Special Issue

Development and Evaluation of Nanomaterials for Agriculture

Message from the Guest Editors

Nanomaterials are increasingly utilized in agriculture due to their distinctive physical and chemical properties, which confer significant advantages over traditional agricultural practices. Nanofertilizers, for instance, offer a revolutionary approach to nutrient management by minimizing nutrient loss and enhancing nutrient uptake efficiency. In addition, nanobiochar and related nanomaterials are employed to ameliorate problematic soils and remediate contaminated soils, contributing to the restoration and enhancement of soil health. However, the deployment of nanomaterials in agriculture necessitates careful consideration of potential risks. The absorption of these materials by plants could potentially alter cellular structures, disrupt metabolic pathways, and interfere with gene expression. Furthermore, there is a risk that nanomaterials could enter the human food chain, raising concerns about potential health implications. We invite researchers from diverse geographical regions to contribute original research and comprehensive review articles that address local agricultural challenges and propose viable solutions.

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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