Special Issue

Biocompatible Functional Nanostructures for Nanomedicine, Environmental and Energy Applications

Message from the Guest Editor

The development of functional nanostructures is revolutionizing fields ranging from sustainable technologies to human health. Among these, nanomedicine stands out as one of the most promising, offering new solutions for targeted drug delivery, imaging, diagnostics, and theranostics. However, the synthesis of nanomaterials often involves toxic reagents, organic solvents, and energy-intensive processes, raising serious concerns about their safety, sustainability, and long-term biocompatibility. This Special Issue focuses on the green synthesis of organic, inorganic, and hybrid nanostructures, with particular emphasis on their application in nanomedicine. We welcome contributions that explore environmentally friendly and scalable methods for producing biocompatible, functional nanomaterials using plant extracts, biomolecules, microbial systems, low-energy techniques, and green solvents. In addition, we welcome articles addressing the roles of green-synthesized nanomaterials in environmental remediation and energy-related applications, especially those that highlight multifunctional or dual-purpose nanostructures.

Guest Editor

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Editor-in-Chief

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