

Special Issue

Recent Advances in Porous Inorganic and Reticulate Matter Membranes for Sustainable Separation

Message from the Guest Editor

The pursuit of global carbon neutrality, water security, and green chemical processes has created unprecedented demand for advanced materials. Among these materials, porous inorganic membranes—such as those based on ceramics, zeolites, metal–organic frameworks (MOFs), and covalent organic frameworks (COFs)—have emerged as a pivotal technology. Their exceptional thermal and chemical stability, coupled with their precisely tunable pore structures, offers immense potential for use in energy-efficient separation processes. This Special Issue, "Recent Advances in Porous Inorganic and Reticulate Matter Membranes for Sustainable Separation", aims to showcase the latest breakthroughs and cutting-edge research in this dynamic field. We invite submissions of high-quality original research and review articles. The topics of interest include, but are not limited to:

- Advanced characterization techniques for determining membrane structure and transport properties
- Membrane applications in sustainable gas separation
- Membrane processes for water purification and resource recovery
- Pervaporation and other liquid-phase separation processes
- The theoretical and computational modeling of membrane performance

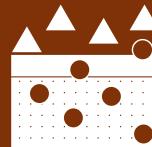
Guest Editor

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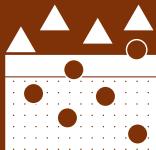
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About the Journal

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 access journal 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

Prof. Dr. Spas D. Kolev

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