Special Issue

Mixed-Matrix Membranes: Characterization and Applications

Message from the Guest Editors

Mixed-matrix membranes, characterized by the incorporation of fillers into polymeric matrices, have found extensive applications in the field of molecular transport and separation. In this Special Issue, we aim to broaden the concept, covering a diverse array of fillers, substrates, and the versatile utilization of both polymeric and inorganic raw materials. This includes solid and gel polymers, ion-conductive, and flexible electrolytes, as well as porous transport layers. Our primary focus in terms of material discovery revolves around the intricate consideration of micro- and nanostructures, as well as the architectural aspects of membranes. We are particularly keen on developing robust characterization methods for membrane materials across a spectrum of chemical, structural, physical, and mechanical properties, including factors such as flexibility, hardness, and modulus. Furthermore, our emphasis extends to a wide range of energy storage applications, such as batteries, especially solid-state batteries, CO2 capture, fuel cells, and separation. This Special Issue will provide an interdisciplinary approach to sustainable energy technologies using mixed-matrix membranes.

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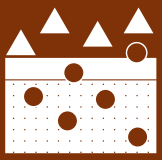

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Message from the Editor-in-Chief

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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