



Exploring Recent Biotechnological Advances for Improved Phytoremediation of Soil Contaminants

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Message from the Guest Editors

Dear Colleagues,

Phytoremediation is an eco-friendly, sustainable, cost-effective management strategy for environmental clean-up. However, it has the disadvantage that plants may be affected by the toxicity of the contaminants when concentrations exceed the threshold level. To overcome these shortcomings, current advances in various biological sciences such as metabolomics, transcriptomics, proteomics, etc., can aid in the characterization of metabolites, transcription factors, and stress-inducible proteins involved in heavy metal tolerance, which in turn can be used for developing heavy metal-tolerant crops. Other approaches include the utilization of beneficial microorganisms, biocompatible growth stimulants, and chelating agents to intensify and accelerate the phytoremediation rate.

Therefore, this Special Issue aims to understand how these recent scientific advancements can increase plant tolerance and modify the nature of the contaminants in the rhizosphere to favor enhanced extraction and transport in the roots and facilitate their translocation towards the aerial parts of the plant.





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Message from the Editor-in-Chief

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