

Special Issue

Applications of Electrospinning-Based 3D Architecture Nanomaterials

Message from the Guest Editor

Living tissues and organs are formed from different scales of fibrous structures such as intracellular microtubules, extracellular matrices around cells, and their aggregates. Tissue engineering aims to construct such ordered and hierarchical fibrous structures from cells. Among various materials, electrospun nanofibers are expected to be useful as cell scaffold materials because of the facileness of structure control and the availability of various materials. Previously flat fiber sheets have been cut and combined to produce three-dimensional structures, however, in recent, the electrospinning technology enabled to fabricate seamless 3D structures with hierarchically controlled nano- and micro-structures from nonwoven fabrics. The proposed Special Issue is inviting original articles in form of communications, full papers, and reviews demonstrating the progress in the research fields of 3D and hierarchical structure control technology by the electrospinning toward healthcare and medicinal application, including basic research on 3D electrospinning, nanofiber-based cell constructs, and biological responses on the geometrically-controlled nanofiber-based scaffold.

Guest Editor

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Deadline for manuscript submissions

closed (15 February 2024)



Nanomaterials

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed



mdpi.com/si/129808

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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