

Special Issue

Seaweed Polysaccharides: Innovations in Isolation, Characterization, Chemical Modification and Processing

Message from the Guest Editor

Seaweed biomass has been used for centuries, primarily in the food sector. These seaweed polysaccharides (SWPSs) are uniquely different from plant-based polysaccharides like cellulose and starch. They are highly diverse in both their molecular structure and range of applications, spanning from compounds with high pharmaceutical activities and nutritional value to the preparation of innovative biomaterials and bioplastics.

This Special Issue is dedicated to innovations in the area of SWPSs, with a special focus on the following aspects: (i) new methods for the extraction of SWPSs from algae biomass, (ii) advanced fractionation and characterization of SWPSs as well as structure–property–relationship studies, (iii) chemical modification of SWPSs into functional derivatives, (iv) conversion of SWPS biomass into low-molecular-weight building block chemicals, (v) fabrication of SWPS-based biomaterials, and (vi) application studies focused on SWPSs and SWPS-based derivatives and materials. Researchers are invited to submit original work and review articles that illustrate recent advances in SWPS research.

Guest Editor

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Deadline for manuscript submissions

closed (30 November 2025)



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About the Journal

Message from the Editor-in-Chief

Polysaccharides and their derivatives are ubiquitous biopolymers, and therefore, in recent years, their potential use has increasingly been explored. *Polysaccharides* are still the biggest class of biopolymers used in classical industries such as the paper and textile industries. The progress and fundamental aspects of the new synthesis pathways and derivatization routes, characterization, properties, as well as processing of polysaccharides are important for their possible application in modern sustainable functional materials and future green technologies. *Polysaccharides* is a new open access journal that will provide the rapid publication of scholarly articles on studies related to polysaccharides. Its mission is to publish cutting-edge articles, encouraging the application of a sustainability-based approach to many complex, interesting phenomena and breaking boundaries among different disciplines.

Editor-in-Chief

Prof. Dr. Karin Stana Kleinschek
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manuscripts are peer-reviewed and a first decision is provided to authors approximately 25.4 days after submission; acceptance to publication is undertaken in 4.5 days (median values for papers published in this journal in the second half of 2025).

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (Engineering (miscellaneous))