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Self-Healing Polymers and Vitrimers

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Deadline for manuscript submissions:
closed (30 April 2022)

Message from the Guest Editors

Dear Colleagues,

Recently, self-healing polymers and vitrimers have attracted considerable interest from investigators. Inspired by the fact that biological tissues can heal injury, preparing these synthetic materials with self-healing properties in order to maintain the mechanical strength and structural integrity of materials against injury and damage is of interest. Vitrimers are a class of crosslinked polymer networks that contain dynamic chemical bonds. Their reprocessing can be achieved via the exchange of dynamic bonds. At service temperature, vitrimers behave as conventional thermosets. Nonetheless, the exchanges of dynamic bonds can be triggered at elevated temperatures. As a consequence, the thermosets display weldability, thermoplasticity or malleability.

This Special Issue is concerned with the synthesis, characterization, structure, and properties of self-healing polymers and vitrimers. Hopefully, contributions focus on synthesis, mechanisms, physical and functional properties, and/or applications of the materials. These research articles can help to compile this Special Issue to reflect the current state-of-the-art advances in this area.

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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.

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