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Modification and Application of Starch-Based Polymers

Guest Editor:

Dr. Dagmara Bajer
Faculty of Chemistry, Nicolaus Copernicus University in Toruń, Gagarina 7, 87-100 Toruń, Poland

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Message from the Guest Editor

Due to its universality, environmental safety, biocompatibility, and application potential, starch is intensely important for the industry. However, its physicochemical properties, including the tendency to induce swelling and retrogradation, strong polarity, variable rheological properties, and structural differences characterizing various botanical types, make its processing difficult. The use of proper modification allows for starch industrialization. The derivatives obtained by variable synthesis (chemical or physical) methods give starch-based materials unique, programmable, processing, and utility properties. The design of biomaterials for specific applications in the food and packaging industry, as well as in medicine and cosmetics, attracts particular attention. Controlled biodegradability, improved mechanical strength and water resistance, as well as more specific properties for definite applications (gas barrier and antioxidant properties, biocompatibility, and bioactivity), are of particular interest.

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Prof. Dr. Alexander Böker
Lehrstuhl für Polymermaterialien und Polymertechnologie, University of Potsdam, 14476 Potsdam-Golm, Germany

Message from the Editor-in-Chief

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Contact Us

Polymers Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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