

Special Issue

Polymer Degradation and Aging: Mechanisms and Environmental Impacts

Message from the Guest Editors

The performance, durability, and environmental fate of polymeric materials are profoundly influenced by degradation and aging processes. This Special Issue aims to gather cutting-edge research and comprehensive reviews on the mechanisms, kinetics, and implications of polymer degradation under various environmental and engineered conditions. Topics of interest include thermal, photo-oxidative, mechanical, chemical, and biological aging of polymers; mechanisms of biodegradation and biofragmentation; and the formation of micro- and nanoplastics as degradation byproducts. Studies addressing degradation in water and wastewater systems, analytical and methodological advances for characterizing aged or weathered polymers, and the environmental and health impacts of degraded polymer particles are also welcome. By integrating insights from materials science, polymer chemistry, and environmental science, this Special Issue seeks to promote a holistic understanding of polymer aging and guide the development of more sustainable polymeric materials and mitigation strategies.

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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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