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Proton-Exchange Membranes: Advances and Applications

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Message from the Guest Editor

Proton-exchange membrane (PEM), playing roles as both a proton conductor and an anode–cathode separator, is a crucial component determining the performance and durability of MEA for PEM fuel cells and other energy conversion technologies. Recent research has focused on facilitating advances in PEMs resulting in outstanding performance in a variety of energy conversion devices.

In addition to fuel cell applications, PEM, in recent years, has extended its clean energy applications to other electrochemical devices, such as PEM water electrolyzers for hydrogen production, vanadium redox flow batteries for energy storage, and CO₂ electrolyzers for the reduction of GHG emissions.

This Special Issue is focused on novel approaches for designing and developing advanced PEM materials for a wide range of renewable energy applications as well as a better understanding of the structure–property relationship of current PEM materials. It is my pleasure to invite you to submit a manuscript. Full papers, communications, and reviews covering these subjects are all welcome.



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