

Special Issue

Nano-Biomaterials for Biomedicine and Tissue Regeneration

Message from the Guest Editors

Nano-biomaterials - including nanoparticles, nanofibers, nanotubes, and self-assembling nanostructures - exhibit high surface area-to-volume ratios, tunable surface chemistry, and the ability to modulate biological responses at cellular and subcellular levels. This special issue focuses on recent advances in the fabrication, functionalization, and biomedical application of nano-biomaterials for tissue regeneration and therapeutic delivery. Topics include nanostructured scaffolds for guided tissue engineering, stimuli-responsive drug delivery platforms, bioinstructive surfaces for cell modulation, and nanostructured platforms for diagnostic and therapeutic integration. Particular attention is given to material-biology interactions, immune modulation, and the role of nanoscale architecture in directing cellular behavior, angiogenesis, and extracellular matrix remodeling. By consolidating contributions from materials science, regenerative medicine, nanomedicine, and bioengineering, this issue aims to advance nano-biomaterials as key enablers of next-generation regenerative and precision therapies.

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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