

Special Issue

Nanomaterials to Enhance Food Quality, Safety, and Health Impact

Message from the Guest Editors

Food quality, safety, and fortification are key aspects to guarantee that foods reach consumers in optimal conditions, from the point of view of freshness, microbiology, and health promotion. Nanotechnology offers significant potential to secure or even enhance these aspects. Nanomaterials can also support food quality and safety by being added directly into a food matrix or into food contact materials. Thus, nanomaterials can be leveraged in the form of nanocomposites into food packaging design via melt compounding, lamination or electrohydrodynamic processing to promote roles such as barrier, antimicrobial, antioxidant, oxygen scavenging, and controlled release of bioactives. These attributes can be exerted either by intended or non-intended migration of the nanomaterials or the active substances they may carry. Lastly, nanomaterials can also be advantageously applied to provide unique opportunities in circular bioeconomy strategies in relation to the valorization of, for instance, bio-based materials, agro-based by-products, and biowaste. This Special Issue targets fundamental and oriented efforts made by researchers and technologist to address all the topics mentioned above.

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.

Editor-in-Chief

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