Special Issue

Advanced Cross-Linked Polymer Network

Message from the Guest Editors

Cross-linked polymers play essential roles in advanced materials, enabling high mechanical stability, chemical resistance, thermal tolerance, and long-term durability across a wide range of engineering applications. These properties are fundamentally governed by the chemical architecture of polymer networks, including network topology, cross-linking mechanism, segmental mobility, and the nature of dynamic or permanent covalent bonds. This field is witnessing rapid advances in sustainable cross-linking strategies, bio-derived precursors, dynamic covalent adaptable networks (CANs), and reprocessable or recyclable thermoset systems. This Special Issue aims to bring together cutting-edge studies on the design, synthesis, characterization, and application of advanced cross-linked polymer networks. Topics may include conventional thermosets, vitrimers, dynamic bond-exchangeable systems, high-performance cross-linked composites, and sustainable polymer networks enabling circular material flows. Contributions addressing reaction mechanisms, catalyst design, structural control, modeling, processing technologies, and application-driven structure–property analysis are highly encouraged.

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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 4.9.

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

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