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Special Issue Reprint

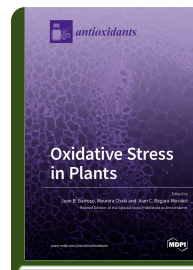
Oxidative Stress in Plants

www.mdpi.com/books/reprint/2854

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ISBN 978-3-03943-006-2 (Hardback)

ISBN 978-3-03943-007-9 (PDF)



Plants are continuously exposed to different environmental stress conditions that have a huge impact on agriculture worldwide, consequently leading to massive economic losses. These adverse conditions alter the metabolism of reactive oxygen and nitrogen species (ROS and RNS). High concentrations of these reactive species—that exceed the capacity of antioxidant defense enzymes—disturb redox homeostasis, which can trigger damage to such macromolecules as membrane lipids, proteins, and nucleic acids, ultimately resulting in nitro-oxidative stress and plant cell death. Significant progress has been made to understand how plants persist in these stressful environments which could be vital to improving plant crop yield. This Special Issue “Oxidative Stress in Plants” includes both original research articles and detailed reviews that aim to better understand the nitro-oxidative stress networks in higher plants, and the addressed topics provide updated and new knowledge about ROS and RNS metabolism in plant responses to abiotic stress as well as the modulation of antioxidant systems in the control of ROS production and accumulation.



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