

## Special Issue

# Advances in Plant Nutrition Using Nanoparticles for Iron and Micronutrient Management

### Message from the Guest Editors

Over the last decade, extensive research has shown that nanoparticles can be both toxic and beneficial for plants, particularly in addressing micronutrient deficiencies. Nanoparticles containing elements like iron, zinc, and manganese vary in size, shape, structure, and chemical nature (e.g., zerovalent or oxide forms), and can be composites or coated. While chemical manufacturing methods exist, plant-based green synthesis is gaining popularity. These nanoparticles are used in seed coatings, soil additives, nutrient solutions, and foliar sprays. Their toxic effects, which depend on concentration, can trigger oxidative stress in plant cells. However, they are often effective in supplying micronutrients, alleviating deficiencies, and promoting plant growth under both stressed and non-stressed conditions. Despite a vast body of research, questions remain regarding their uptake mechanisms, longevity, long-term effects, fate in natural agricultural environments, and specific applications. This Special Issue aims to gather recent research on the control of micronutrients in plants.

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### Deadline for manuscript submissions

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## Plants

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### Message from the Editor-in-Chief

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### Editor-in-Chief

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