



*plants*



*Special Issue Reprint*

## Water and Ion Transport in Plants

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This book was established after closing the special issue “Water and Ion Transport in Plants: New and Older Trends Meet Together” edited by Dr. Vadim Volkov, Professor Lars Wegner and Dr Mary Beilby as Guest Editors and Mr. Everett Zhu as Manager Editor.

This book represents a small collection of bright papers related to water and ion transport in plants; these exceptionally wide topic cannot be covered within a single Book, so the aim was to recall the main concepts established for water and ion transport, to introduce new ideas, including controversial ones, and to link these ideas for generating directions of potential future research and progress. The goal was reached pointing to the main traditionally studied ion transport systems: ion channels, ion transporters, sodium and proton ATPases and macroscopic effects of their activity. Water transport in roots was shown in full complexity with its links to ion transport systems and aquaporins. Nonconventional use of silicon particles as addition to fertilizers is a subject of a paper within the collection. We hope that the Book will be a good reading with excellent examples of modern research; we are also assured that the Book will stimulate the future interest in water and ion transport in plants.



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