

Curriculum Vitae

Name **Dr. Muhammad Salman**
Father's Name **Aftab Ahmed**
Date of Birth **28 August 1984**
Religion **Islam**
Marital Status **Married**
Nationality **Pakistani**
I.D. Card No. **35202-8573085-1**
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Academic Qualifications

Qualification	Subjects	Division	Institute/University
Ph.D	Applied Chemistry	Completed with Course work CGPA = 4.0	University of the Punjab
M.Phil	Applied Chemistry	1 st	University of the Punjab
M.Sc	Chemistry	1 st	University of the Punjab
B.Sc	Pre-engineering	1 st	University of the Punjab
F.Sc	Pre-engineering	1 st	Govt. College of Science
Matric	Science	1 st	Standard Model School

Distinction

- Got 1st position in *M.Phil (Applied Chemistry)*, session 2009-2011.

Working Experience

At Parent Institute (Institute of Chemistry)

- Currently working as an **Assistant Professor of Environmental and Industrial Chemistry (Permanent Basis; BPS-19)** at Institute of Chemistry, University of the Punjab (From 24-10-2014 to date).

- Worked as **Lecturer, Applied Chemistry (Permanent Basis; BPS-18)** at Institute of Chemistry, University of the Punjab (From 06-08-2013 to 23-10-2014).
- Worked as **Lecturer, Applied Chemistry (On Contract/Adhoc)** at Institute of Chemistry, University of the Punjab (From 01-11-07 to 05-08-2013)
- Worked as a **Scientific Officer (On Contract)** in Institute of Chemistry University of the Punjab (From 24-06-07 to 31-10-07)
- Worked as a **Demonstrator (On Contract)** (from 03-11-06 to 23-06-07) in Institute of Chemistry, University of the Punjab
- Working as **Visiting Assistant Professor of Chemistry** at Institute of Education and Research, University of the Punjab (From April 2015 to date)
- Worked as **Visiting Lecturer, Chemistry** at College of Earth and Environmental Sciences, University of the Punjab (From Feb 2014 to Feb 2015)
- Worked as **Visiting Lecturer** of Applied Chemistry at Precision System and Training Center (PSTC), Course Name: D.A.E. (from 02-08-07 to 01-05-09)

Research Awards

- **Punjab University** Performance Based Evaluation Award **2015 (Ph.D 50.67%)**
- **Punjab University** Research Incentive Award **2015** on the publications of **2014** (Rs. 33,667/-)
- **Punjab University** Performance Based Evaluation Award **2014 (Non-PhD 69.33%)**
- **Punjab University** Research Incentive Award **2014** on the Publication of **2013** (Rs. 28,000/-)
- **Punjab University** Performance Based Evaluation Award **2013 (Non-PhD 53.33%)**
- **Punjab University** Research Incentive Award **2013** on the Publication of **2012**
- **PCST** Research Productivity Award (**RPA-2012**) in 'G' Category with a score of **4.2677** on the publication of **2011 (10 publications)**
- **Punjab University** Research Incentive Award **2012** on the publications of **2011**
- **Punjab University** Research Incentive Award **2011** on the publications of **2010**
- **Punjab University** Research Incentive Award **2010** on the publications of **2009**

Courses Taught at Home Institute

Teaching following courses to Graduate and Post Graduate levels

- Applied Chemistry
- Environmental Chemistry

Academic Duties

- Member of Admission Committee, University of the Punjab

- Member of Sports Committee, Institute of Chemistry, University of the Punjab
- Internal/External Examiner for B.Sc., BS/M.Sc examination (Practical/Theory)

Additional Duties

- Security Incharge at Institute of Chemistry, University of the Punjab
- Departmental Focal person for Prime Minister National Laptop Scheme

Research Interest

- Development of Cost-Effective Methodologies
- Environmental Issues
- Applied Aspects of Chemistry

Instrumentation Skills

I am working (Operation/Maintenance) on the following Instruments in Institute of Chemistry, University of the Punjab

- ICP-OES (Inductively Coupled Plasma Optical Emission Spectrometer)
- AAS (Atomic emission spectrometer)
- UV/VIS Spectrometer
- FTIR
- Flame Photometer

Additional Research Skills

- Acting as a reviewer of following journals

Journal Name	Country	Impact Factor
Analytical Letters	United States	1.030
Bioremediation Journal	United Kingdom	0.784
Desalination and Water Treatment	Italy	1.173
Korean Journal of Chemical Engineering	Korea	1.166

Papers Presented in Conferences / Symposiums

- Poster presentation on “Binding of Pb(II) and Cd(II) ions by modified wheat straw (*Triticum aestivum*): Continuous flow studies” **7th Chemistry Conference, PINSTECH**, Islamabad, November 24-26, 2015
- Oral presentation on “Effect of Cd(II) ions on the binding of Pb(II) ions by dried biomass from *Ficus religiosa*” **26th National and 14th International Conference** of Chemical Society of Pakistan, held at Islamia University of Bahawalpur, Bahawalpur, October 05-08, 2015.
- Oral presentation on “Biosorptive removal of Ni(II) and Mn(II) in binary metal systems by dried biomass from *Ficus religiosa*” **26th National and 14th International Conference** of Chemical Society of Pakistan, held at Islamia University of Bahawalpur, Bahawalpur, October 05-08, 2015.

