Special Issue

Thin-Film Composite Membranes for Gas and Vapor Separation

Message from the Guest Editors

Industrial thin-film composite (TFC) membranes with superior separation properties require a thin defect-free selective layer. However, the current literature predominantly focuses on the design of polymer architectures to obtain high permeability and selectivity, and there is a lack of studies focused on achieving TFC membranes with scalability and low-cost manufacturing. On the other hand, the structure and separation properties of polymers in the nanoscale need to be better understood. This Special Issue, titled “Thin-film Composite Membranes for Gas and Vapor Separation”, aims at collecting recent advancements in the development and application of TFC membranes for gas and vapor separations. Research articles, reviews, and communications on new polymer design, membrane fabrication, and membrane characterization are welcome. Given that mixed matrix materials constitute a promising avenue for achieving the dual objectives of high selectivity and permeance, original research studies on thin-film nanocomposite membranes and interfacial engineering between polymer, gutter layer, and nanofiller are also encouraged.

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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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