima, 2015, Insight into simultaneous removal of Pb(II) and As(III) using magnetic biochar from Rice husk
25. Qamar-un-Nisa, 2015, UV-Degradation and Biological Studies of Sulfamethoxazole and N-methyl-N`-[(4-methylphenyl) carbamimidoamido] acetic acid
26. Maryam Dilshad, 2014, Continuous flow biosorption of metal ions by *Ficus religiosa*: Breakthrough curves and modeling
27. Ayesha Ashraf, 2014 Quantitative determination of Levofloxacin and Azithromycin – A simple method for pharmaceutical quality control
28. Faiza Farooq, 2014, Binding of metal ions by modified wheat straw – A step towards selective biosorption (Co-Supervisor)
29. Rabeea Sadiq, 2014, Binding of cationic dyes using palm kernel shell magnetic biochar
30. Shamsa Kanwal, 2014, Studies of the use of coconut shell magnetic biochar for removal of brilliant green and congo red from their aqueous solutions
31. Moniba Rafiq, 2013, Biosorption of lead and cadmium ions using an ornamental plant, *Gardenia jasmenoides*
32. Madiha Tariq, 2013, Continuous flow studies of the remediation of chromium contaminated waters using non-toxic biodegradable biosorbent (Straw from *Oryza sativa*)

M. Sc.

1. Amina Bhatti, 2020, Studies of the binding of brilliant green on biomass from *Polyalthia longifolia*

2. Samman Fatima, 2020, Biosorption of crystal violet dye from aqueous solution using powdered branches from *Syzygium cumini*
3. Aqsa Iqbal, 2019, Studies of adsorption interaction of chemically modified *Ficus religiosa* with Ni(II) ion
4. Wajiha Wajid, 2019, Biosorption interaction of Ni(II) and Cr(III) with xanthate modified powdered branches of *Ficus religiosa* in single and binary metal system
5. Kanwal Iqbl, 2018, 4-Phenyl-3-thiosemicarbazide modified *Ficus religiosa* branch powder for the removal of Cu(II) and Ni(II) ions
6. Hafiza Mehak Nazir, 2018, Biosorption of lead and cadmium by using *Ficus religiosa* leaves modified with 4-phenyl-3-thiosemicarbazide
7. Zahid Haneef, 2017, The studies of the adsorptive removal of Cd(II) by NH_2-AAc-MCM-41
8. Shahzaib Tariq, 2017, Catalytic reduction of chlorantraniliprole by reclaimable silver magnetic nanocatalyst
9. Asma Bibi, 2016, Studies of the removal of Nickel and Cadmium ions from aqueous solution by using biomass from *Ficus religiosa*
10. Amna Zahid, 2015, Continuous flow studies of biosorption of Brilliant Green using *Ficus religiosa* leaves
11. Mamoona Arooj, 2015, Continuous flow studies of biosorption of Malachite Green using *Ficus religiosa* leaves
12. Madiha Ishaq, 2014, Biosorptive removal of metal ions by leaves from *Ficus religiosa*: Single and binary metal systems
13. Tasneem Arshad, 2014, *Ficus religiosa*: An efficient biosorbent for Pb(II) and Cd(II) in single and binary metal systems
14. Huma Shehzadi, 2014, A spectrophotometric method for indirect determination of novapim
15. Zohaib Sarwar, 2014, Analysis of municipal wastewater from district Rahim Yar Khan used for irrigation
16. M. Anees, 2013, Biosorption of lead and cadmium using biomass from *Ficus religiosa*

BS

1. Aqeel Aslam Khan, 2020, Carbonized *Ficus religiosa*: An efficient biosorbent for Cr(VI) in aqueous solutions
2. Ejaz Ahmad, 2020, Studies of the binding of Cu(II) with carbonized *Ficus religiosa* in aqueous systems
3. Mah Gull, 2020, Binding of Ni(II) from aqueous solution using carbonized biomass from *Ficus religiosa*
4. Sidra Shahzadi, 2019, Application of silver coated iron oxide nanoparticles in catalytic degradation of malachite green dye
5. Iram Manzoor, 2019, Catalytic degradation of brilliant green dye by silver magnetic clusters
6. Ammara Shabbir, 2018, Studies of adsorptive removal of Pb(II) and Cd(II) ions using 4-phenyl-3-thiosemicarbazide modified *Ficus religiosa* branch powder
7. Sana Rafaqat, 2018, Modification of *Ficus religiosa* (leaves) by using 4-phenyl-3-thiosemicarbazide for the removal of Ni(II) and Cu(II) from aqueous solutions
8. Farhaj Fatima 2017, The study of binding of Pb(II) and Ni(II) by acrylic acid attached amine functionalized MCM-41
9. Sana Qayyum, 2017, The adsorptive study of toxic metal ions Pb(II) and Ni(II) onto amine functionalized MCM-41
10. Sharjeel Hassan, 2016, Biomass from *Azadirachata indica* for Ni(II) and Cd(II) removal From Single And Binary Metal Systems
11. Hira Rashid, 2016, Studies of the Adsorption of Congo red Dye On Activated Carbon From *Ficus religiosa*
12. Rabia Akram Bajwa, 2015, Studies of the Binding of Pb(II) ions onto p(NIPAM-co-AAc) Microgel
13. Sabah Haider, 2015, Adsorption Characteristics of p(NIPAM-co-AAc) Microgel for Cd(II) ions

In Progress

Ph. D.

- Nazish Awan
- Rabia Akram Bajwa

- Sabah Haider Meraj

M. Sc.

- Al Hassam
- Taseer Hussain
- M. Aqib Ali

BS

- Faiza Fayyaz
- Noor Fatima
- Sara Abid