

Dr. Ahmad Raza Ashraf



Research Profiles

<https://ue.edu.pk/empprofile.php?id=1689>

<https://scholar.google.com/citations?user=D4FXROYAAAAJ&hl=en>

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Department of Chemistry, University of Education, Multan Campus, Bosan Road, Multan, 60700, Pakistan.

Permanent Address

House No. 42, Main Millat Road, Near Faisal Street, Ittehad Colony, Samanabad, Lahore, Pakistan.

Date of Birth

January 03, 1985

Nationality

Pakistani

Gender

Male

Marital Status

Married

Religion

Islam

Objective

I am oriented to work in an established academic institution to offer my teaching and research skills, to contribute at my level best for the progression of host institution, host country, and the humanity.

Current Employment

Jan 2023 to Date **Assistant Professor (TTS)**, Department of Chemistry, University of Education, Lahore (Multan Campus)

Past Experience

Feb 2022 to Dec 2022 **Assistant Professor**, Department of Chemistry, The University of Lahore, Lahore
Sep 2020 to Sep 2021 **IPFP Fellow**, Department of Chemistry, University of Education, Lahore (Faisalabad Campus)
Sep 2019 to Mar 2020 **Visiting Lecturer**, Department of Chemistry, University of Sahiwal, Sahiwal
Sep 2018 to Sep 2020 **Lecturer**, Department of Chemistry, Heritage International College, Arifwala
Oct 2012 to Dec 2012 **Research Associate**, HEC Pakistan Research Project No. 20-2154/NRPU/R&D/HEC/12-3698, QAU Islamabad.

Academic Record

2019 **Ph.D. Chemistry** (Inorganic/Analytical)
Quaid-i-Azam University, Islamabad, Pakistan
Thesis Title: Tailoring of Polyimide Properties by Structural Modifications, Copolymerization and Nanocomposites Synthesis
2011 **M.Phil Chemistry** (Inorganic/Analytical)
Quaid-i-Azam University, Islamabad, Pakistan
Thesis Title: Synthesis and Characterization of Polyimide and Copolyimide Based Materials
1st Division
2008 **M.Sc. Chemistry**
Bahauddin Zakariya University Multan, Pakistan
1st Division
2005 **B.Sc. (Botany, Zoology, Chemistry)**
Bahauddin Zakariya University, Multan, Pakistan
1st Division

Awards / Scholarships

HEC Pakistan 5000 Indigenous Ph.D. Fellowship Program (Phase II)
International Research Support Initiative Program (IRSIP) of HEC Pakistan for foreign research visit to University of Waterloo, Canada.
Financial support by Professor Leonardo C. Simon during research visit to University of Waterloo Canada under IRSIP.
University merit scholarship during all the four semesters of MPhil at QAU Islamabad.

Research Interests

Synthesis, characterization and properties evaluation of:

- High performance polymers (polyamides/polyimides)
- Polyimide/metal oxide nanocomposites
- Schiff base ligands and transition metal complexes
- Graphene/metal oxide nanocomposites for photocatalytic applications

Research Expertise

➤ I have a broad knowledge, training and experience of following equipments and characterization techniques, and can handle independently: WAXRD, UV-Vis Spectroscopy, FTIR Spectroscopy, NMR Spectroscopy, TGA, DMTA, Freeze dryer, Rotary evaporator, Glove Box, Sonicator, Furnaces, Schlenk lines etc.

Research Supervision

- I have Supervised **13 MPhil** and **09 BS** research students since September 2020
- I am Co-Supervisor of **01 Ph.D.** Student (continue)

