# Special Issue

# Electrospun Nanofibers: Innovations in Energy Applications and Smart Devices

## Message from the Guest Editors

Electrospun nanofibers are ultrathin fibers with diameters in the nanometer range. Renowned for their high surface-area-to-volume ratios, tunable morphologies, and exceptional mechanical properties, they are used in diverse domains, including filtration membranes, catalytic supports, energy harvesting, conversion and storage, as well as photonic and electronic devices. Moreover, electrospun nanofibers are now utilized as stimuli-responsive, self-cleaning, and self-healing materials, adapting to environmental changes, repelling contaminants, and exhibiting the ability to recover from minor damage. This adaptability has increased their utility across various industries, making them invaluable for energy applications and the development of smart devices. This Special Issue aims to provide an exclusive platform for researchers to explore the multifaceted landscape of electrospun nanofibers and their wide-ranging applications. It welcomes contributions covering topics such as the strategic design and synthesis of electrospun nanofibers, their unique properties, and their utilization in energy applications and the development of cutting-edge smart devices.

## Guest Editors


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## Deadline for manuscript submissions

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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.

## Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
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