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Food Packaging Bionanocomposites

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Message from the Guest Editors

Recent developments in nanoscience and nanotechnology are impacting the food industry more and more.

This Special Issue is devoted to the development of bio-based nanocomposites to be used in food packaging applications. The term “bionanocomposite” refers to nanocomposites including a naturally occurring polymer (biopolymer) mixed with inorganic solids and exhibiting at least one dimension on the nanometer scale. Such hybrid materials are designed to be invaluable for their environmental sustainability and for the multifunctional properties they can exhibit, such as biodegradability, antimicrobial activity, mechanical and thermal characteristics, and high barrier properties against the diffusion of oxygen, carbon dioxide, flavor compounds, and water vapor. For this Special Issue, we invite contributions on innovative preparation and processing technologies to obtain bio-based polymer nanocomposites with enhanced food packaging performance, as well as different characterization approaches and application cases.

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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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