



*gases*

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## Gas Separation Membranes for Energy and Environmental Applications

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### Message from the Guest Editor

Membrane-based gas separation processes have gained growing attention in several important industrial-relevant processes, such as carbon capture, hydrogen recovery, natural gas upgrading, hydrocarbon separation, and air purification due to high energy efficiency. In addition, membrane separation offers a smaller environmental footprint, continuous operation, and great simplicity compared with conventional separation techniques and therefore plays a key role in energy–environmental science and technology.

Despite the progress in this field over the last four decades, most of the available membranes suffer from mechanical instabilities and low separation performances and are not able to meet the required needs for practical applications.

Here, we invite authors to submit original as well as review articles that will contribute to advance the area of gas separation membranes. This includes but is not limited to new and emerging applications of gas membranes, membrane material synthesis, composite membranes, membrane fabrication and characterization, mass transport through membranes, membrane upscaling, gas membrane separation process, and membrane simulation and modeling.



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# Special Issue