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Electrospinning for Nanofiber Membrane Fabrication: Challenges and Applications

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Message from the Guest Editors

Dear Colleagues,

Among the many techniques available for the production of nanofibers, electrospinning has rapidly emerged as a simple process that can produce smooth nonwoven nanofibers with highly porous structures. Compared with the traditional phase inversion membrane preparation technology, electrospinning can form interconnected pores of uniform size and porosity over 90%. The ability to combine scalable electrospinning processes with flexible surface treatments makes them suitable for water filtration membrane applications.

This Special Issue focuses on recent theoretical developments and the practical applications of electrospun nanofiber membranes. We invite contributions from major groups in the field with the aim of giving a view of the current state of the art in this discipline. Potential topics include, but are not limited to:

1. Structure design of electrospinning nanofiber membrane;

2. Functional finishing and advanced application of electrospinning nanofiber membrane;

3. Study on forming mechanism and theory of electrospinning nanofiber membrane;

Specialsue



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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, metalorganic 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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