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Functionalization of Electrospun Nanofibers in Bioengineering

Guest Editor:

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Deadline for manuscript submissions:
closed (10 October 2021)

Message from the Guest Editor

The functionalization of nanofiber surfaces to provide critical functions in bioengineering is currently a topic of great interest. Functionalization of nanofibers with a wide array of biomolecules including enzymes, antibodies, DNA, aptamers, etc., has been achieved via a wide variety of techniques including encapsulation, adsorption, and covalent bonding of the biomolecules to the nanofiber structures. The functionalized nanofiber membranes have enhanced performance of membranes in fields ranging from tissue engineering, sensing, drug delivery, sample purification, wastewater remediation, catalysis, and other processes.

The issue will include both fundamental and applied research topics including but not limited to:

- Nanofiber functionalization processes
- Functionalized nanofiber performance
- Bioengineering applications of nanofibers
- Devices incorporating biofunctional nanofibers
- Stability of biofunctionality on nanofiber membranes
- Reaction mechanisms and kinetics of nanofiber functionalization

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Editor-in-Chief

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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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