

## Special Issue

# Silicon and Its Physiological Role in Plant Growth and Development

### Message from the Guest Editor

We are pleased to invite you to contribute to a Special Issue of *Plants* entitled 'Silicon and its Physiological Role in Plant Growth and Development'. This Special Issue seeks to delve into the physiological and metabolic mechanisms underlying silicon's (Si) influence on plant growth, development, and resilience. We encourage submissions addressing, but not limited to, the following topics: Physiological effects of silicon on plant growth and nutrient uptake;

Silicon-driven metabolic pathways, including antioxidant activity and secondary metabolite production; Silicon's role in enhancing photosynthetic efficiency and energy utilization;

Molecular signaling and transcriptional changes associated with silicon;

Interactions between silicon and other nutrients at the physiological level;

Innovations in methodologies to study silicon's role in plant physiology.

This Special Issue welcomes original research articles and comprehensive reviews and perspectives that focus on uncovering silicon's physiological functions and metabolic impacts. We aim to foster a deeper understanding of Si's role in plant development and its application in sustainable agriculture.

### Guest Editor

Dr. Jonas Pereira de Souza Junior

Citrus Research and Education Center, University of Florida, Lake Alfred, FL 33850, USA

### Deadline for manuscript submissions

30 November 2025



## Plants

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## About the Journal

### 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.

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### Editor-in-Chief

Prof. Dr. Dilantha Fernando  
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JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)