

## **Nanochemistry Group**

### **Research Team:**

**Group Leader:** Dr. Ambreen Ashar

### **Members:**

Dr. Faiza Nazir

Dr. Noshin Afshan (IFPF fellow)

Dr. Sadia Noor (Visiting faculty)

Dr. Asma Tabassum (Visiting faculty)

### **Research Description**

Nanochemistry is the combination of chemistry and nano science. Nanochemistry is associated with synthesis of nanomaterials which are dependent on size, surface, shape and defect properties. This is a broad and highly interdisciplinary field of chemistry. Within the Department of Chemistry at GCWUF, the research interests of the group are focused on new nanomaterials and their multifaceted applications. We interact and collaborate with other research groups at the University. The focus of our research activities is the development and study of nanomaterials using various approaches and their applications in the medical textile, environmental remediation, wastewater treatment and many other fields. We mainly focus on the following aspects:

- Synthesis and modification of nanomaterials for biomedical and agricultural application.
- Synthesis of inorganic nanoparticles for environmental remediation processes.
- Treatment of industrial effluents using nanoparticles and advanced oxidation processes.
- To design DNA nanostructures and evaluate their applications. Design novel nanocomposites and their applications for the removal of wastes.