



Advances in Polymer-Based Materials for Energy Applications

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Message from the Guest Editors

Over the past few decades, the demands for energy production and storage have drastically increased, driving the advances in the development of high-performance and eco-friendly energy devices such as lithium-ion batteries, supercapacitors, fuel cells, solar cells, etc. Polymers with various functionalities have been applied in the components within the aforementioned devices to improve the efficiency of energy storage and conversion. The design and fabrication of polymer-based materials are crucial to enhance the performance and the durability of the energy devices. Thus, the combinations of modeling and experimental characterizations provide more comprehensive insights into the designs and optimizations of novel polymeric materials.

The aim of this Special Issue is to demonstrate recent advances in the designs, fabrications, and characterizations of polymer-based materials for energy applications. The scope of interest includes but is not limited to solid/gel polymer electrolytes, binders, separators, ion-exchange membranes, conducting polymers, and polymer-based electrodes for energy conversion and storage devices.





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