SYEDA TASKEEN SHAHID

+92 308 4234247 | syeda.taskeen.shahid@gmail.com
Muhammad Pura, Near Link Road, Model Town, Lahore, Pakistan

PROFILE SUMMARY

Enthusiastic and detail-oriented researcher in chemistry with a focus on nanotechnology, electrochemistry, and electrode materials. Specialized in the synthesis and characterization of graphene-doped metal oxide nanocomposites for environmental and energy applications. Experienced in photocatalysis, electrode fabrication, and advanced material characterization techniques. Highly motivated to contribute to the development of next-generation battery materials, particularly in magnesium-ion systems.

KEY SKILLS

- Nanomaterials synthesis: Fe_2O_3, MnO, rGO composites
- Electrode and membrane fabrication
- Photocatalytic testing under UV & sunlight
- Instrumental techniques: XRD, FTIR, SEM, UV-Vis, PL
- Data analysis: Excel, ChemDraw, ChemCraft, Origin, Vesta
- Scientific writing & academic communication

EDUCATION

- MPhil in Chemistry (2023–2025)
  Government College University (GCU), Lahore
  *Current research**:** Investigation the role of rGO loading on iron manganese oxides (GFM) nanocomposite for sustainable photocatalytic and advance electrode design

- Bachelor of Science (Hons) in Chemistry (2019–2023)
  Government College University (GCU), Lahore

- F.Sc. Pre-Medical (2017–2019)
  Govt. Queen Mary Graduate College, Lahore

RESEARCH EXPERIENCE

- **MPhil Thesis (2023–Present)**
  - Synthesizing rGO/Fe_2O_3/MnO electrodes with varying dopant ratios (GFM-50, GFM-100, GFM-150)
  - Evaluating photocatalytic efficiency under UV and sunlight irradiation
  - Developing and analyzing membranes for energy/environmental applications

- **Bachelor's Research Project (2022–2023)**
  - Synthesized Fe_2O_3 and MnO nanocomposites doped with graphene oxide
  - Conducted photocatalytic studies
  - Characterized samples using SEM, EDX, FTIR, XRD, UV-Vis, PL, PSA, Zeta

PUBLICATIONS

- **Chapter Co-author**
  "Green Engineering of Iron and Iron Oxides Using Different Plant Extracts"
  In: *Iron and Iron Ores*, IntechOpen (2023)
  – Focus on eco-friendly synthesis of iron-based nanomaterials with applications in energy storage, environmental remediation, and biomedical fields.
- **Co-author (Submitted)**
  "Evaluation of Wound Healing Properties of CuO, CuO-mediated Chitosan, and CuO-mediated Polyethylene Glycol Formulation: A Therapeutic Approach"
  – Investigated the biomedical potential of CuO nanomaterials combined with biopolymers.
- **Co-author (Submitted)**
  "Harnessing Aloe Barbadensis Miller (Aloe Vera) Gel Extract for the Green Synthesis of ZnO and MnO Nanoparticles: A Phytochemical, Statistical, and Antibacterial Study"
  – Explored green synthesis and characterization of metal oxide nanoparticles using aloe vera extract.
- **Author (In Progress)**
  "One-Pot Hydrothermal Engineering of rGO-Doped Transition Metal Oxide Nanocomposites for Synergistic Photocatalytic and Adsorptive Performance"
  – Developing multifunctional nanocomposites for environmental remediation applications.
- **Author (In Progress)**
  "Facile Synthesis of Ternary rGO/Fe–Mn Oxide Nanocomposites with Varying GO Content for Photocatalytic and Adsorptive Elimination of Methylene Blue"

– Investigating GO-loading effects on ternary nanocomposite photocatalysis and dye removal efficiency.

- **Author (In Progress)**
  Effect of Graphene Oxide Content on the Electrochemical Behavior of Binary and Ternary rGO–Metal Oxide Nanocomposites for Energy Storage Applications"
  Developing advanced rGO–metal oxide nanocomposites is crucial for enhancing energy storage technologies, which are essential for meeting the growing demand for sustainable and efficient power solutions in modern electronics and renewable energy systems

CERTIFICATIONS & ACHIEVEMENTS

- Diploma in Computer Application, Punjab Board of Technical Education (Jan 2020)
- Communication Skills & Spoken English, Qasim Ali Shah Foundation (Dec 2021)
- Writing Skills & Habit Series Courses, Qasim Ali Shah Foundation (June & Dec 2022)
- 3rd Position, Interdepartmental Sports, GCU Lahore

REFERENCES

Dr. Shaista Ali
Assistant Professor, Department of Chemistry, GCU Lahore
✉ shaista.ali@gmail.com | ✆ +92 323 4536844

Dr. Muhammad Umer Shafique
Assistant Professor, Department of Chemistry, GCU Lahore
✉ umer.shafique@gcu.edu.pk | ✆ +92 311 2666656