



New Advances in Membrane Technologies for CO₂ Separation

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Deadline for manuscript
submissions:

closed (31 May 2019)

Message from the Guest Editors

Dear Colleagues,

The recent SPIRE initiatives developed in the framework of H2020 calls to define CO₂ separation and reuse as one of the most important pillars to boost sustainability, making the chemical industry competitive, while at the same time contributing to climate change mitigation. CO₂ separation from flue gas coming out from a power plant or the cement industry, as well as CO₂ from biogas and natural gas are some of the fields where membrane gas separation finds application. Moreover, membrane reactors are recently competing as good candidates for CO₂ conversion for valuable fuels or chemicals.

To this purpose, membrane engineering, together with materials science, play a key role in the development of membrane technologies as CO₂ alternative processes become more compact and efficient, with a lower energy consumption, a reduced plant volume, and are well-fit to the Process Intensification Strategy.

This Special Issue aims at compiling relevant contributions showing the recent advances of membrane technologies in CO₂ separation and reuse. Modeling and experimental manuscripts, as well as reviews dealing with the most significant technologies, are particularly welcome.





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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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