

Special Issue

Electrospun Nanomaterials: Applications in Food, Environmental Remediation, and Bioengineering

Message from the Guest Editors

The simplicity, cost effectiveness and scalability of electrospinning has made it a popular method used in fabricating nanofibers. It allows for the design of multiple structures which are highly amenable to molecular cargo loading. The versatility of electrospinning drives its diverse application including those addressed in the Special Issue, such as food, environmental remediation, and bioengineering. Continued research must address the complex issues of biocompatibility of the electrospun mats, their release dynamics and the biological activity of the subsequently delivered compounds. An important driver of these applications results from advances in materials science and new nanofiber manufacturing processes. In this respect, polymers have the advantage of comprising a large variety of biocompatible and biodegradable molecules with their tailored properties designed to meet the needs of the application of interest, in addition to corresponding health and biosecurity requirements. Examples of these applications have included bioactive scaffolds, wound healing dressings, biosensors, compound protective nanoreservoirs and sustained and controlled release systems.

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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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