Special Issue

Sustainable Cost-Effective Lightweight Polymer Composites

Message from the Guest Editor

This Special Issue addresses the material development, design and manufacturing process of cost-effective sustainable polymer composites, with an emphasis on recyclable, cost-effective lightweight fibre-reinforced composites. The composites that will be discussed in this Special Issues are glass, basalt, aramid and carbon fibre-reinforced resin systems such as recyclable thermoset resin, thermoplastic resin and polyamide biomaterial. The main characteristics to be attained are high specific strength, stiffness and durability. The manufacturing process includes infusion, pultrusion, filament winding, tape layering, a resin transfer moulding process, automatic tape layering, thermal forming, and 3D printing for large structures. Industrial application areas include aerospace, the automotive industry, wind energy, hydrogen storage tanks, hydrogen pipelines, and renewable energy systems such as wind turbine blades, solar panels, and battery covers. This Special Issue aims to advance the adoption of composites that meet both performance and cost-effective sustainability requirements by highlighting innovations in material systems and their structural validation.

Guest Editor

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Deadline for manuscript submissions

closed (25 July 2025)

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/227678

Polymers
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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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