Special Issue

Advances in Modified Thin-Film Composite (TFC) Membranes: Innovations in Selective, Intermediate, and Support Structures

Message from the Guest Editors

This Special Issue will explore the innovative approaches for modifying the structural components of thin-film composite (TFC) membranes, with a focus on the support, intermediate, and selective layers. Recent studies have shown that engineering these layers with novel nanomaterials or suitable reagents can significantly improve the separation performance of TFC membranes by addressing the permeability–selectivity trade-off typically associated with polyamide-based systems. Such modifications can enhance permeation rates, selectivity, and long-term stability, thereby pushing the boundaries of current membrane technologies in desalination, water purification, and other separation processes.

By highlighting these advancements, this Special Issue aims to inspire further research and innovation in multi-layer TFC membrane design, ultimately contributing to the next generation of high-performance membranes for a wide range of critical applications.

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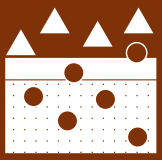

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Message from the Editor-in-Chief

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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