

Special Issue

Metals, Metalloids, Metal-Based Nanoparticles – Effects, Responses and Novel Technologies

Message from the Guest Editors

Heavy metals, metalloids, and metal nanoparticles have been recognized as an important threat for the soil, water, sediments, as well as for terrestrial and aquatic biota. These contaminants can be extremely toxic for plants and algae by negatively affecting their growth and development as well as their biochemical and antioxidative status. They can interfere with electron transport chains and/or facilitate reactive oxygen species production, resulting in nucleic acid damage, lipid peroxidation, protein oxidation, and disruption of cell membranes. Generally, plants and algae have evolved different strategies to overcome the harmful effects of these pollutants. This Special Issue will focus on biochemical and molecular strategies of plants and algae for coping with excess metals, metalloids, and metal nanoparticles in soil and water, different molecular approaches to enhance their response to metal stress, and the potential of plants and algae in phytoremediation as well as the application of novel technologies for the synthesis of various metal-based nanoparticles.

Guest Editors

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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.

Editor-in-Chief

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