Special Issue

Advanced Thermosets: Tailoring Thermal and Mechanical Properties with Hybrid Polymers

Message from the Guest Editors

Thermosetting polymers are widely used in high-performance applications due to their superior mechanical strength, chemical resistance, and thermal stability. The integration of nanomaterials into thermosetting matrices has led to the development of hybrid thermoset nanocomposites, which exhibit improved mechanical and functional properties tailored to specific industrial needs.

One of the major challenges in designing hybrid thermoset nanocomposites is ensuring homogeneous dispersion and strong interfacial bonding between the polymer and nanofillers. Functionalization techniques, such as surface modification of nanoparticles or covalent bonding strategies, help optimize load transfer efficiency, further boosting mechanical performance. Applications of hybrid thermoset nanocomposites span across aerospace, automotive, electronics, and biomedical industries. As research advances, new hybridization strategies, sustainable filler alternatives, and recyclable thermoset composites are being explored. These innovations aim to overcome traditional limitations, making hybrid thermoset nanocomposites a key material class for next-generation engineering applications.

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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

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