

**Dr. MOHAMMAD H. EL-DAKDOUKI**

**Beirut Arab University**

**Department of Chemistry**

**Beirut, Lebanon**

**Email: m.eldakdouki@bau.edu.lb**

**Phone: (+961) 70 985 415**

**Title: The Power of the Small: Bridging Gaps with Nanotechnology**

**Short Abstract**

Nanotechnology has revolutionized many sectors and impacted our lives in different ways by unlocking unprecedented capabilities that became possible when matter was produced at the nanoscale. This seminar will delve into how nanotechnology provided reliable and innovative solutions to challenges encountered in various facets of industry, medical sector and the environment. A synopsis summarizing 15 years of research outcomes in nanoscience will be presented. We will explore the role of nanotechnology in facilitating drug delivery, enhancing the sensitivity of clinical molecular imaging devices such as Magnetic Resonance Imaging (MRI), and presenting solutions to environmental remediation. We will touch down on the integration of the concepts green and sustainable chemistry in the synthesis of nanoparticles designed for various applications to preserve natural resources, reduce anthropogenic pollution, and ensure sustainability.