Research Profile

Journal Articles: 20
h-index (as per Google Scholar): 10

Cumulative Impact Factor: > 70
Citations (as per Google Scholar): 434

List of Research Publications

- [1] *Thermal performance customization of polyimide films by nanocomposite engineering with Al₂O₃ and ZnO nanoparticles*
Ahmad Raza Ashraf, Zareen Akhter, Muhammad Asim Farid, Leonardo C. Simon, Khalid Mahmood, and Muhammad Faizan Nazar
Frontiers in Materials, 12, 1504965, 2025
<https://doi.org/10.3389/fmats.2025.1504965>
- [2] *Formulation of Microemulsion-Based Gels for Enhanced Topical Administration of Nonsteroidal Anti-Inflammatory Drugs*
Muhammad Yasir Siddique, Ahmad Raza Ashraf, Salah Uddin Khan, Muhammad Atif Saleem, Muhammad Ashfaq, Kamran Alam, Ahmed Ahmed Ibrahim, and Muhammad Faizan Nazar
Langmuir, 40, 24174–24184, 2024
<https://doi.org/10.1021/acs.langmuir.4c03749>
- [3] *Cobalt-Based Ferrite Modified Carbon Nanotubes Fibers for Flexible and Disposable Microelectrode Toward Electrochemical Glucose Sensing*
Abid Ali, Rizwan Shoukat, Ahmad Raza Ashraf, Zarqa Rasheed, Sheza Muqaddas, Munawar Iqbal, Munira Khalid, Wissem Mnif, and Ismail ElKamil Suliman Mohamed.
Analytical Science Advances, 5, 11-12, e202400032, 2024
<https://doi.org/10.1002/ansa.202400032>
- [4] *Simultaneous photocatalytic degradation of methylene blue and methyl orange using a green synthesized Zn 0.98 Mn 0.02 O/BiOCl nanocomposite*
Muhammad Asim Farid, Ahmad Raza Ashraf, Rida Sarfaraz, Sadaf ul Hassan, Nimra Naeem, and Hamza Naeem.
New Journal of Chemistry, 48, 2, 887-897, 2024.
<https://doi.org/10.1039/D3NJ05085H>
- [5] *Electrochemical sensing of glucose and ascorbic acid via POM-based CNTs fiber electrode*
Sheza Muqaddas, Hira Aslam, Sadaf Ul Hassan, Ahmad Raza Ashraf, Muhammad Adeel Asghar, Muhammad Ahmad, and Arif Nazir
Materials Science and Engineering B, 293, 116446, 2023
<https://doi.org/10.1016/j.mseb.2023.116446>
- [6] *Assessment of essential and toxic elemental concentrations in tumor and non-tumor tissues with risk of colorectal carcinoma in Pakistan*
Muhammad Abdul Qayyum, Tahir Farooq, Aqsa Baig, Tanveer Hussain Bokhari, Muhammad Naveed Anjum, Mian Habib-ur-Rahman Mahmood, Ahmad Raza Ashraf, Khawaja Muddassir, and Muhammad Ahmad
Journal of Trace Elements in Medicine and Biology, 79, 127234, 2023
<https://doi.org/10.1016/j.jtemb.2023.127234>
- [7] *Synthesis, DNA binding and biological evaluation of benzimidazole Schiff base ligands and their metal(II) complexes*
Khalid Mahmood, Zareen Akhter, Fouzia Perveen, Aisha, Muneeba Bibi, Hammad Ismail, Nida Tabassum, Sammer Yousuf, Ahmad Raza Ashraf, and Muhammad Abdul Qayyum
RSC Advances, 13, 18, 11982-11999, 2023
<https://doi.org/10.1039/D3RA00982C>
- [8] *Ecofriendly green synthesis of Ag@Cu bimetallic nanoparticles using Seidlitzia stocksii stem extract: photocatalytic degradation of methylene blue*
Arif Nazir, Mahmood Ali, Norah Alwadai, Munawar Iqbal, Maryam Al Huwayz, Abida Kausar, Hamza Arif, Abid Ali and Ahmad Raza Ashraf
Zeitschrift für Physikalische Chemie, 237, 923-936, 2023
<https://doi.org/10.1515/zpch-2022-0095>
- [9] *Carbon Nanotube Fiber-based Flexible Microelectrode for Electrochemical Glucose Sensors*
Sheza Muqaddas, Mohsin Javed, Sohail Nadeem, Muhammad Adeel Asghar, Ali Haider, Muhammad Ahmad, Ahmad Raza Ashraf, Arif Nazir, Munawar Iqbal, and Abid Ali
ACS Omega, 8, 2, 2272-2280, 2023
<https://doi.org/10.1021/acsomega.2c06594>
- [10] *Structural, Optical and Electrical Properties of Cu_{0.6}CoxZn_{0.4-x}Fe₂O₄ (x = 0.0, 0.1, 0.2, 0.3, 0.4) Soft Ferrites*
Wazirzada Aslam Farooq, Muhammad Sajjad Hasan, Muhammad Iftikhar Khan, Ahmad Raza Ashraf, Muhammad Abdul Qayyum, Nafeesah Yaqub, Mona A. Almutairi, Muhammad Atif and Atif Hanif
Molecules, 26, 1399. 2021
<https://doi.org/10.3390/molecules26051399>
- [11] *Adsorption of crystal violet dye by using low cost adsorbent peanut husk*

Sohail Abbas, Tariq Javed, Shagufta Zafar, Muhammad Babar Taj, Ahmad Raza Ashraf, Muhammad Imran Din, Desalination and Water Treatment, 233, 387–398, 2021

