



Bacterial Exopolysaccharides: Production, Characterization and Formulation of Innovative Materials for High-Value Applications

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Message from the Guest Editors

The research of naturally produced polymers is currently an attractive topic. Bacteria are the main cell factories for producing exopolysaccharides as a principal component of the biofilm matrix. The production of bacterial exopolysaccharides is based on the ability of bacteria in the conversion of a wide range of carbon sources in a large variety of biopolymers, such as cellulose, alginate, hyaluronate, levan and dextran. Exopolysaccharides produced by bacteria are receiving more attention thanks to their unique properties, such as high purity and biocompatibility, making them suitable for a wide range of applications in many fields. The development of bacterial exopolysaccharides and their in situ/ex situ modification strategies, including synthetic biology, are continuously evolving, allowing the formulation of new tailor-made bio-based materials for high-value products.

In this context, the aim of this Special Issue is to explore new advances and challenges in bacterial exopolysaccharide-based materials, focusing on the topics of Bacterial exopolysaccharides production, Formulation of new bio-based materials, Characterization towards specific application niche.





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