

Special Issue

Process–Structure–Properties Relationships in Polymers and Polymer Composites

Message from the Guest Editors

This Special Issue aims to provide a comprehensive exploration of the latest advancements in polymer materials and composites while charting a path for future innovations. The development of polymer materials is marked by an intricate relationship between the manufacturing processes, the resulting material structures, and their ultimate properties, necessitating a deeper understanding of each stage. This Special Issue intends to present cutting-edge research on topics including the design, synthesis, functionalization, and performance optimization of polymer composites. Significant focus is placed on understanding how various processing techniques—such as additive manufacturing, extrusion, and injection molding—influence the molecular and structural composition of polymers, thereby impacting their mechanical, thermal, and chemical properties. This Special Issue also explores emerging applications, like multifunctional composites for energy storage and biocompatible materials for medical applications, to inspire new avenues for innovation.

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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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