CURRICULUM VITAE



Dr. Fazal Akbar Jan, PhD in Chemistry

Objective: *To work in a challenging atmosphere in reputable Organization to use all of my capabilities for the betterment of mankind and organization's repute*

Personal information

Name: Fazal Akbar Jan
Father's name: Rahman Said
Date of birth: February 4,1983
Domicile: Dir lower
CNIC:15302-0865623-3
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Academic Qualifications



Qualification	Year	Marks/ CGPA	Division	Board/University
PhD	2008-2011	3.5	1st	*Institute of Chemical Sciences University of Peshawar*
M.Phil	2005-2008	3.6	1st	*Institute of Chemical Sciences University of Peshawar*
M.Sc	2005	795/1200	1st	*Department of Chemistry, University of Peshawar*
B.Sc	2003	364/550	1st	*University of Peshawar*
F.Sc	2001	726/1100	1st	*BISE Swat*
SSC	1999	577/850	1st	*BISE Swat*

Areas of Research interest

- Environmental sampling and analysis
- Risk assessment due to exposure to environmental contaminants
- Materials development, characterization and their bio-application
- Application of the synthesized materials for environmental remediation
- Catalysts development for water splitting
- Crude oil characterizations and demulsification

LIST OF PUBLICATIONS



1. Rahat Ullah , F. Akbar Jan , Muhammad Zeeshan , Naimat Ullah, Enhanced photocatalytic degradation of hazardous dyes using a novel ternary Co3O4-CuO-SnO2 heterojunction: experimental and RSM-based process optimization,Inorganic Chemistry Communications, 7 September 2026, 10.1016/j.inoche.2026.117545. (**IF=5.9**)
2. Sana Ullah, F. Akbar Jan, Muhammad Zeeshan, Naimat Ullah, Silver Oxide/Boron Nitride Nanocomposite as a Robust Catalyst for Oxidative Desulfurization: High efficiency and Recyclability with NaClO Oxidant, Arabian Journal for Science and Engineering (https://doi.org/10.1007/s13369-026-11297-9) (**IF=2.9**)
3. Tariq Aziz, F. Akbar Jan, Naimat Ullah, Haleema Sadia, Hussain Ahmad, Revolutionizing cancer therapies: tin-doped zinc sulfide nanoparticles for oxidative stress mitigation and safe applications in mice models, Nanomedicine Journal 13: 1-, 2026(**IF=1.4**).
4. Naimat Ullah, Fazal Akbar Jan, Syed Mujtaba Shah, Muhammad Usman, and Munzir H. Suliman, Boosting efficiency of hybrid bulk heterojunction solar cells using organic dyes-grafted Sn-doped ZnS nanohybrid blended with P3HT, Journal of Material Science : Material in Electronics (2025) 36:1591(**IF=2.8**).
5. Muhammad Jawad,Muhammad Zeeshan,· Muhammad Esa Afzal, Muhammad Zakria, F. Akbar Jan, Photocatalytic degradation of Eosin Yellow dye using cerium-doped zinc oxide nanoparticles: optimization through response surface methodology desirability factor, Journal of the Iranian Chemical Society (https://doi.org/10.1007/s13738-025-03220-0) (**IF=2.2**).
6. Saleem Khan , Muhammad Zeeshan , F. Akbar Jan , Naimat Ullah, Photocatalytic degradation of crystal violet and Eosin Yellow dyes using ZnS-Co3O4 composite: Synthesis, characterization and process optimization under UV light, Inorganic Chemistry Communications,177(2025)114354(**IF=4.4**).
7. Naureen Hussain, Mahnoor Zeb, Muhammad Irfan , Muhammad Zeeshan, F. Akbar Jan, Optimized adsorption of Acid Green 25 (AG-25) dye using zinc sulfde (ZnS) nanoparticles: a Response Surface Methodology approach, Transition Metal Chemistry (**IF=1.6**)(https://doi.org/10.1007/s11243-025-00636-8).
8. Muhammad Zeeshan, F. Akbar Jan, Wahab Ali, Sabir Shah, Naimat Ullah,Investigating the Photocatalytic Potential of Nickel Oxide (NiO) Nanoparticles for the Degradation of Thiamethoxam Insecticide and Process Optimization Using Response Surface Methodology (RSM) Desirability Factor, Chemistry Africa (2024) 7:4931–4945 (**IF=2.3**)
9. Muhammad Zeeshan, F. Akbar Jan, Wahab Ali , Muhammad Usman, Naimat Ullah, Green One step Synthesis of Carbon dots from Grapes peel, Characterization and Application as a Fluorescence Probe for the Detection of some Heavy, Light Metals ions and DNA BindingChemistry Africa (2024) 7:4975–4984 (**IF=2.3**)
10. Saira Umar , F. Akbar Jan, Rashid Ahmad, Rahat Ullah, Naimat Ullah, Kinetic and thermodynamic study of the removal of acid black 234 and acid brown 113 dyes from aqueous solution using a low-cost synthesized activated carbon supported iron oxide (AC/Fe2O3) nanocomposites, Journal of Material Science : Material in Electronics (2024) 35:1950(**IF=2.8**)

