Special Issue

Plant Uptake of Heavy Metals in Soil

Message from the Guest Editors

Heavy metal contamination in soils poses a significant threat to global food security, environmental quality, and human health. Conventional remediation techniques are costly, energy-intensive, and disruptive. In contrast, plant-based remediation strategies offer eco-friendly solutions. Plants can absorb, translocate, and sequester heavy metals through uptake and detoxification pathways, while microorganisms in the rhizosphere contribute to metal immobilization or transformation. This Special Issue aims to bring together cutting-edge research on the interactions between plants and soil microbiota in the context of heavy metal remediation. Topics of interest include, but are not limited to, the following:

- Mechanisms of plant uptake, transport, and sequestration of heavy metals.
- Microbial transformation or stabilization of heavy metals in contaminated soils.
- Rhizosphere processes facilitating plant–microbe synergism in heavy metal remediation.
- Multi-omics and advanced imaging approaches for elucidating plant–microbe–metal interactions.
- Field applications, novel microbial inoculants, and plant–microbe consortia for sustainable restoration of co-contaminated soils.

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Message from the Editor-in-Chief

Toxics (ISSN 2305-6304) is an international, peer-reviewed, open access journal which provides an advanced forum for studies related to all aspects of toxic chemicals and materials. We aim to publish high quality work that furthers our understanding of the exposure, effects, and risks of chemicals and materials in humans and the natural environment as well as approaches to assess and/or manage the toxicological and ecotoxicological risks of chemicals and materials. Please consider publishing in *Toxics* when preparing your next paper.

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