Special Issue

Next-Generation Functional Polymers for Energy Harvesting and Storage

Message from the Guest Editors

Research on advanced functional polymer materials is gaining momentum, driven by the growing demand for sustainable energy solutions. Functional polymers are integral to both energy harvesting and storage technologies due to their tunable properties, lightweight nature, and environmental compatibility. Through advanced molecular design, innovative synthesis techniques, and the incorporation of functional groups or fillers, polymers can efficiently convert and store energy. This Special Issue will explore recent advances in polymer-based materials for batteries, supercapacitors, and energy harvesting devices such as piezoelectric and triboelectric nanogenerators. Additionally, it will address design strategies, classifications, emerging applications, and future challenges in developing next-generation polymeric materials for energy conversion and storage.

- functional polymer materials
- energy storage
- supercapacitors
- lithium-metal batteries
- piezoelectric nanogenerators
- triboelectric nanogenerators
- solid-state electrolytes
- separators
- polymer-based composites
- energy conversion

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Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Alexander Böker
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