

Special Issue

Molecular Mechanisms of Mineral Nutrition and Tolerance to Salt and Drought in Plants

Message from the Guest Editor

This Special Issue “Molecular Mechanisms of Mineral Nutrition and Tolerance to Salt and Drought in Plants” invites cutting-edge research and insightful reviews on the molecular basis of plant mineral nutrition and its integration with salt and/or drought tolerance, two especially relevant stress factors in the current climatic context that frequently occur simultaneously. We seek contributions elucidating the regulatory networks and transporter systems governing uptake, allocation, and homeostasis of macro and micronutrients under saline or dry environmental conditions. Topics of interest include ion transporters, signaling cascades, transcriptional and post-translational regulation, reactive oxygen species and hormone crosstalk, omics-driven discoveries, and the roles of root architecture and microbial interactions in enhancing nutrient use efficiency and stress resilience under osmotic or ionic constraints. By highlighting mechanistic insights and biotechnological advances, this issue aims to foster strategies for crop improvement in the face of escalating soil salinization and water scarcity challenges.

Guest Editor

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