

AREEBAH AWAN

Visiting Faculty Member (Teacher ID: 705046)

Quaid-I-Azam University, Islamabad

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Research Interests

Catalysis-SACs/DASCs, Electrochemistry, Material Syn, Renewable Energy- water splitting, CO₂ reduction, Sustainable Energies, Perovskite nanomaterials applications, Spectroscopy

Education

■ Pakistan Institute of Engineering and Applied Sciences (A+ / Excellent overall) (2023-2025)

Master in Chemistry

- Excellence Award for outstanding Research Performance
- Certificate of Appreciation and Merit for being an all-rounder student
- Class representative of batch 2023-2025

Majors Analytical Chemistry, Inorganic Chemistry, Polymer Chemistry, Physical Chemistry.

■ Quaid-i-Azam University, Islamabad (2019-2023)

Bachelor in Chemistry

- Ranked 5th among the batch 2019-2023

Specialized in Inorganic/Analytical chemistry.

■ Fauji Foundation School/College for Girls, New Lalazar, Rawalpindi (2014-2019)

- Secured 11th position overall Federal Board.

Work Experience

Visiting Faculty at Quaid-I-Azam University (2026-Present)

- Teaching **Organic Chemistry CH-101** at *Microbiology Department*.
- Teaching **Biochemistry-II** and **Pharmaceutical Chemistry** at *Department of Pharmacy*.

Instructor Fauji Foundation College for Girls, New Lalazar (7/2023-11/2023)

- Taught F.SC students Chemistry

Teacher Assistant at Quaid-I-Azam University, Islamabad (2022-Spring semester)

- Under Dr. Proff. Amir Waseem's Assistance ship and conducted lab of 2nd semester
- Helped them to do basic calculations and mechanisms

Teacher Assistant at Quaid-I-Azam University, Islamabad (2022-2023 Fall semester)

- Under Dr. Proff. Amir Waseem's Assistance ship and conducted lab of 3rd semester
- Helped them understand Complexometric titrations, formation of inorganic complexes and conducted their exam as well.

Employee at SciTech International (SMC-PVT) Ltd (01/2023 – 06/2023)

City: Islamabad Country: Pakistan

- Employee for tenure of 6 months
- Expertise in precision instrumentation, scientific research methodologies
- Communication with clients and foster collaborative work

Instructor at Al-Hamd Educational Institute, Islamabad (2020-05/2023)

- Teacher of Chemistry at a Coaching Center.
- Communicate frequently with parents, students and faculty to provide feedback.

Internship

**National Centre for Physics, Islamabad.
Experimental Physics Directorate (ALP)**

(2022-2022)

Internship on learning Characterization techniques including X-ray Diffraction (XRD), Thermal Gravimetric Analysis (TGA), Differential Thermal Analysis (DTA), Scanning Electron Microscope (SEM), and analyzing different graphs.

Research Projects

- **Tuning Electrochemical Properties Of Single atom-Catalyt (SACs) for Oxygen Evolution Reaction**
- **Synthesis of Transition Metal doped MoS₂ for HER water Splitting.**
- **Melamine based Heterogenous catalysts using Non-Noble metal atoms for Hydrogen Evolution Reaction**

Awards and Achievements

- **Certificate of Appreciation and Merit** Awarded During MS studies due to overall performance
- **Excellence Award** for Outstanding Research Award.
- Won **Poster Competition** at Pakistan Institute of Nuclear Science and Technology.
- Ranked 5th in Bachelor studies at Quaid-i-Azam University.
- Awarded 1st in a science Exhibition, **PSN**, where presented a model producing electricity through kinetic flow of water
- Stood 67th in **International Kangaroo Test** from across the country.
- Secured good position in **ISMO** test.
- Have been 2 time Best Debater award winner by **PSN**, Islamabad.
- Participated in an Essay Writing Competition in Quaid-e-Azam University.
- Hosted a Mega Event at Quaid-e-Azam University, Islamabad.
- Won Badminton match at Inter-departmental Badminton Competition, QAU, and Islamabad.
- A speech delivered at **Radio Pakistan**.
- Live show discussion at a News TV Channel, **HUM NEWS**, about social Apps Uses and misuses.
- Attended a Joint International Conference on Basics and Application of the Rietveld Method in Material Science at NCP and awarded a prize by **Dr. Sebastian Bette**, Max Plank Institute.

Bachelor Lab Projects

Water analysis of filtered, tap, mineral and distilled water. It aimed at the analysis of hardness and softness. Moreover chemical contents were analyzed.

Cement analysis was done using different techniques, each chemical employ a different technique. Synthesis of Clathrates.

Synthesis of Organotin compounds and analysis through Infrared spectroscopy. Complexometric titrations in the analysis of a metal ion from a solution.

Preparation of ringed complexes of Trioxalato chromate

Experiments to find the rate constants, activation energies and entropy of activation of various compounds were calculated.

Preparation of different functionality including aldehydes, ketones, alcohols and many more. Organic synthesis.

Purity of reaction mixture through TLC, UV viewing.