

Special Issue

Polysaccharides in High-Performance Nanostructured Materials

Message from the Guest Editors

Polysaccharides are widely available polymers from agricultural and marine sources. Nano-structured versions of fibrous polysaccharides such as cellulose and chitin are currently being produced by interesting new methodologies, making it possible to exploit interesting high performances correlated to their nano-dimensions, also considering suitable modification technologies or the combination of these nano-fibers with other nanostructured materials such as nano-lignin, inorganic nanomaterials, or specific functional molecules. The preparation and testing of such nano-structured materials is a current frontier in research. Polysaccharides are also used in biobased materials and nanocomposites with enhanced performances thanks to the improved interfacial areas and functional properties. This Special Issue aims to gather research and review papers to increase the knowledge and use of polysaccharides and their derived compounds in nano-structured materials, finding new ways to produce innovative, sustainable, and smart products for use in several applications.

Guest Editors

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano–alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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