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Plastic Recycling and Biopolymer Synthesis for Industrial Application

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Message from the Guest Editors

Plastic waste is one of the major classes of solid waste raising significant concern worldwide. In 2017, 438 millions tonnes of plastic were produced worldwide, mainly used for plastic packaging, building and construction industry, textile industry and others. Most of the plastic waste ends in landfill or incineration at the end of its useful life, while many synthetic plastics take over 100 years to degrade in the natural environment. Therefore, plastic recycling to reduce the impact on the environment and to reduce the depletion of non-renewable resources is a crucial approach to achieve the Sustainable Development Goals set by the UN.

Alternatively, a growing number of investigations have been carried out to synthesize biopolymers to replace crude-oil-based plastic in industrial applications, such as poly-lactic acid (PLA), poly-β-hydroxybutyrate (PHB) and alginate extracted from seaweed. These biopolymers have increasingly been used in various industries, providing a sustainable solution to plastic pollution. In this Special Issue, original research articles and reviews related to plastic recycling and biopolymer synthesis are welcome.

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Message from the Editor-in-Chief

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