Special Issue

Interplay between Nanomaterials and Plants

Message from the Guest Editors

This Special Issue aims to summarize the recent topical results in the plant– nanomaterial interaction, with a particular focus on the dynamics and mechanism of nanoparticles in plants, the application of nanomaterials in plants for benefits, the biological effect and impact on plants, and innovative approaches and tools for plant detection. Research areas may include (but are not limited to) the following: Nano-delivery of pesticides, fertilizers, nuclear acids, and biomolecules in plants; Applications of nanomaterials for plant stress tolerance, yield elevation, growth regulation, insect resistance, etc. Mechanisms of uptake, transport, fate, and transformation of nanoparticles in plants; Implications of nanomaterials taken up by plants; Bioaccumulation, biomagnification, biotransformation behavior, and toxicity of nanomaterials in plants and the environment; Innovative approaches and tools for plant–nanomaterial interaction detection. For more details, please see the following link: https://www.mdpi.com/si/211076

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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