

Special Issue

Advances in Functional Polymeric Nanocomposites

Message from the Guest Editor

This Special Issue, “Advances in Functional Polymeric Nanocomposites”, explores groundbreaking advances in functional polymeric nanocomposites and the importance of nanoscale fillers in polymer-based materials. The issue illustrates how tailoring polymer architectures and nanoparticle surface modifications yields multifunctional properties like superior mechanical strength, tunable electrical and magnetic responses, and thermal resilience. Advanced processing methods reveal how these parameters influence the microstructure and performance of nanocomposites, enabling the development of stimuli-responsive materials for a variety of cutting-edge applications. The articles in this issue also examine new fabrication methods and the structure–property links that underpin these materials' performance. The issue shows how polymer science, nanotechnology, and materials engineering are advancing flexible electronics, biomedical devices, energy storage and conversion, and environmental remediation technologies. This comprehensive analysis covers the current state of the art and future research directions to maximize the performance of next-generation functional polymeric nanocomposites.

Guest Editor

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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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