Special Issue

New Insights into Polysaccharide-Based Scaffolds: Design, Production and Applications

Message from the Guest Editor

Natural and synthetic polysaccharides represent intriguing candidates as scaffolding materials for biomedical and technological applications, ranging from tissue engineering, drug delivery, and biosensing to energy storage. Polysaccharide macromolecules consist of monosaccharide units connected by glycosidic bonds with functional groups on the polymeric backbone, enabling structural modifications. This feature, together with their biodegradability, biocompatibility, and non-toxicity aspects, encourages the investigation of these biopolymers. This Special Issue aims to highlight the recent advances in the area of scaffolds, with a particular interest in the design, production characterization and performance evaluation of those containing native or suitably functionalized polysaccharides for tissue engineering and biomedical applications. Depending on the design, topics include (but are not limited to) hydrogels and porous, fibrous, and composite scaffolds. Fabrication method topics may pertain to solvent casting, phase separation, electrospinning, freeze-drying, 3D printing, etc.

Guest Editor

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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

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