Special Issue

Towards a Safe Nanotechnology: Understanding and Controlling Immunomodulatory and Toxicological Properties of Nanomaterials

Message from the Guest Editor

Human and environmental exposure to nanomaterials has become an unavoidable reality. The expansion of nanotechnology has brought products of daily application to the market which use nanoparticles as functional or supporting materials. Understanding the interactions of nanomaterials with biological systems is crucial to anticipate biological risks and to establish criteria for designing as-safe-as-possible nanomaterials. As often in science, improved knowledge around nano-safety has opened new questions arising from still unresolved uncertainties: the physicochemical heterogeneity of nanoparticles does not allow to generalize conclusions and the details of the interaction of nanomaterials with cells and organisms are largely unknown. As of today, these uncertainties still prevent the adoption of effective regulatory and protective rules. This Special Issue aims to collate articles focusing on new findings in nanotoxicology, methods for understanding the interaction of nanoparticles with biological systems, statistical methods to estimate risks, and strategies for mitigating risks of hazardous nanoparticles. We look forward to receiving your contributions.

Guest Editor

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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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