

Special Issue

Polymer-Based Composite Materials for Sustainable Energy Systems and Storage Technologies

Message from the Guest Editors

Polymer-based composites play a vital role in advancing sustainable energy systems and storage technologies due to their lightweight nature, tunable properties, and excellent chemical stability. This Special Issue highlights recent advances in the design, synthesis, characterization, modeling, and application of polymer composites for energy conversion and storage. We welcome original research and reviews on polymer nanocomposites, conductive polymers, bio-based and recyclable materials, membranes, coatings, electrolytes, separators, dielectric materials, and hybrid composites for batteries, supercapacitors, fuel cells, hydrogen technologies, solar energy, thermal energy storage, and carbon capture. Particular emphasis is placed on materials that enhance energy efficiency, durability, safety, scalability, and sustainability. Contributions integrating experimental studies, computational modeling, life-cycle assessment, and structure–property relationships are especially encouraged to accelerate the development of high-performance polymer materials for next-generation energy technologies.

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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 5.8.

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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