<https://doi.org/10.5004/dwt.2021.27538>

- [12] *Synthesis, characterization and biological evaluation of novel benzimidazole derivatives*
Khalid Mahmood, Zareen Akhter, Muhammad Adeel Asghar, Bushra Mirza, Hammad Ismail, Faroha Liaquat, Saima Kalsoom, Ahmad Raza Ashraf, Muhammad Shabbir, Muhammad Abdul Qayyum & Vickie McKee
Journal of Biomolecular Structure and Dynamics, 38, 1670-1682, 2020
<https://doi.org/10.1080/07391102.2019.1617783>
- [13] *Synthesis, DNA Binding Affinity, Molecular Docking Study and Antitumor Activity of Cu(II), Pd(II) and Zn(II) Metal Complexes of Benzimidazole Schiff Base Ligand*
Khalid Mahmood, Zareen Akhter, Bushra Mirza, Hammad Ismail, Faroha Liaquat, Saima Kalsoom, Ahmad Raza Ashraf, Muhammad Abdul Qayyum
Journal of the Chemical Society of Pakistan, 41, 5, 903-916, 2019
- [14] *Polyimide derivatives of 4,4'-bis((4-aminophenoxy)methyl)-1,1'-biphenyl: Synthesis, spectroscopic characterization, single crystal XRD and thermal studies*
Ahmad Raza Ashraf, Zareen Akhter, Leonardo C. Simon, Charles Dal Castel, Abdeljalil Assoud
Journal of Molecular Structure, 1169, 46-58, 2018
<https://doi.org/10.1016/j.molstruc.2018.05.051>
- [15] *Synthesis of polyimides from α,α' -bis(3-aminophenoxy)-p-xylene: Spectroscopic, single crystal XRD and thermal studies*
Ahmad Raza Ashraf, Zareen Akhter, Leonardo C. Simon, Vickie McKee, Charles Dal Castel
Journal of Molecular Structure, 1160, 177-188, 2018
<https://doi.org/10.1016/j.molstruc.2018.01.098>
- [16] *Nickel(II) and palladium(II) triphenylphosphine complexes incorporating tridentate Schiff base ligands: Synthesis, characterization and biocidal activities*
Muhammad Shabbir, Zareen Akhter, Ahmad Raza Ashraf, Hammad Ismail, Anum Habib, Bushra Mirza
Journal of Molecular Structure, 1149, 720-726, 2017
<https://doi.org/10.1016/j.molstruc.2017.08.050>
- [17] *Pharmacological evaluation of ONNO donor quadridentate Schiff bases*
Muhammad Shabbir, Zareen Akhter, Ahmad Raza Ashraf, Michael Bolte, Sumbal Wahid, Bushra Mirza.,
European Journal of Chemistry, 8, 46-51, 2017
<https://doi.org/10.5155/eurjchem.8.1.46-51.1535>
- [18] *Schiff base triphenylphosphine palladium (II) complexes: Synthesis, structural elucidation, electrochemical and biological evaluation*
Muhammad Shabbir, Zareen Akhter, Iqbal Ahmad, Safeer Ahmed, Maryam Shafiq, Bushra Mirza, Vickie McKee, Khurram Shahzad Munawar, Ahmad Raza Ashraf
Journal of Molecular Structure, Volume 1118, 250-258, 2016
<https://doi.org/10.1016/j.molstruc.2016.04.003>
- [19] *Effect of polydimethylsiloxane incorporation on the properties of polyimides synthesized from newly designed α,α' -bis(2-aminophenoxy)-p-xylene*
Ahmad Raza Ashraf, Zareen Akhter, Vickie McKee, Muhammad Siddiq
Express Polymer Letters, 9, 1001-1014, 2015
[10.3144/expresspolymlett.2015.90](https://doi.org/10.3144/expresspolymlett.2015.90)
- [20] *(3-benzoylphenyl) (phenyl)methanone*
Ahmad Raza Ashraf, Zareen Akhter, Michael Bolte
Acta Crystallographica Section E: Structure Reports Online, Volume 67, o2432, 2011
<https://doi.org/10.1107/S1600536811033344>

