



Muhammad Shehzad

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ABOUT ME

Dedicated MPhil scholar and researcher specializing in renewable energy and advanced materials, with a strong focus on catalyst design, synthesis, and characterization. Passionate about contributing to innovative research in sustainable energy solutions and advancing the development of efficient catalytic systems for environmental and industrial applications.

EDUCATION AND TRAINING

15/09/2022 – 04/09/2024 Peshawar, Pakistan

MPHIL IN PHYSICAL CHEMISTRY National Center of Excellence in Physical Chemistry, University of Peshawar

- Catalysis
- Chemical Kinetics
- Surface Chemistry
- Quantum Mechanics
- Heterogenous Catalyst
- Statistical Thermodynamics

Website <https://g.co/kgs/6mDmA3m> | **Field of study** Physical Chemistry | **Final grade** 3.4/4.0 |

Thesis Lignin-Derived Solid Acid Catalyst For One-Pot Conversion of Glycerol into Acrylic Acid

04/09/2018 – 15/09/2022 Kohat, Pakistan

BACHELOR IN CHEMISTRY Kohat University of Science and Technology

- Spectroscopy
- Photochemistry
- Thermochemistry
- Chemical Kinetics
- Nuclear Chemistry
- Surface Chemistry
- Polymer Chemistry
- Quantum Chemistry
- Statistical Mechanics
- Statistical Thermodynamics

Website <https://www.kust.edu.pk/kust> | **Field of study** Chemistry | **Final grade** 3.44/4.0 |

Thesis Characterization of Phenanthrene linked Triphenylamine based Polyimides as a Flourescent material for copper metal ion detection .

WORK EXPERIENCE

15/09/2023 – 02/12/2024 Peshawar, Pakistan

RESEARCHER

- Helping Lab fellows & Guiding Juniors in lab
- Experimental Design and Planning
- Sample Preparation
- Synthesis and Reactions
- Characterization and Analysis(FTIR,UV & HPLC)
- Data Management and Interpretation/Plotting
- Equipment Handling and Maintenance
- Safety and Compliance
- Working with team members to plan and conduct experiments.

Department National Center Of Excellence in Physical Chemistry, University of Peshawar | **Website** <https://g.co/kgs/tHbZaMT>

DIGITAL SKILLS

Softwares Skills

Good use of Microsoft app, social network, internet search engines and e-mail | basic skills in graphic (canva) | comprehensive knowledge of MS-Office | Computer literacy(Microsoft Word,Excel,Office,Powerpoint,Outlook,Adobe Photoshop) | OrigionPro 2020 | Intalling/Configuring/Uninstalling computer software | Social media management (Facebook, Twitter, LinkedIn, YouTube, Instagram) | Social Media including Facebook , WhatsApp and Twitter | Goole scholar | Adobe Photoshop, illustrator, AI | Reference management; Endnote Experties | basics of video-editing | Google Maps, GPS Tracking | Zoom & Telegram | Molecule editor ChemDraw

Others Skills

Proficiency of using computer and internet | Strong interest in history and politics | Using social media (experienced) | I have an excellent art of text and writing | I want to work I communicate well with people I am polite and serious | Academic reading, writing and editing

LANGUAGE SKILLS

Mother tongue(s): **PASHTO**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
URDU	C2	C2	C2	C2	C2
ENGLISH	C1	C2	B1	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

CONFERENCES AND SEMINARS

06/03/2023 – 08/03/2023 National Center Of Excellence In Physical Chemistry, University of Peshawar
Renewable Energy And Advance Material (ICREAM 2023)

Attended a seminar focusing on the critical intersection of renewable energy technologies and advanced materials. Explored the development and application of cutting-edge materials, such as catalysts, semiconductors, and nanomaterials, in energy generation, storage, and conversion processes. Discussions highlighted the role of these materials in enhancing the efficiency and sustainability of technologies like solar cells, fuel cells, and energy storage devices. Gained insights into ongoing research trends, innovative approaches, and the future potential of advanced materials in addressing global energy challenges and driving the transition toward sustainable energy systems.

CERTIFICATION

Biodiesel

Comprehensive exploration of biofuels, including their definition, advantages over fossil fuels, and diverse types. Special emphasis on transport biofuels and their role in sustainable energy solutions. Evaluated the potential of biofuels as a complete alternative to future energy needs, focusing on environmental and economic impacts.

Link <https://www.open.edu/openlearn/blocks/ocwstatement/statement.php?id=408&user=4275591&f=1>

Leadership Essentials

Completed training on 8 core leadership principles, focusing on team management, collaboration, and practical strategies for humanitarian, nonprofit, and educational sectors.

Link <https://ready.csod.com/LMS/Eval/CustomCertificate.aspx?qs=^^^WYlJyQfb7dz8e0ieizdbMbMPvM6BmQwGLwNTNnEIZSnPo3JQ%2fEgbzH1fTmR%2fCi66nMc1m4ERYBltJzQkukXTkQ20szCPGlrBBWoko0I52vDNsVHz>

Fundamentals of English Grammar

Completed a comprehensive course covering foundational English grammar, including the use of parts of speech, sentence structure, and punctuation. Gained proficiency in sentence construction, verb tenses, points of view, tone, and identifying common grammatical mistakes such as misplaced words. The course equipped me with essential skills for applying grammar rules in both everyday conversations and written communication.

Link https://docs.uniathena.com/prod/course/certificate/1075_1737310760_certificate.jpg

HOBBIES AND INTERESTS

Sports

Player Of

- Cricket
- Football
- Volleyball
- Basketball
- Badminton
- e-Sports

Reading Books

To Learn & Understand

- Political History
- Scientific Literature
- Theoretical Knowledge
- Practical Insights
- Problem Solving Approaches
- Skills Development
- Inspiration and Innovation

Social Media

To Access

- Real Time News Updates
- Latest Trends
- Networking Opportunities
- Educational Resources
- Research Sharing
- Discussion Forums
- Global Perspective
- Direct Political Figures

RECOMMENDATIONS

Dr. Muhammad Farooq Associate Professor

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