

Special Issue

Porous Nanofiber Composite Membranes: Preparation, Functionalization and Applications

Message from the Guest Editors

This issue aims to explore the latest advancements at the intersection of porous materials and nanofiber technology for membrane development. Composite membranes combining a high surface area and tunable porosity of nanofibers with the unique selectivity and functionality of various porous materials have shown immense potential. This Special Issue will focus on novel synthesis strategies, advanced functionalization techniques, and cutting-edge applications in critical areas, including water treatment, gas separation, energy storage, and biomedicine. A key objective is to address the interfacial engineering challenges between nanofibers and porous fillers, enhancing membrane performance and long-term stability. We also encourage submissions on scalable manufacturing methods and life-cycle analysis to bridge the gap between laboratory research and industrial implementation. We welcome the submission of original research articles and comprehensive reviews that address challenges and opportunities involved in designing, characterizing, and applying these sophisticated composite membrane systems.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

You are cordially invited to contribute a research article or a comprehensive review for consideration and publication in *Membranes* (ISSN 2077-0375). *Membranes* is an international, peer-reviewed open access journal of membrane technology published monthly online by MDPI. The journal covers the broad aspects of the science and technology of both biological and non-biological membranes, including membrane dynamics and the preparation and characterization of membranes and their applications in water, environment, energy, and food industries. Articles contributing to better understanding of transport processes in all types of membranes are also welcome. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Spas D. Kolev
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