International Conference Presentations

1. *Phytofabrication of CuO/ZnO Nano-Photocatalyst for Rhodamine-B Degradation*
Ahmad Raza Ashraf, Nimra Irshad, Muhammad Rouf Alvi
6th International Conference on Advances in Materials Science (AIMS-2025), December 03-04, 2025 Department of Physics, Division of Science & Technology, University of Education, Lahore, Pakistan
2. *Thermal Stability Enhancement of Polyamide Matrix by Embedding ZnO Nanoparticles*
Ahmad Raza Ashraf, Zareen Akhter, Muhammad Faizan Nazar, Muhammad Rouf Alvi
3rd International Conference Trends and Research in Chemistry (TRIC-2024), November 06-07, 2024, University of Education, Lahore, Pakistan.
3. *Nanocomposite Engineering: Thermal Performance Enhancement of Polyimide by Incorporation of Nano-Alumina*
Ahmad Raza Ashraf, Zareen Akhter, Muhammad Faizan Nazar, Abid Ali
2nd International Conference Trends and Research in Chemistry (TRIC-2023), May 16-18, 2023, University of Education, Lahore, Pakistan.
4. *Enhanced Thermal Stability of Polyimide by Incorporation of Al₂O₃ nanoparticles*
Ahmad Raza Ashraf, Zareen Akhter, Abid Ali
International Conference On Chemical and Material Sciences (ICCMS), May 21, 2022, The University of Lahore, Lahore, Pakistan.

5. **Diamine Architecture Effects on Thermal Stability of Polyimides**
Ahmad Raza Ashraf, Zareen Akhter, Muhammad Abdul Qayyum
International Conference On Biological Research & Applied Sciences (IBRAS), January 20-21, 2021, Jinnah University For Women, Karachi, Pakistan.
6. **Improved Thermal Performance of Polyimides by Incorporation of Cardo and Trifluoromethyl Moieties**
Ahmad Raza Ashraf, Zareen Akhter, Muhammad Abid Rashid, Mian Habib Ur Rahman Mahmood
1st International Industrial Chemistry Conference (IICC), Feb 26-28, 2021, NED University of Engineering & Technology, Karachi, Pakistan.
7. **Multivariate Investigation of Toxic and Essential Metals in The Serum of Colorectal Cancer Patients (With Types and Stages) in Comparison with Controls**
Muhammad Abdul Qayyum, Ahmad Raza Ashraf, Danish Riaz
1st International Industrial Chemistry Conference (IICC), Feb 26-28, 2021, NED University of Engineering & Technology, Karachi, Pakistan.
8. **Synthesis of Biodegradable Plastics from Wheat Husk**
M. Waseem Shahzad, Aftab Kareem, Zaman Ashraf, Ahmad Raza Ashraf
1st International Industrial Chemistry Conference (IICC), Feb 26-28, 2021, NED University of Engineering & Technology, Karachi, Pakistan.
9. **Dianhydride architecture effects on thermal and mechanical properties of polyimides**
Ahmad Raza Ashraf, Zareen Akhter, Charles Dal Castel, Leonardo C. Simon
37th Canadian High Polymer Forum, August 9-11, 2016, Glen House Resort, Gananoque, ON, Canada.
10. **Improvement of thermal and mechanical properties of polyimide using metal oxide nanoparticles**
Ahmad Raza Ashraf, Zareen Akhter, Charles Dal Castel, Leonardo C. Simon
16th Society of Plastics Engineers (SPE) Automotive Composite Conference and Exhibition (ACCE), September 7-9, 2016, Michigan, USA.

Research Funding

- Won a **Research Grant** amounting **999535/- PKR**, under Startup Research Grant Program (SRGP) of HEC Pakistan, for the research project entitled “Polyimide/Inorganic nanocomposites for electronics industry: Synthesis, characterization and properties evaluation” at the Department of Chemistry, University of Education, Lahore (Faisalabad Campus), Pakistan, in September, 2020.

Computer Skills towards Scientific Research

- I am skilled in following Computer Software which can be used for Scientific Research: Microsoft Office, EndNote, Adobe Acrobat, Origin, Mendley, ChemDraw, Mercury, TA Universal analysis etc.

Reviewer of Scientific Journals

Reviewed articles for following journals:

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| 1. Arabian Journal of Chemistry | 2. Journal of Analytical Chemistry |
| 3. Physica Scripta | 4. Journal of Chemistry |
| 5. Journal of The Chemical Society of Pakistan | 6. Nanotechnology |
| 7. Energy and Fuels | 8. Journal of Trace Elements in Medicine and Biology |

Other Particulars

- Secured 2nd position in “Microteaching Competition” in National Faculty Development Program (NFDP) 2020 of National Academy of Higher Education (NAHE) Pakistan.
- Won 3rd position in “Three Minute Thesis Competition” in NFDP 2020 of NAHE Pakistan.
- First division throughout the academic career.

References

1. **Prof. Dr. Zareen Akhter**
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Quaid-i-Azam University, Islamabad, Pakistan.
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2. **Dr. Ali Haider**
Associate Professor, Department of Chemistry
Quaid-i-Azam University, Islamabad, Pakistan.
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3. **Dr. Muhammad Faizan Nazar**
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University of Education, Lahore, Pakistan.
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