

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.

Guest Editor

Dr. Fatemeh Ajalloueiian
Department of Health Technology Drug Delivery and Sensing,
Danmarks Tekniske Universitet, Lyngby, Denmark

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*Polymer*s
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
polymers@mdpi.com

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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

Fraunhofer-Institut für Angewandte Polymerforschung, Lehrstuhl für Polymermaterialien und Polymertechnologie, Universität Potsdam, Geiselbergstraße 69, 14476 Potsdam-Golm, Germany

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