Special Issue

Nanotechnology in Crop Physiology and Sustainable Agriculture

Message from the Guest Editors

Nanotechnology in agriculture is gaining importance as it offers innovative solutions to traditional farming practices. Advances in this field have significantly enhanced the production of essential elements for plants, which can improve fertilizer composition, increase efficiency, and reduce nutrient losses. Due to their large surface area, high sorption capacity, and controlled release capabilities, nanoparticles can be used as "smart nutrient delivery systems" and products for plant protection and resistance enhancement. Nanotechnology's potential toxic dose-dependent effects on plants and the environment are also necessary because they help identify optimal limits and assess safety. As global food demand continues to rise, nanotechnology can play a significant role in different stages of food production. Its application aims to create food systems that are fair, healthy, and environmentally sustainable. This Special Issue of "Plants" will focus on the impact of nanostructures on plant physiology, biochemistry, and productivity, aiming to promote more sustainable agricultural solutions.

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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