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Novel Nanomaterial Membranes for Efficient Separation

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Message from the Guest Editors

Traditional polymeric membranes suffer various challenges such as wide pore size distribution, long-term stability, mechanical strength, and operation in harsh environments, which deteriorate their separation performance. To address this issue, various novel nanomaterials, such as graphene-based nanomaterials, metal–organic frameworks, covalent–organic frameworks, and MXene, have been explored as membrane materials to enhance separation efficiency. This has opened up a new research area centered around next-generation membranes fabricated by nanomaterials for separation purposes.

This Special Issue focuses on recent advances in nanomaterial-based separation membranes. The Special Issue will accept original research articles and reviews on various subject areas, including (but are not limited to) (i) design and synthesis novel membrane nanomaterials; (ii) the characterization of novel membrane micro-structures; (iii) the fabrication and modification of nanomaterial-based membranes; (iv) the enhancement of membrane separation efficiency; and (v) mass transport and separation mechanisms of novel nanomaterial membranes.

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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.

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