11. Shah Mansoor, Gul Asimullah Khan Nabi, Sajjad Hussain, Zainab Javid,F. Akbar Jan, Synthesis, Characterization, Kinetic and Thermodynamic Study of Photocatalytic Degradation of Malachite Green Dye Using MnO2 Nanoparticles as Catalyst, Chemistry Africa (2024) 7:1575–1583(**IF=2.3**)
12. Shah Mansoora, F. Akbar Jan, Naimat Ullah, Determination and Quantification of Cetirizine Dihydrochloride in Pharmaceutical Formulations and Biological Fluids Through Fluorescence Quenching of Eosin Y: Application to Content Uniformity Test, 8, Journal of Analytical Chemistry, 2023, Vol. 78, No. 8, pp. 965–974 (**IF=1.0**)
13. Sajid Ullah, F. Akbar Jan, Naimat Ullah, Tariq Aziz, Photocatalytic and therapeutic applications of the synthesized nickle oxide (NiO) nanoparticles Journal of the Iranian Chemical Society (2023) 20:2017–2029(**IF=2.2**)
14. Umar Shah,F. Akbar Jan, Rahat Ullah, Wajidullah, Naimat Ullah, Manzoor Ahmad, Photocatalytic Degradation of Acidic and Basic Dye by ZnS and TinDoped ZnS Nanocatalysts Iranian Journal of Science (2023) 47:733–747(**IF=1.7**)
15. F. Akbar Jan, Sh. Khalid, N. Ullah, R. Ullah, Synthesis, characterization and application of undoped TiO2 and co-doped TiO2 (with Ba & Co) for the photocatalytic degradation of Coomassive brilliant blue (CBB) dye under UV light irradiation, Bulgarian Chemical Communications, Volume 55, Issue 2 (pp. 85-96) 2023(**IF=0.349**)
16. Shah Faisal,F. Akbar Jan, Sanum Saleem,Rahat Ullah, Wajidullah, Naimat Ullah, Salman, Juglans regia L. mediated synthesis of cobalt oxide and zinc-doped cobalt oxide nanoparticles: characterization and evaluation for environmental, antibacterial and cytotoxic potential Nanotechnology for Environmental Engineering (2022) 7:675–689(**IF=0.687**)
17. Umar Shah, F. Akbar Jan, Rahat Ullah,Wajidullah, Salman, Naimat Ullah, Tin Decorated Zinc Sulphide Nanoparticles for Photocatalytic Degradation of Bromophenol Blue Dye and Their Therapeutic Applications: A Kinetic and Thermodynamic Approach, ECS Journal of Solid State Science and Technology, 2022 11 033011(**IF=1.8**)
18. Sundas Ali, F. Akbar Jan, Rahat Ullah, Wajidullah, Naimat Ullah, Kinetic and Thermodynamic Study of the Photo Catalytic Degradation of Methylene Blue (MB) in Aqueous Solution Using Cadmium Sulphide (CdS) Nanocatalysts, Chemistry Africa (2022) 5:293–304(**IF=2.3**)
19. Rahat Ullah, F. Akbar Jan, Hussain Gulab, Sanum Saleem, Naimat Ullah,Wajidullah, Metals Contents in Honey, Beeswax and Bees and Human Health Risk Assessment Due to Consumption of Honey: A Case Study from Selected Districts in Khyber Pakhtunkhwa, Pakistan, Archives of Environmental Contamination and Toxicology (2022) 82:341–354(**IF=3.7**)
20. Sundas Ali, F. Akbar Jan , Rahat Ullah, Wajidullah, Naimat Ullah, Salman, UV-light-driven cadmium sulphide(CdS) nanocatalysts: synthesis, characterization, therapeutic and environmental applications; kinetics and thermodynamic study of photocatalytic

