Special Issue

Polymer Ion Conducting Electrolytes for Energy Storage and Conversion Devices

Message from the Guest Editor

In recent decades, the development and continuous growth of the renewable energy production has pushed researchers to look for the optimum method to store and convert back energy to solve the problem of the intermittent energy generation and thus to guarantee the electrical grid stability. Among all the systems utilized, electrochemical energy storage and conversion (EESC) devices, such as batteries, fuel cells, capacitors, etc., are very promising. Their development and increasing performances are mandatory for an efficient management of energy. However, these devices have not yet reached complete maturity in terms of performance and cost reduction. Among all the components that are necessary for the operation of these devices, the ion-conducting electrolyte is fundamental. The so-called ionomer-based (i.e., polymers with grafted ionic groups) electrolytes, often in the form of a solid membrane, can conduct cations, anions, or both, and they have to satisfy a lot of different requirements, which are sometimes very challenging. Many ionomers are available today, and even more are the subjects of research. It is for this reason that we are pleased to invite you to this Issue.

Guest Editor

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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 accessjournal 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

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