Special Issue

Advances in Polyurethane Synthesis and Applications

Message from the Guest Editors

Polyurethanes are a specific class of polymer materials with versatile properties, including thermoplastic, elastomeric, or thermoset behaviors. Their exceptional performance requirements can be achieved by manipulating their chemical structure and composition. These materials have widespread applications in everyday life, such as foams, adhesives, coatings, and paints. The development of polyurethanes has evolved over the years, with traditional synthesis relying on toxic and petrochemical-derived isocyanates. Recent advancements, however, focus on more sustainable and eco-friendly synthetic methods, incorporating isocyanate-free, bio-based, and CO2-derived precursors. A key aspect of current research emphasizes circularity, renewable resources, and application-oriented properties to position polyurethanes as essential materials in addressing both global material and environmental challenges. Notable innovations in the circular economy include the development of polyurethane covalent adaptable networks and vitrimers, which enable the recycling and reuse of the material.

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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

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