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Performance Improvement of Membranes with Additives, Composites, and Blends for Gas Separation

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Message from the Guest Editor

Dear Colleagues,

As membrane-based gas separations are energy-efficient, environmentally benign, and space-intensive processes, they are viably used in practical applications, including nitrogen enrichment, carbon capture, olefin/paraffin separation, natural gas sweetening, helium recovery, and more. Membrane share in the market has increased over the past few decades, competing with traditional operations such as adsorption and cryogenic distillation, which require significant energy for phase inversion. However, gas productivity (or permeability) and gas separation efficiency (or selectivity) of the membranes still need to be upgraded for better operation and industrial adoption. Gas separation performance of the membranes has been improved by incorporating different materials and there is a large room for further studies until now.

This Special Issue aims to set forth the new membranes with additives, composites, blends, or other mixed matrix approaches, and their improvements in gas separation performance.



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Special Issue



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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.

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