Special Issue

Composite Membranes for Gas and Vapor Separation

Message from the Guest Editors

Membranes play a crucial role in addressing critical environmental and industrial challenges, but composite membranes face several key challenges, including the complexity of fabricating defect-free thin layers, maintaining long-term membrane stability, and scaling up from laboratory to industrial applications. The aim of this Special Issue, titled “Composite Membranes for Gas and Vapor Separation”, is to collect recent advancements in the development and application of composite membranes for gas and vapor separations. Composite membranes incorporate selective thin layers atop a porous support membrane, enhanced mechanical properties, and improved scalability. Potential topics of interest include, but are not limited to, the following:

- Application of thin-film composite membranes for gas and vapor separation;
- Advanced polymeric, inorganic, and mixed matrix materials;
- Development of high-performance asymmetric and isoporous membranes;
- Thin-film nanocomposite membranes and interfacial engineering between polymers, gutter layers, and nanofillers;
- Characterization and modeling of gas transport properties in nanofilms.

Guest Editors

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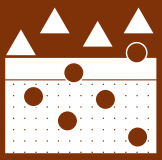

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Message from the Editor-in-Chief

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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