- Poster presentation on “Continuous flow biosorption of Pb(II) and Cd(II) ions by silica immobilized urea-modified biomass from *Triticum aestivum*” **26th National and 14th International Conference** of Chemical Society of Pakistan, held at Islamia University of Bahawalpur, Bahawalpur, October 05-08, 2015.
- Oral presentation on “Removal of Ni(II) and Cd(II) from aqueous solutions using *Phaseolus vulgaris*” **26th National and 14th International Conference** of Chemical Society of Pakistan, held at Islamia University of Bahawalpur, Bahawalpur, October 05-08, 2015.
- Oral presentation on “Continuous flow studies of biosorption of Pb(II) and Cd(II) ions in single and binary metal systems using simple and modified leaves from *Ficus religiosa*” **6th Chemistry Conference, PINSTECH**, Islamabad, November 11-13, 2014.
- Poster presentation on the topic “Purification of harvested rain water by indigenous and modified sand columns; a benign and cost effective treatment” **25th National and 13th International Chemistry Conference** of Chemical Society of Pakistan, held at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
- Poster presentation on the topic “Use of *Ficus religiosa* for the removal of malachite green dye from aqueous solution” **25th National and 13th International Chemistry Conference** of Chemical Society of Pakistan, held at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
- Poster presentation on the topic “Continuous flow biosorption of lead and cadmium ions from aqueous solutions using *Ficus religiosa*” **25th National and 13th International Chemistry Conference** of Chemical Society of Pakistan, held at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
- Poster presentation on the topic “Coconut shell magnetic biochar: Removal of Brilliant green dye from aqueous solutions” **25th National and 13th International Chemistry Conference** of Chemical Society of Pakistan, held at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
- Poster presentation on the topic “Modified palm kernel (magnetic biochar) biomass for the binding of Malachite green dye” **25th National and 13th International Chemistry Conference** of Chemical Society of Pakistan, held at Institute of Chemistry, University of the Punjab, Lahore, October 20-22, 2014.
- Poster presentation on the topic “Studies of Binding of Lead and Cadmium ions onto an Indigenous Ornamental Plant” **24th National and 12th International Chemistry Conference** of Chemical Society of the Pakistan, held at Institute of Chemical Sciences, BZ Universtiy, Multan, October 28-30, 2013.

- Poster presentation on the topic “Continuous Flow Studies of the Remediation of Chromium Contaminated Waters using Biomass from *Oryza sativa*” **24th National and 12th International Chemistry Conference** Held at Institute of Chemical Sciences, BZ Universtiy, Multan, October 28-30, 2013.
- Oral Presentation on the topic “Insight into the binding of Cu(II) by biomass from *Oryza Sativa*: effect of modification and other interfering ions”, **International Conference on physical and Environmental Chemistry** held at Hotel Elites, Nathia Gali, Baragali Campus, University of Peshawar, September 09-11, 2013.
- Presented “Kinetics, Isothermic heat of sorption and thermodynamically activated parameters for elimination of Cd(II) ions onto *Sccharum bengalense* a low cost biosorbent”, **10th International and 22nd National Chemistry Conference** held at Dept. of Chemistry and Biochemistry, University of Agricultural Faisalabad November 21-23, 2011.
- “Removal of Pb(II) and Cd(II) from aqueous solutions using *Polyalthia longifolia* leaves – a green approach” Accepted in **The 2nd International Conference on Multimedia Technology, ICMT2011, WCUEP2011, China** will be held on 26-28 July 2011.
- Poster presentation on the topic “Synthesis of Tallow based Esterquat for Fabric Softening”, **18th National Chemistry Conference Chemical Society of Pakistan** held at **Institute of Chemistry, University of Punjab** on 25-27 February, 2008.
- Poster presentation on the topic “Removal of Chromium(III) by using indigenous Coal as Adsorbent”, **18th National Chemistry Conference Chemical Society of Pakistan** held at **Institute of Chemistry, University of Punjab** on 25-27 February, 2008.
- Presented a research paper on the topic “Accurate Determination of Arsenic by Modified Gutzeit Method” in **Ninth Symposium on Analytical and Environmental Chemistry** Jointly organized by **Institute of Chemical Sciences (ICS) University of Peshawar. University of Sindh, Jamshoro at Bara Gali Campus** (24th-26th July 2006).