degradation of Eosin B and Methyl Green dyes, Water Science & Technology (2022) 85 (4): 1040–1052(**IF=2.5**)

21. F. Akbar Jan , Wajidullah, Rahat Ullah, Salman, Naimat Ullah, Abdul Salam, An investigation into the environmental and therapeutic applications of holmium doped titanium dioxide (Ho-TiO2) nanocatalysts. Kinetic and thermodynamic study of the photocatalytic degradation of Safranin O dye, Nano Futures **6** 015003 (**IF=2.5**)
22. Usman Khan, F. Akbar Jan1, Rahat Ullah , Wajidullah, Naimat Ullah , Salman, Comparative photocatalytic performance and therapeutic applications of zinc oxide (ZnO) and neodymium-doped zinc oxide (Nd–ZnO) nanocatalysts against Acid Yellow-3 dye: kinetic and thermodynamic study of the reaction and effect of various parameters, Journal of Material Science : Material in Electronics (2022) 33:2781–2800(**IF=2.8**)
23. F. Akbar Jan, Manzoor Ahmad, Umar Shah, Muhammad Saleem, Rahat Ullah, Naimat Ullah, Synthesis, Characterization and Band Gap Tuning of Neodymium (1-4%) Doped Zinc Oxide Catalyst and its Application for the Photocatalytic Degradation of Coomassive Violet R200 Dye in Aqueous Solution, Journal of the Chemical society of Pakistan Vol. 43, No. 06, 2021, 726-735. (**IF=0.3**)
24. Shah Fahad , Ajmal Khan, F. Akbar Jan, Wajidullah, Rahat Ullah, Green synthesis of Zinc Oxide Nanoparticles (znonps) using leaf extract of Cucumis sativus; Characterization, in vitro properties and environmental applications, Bioscience Research, 2021 18(4):3182-3192(**IF=0.737**)
25. F. Akbar Jan, Rahat Ullah, Umar Shah, Muhammad Saleem, Naimat Ullah, Muhammad Usman, Characterization of Alpha Bismuth Trioxide Nanoparticles and their Application for Catalytic Degradation of Xylene Cyanol FF Dye in Aqueous Solution Journal of the Chemical society of Pakistan Vol. 43, No. 03, 2021(**IF=0.3**)

M.Phil scholars supervised

S.No	Name of Scholar	Registration number	Research topic
1	Muhammad Asim	2021-BK-7534	Effects of radiolytic and thermal stresses on the quality indices of some commonly used edible oils
2	Imad Khan	2016-CAS-1513	Physiochemical characteristics, metal contents and possible adulteration of honey samples collected from selected districts in Khyber Pakhtunkhwa
3	Shah Faisal	2014-BK-1922	Green Synthesis of undoped and zinc doped cobalt oxide nanoparticles; their application for the photocatalytic degradation of Malachite dye
4	Sundas Ali	2012-BK-78	Synthesis, characterization and investigation of the photocatalytic performance of cadmium sulphide (CdS) nanocatalyst against selected organic dyes
5	Shah Khalid	2018-BK-4937	Band tuning of synthesized TiO_2 catalyst by doping with metal and its application for the removal of organic dyes from waste

