

Special Issue

Advanced Fabrication Techniques and Applications for High-Performance Polymer Membranes

Message from the Guest Editors

Recent advances in membrane fabrication, such as electrospinning, new versions of phase inversion, layer-by-layer assembly, 3D printing, and interfacial polymerization, have enabled precise control over membrane morphology, pore structure, and surface functionality. Innovations in nanocomposite integration (e.g., graphene oxide, metal–organic frameworks) and biomimetic design further enhance selectivity, permeability, and mechanical robustness. Additionally, sustainable approaches that incorporate green solvents and recyclable polymers and align with circular economy principles are increasing being used. Polymer membranes are utilized in a variety of applications, including the following: Water treatment, Energy systems, Gas separation, and Biomedical engineering. This Special Issue welcomes contributions that address these themes, fostering collaboration among chemists, engineers, and environmental scientists to push the boundaries of polymer membrane science.

Guest Editors

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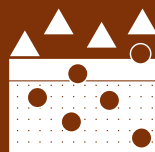
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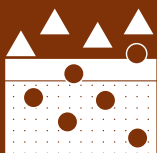


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Message from the Editor-in-Chief

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

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