Workshops / Seminars Attended

- Participated as Exhibitor in **Pakistan Coating Show Conference and Seminars** organized by **BinRasheed (pvt) Ltd** held in **EXPO Center, Johar Town, Lahore** on 15-17th January 2016.
- Participated as Exhibitor in **Pakistan Coating Show Conference and Seminars** organized by **BinRasheed (pvt) Ltd** held in **EXPO Center, Johar Town, Lahore** on 22-24th January 2015.

- Participated in **Indigenous On-Campus Training Program of Teaching Faculty organized by University of the Punjab in collaboration with Higher Education Commission** held in Institute of Administrative Sciences, PU, LHR on 1-5th December 2014 (Batch-5).
- Worked as a member of organizing committee in **25th National and 13th International Chemistry Conference of Chemical Society of Pakistan** held in **Institute of Chemistry, University of the Punjab, Lahore** on 20-22th October 2014.
- **Awareness seminar against dengue and measles**, on 1st Sep, 2013 at Khorana Auditorium, PUIC.
- ‘**Balochistan: Problems and their Solutions**’ on October 01, 2013 in Al-Raazi Hall, Undergraduate block, University of the Punjab.
- Seminar on “**Study and work in Japan**” on 5th Dec, 2013 at Khorana Auditorium, PUIC.
- Participated as a Judge in ‘**National Science Fair 2012-13**’, organized by Intel International Science and Engineering Fair (ISEF).
- Seminar on **Microbial Resistant Paints**, arranged by **Department of Microbiology and Molecular Genetics, University of the Punjab**, held on 17th April, 2008
- Worked as a member of Organizing Committee in **18th National Chemistry Conference of chemical Society of Pakistan** held at **Institute of Chemistry, University of Punjab** on 25-27 February, 2008.
- Seminar on **Persistent Organic Pollutants (POPs)**, arranged by **EPA**, held at PC on December 2005.
- Seminar on **Atomic Absorption Spectroscopy (AAS) and Inductive Coupled Plasma (ICP-OES & ICP-MS)**, arranged by **We Brothers Scientific PVT Limited Pakistan**, held at PC on June 2006.
- All seminars held at Institute of Chemistry, University of the Punjab.

Research Projects / Grants Utilized

1. Remediation of Ni(II) and Co(II) from aqueous medium using *Phaseolus vulgaris*

Principal Investigator: **1,50,000/=** PKR

Year: 2014-2015

Funded by: University of the Punjab

Place: Institute of Chemistry, University of the Punjab

Status: On going

2. ***Removal heavy metal ions using chemically modified agricultural waste biomass***
Principal investigator: **1,25,000/=** PKR
Year: 2013-2014
Funded by: University of the Punjab
Place: Institute of Chemistry, University of the Punjab
Status: **Completed**

3. ***Removal of Acid Yellow-73 dye from water by chemically modified Citrus reticulata peels***
Principal Investigator: **1,25,000/=** PKR
Year: 2012-2013
Funded by: University of the Punjab
Place: Institute of Chemistry, University of the Punjab
Status: **Completed**

4. ***Removal of Congo Red dye from water by adsorption on Grewia asiatica leaves.***
Principal Investigator: **1,25,000/=** PKR
Year: 2011-12
Funded by: University of the Punjab
Place: Institute of Chemistry, University of the Punjab
Status: **Completed**

5. ***Removal of Alizarin Red S (dye) from Aqueous Media by Using Alumina as an Adsorbent***
Principal Investigator: **1,25,000/=** PKR
Year: 2010-11
Funded by: University of the Punjab
Place: Institute of Chemistry, University of the Punjab
Status: **Completed**

6. ***Forced Migration of Soluble and Suspended Materials by Freezing Front in Aqueous Systems***
Principal Investigator: **1,25,000/=** PKR
Year: 2009-10
Funded by: University of the Punjab
Place: Institute of Chemistry, University of the Punjab
Status: **Completed**