			water
6	Rahat Ullah	2015-BK-2633	Analysis of pesticides residues and heavy metals in honey,honey bee wax and honey bees; their associated Human health risk assessment
7	Muhammad Aamir	2017-BK-3839	Synthesis and characterization of SnO_2 nanoparticles and its application as photocatalyst for the degradtion of selected dyes
8	Umar Shah	2015-BK-2625	Synthesis of doped and undoped zinc sulphide nanoparticles; Their environmental and therapeutical applications
9	Saira Umar	2020-BK-6727	Removal of acid dyes by activated carbon/iron oxide composite from aqueous solution
10	Sajid Ullah	2015-BK-2629	Synthesis, characterization, biological activities of nickel oxide nanoparticles and their applications for the photodegradation of selected organic dyes
11	Abid Ullah	2014-BK-2378	comparative compositional analysis of crude oils processed by Attock Refinery Limited, Pakistan
12	Shah Mansoor	2015-BK-2634	Quantification of Cetirizine Dihydrochloride in pharmaceutical formulations and biological fluids through fluorescence quenching of Eosin-Y
13	Saleem Khan	201-CAS-2289	Synergistic photocatalysis and response surface methodology optimization of Co_3O_4-ZnS nanocomposite for eosin-y and crystal voilet dyes degradation
14.	Shahab Khan		Oxidative desulfurization of fuel oil using choline chloride based deep eutectic solvents; a green approach
15	Sanullah	2016-CAS-1546	Fabrication of silver oxide doped boron nitride catalyst for the oxidative desulfurization of fuel oil
16	Rahat Ullah	2019-BK-5866	Response Surface Methodology (rsm) approach for the degradation of hazardous organic dyes using synthesized trimetallic oxide (co3o4-cuo-sno2) nanocomposite
17	Sanila Shahab	2024-BK-10432	Synthesis of $Bi_2O_2Co_3$-NiS (3:1) nanocomposite via solid-state grinding approach for visible-light photocatalysis: optimization and process analysis using response surface methodology

BS/M.Sc thesis supervised

S.No	Group	Program	Thesis title
1	Muhammad Jawad, Muhammad Zakria,Muhammad Esa Afzal	BS	Photocatalytic degradation of EosinY dye using Ce doped zinc oxide nanoparticles: optimization through Response Surface Methodology Desirability Factor
2	Muhammad Zeeshan, Wahab Ali,Sabir Shah,Bushra Gul	BS	Investigation of the photocatalytic potential of nickel oxide (NiO) nanoparticles for the degradation thiomethoxam insecticide and process optimization through Response Surface Methodology(RSM) Desirability Factor
3	Usman Khan	BS	Synthesis of zinc oxide and neodymium doped zinc oxide nanoparticles and comparative study of their application for the photocatalytic degradation for Acid Yello3 dye
4	Naureen Hussain,Mahnoor Zeb,Muhammad Irfan	BS	Efficient adsorption of Acid green 25 dye using ZnS nanoparticles: Evaluation and optimization via Response Surface Methodology Desirability Factor analysis
5	Rahat Ullah	BS	Synthesis of zinc oxide and Sr-doped zinc oxide nanoparticles and comparative study of their application for the photocatalytic degradation of Acid vilet17 dye in aqueous solution
6	Umar Shah, Muhammad Saleem	BS	Bismuth doped zinc oxide nanoparticles for the photocatlytic degradation of Xylene cyanol FF dye and characterization of the catalyst and optimization of different reaction parameters

Research projects

S.No	Project Title	Funding agency	Status	Amount
1	Assessment of polycyclic aromatic, hydrocarbons(PAHs) and heavy metals in sludge amended soils and their uptake by the vegetables in District Mardan	HEC	Approved//Completed	0.5Million
2	Toxicological Study of Heavy Metals and Pesticide Residue in Honey,	HEC	Approved/Completed	1.658 Million

