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2D Materials based Membranes

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Message from the Guest Editors

The vast progress in the development of 2D materials did not leave research on membranes untouched. Due to their ultimate thinness, 2D materials are a highly promising candidate for new membrane technologies. Here, the family of 2D materials offers a broad range to fabricate membranes with the most diverse properties and possible applications. Graphene and graphene oxide membranes have a sharp cut-off for selectivity in the sub-nm range, making them promising candidates for water desalination. Membranes made of the transition metal dichalcogenide exhibit non-swelling behaviour and their catalytic activity can be harvested in manifold ways. The young group of 2D materials including zeolite, metal-organic framework, or MXenes are promising candidates for gas separation. Moreover, the 2D nature of all these materials can lead to new insights into molecular transports in highly confined environments, accelerating the progress in nanofluid research.

The Special Issue 2D Materials based Membranes calls for papers on membrane fabrication procedures, membranes characteristics, and their application in separation and purification.



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Special Issue



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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 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.

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