List of Published Research Articles

Total Publications = **57**

Cumulative Impact Factor ~ **60.476**

Sr. No.	Authors, Title of Paper	Impact
2015		

1.	M. Salman , M. Athar, U. Farooq, Biosorption of heavy metals from aqueous solutions using indigenous and modified lignocellulosic materials – a review, <i>Reviews in Environmental Science and Bio/Technology</i> , 2015 , 14(2), 211-228	3.333
2.	J. Anwar, U. Shafique, Waheed-uz-Zaman, R. Rehman, M. Salman, A. Dar, J. M. Anzano, U. Ashraf, S. Ashraf, Microwave Chemistry: Effect of Ions on Dielectric Heating in Microwave Ovens <i>Arabian Journal of Chemistry</i> , 2015 , 8(1), 100-104.	3.725
3.	F. Farooq, U. 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 <i>Korean Journal of Chemical Engineering</i> , 2015 , 32(9), 1818-1826	1.166
4.	M. Rafique, U. Farooq, M. Athar, M. Salman , M. Aslam, H. M. H. Raza, <i>Gardenia jasmenoides</i> : An ornamental plant for biosorption of lead and cadmium ions, <i>Desalination and Water Treatment</i> , 2015 Date of Acceptance: 20-03-2015	1.173
5.	M. H. Raza, A. Sadiq, U. Farooq, M. Athar, T. Hussain, A. Mujahid, M. Salman , <i>Phragmites karka</i> as a biosorbent for the removal of mercury metal ions from aqueous solution: Effect of modification, <i>Journal of Chemistry</i> , 2015 , Volume 2015, Article ID 293054, 12 pages http://dx.doi.org/10.1155/2015/293054	0.361
2014		
6.	M. Athar, U. Farooq, S. Z. Ali and M. Salman , Insight into the binding of copper(II) by non-toxic biodegradable material (<i>Oryza sativa</i>): Effect of modification and interfering ions, <i>Clean Technologies and Environmental Policy</i> , 2014 , 16, 579-590.	1.934
7.	H. M. Raza, M. Athar, U. Farooq, M. Salman , A. Mujahid, T. Hussain, Chemically Modified biomass from <i>Triticum aestivum</i> for eco-friendly detoxification of Cd(II) and Sn(II) contaminated waters, <i>Polish Journal of Environmental Studies</i> , 2014 , 23(6), 2163-2174.	0.871
8.	M. Salman , M. Athar, U. Farooq, S. Rauf, U. Habiba, A new approach to modification of an agro-based raw material for Pb(II) adsorption, <i>Korean Journal of Chemical Engineering</i> , 2014 , 31, 467-474.	1.166
2013		
9.	M. Salman , M. Athar, U. Farooq, S. Nazir and H. Nazir, Insight to rapid removal of Pb(II), Cd(II) and Cu(II) from aqueous solution using an agro-based adsorbent <i>Sorghum bicolor L. biomass</i> " <i>Desalination and Water Treatment</i> , 2013 , 51, 4390-4401.	1.173
10.	R. Rehman, M. Salman , T. Mahmud, F. Kanwal and Waheed-uz-Zaman, Utilization of chemically modified <i>Citrus reticulata</i> peels for biosorptive removal of Acid Yellow-73 dye from water, <i>J. Chem. Soc. of Pak.</i> , 2013 , 35(3), 611-616.	0.345

11.	M. Salman , M. Athar, U. Farooq, H. Nazir, A. Noor and S. Nazir, Microwave assisted Urea-modified <i>Sorghum</i> biomass for Cr (III) elimination from aqueous solutions <i>The Korean Journal of Chemical Engineering</i> , 2013 , 30(6), 1257-1264.	1.166
12.	M. Athar, U. Farooq, M. Aslam and M. Salman , Adsorption of Pb(II) ions onto biomass from <i>Trifolium resupinatum</i> : equilibrium and kinetic studies, <i>Appl Water Sci</i> , 2013 , 3, 665-672. DOI 10.1007/s13201-013-0115-0	Open Access
13.	S. Z. Ali, M. Athar, U. Farooq and M. Salman , Insight into Equilibrium and kinetics of the binding of Cadmium ions on radiation-modified straw from <i>Oryza sativa</i> <i>Journal of Applied Chemistry</i> , 2013 , Volume 2013, Article ID 417180, 12 Pages	Open Access
2012		
14.	M. Salman , M. Athar, Waheed-uz-Zaman, U Shafique, J. Anwar, R. Rehman, S. Ameer and A. Arshad, Micro-determination of arsenic in aqueous samples by Image Scanning and Computational Quantification, <i>Analytical Methods</i> , 2012 , 4, 242-246	1.821
15.	U. Shafique, A. Ijaz, M. Salman , Waheed-uz-Zaman, N. Jamil, R. Rehman, A. Javaid, Removal of Arsenic from water using Pine Leaves, <i>Journal of Taiwan Institute of Chemical Engineers</i> , 2012 , 43, 256-263.	3.000
16.	R. Rehman, A. Abbas, S. Murtaza, T. Mahmud, Waheed-Uz-Zaman, M. Salman and U. Shafique, Comparative removal of Congo Red dye from water by adsorption on <i>Grewia asiatica</i> leaves, <i>Raphanus sativus</i> peels and activated charcoal, <i>J. Chem. Soc. of Pak.</i> , 2012 , 34(1), 112-119.	0.345
17.	R. Rehman, T. Mahmud, J. Anwar and M. Salman , Isothermal Modeling of Batch Biosorption of Brilliant Green Dye from Water by Chemically Modified <i>Eugenia jambolana</i> Leaves <i>J. Chem. Soc. of Pak.</i> , 2012 , 34(1), 136-143.	0.345
18.	M. Salman , M. Athar, U. Shafique, R. Rehman, Waheed-uz-Zaman, M. Irshad, Microwave Assisted Synthesis of Esterquat for Fabric Softening Applications, <i>J. Chem. Soc. of Pak.</i> , 2012 , 34(2), 415-418.	0.345
19.	R. Rehman, J. Anwar, T. Mahmud, M. Salman , S. Mahboob, Optimization of operational conditions for batchwise biosorption of chromium (VI) using chemically treated <i>Alastonia Scholaris</i> Leaves as Biosorbent <i>J. Chem. Soc. of Pak.</i> , 2012 , 34(2), 292-298.	0.345
20.	R. Rehman, A. Abbas, T. Mahmud, M. Salman , S. Akbar, Thermodynamical and Mechanistic Studies of Direct Red-28 Dye Adsorption on <i>Syzygium cumini</i> Stem, <i>J. Chem. Soc. Pak.</i> , 2012 , 34(5), 1156-1162.	0.345
21.	U. Shafique, J. Anwar, Waheed-uz-Zaman, R. Rehman, M. Salman , A. Dar, N. Jamil, Forced Migration of Soluble and Suspended Materials by Freezing Front in Aqueous Systems, <i>Journal of Hydro-environment Research</i> , 2012 , 6, 221-226.	2.474
22.	M. Salman , M. Athar, U. Shafique, R. Rehman, S. Ameer, S.A. Ali, M. Azeem, Removal of Formaldehyde from Aqueous Solution	0.460

