

## 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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### Guest Editors

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### Deadline for manuscript submissions

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## International Journal of Molecular Sciences

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