Special Issue

Recycling and Resource Utilization of Waste Polymers

Message from the Guest Editors

The increasing consumption of polymer-based materials has led to a surge in plastic waste, posing significant environmental and economic challenges. Effective recycling and resource utilization of waste polymers are critical for promoting sustainability and reducing dependence on virgin raw materials. This Special Issue aims to showcase the latest advancements in polymer recycling technologies, innovative material recovery strategies, and the development of value-added products from recycled polymers. We welcome original research and review articles covering mechanical, thermal, chemical, and biological recycling methods, upcycling approaches, polymer composite reprocessing, and the environmental impact assessment of recycling practices. Contributions focusing on novel catalysts, advanced separation techniques, and circular economy models for polymer waste management are also encouraged. This Special Issue seeks to provide a comprehensive platform for advancing waste polymer utilization and fostering sustainable material innovation by bringing together interdisciplinary research and industrial perspectives.

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Deadline for manuscript submissions

20 December 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/240460

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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