Special Issue

Bio-Based Polymers from Proteins and Polysaccharides: Challenges and Opportunities

Message from the Guest Editors

Building on the success of our previous two Special Issues, we are pleased to announce the third in our series focused on bio-based polymer synthesis. The global dependence on fossil-fuel-derived polymers underscores an urgent need for sustainable, biodegradable alternatives that are both eco-friendly and industrially feasible. While earlier issues have explored polymer extraction from biomass and the synthesis of bio-based monomers, key research challenges remain in enhancing their scalability, material performance, and functional tunability. This edition aims to address these gaps by focusing on recent advances in the development of biopolymers—particularly those derived from natural macromolecules such as proteins, polysaccharides, and lipids. We welcome submissions of original research and critical reviews on topics ranging from green synthesis methods and polymerization strategies to structure–function relationships, degradation behavior, and practical applications in edible food coatings, biodegradable agricultural films, and drug-delivery carriers.

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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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