

Special Issue

Synthesis and Mechanism Research of Polymer Membranes

Message from the Guest Editors

Polymer membranes play a central role in water purification, resource recovery, energy conversion, and environmental remediation. Despite rapid progress in membrane fabrication, challenges remain in precisely controlling membrane structure, understanding formation mechanisms, and translating laboratory advances into robust large-scale applications.

This Special Issue aims to highlight recent advances in the synthesis, structural regulation, and mechanisms-related research of polymer membranes with strong relevance to practical applications. We welcome contributions that explore novel fabrication strategies, interface chemistry, pore-structure engineering, functional polymer materials, covalent organic framework-based membranes. Studies addressing desalination, wastewater treatment, emerging contaminant removal, selective ion separation, and antifouling performance under realistic operating conditions are particularly encouraged.

Both original research articles and comprehensive review papers are invited.

Guest Editors

Dr. Xiaocui Wei

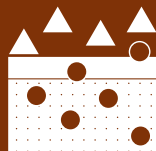
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About the Journal

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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