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Cellulose Nanocrystals/Nanofibers: From Synthesis to Emerging Applications

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Message from the Guest Editors

Dear Colleagues,

In recent decades, natural polymers have become increasingly important for both the scientific and industrial sectors. Cellulose is the most abundant biopolymer produced on Earth, possessing numerous advanced applications due to its renewable nature, unique properties, and wide availability. The present Special Issue intends to provide detailed insights into the advancements and various challenges in the field of cellulose nanocrystals (CNCs) and cellulose nanofibers (CNFs). Emphasis is placed on cellulose fiber extraction sources and their methods, purification processes, and sample preparation and drying techniques used for CNC and CNF.

In this Special Issue, we invite the submission of original manuscripts devoted to recent overviews of current research that are being conducted into the synthesis and functional properties of cellulose as a nanomaterial. Topics to be covered include (but are not limited to):

- Healthcare
- Water purification
- Biocomposites
- Energy
- Fiber extraction sources



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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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