	by Adsorption on Kaolin and Bentonite - a Comparative Study, <i>Turkish Journal of Engineering and Environmental Sciences</i> , 2012 , 36, 263-270.	
23.	M. Salman , R. Rehman, U. Shafique, T. Mahmud, B. Ali Comparative Thermal And Catalytic Recycling Of Low Density Polyethylene Into Diesel-Like Oil Using Different Commercial Catalysts, <i>EJEAFChe</i> , 2012 , 11(2), 96-105.	0.18
24.	M. Salman , R. Rehman, J. Anwar, T. Mahmud, Statistical Analysis Of Selected Heavy Metals In Hair And Nails Of Cancer And Diabetic Patients Of Pakistan <i>EJEAFChe</i> , 2012 , 11(3), 163-171.	0.18
25.	M. Salman , R. Rehman, Waheed-uz-Zaman, J. Anwar, S. Airam, K. Rehman, Microanalysis Of Mercury In Fish And Root Vegetable Samples By Image Scanning Densitometry Using Computationally Quantified Spot Tests, <i>EJEAFChe</i> , 2011 , 11(4), 279-285.	0.18
26.	M. Salman , R. Rehman, U. Shafique, A. Abbas, Toxic and nutritive elements analysis of commercially available tea samples of Pakistan by ICPOES employing microwave digestion, <i>EJEAFChe</i> , 2012 , 11(5), 459-468.	0.18
2011		
27.	J. Anwar, U. Shafique, Waheed-uz-Zaman, Z. Nisa, M. A. Munawar, N. Jamil, M. Salman , A. Dar, R. Rehman, J. Saif, H. Gul, T. Iqbal, Removal of chromium on Polyalthia longifolia leaves biomass. <i>International Journal of Phytoremediation</i> , 2011 , 13, 410-420.	1.739
28.	U. Shafique, J. Anwar, M. Salman , Waheed-uz-Zaman, A. Dar, R. Rehman, M. Azeem, S. Ameer, Novel methods to determine sulfide in aqueous samples by quantification of lead sulfide spots. <i>Journal of Sulfur Chemistry</i> , 2011 , 32(2), 151-157.	0.943
29.	M. Salman , U. Sahfique Waheed-uz-Zaman, R. Rehman, A. Yousaf, F. Azhar, A Rapid Method for Measurement of Nickel and Chromium at Trace Level in Aqueous Samples. <i>Journal of the Mexican Chemical Society</i> , 2011 , 55(4), 213-216.	0.619
30.	M. Salman , M. Athar, U. Shafique, M. I. Din, R. Rehman, A. Akram, S. Z. Ali, Adsorption modeling of alizarin yellow on untreated and treated charcoal, <i>Turkish Journal of Engineering and Environmental Sciences</i> , 2011 , 35(3), 209-216.	0.460
31.	U. Shafique, Waheed-uz-Zaman, J. Anwar, M. A. Munawar, M. Salman , A. Dar, R. Rehman, U. Ashraf, S. Ahmad, A rapid, economical, and eco-friendly method to recycle terephthalic acid from water poly (ethylene terphthalate) bottles, <i>International Journal of polymeric Materials</i> , 2011 , 60(14), 1147-1151.	3.568
32.	R. Rehman, A. Abbas, A. Ayub, Qurat-ul-Ain, M. Salman , T. Mahmud, U Shafique, Waheed-uz-Zaman, Comparative Study of Brilliant Green Dye Adsorption from Water by Radish Peels, Jamun stem and coal. <i>EJEAFChe</i> , 2011 , 10(7), 2531-2543.	0.18
33.	S. Z. Ali, M. Athar, M. Salman , M. I. Din, Simultaneous removal of Pb(II), Cd(II) and Cu(II) from aqueous solutions by adsorption on <i>Triticum aestivum</i> – a green approach, <i>Hydrology:Current</i>	1.22

