

AIZA ZAFAR

Kuala Lumpur, Malaysia | +60-1133208381 | aizaala7@gmail.com | DOB: 7th October, 1998

Environmental Scientist | SDG 6 Specialist | Advanced Water Remediation

Highly skilled researcher with 3+ years of expertise in the fabrication and characterization of advanced nanoporous membranes (COFs/MOFs) for water remediation. Proven record of academic excellence and technical success in achieving 99% salt rejection in desalination frameworks. Seeking a doctoral position to leverage advanced synthesis skills and analytical expertise in developing the next generation of resilient, high-throughput water treatment technologies

EDUCATION

MPhil, Environmental Sciences | Quaid-i-Azam University, Islamabad | 2021–2023 | CGPA: 3.7/4

Academic Standing: Ranked **1st** in Departmental Cohort

Thesis Title: Engineering of composite membranes for simultaneous desalination and heavy metal adsorption

Key Achievement: Developed the department's first research framework for 2D COF-doped membranes, achieving a 99% salt rejection rate and catering to the national research gap in Pakistan's seawater purification strategies.

BS (Hons.), Environmental Sciences | Quaid-i-Azam University, Islamabad | 2017–2021 | CGPA: 3.7/4

Thesis Title: Degradation of Levofloxacin by BiVO₄ / g-C₃N₄ heterojunction under Visible Light

Key Achievement: Ranked **3rd** in a cohort of 40 students (Top 10% of the department)

RESEARCH & PROFESSIONAL EXPERIENCE

Graduate Researcher | 2021 – 2024 | Renewable Energy Advancement Lab (REAL), Quaid-i-Azam University

- Advanced Material Synthesis: Engineered novel 1D, 2D, and 3D Covalent Organic Frameworks (COFs) and MOFs for high-performance desalination and photocatalytic degradation.
- Supervision & Mentorship: Acted as a lead mentor for 5+ undergraduate researchers, overseeing projects on Topological Insulator Nanoparticles and the photoreduction of heavy metals.
- Analytical Modeling: Performed complex adsorption kinetics and isothermal modeling using OriginPro and MATLAB, achieving a 99% accuracy rate in experimental-to-model correlation.
- Laboratory Management: Spearheaded the maintenance and troubleshooting of analytical equipment including FTIR, XRD, AAS, and SEM, reducing laboratory downtime by 15%.

Sustainability Manager | EngineeringTech Services | March 2023 – March 2025

- Strategic Planning: Coordinated the development of organization-wide environmental sustainability plans, focusing on pollution control and resource efficiency to meet ESG performance objectives.
- Risk Assessment: Executed technical compliance audits and environmental risk assessments for large-scale petroleum-related projects.
- Governance & Compliance: Ensured alignment with recognized reporting frameworks (e.g., GRI) while improving data quality and disclosure readiness for regulatory stakeholders.
- Training & Engagement: Led sustainability training and stakeholder engagement activities, facilitating the adoption of advanced environmental management practices.

Market Research Team Lead | Kuaishou Technology | August 2021 – February 2023

- Operational Leadership: Directed vertical roadmaps and oversaw team operations, coaching a team of 50 client partners in a high-stakes digital environment.
- Data Analytics: Managed 10–15 end-to-end digital campaigns, utilizing data-driven strategies to increase organic engagement by 44%.
- Quality Control: Maintained platform integrity through copyright compliance and rigorous quality control protocols.
- Scalability: Led partner training programs and scaled B2B/B2C initiatives, demonstrating strong cross-functional project management.

TECHNICAL SKILLS & INSTRUMENTATION

- Synthesis & Characterization: Sol-gel, Electrospinning, XRD, SEM, FTIR, AAS, UV-Vis Spectroscopy, TGA/DSC.
- Analytical Software: OriginPro (Non-linear regression & kinetics), MATLAB, VASP, COMSOL Multiphysics, ChemDraw, Mercury.
- Digital Project Management: Slack, Jira, Trello, Advanced Data Analytics, Stakeholder Management.

PUBLICATIONS & SCHOLARLY CONTRIBUTIONS

Book Chapter

- Fazal, S., ... **Zafar, A.**, et al. (2023). *Role of Mosquito Microbiome in Insecticide Resistance*. **IntechOpen eBooks**. doi:10.5772/intechopen.104265.

International Policy & Plenary Reviews

- UNESCAP:** *High-Level Plenary on Review of Sustainable Development Goals in South and South-West Asia: SDG 6 – Clean Water and Sanitation* (2022).
- SDPI:** *Governing Pakistan's Water Economy in the 21st Century*. Sustainable Development Policy Institute (2019).
- SDPI:** *COP26 and the Way Ahead: Role of Parliaments in Climate Politics & Implementation of the Paris Agreement* (2020).

PROFESSIONAL CERTIFICATIONS

- Sustainability & ESG Leadership:** A series of professional certifications covering *Corporate ESG Strategy*, *Pollution Prevention, Industry and Business Processes*, and *The Effects of Environmental Change on Business*.
- Risk & Impact Assessment:** Specialized training in *Weighing Risks and Opportunities of Sustainability Initiatives* and *Recognizing Organizational Risks*.
- Strategic Communication:** *Art of Report Writing* (SDPI, 2018) and *Nurturing the Creative Power of Your Team*.

HONORS & DISTINCTIONS

- MPhil Merit Position:** Ranked 1st in the Department of Environmental Sciences, QAU.
- BS Merit Position:** Ranked 3rd in Batch (Top 10%), QAU.
- Merit Scholarship:** Awarded by Quaid-i-Azam University for academic excellence (2017–2021).
- HOD Commendation:** Recognized for pioneering Covalent Organic Framework (COF) research in the department.

REFERENCES

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Environmental Nanotechnology
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