Special Issue

Advances in Nano-Based Materials for Biomedical Applications

Message from the Guest Editor

Nano-based materials are transforming the field of biomedicine by offering unique properties such as high surface area, tunable functionality, and excellent biocompatibility. These characteristics enable a wide range of applications, including drug delivery, diagnostics, tissue engineering, and cancer therapy. Recent advancements have focused on improving the functionality, stability, and bioactivity of nanomaterials—particularly nanoparticles—for targeted drug delivery, high-resolution bioimaging, and tissue regeneration.

The future of nano-based materials in biomedicine is highly promising, with growing opportunities in personalized medicine, stimuli-responsive (smart) nanomaterials, and bioactive scaffolds for regenerative medicine.

This Special Issue invites original research articles and comprehensive reviews focusing on innovative applications of nanomaterials in healthcare—covering novel nano-synthesis strategies, advanced drug delivery systems, bioimaging technologies, biosensing tools, and tissue engineering approaches that push the boundaries of next-generation nanomedicine.

Guest Editor

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Message from the Editor-in-Chief

The biomaterials field is one of the largest and fastest growing research areas both in the scientific community and in the industrial one. Biomaterials are the result of collaborations between different disciplines: chemistry, medicine, pharmacology, engineering and biology. The objective of this collaboration is to lead to the implementation of new devices to restore form and human body functions. The mission of the *Journal of Functional Biomaterials* (*JFB*) is to focus attention on physico-chemical characteristics and their importance in the interactions between biomaterials and living tissues. *JFB* seeks to publish studies on the preparation, performance and use of biomaterials in biomedical devices, as well as regarding their behavior in physiological environments. We are pleased to welcome you as our authors.

Editor-in-Chief

Prof. Dr. Pankaj Vadgama
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