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Biomaterials Tailoring at the Nanoscale for Tissue Engineering and Advanced Therapies

Guest Editors:

Prof. Dr. Gianluca Ciardelli

Department of Mechanical and
Aerospace Engineering,
Politecnico di Torino, 10129
Torino, Italy

Dr. Monica Boffito

Department of Mechanical and
Aerospace Engineering,
Politecnico di Torino, 10129
Torino, Italy

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Message from the Guest Editors

The control of matter at the nanoscale has demonstrated an enormous potential in the development of engineered devices in several applications such as energy, paintings and coatings, electronics, and textiles. In the medical field, the design of materials and structures with nanometric precision has demonstrated its enormous potential in controlling cellular processes such as adhesion, proliferation, and differentiation, while nanosized carriers have shown enhanced efficacy and precision in delivering therapeutic or diagnostic payloads to specific living environments.

After an exciting decade of research in the fascinating, supradisciplinary field of bionanotechnology, times are now mature for transferring the results of this research to a higher technology-readiness level and to evaluate their real potential to be translated from the bench to the bedside. On the other hand, further research is needed to understand the mechanisms (including topographical, mechanical, and (bio)chemical cues) underlying the interaction of living environments with nanostructured materials and surfaces.



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Editor-in-Chief

Prof. Dr. Shirley Chiang

Department of Physics, University
of California Davis, One Shields
Avenue, Davis, CA 95616-5270,
USA

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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Nanomaterials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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