Special Issue

Polymer Fibers: Strength, Durability, Sustainability, and Innovation Across Industries

Message from the Guest Editor

Polymer fibers at the nano- and microscale are transforming multiple industries due to their high surface area, porosity, tunable mechanics, and compatibility with diverse materials. Advances in fabrication methods—such as electrospinning, hydrogel self-assembly, melt-extrusion, and textile-based techniques—now allow precise control over fiber morphology, composition, and function, unlocking new potential in materials science. This Special Issue. "Polymer Fibers: Strength, Durability, Sustainability, and Innovation Across Industries", focuses on recent progress in nano/microfiber design and engineering for targeted applications. We welcome work on fiber-based systems for biomedicine (drug delivery, biosensing, tissue engineering), as well as for energy, filtration, water treatment, and structural reinforcement. We emphasize scalable fabrication, post-processing for functionalization, and interdisciplinary approaches that unite polymer chemistry, nanotechnology, biomedicine, and engineering. This issue aims to showcase innovations that enhance the performance, sustainability, and real-world application of polymer fibers in next-generation 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 4.9.

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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