

Special Issue

ZnO Nanostructures for Tissue Regeneration, Drug-Delivery and Theranostics Applications

Message from the Guest Editors

Zinc oxide nanostructures are capturing a great deal of interest thanks to their outstanding and multifunctional properties, and they have been successfully applied to a wide plethora of applications, ranging from energy harvesting systems and photocatalysis, to the biomedical field. In such particular case, ZnO nanostructures alone or combined into hybrid or composite systems represented a powerful tool for the fabrication of new scaffolds for tissue regeneration with improved antimicrobial properties, as well as for drug-delivery applications. Moreover, the promising optical and biocompatible properties of ZnO have been successfully combined together, resulting in the co-presence of imaging and therapeutic actions. This aims at designing novel nanosystems for theranostic applications in particular for cancer therapy. This Special Issue is dedicated to the most recent advances in the use of ZnO nanostructures for designing novel "smart" biomedical systems applied to tissue engineering, drug-delivery and theranostics. Participation with research papers and reviews is highly encouraged.

Guest Editors

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano–alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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