

## Manzoor Hussain

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<b>Professional Highlights</b>	• <b>Lecture</b> Department of Chemistry, GC University Lahore	2021- Present
	• <b>Research/Teaching Assistant</b> Department of Chemistry, GC University Lahore.	2019 - 2021
	• <b>Lab Assistant</b> WASA Water Testing Lab (LDA), Lahore	2018 - 2019
	• <b>Teacher Biology, Chemistry and General Science</b> The Educators School 9A Temple Road Lahore	2017 - 2018
	• <b>Assistant Analyst</b> Global Environmental Lab Cavalry ground, Lahore	2017 – 2017
	• <b>Milk Tester</b> Milk Collection Centre Nestle, Pakistan	
	• <b>Supervised/Co-Supervised</b> Thesis research work of MPhil, M.Sc. and BS students.	
<b>Awards</b>	• Quiz winner at district level (Pakpattan) 2011 • PEEF scholarship award with 1500 USD	
<b>Academic</b>	• <b>M.Phil.</b> (Chemistry), <i>Government College University, Lahore.</i> <b>Thesis Titled:</b> “Novel Nano Catalytic Material for Energy Conversion and Storage.	
	• <b>M.Sc.</b> (Chemistry), <i>Government College University, Lahore.</i> <b>Thesis Titled:</b> <i>Extraction of Precious Metals from Electronics Waste.</i>	
	• <b>B.Sc.</b> (Chemistry, Botany and Zoology), <i>Bahauddin Zakariya University, Multan.</i>	
	• <b>F.Sc.</b> (Pre-medical), <i>Cambridge College for Boys Pakpattan,</i>	
	• BISE Sahiwal.	
	• <b>Matric</b> (Science), <i>Government High School Hotta Pakpattan,</i>	
	• BISE Multan.	
<b>Areas of Research Expertise</b>	• Industrial Process development • Extraction and Refining of Metals from Different Sources by Different Techniques • Electronic Waste (PCBs, End of life Batteries) Recycling • Bio Plastics from Agricultural Wastes • Synthesis and Purification of Metals Salts • NC Lacquers for Printing ink from Agricultural Waste	

**Details of  
Research  
Topics,  
Project and  
Process  
Developed**

- Recycling of Electronic Wastes
  - Sample Preparation for Analysis of Metals from Different Types of Materials for AAS And ICP-OES
1. Commercial Nickel Sulphate Synthesis from Waste Rany Nickel Catalyst.
  2. Nickel Metal by Pyro Metallurgy from Waste Catalyst.
  3. Electrolytic Refining of Impure Nickle.
  4. Antimony, Copper, Gold, lithium, Lead, Manganese and Silver from Ores.
  5. Copper, Gold, Palladium and Silver from Electronic Waste.
  6. Graphene Preparation from Li Ions Batteries.
  7. Recovery of Cu, Li, Ni, Mn and Co from Li Ions Batteries.
  8. Electrefining of Copper to High Purity.
  9. Palladium and Platinum from Waste Catalytic Converter.
  10. Development of Process for Synthesis and Purification of Zinc Sulphate of High Purity from Waste Foundry Scrub Dust (Zinc Ash).
  11. Process to remove Cd and Chlorides from Zinc Fly Ashes.
  12. Developing Process to Make High Purity Zinc Powder from Zinc Ash
  13. Synthesis of Iron Pigments of Different Shades from Waste Mill Scale.
  14. Process Development of DCP from Phosphate Rock.
  15. Preparation of Magnesium Sulphate from Magnesium Ores.
  16. Preparation of Precepted Silica from Husk Ash.
  17. Synthesis of Low Viscos NC Lacquer for Printing Ink.
  18. Development of Biodegradable plastics From Wheat Straw.
  19. Extraction of Hemicellulose and Cellulose from Wheat and Rice Straw.
  20. Synthesis of high purity MCC from Waste Cotton Linter and Extracted Cellulose.
  21. Starch Base Biodegradable Plastic.
  22. Extraction of Chitin and Chitosan from Fish Scale and There Use in Bio Plastics and Superabsorbent
  23. Supper Absorbent and Their Application in Alcohol Dehydration.
  24. Solubilised Sulphur for Fungicides.
  25. Colloidal Sulphur for Cosmetics and medical Purpose.
  26. Development of Process for Para-Toluene Sulfonic acid Synthesis.
  27. Recovery of Molybdenum and Cobalt from Waste Catalyst of Oil Refinery.
  28. Lignin Recovery from Agricultural Waste and Its Use in Vanilla Synthesis.
  29. Starch Doped Degradable Polyethylene Plastics
  30. Biodegrade Able Adhesive from Hemicellulose of Agricultural Waste.
  31. Oil Recovery from Waste Catalyst of Ghee Industry and Its Use in Biodiesel.

32. Piezo Materials Synthesis to Convert Vibrations to Electrical Energy
33. Purification of Tin from Tin oxide by Electrolytic Method.
34. Preparation of ethylene Ripener solution for bananas.
35. Study of Leaching of Styrofoam Disposable Container Material to Food in Collaboration with Punjab Food Authority.
36. Preparation of Chlorine Dioxide Spray as disinfectant during Corona.
37. Formulation of Nail Polish, Hand wash, Hand sanitizer, Shampoo etc.