	<i>Research</i> , 2011 , 2(4), 118. doi:10.4172/2157-7587.100118	
34.	R. Rehman, T. Mahmud, J. Anwar, M. Salman , U. Shafique, Waheed-uz-Zaman, F. Ali, Removal of Alizarin Red S (dye) from aqueous media by using Alumina as an adsorbent. <i>J. Chem. Soc. Pak.</i> , 2011 , 33(2), 228-232.	0.345
35.	T. Mahmud, R. Rehman, R. Hussain, M. Salman , U. Shafique, J. Anwar, Waheed-uz-Zaman, A. Sana, Synthesis, Characterization and Antibacterial Activity of some Enaminones and their complexes with Nickel (II) and Antimony (III) <i>J. Chem. Soc. of Pak.</i> , 2011 , 33(3), 426-432.	0.345
36.	R. Rehman, J. Anwar, T. Mahmud, M. Salman , U. Shafique, Influence of operating conditions on the removal of Brilliant Vital Red Dye from aqueous media by biosorption using Rice Husk. <i>J. Chem. Soc. of Pak.</i> , 2011 , 33(4), 515-521.	0.345
37.	R. Rehman, J. Anwar, T. Mahmud, M. Salman , U. Shafique, Waheed-uz-Zaman, Removal of Murexide (Dye) from aqueous media using Rice Husk as an adsorbent. <i>J. Chem. Soc. of Pak.</i> , 2011 , 33(4), 598-603.	0.345
38.	M. Salman , R. Rehman, T. Mahmud, Waheed-uz-Zaman, U. Shafique, J. Anwar, S. Z. Ali, Assessment of concentration of Lead, Cadmium, Chromium and Selenium in blood serum of Cancer and Diabetic patients of Pakistan, <i>J. Chem. Soc. of Pak.</i> , 2011 , 33(6), 869-873.	0.345
39.	T. Mahmud, R. Rehman, J. Anwar, S. Ali, A. Abbas, M. Salman Mineral and Nutritional Composition of Camel (<i>Camelus dromedarius</i>) Meat in Pakistan, <i>J. Chem. Soc. of Pak.</i> , 2011 , 33(6), 835-838.	0.345
40.	R. Rehman, J. Anwar, T. Mahmud, M. Salman , M. Saleem, Evaluation of Batch Biosorption of Chromium (VI) from Aqueous Solution by Chemically Modified <i>Polyalthia longifolia</i> Leaves. <i>J. Chem. Soc. of Pak.</i> , 2011 , 33(6), 846-852.	0.345
2010		
41.	J. Anwar, M. Salman , U. Shafique, Waheed-uz-Zaman, A. Dar, J. M. Anzano, Micro-Determination of Iron in Pharmaceutical Preparations by Image Scanning and Computational Quantification, <i>Current Medicinal Chemistry</i> , 2010, 17(35), 4424-4426.	3.853
42.	J. Anwar, U. Shafique, Waheed-uz-Zaman, M. Salman , A. Dar, S. Anwar, Removal of Pb(II) and Cd(II) by adsorption on peels of banana, <i>Bioresource Technology</i> 2010, 101, 1752-1755	4.494
43.	J. Anwar, U. Shafique, Waheed-uz-Zaman, M. Salman , Z. Hussain, M. Saleem, N. Shahid, S. Mahboob, S. Ghafoor, M. Akram, R. Rehman, N. Jamil, Removal of chromium from water using peas waste – a green approach <i>Green Chemistry Letters and Reviews</i> 2010, 3(3), 239-243	1.327
44.	T. Mahmud, R. Rehman, A. Gulzar, A. Khalid, J. Anwar, U. Shafique, Waheed-uz-Zaman, M. Salman , Synthesis, characterization and study of antibacterial activity of enaminone	3.725