	Honeybee wax, Trapped Pollens and Bees (Apis millifera & Apis dorsata fabricious) and Risk Assessment due to Consumption of Contaminated Honey			

Teaching /Research Experience

- Currently serving as Assistant Professor of Environmental Chemistry at the Department of Chemistry Bacha Khan University Charsadda since February 27, 2013.
- Served as Assistant Professor of Environmental Chemistry at the Department of Chemistry Abdul Wali Khan University Mardan under IPFP from February 12, 2012 to February 13,2013.
- Six months research at the Department of Chemistry, University of Aberdeen under IRSIP.
- Served as Research and Teaching Assistant at the Institute of Chemical Sciences, University of Peshawar under NIP from August 6, 2007 to August 7, 2008.
- Served as Lecturer in Chemistry in Oriental Degree College Peshawar from September 2008 to March 2009.
- Served as Trained Graduate Teacher in Frontier Children Academy Peshawar from September 2005 to March 2006.

Administrative Experience

- Currently working as Departmental Focal Person, Member of the University Food Committee, Member of University Chraity Body , Member of Graduate Study Committee Department of Geology and convener University Masjid Committee.
- Deputy Registrar Academics at Bacha Khan University Charsadda from January 02,2019 to January 01,2020.
- Member of Senate constituency representative from Assistant Professor cadre Bacha University Charsadda from July 3,2019 to July 02,2022.
- Worked as Departmental M.Phil /PhD coordinator for 6 years
- Member of Board of Study Department of Chemistry Kohat University of Science and Technology (KUST)

Conferences /workshops/Seminar organized /attended

- Secretary and Organizer First International Chemistry Conference titled" Advances in Green Chemistry for Sustainable Development: Mitigating Environmental Pollution and Climate Change" to be held on March 24-25,2027 at Bacha Khan University Charsada.
- Organized one day workshop on "Skills Development in Academics and Scientific Writing" at Bacha Khan University Charsadda on November 15,2022.
- One day seminar on semester rules & regulations and self assessment organized by QEC Bacha Khan University Charsadda
- Nanotechnology workshop organized by Pakistan Atomic Energy Commission and Centralized Resource Laboratory University of Peshawar
- Paper presented at symposium organized by University of Peshawar at Bara Galli Summer Campus
- First Post Graduate Research Poster Presentation organized Institute of Chemical Sciences, University of Peshawar
- Post Graduate Research Poster symposium organized National Centre of Excellence in Physical Chemistry, University of Peshawar

Courses certificates

- ✓ Basic First Aid training organized by Red Crescent Society Khber Pakhtunkhwa branch
- ✓ Use of Nuclear Techniques in Agriculture, Food and Medicines organized by NIPA
- ✓ Introduction to Bioinorganic Chemistry of Metals organized by Institute of Chemical Sciences, University of Peshawar

Scholarships

- Scholarship for M.Phil study from Pakistan Science Foundation
- Indigenous 5000 PhD Fellow Batch-IV HEC Paakistan

Countries visited

United Kingdom, Kingdom of Saudi Arabia

Hobbies

- ❖ Reading research papers
- ❖ Tilawati-Quran Pak
- ❖ Net surfing and news reading

Languages

- **English**
- **Pashto**
- **Urdu**

Academic References

Prof.Dr.Muhammad Ishaq Institute of Chemical Sciences, University of Peshawar, Peshawar, KPK Pakistan Cell No. 0300-5974255 E-mail: mishaq481@yahoo.com	**Dr.Hussain Gulab** Department of Chemistry , Bacha Khan University Charsadda, KPK Pakistan Cell No.0314-9771362 E-mail:hussaingulab@gmail.com
Prof. Dr. Khalid Saeed Dean of Sciences Bacha Khan University Charsadda, KPK Pakistan Cell No. 0323-9290054 E-mail: khalidkhalil2002@yahoo.com	**Prof. Dr. Sardar Khan** Department of Environmental Sciences, University of Peshawar, KPK Pakistan Cell No. 0300-9116256 E-mail: sardar.khan2008@yahoo.com