Special Issue

High-Performance Composite Membrane for Gas Separation and Capture

Message from the Guest Editors

This Special Issue aims to explore the latest innovations and advancements in the design, development, and application of composite membranes. The need for efficient gas separation technologies has become critical, particularly in sectors like carbon capture, hydrogen production, natural gas purification, and industrial gas processing. Composite membranes offer unique advantages due to their tailored structures, enabling enhanced selectivity, permeability, and stability, which are essential for meeting the rigorous requirements of gas separation processes. This issue seeks to highlight cutting-edge research that addresses both the theoretical understanding and practical applications of composite membranes, contributing to the advancement of sustainable and energy-efficient gas separation technologies. Original research articles and reviews are welcome. Research areas may include (but are not limited to) the following: novel composite membrane material, composite membrane fabrication methods, and their performance in gas separation processes such as carbon capture, hydrogen separation, industrial gas processing, and sustainable gas technologies.

Guest Editors

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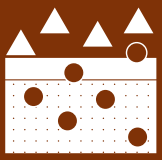

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Message from the Editor-in-Chief

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 accessjournal 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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