	complexes of zinc and iron <i>Arabian Journal of Chemistry</i> 2010, 3(4), 219-224	
45.	J. Anwar, Waheed-uz-Zaman, M. U. Shafique, M. Salman , Computational Quantification of Spot Tests by Image Scanning- A New Analytical Technique for Micro Samples <i>J. Anal. Letter</i> 2010, Vol-43(2), 367-371	1.030
46.	J. Anwar, U. Shafique, Waheed-uz-Zaman, M. Salman , A microwave based low cost, eco-friendly device for high temperature reactions in undergraduate laboratories <i>Bulgarian Journal of Chemical Education</i> 2010, 19(5), 142-145	0.036
47.	M. Akram, Waheed-uz-Zaman, Z. Hussain, M. Salman , U. Shafique, R. Rehman, J. Anzano, Synthesis of tallow based esterquat <i>J. Sci. Res.</i> 2010, 40(1), 31-36	
48.	Z. Hussain, A. Nazir, U. Shafique, M. Salman , Comparative study for the determination of metals in milk samples using flame-AAS and EDTA complexometric titration <i>J. Sci. Res.</i> 2010, 40(1), 9-14	
2009		
49.	Removal of Chromium (III) by using coal as adsorbent <i>J. Hazard. Mater.</i> 2009, 171, 797-801	4.529
50.	Adsorption study of cadmium (II) and lead (II) on Radish Peels <i>J. Sci. Res.</i> , 2009, 39(1), 39-34	
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52.	J. Anwar, M. U. Shafique, M. Salman , Waheed-uz-Zaman, I. Asif, Removal of Chromium(III) and Zinc(II) by Using Pods of Pisum Sativum (Garden Peas) <i>J. Sci. Res.</i> , 2008, 38(2), 15-21	
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54.	M. Salman , J. Anwar, Waheed-uz-Zaman, M. U. Shafique, A. Irfan, Preparation of Oil / Water Emulsions of Paraffin and Bees Waxes with Water <i>J. Sci. Res.</i> , 2008, 38(2), 5-8	
55.	M. Salman , J. Anwar, Waheed-uz-Zaman, S. Arif, S. Munir, Rapid Determination of Chemical Oxygen Demand (COD) using Microwave Digestion Followed by Titrimetry <i>J. Sci. Res.</i> , 2008, 38(1), 13-16	
56.	J. Anwar, Waheed-uz-Zaman, M. Salman , N. Jabeen, Extraction of Rice Bran Oil from Local Rice Husk <i>J. Sci. Res.</i> , 2006, Vol-35(1), 59-64	
ACCEPTED ARTICLES		
57.	Chemistry of Ice: Migration of Ions and Gases by Directional Freezing of Water <i>Arabian Journal of Chemistry</i> , (2011) doi:10.1016/j.arabjc.2011.02.019 Date of Acceptance: 19-02-2011	3.725

Sr. No.	Description
1.	<p>A Full Chapter in an International Book Title: Hazardous Metals: Sources, Toxicity, and Control (Chap – 4) Authors: Umer Shafique, Jamil Anwar, Jesus M. Anzano, Muhammad Salman Book Title: Hazardous Materials: Types, Risks, and Control Series: Environmental Science, Engineering and Technology Editor/s: Satinder Kaor Brar Publisher: Nova Science Publishers Inc. Address: New York, United States ISBN: 978-1-61324-425-8 (Hard Cover) Date of Publication: 2011 (Third Quarter) LINK: https://www.novapublishers.com/catalog/product_info.php?products_id=20178c</p>

Thesis Supervised (M.Phil/MS)

Sr. No.	Student Name	Class	Thesis Title	Year
1.	Huma Nazir (Co-Supervised)	M.Phil	Purification of Harvested rain water by indigenous and modified sand columns; A benign and cost effective treatment	2014
2.	Samar Ilyas (College of Earth and Environmental Sciences)	MS	A Study of mercury levels in effluents of Dental clinics and in Blood samples of Dental staff in Lahore	2013

(M.Sc/BS)

Sr. No.	Student Name	Class	Thesis Title	Year
1.	Shakila Batool	M.Sc	Biosorption of congo red on <i>Ficus religiosa</i> – a continuous flow study	2015
2.	Rabia Afzaal	M.Sc	Biosorption characteristics of Ni(II) and Cd(II) using <i>Polyalthia longifolia</i>	2015
3.	Hafiza Arooj Rauf	BS	<i>Sorghum bicolor L.</i> based biomass for the removal of alizarin yellow from aqueous solution	2015
4.	Sitara Anjum	BS	Biosorption of brilliant yellow (dye) from aqueous solution using <i>Polyalthia longifolia</i> branches	2015
5.	Zark Zahid	M.Sc	Equilibrium and kinetic modeling for the removal of Pb(II) and Cd(II) from aqueous solution using <i>Phaseolus vulgaris</i> (Green Bean Husk) biomass	2014
6.	Ramsha Nasir	BS	Desorption studies of Pb(II) and Cd(II) using	2014

			metal loaded <i>Sorghum bicolor</i>	
7.	Anum Tahir	BS	Kinetic Modeling for Desorption of Cu(II) & Cr(III) from agricultural waste biomass	2014
8.	Hafiza Rehma Zahid	BS	Removal of Ni(II) and Co(II) from aqueous solution using <i>Phaseolus vulgaris</i>	2014
9.	Sadaf Rauf	BS	Microwave Assisted Thiourea modified sorghum biomass for the removal of Pb(II) and Cd(II) from aqueous solution	2013
10.	Umy Habiba	BS	Removal of Cr(III) and Cu(II) from aqueous solution using radiation modified <i>Sorghum Biomass</i> .	2013
11.	Huma Nazir	BS	Adsorption Characteristics of Cr(III), Ni(II) and Cd(II) using <i>Phaseolus vulgaris</i> (Green Bean Husk) Biomass.	2012
12.	Saba Nazir	BS	Equilibrium, Kinetic and Thermodynamic Modeling for Removal of Pb(II), Cd(II) and Cu(II) from Aqueous Solution Using <i>Sorghum</i> Biomass.	2012
13.	Muhammad Azeem	M.Sc	Novel Method to Determine Sulfide ions at Micro-levels by Image Scanning and Computational Quantification.	2011
14.	Sadia Ameer	M.Sc	Adsorption Modeling of Aqueous Formaldehyde using Kaolin and Bentonite.	2011
15.	Isma Haq	M.Sc	Densitometry; A Novel Technique for Quantitative Micro-determinations of Cyanide and Sulfide ions.	2011
16.	Sumaira Roshan	M.Sc	Micro-determinations of Aqueous Formaldehyde by Image Scanning and Computational Quantification.	2011
17.	Saad Shahid	BS	Removal of Ni(II) and Cr(II) from aqueous solution using <i>Falsa</i> Leaves.	2011
18.	Anum Noor	BS	Novel method to determine chlorides and sulfates in aqueous samples.	2011
19.	Munira Khalid (Co-supervised)	M.Sc	Evaluation of thermodynamic parameters by sorption studies of copper metal on modified low cost adsorbent (rice straw).	2010
20.	Sidra Bano (Co-supervised)	M.Sc	Equilibrium and kinetic study of lead(II) metal ion adsorption on rice straw; a low cost adsorbent.	2010
21.	Sara Qamar	BS	Removal of As(V) from aqueous solution using dried pine leaves.	2010
22.	Amna Yousaf	BS	Densitometry; A Novel Method for Quantitative micro-determination of Fe(II), Fe(III) and Cu(II).	2010
23.	Faiza Azher	BS	Filed determination of Ni(II) and Cr(VI) in aqueous samples by image densitometry.	2010
24.	Mobina Irshad Ali	BS	Microwave assisted synthesis of Esterquat for fabric softening applications.	2010

25.	Attia Akram	M.Sc.	Thermodynamics and Sorption studies of Alizarin Yellow on Treated Wood Charcoal.	2010
26.	Sarah Saleem	M.Sc.	Removal of Pb(II) and Cd(II) from aqueous solution using Polyalthia Longfolia leaves.	2010
27.	Bushra Ali (Co-supervised)	M.Sc.	Catalytic degradation of polyethylene.	2009
28.	Fareeha Iqbal (Co-supervised)	M.Sc.	A modified method for the production of formaldehyde.	2009
29.	Unaiza Uzair (Co-supervised)	BS	Synthesis and characterization of paraffin wax emulsions.	2009
30.	Huma Iqbal	BS	Removal of formaldehyde from aqueous solution using mineral coal.	2009
31.	Hira Sattar	BS	Study of adsorption isotherms for the removal of Pb(II) and Cu(II) by using dried orange peels.	2009
32.	Maria Bano	BS	Relative study of alterations in oil parameters of sunflower, soyabean, canola and corn oils on conventional heating.	2009
33.	Sana Zulfiqar Ali	M.Sc.	Adsorption study of formaldehyde on charcoal.	2009
34.	Nabila Amin	M.Sc.	Study of Trace metals concentrations (Se, Cr, Pd and Cd) in blood serum, hair and nails of cancer and diabetic patients.	2009
35.	Silwat Tarar	M.Sc.	Estimation of Metals (Fe, Cd, Zn, Cr, Ca and K) in Various Brands of Tea Available in Local Market.	2008
36.	Faiza Andleeb	M.Sc.	Study of Metal Loads (Mn, Pb, Ni, Co, Mg and Na) in Various Tea Brands.	2008

Extra curriculum activities

Reading books (related to science and army) in spare time and listening music.

Games of Interest

Football, Cricket, Tug of War.

References

Will be furnished on request.