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Titolo	Nitric Oxide Action in Abiotic Stress Responses in Plants // edited by M. Nasir Khan, Mohammad Mobin, Firoz Mohammad, Francisco J. Corpas
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Descrizione fisica	1 online resource (252 p.)
Disciplina	570 571.2 571.9453 572572 630
Soggetti	Plant physiology Botanical chemistry Oxidative stress Agriculture Plant Physiology Plant Biochemistry Oxidative Stress
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Reactive Nitrogen Species and Nitric Oxide -- Functional Role of Nitric Oxide under Abiotic Stress Conditions -- Nitric Oxide and Abiotic Stress Induced Oxidative Stress -- Regulatory Role of Nitric Oxide in Alterations of Morphological Features of Plants under Abiotic Stress -- Nitric Oxide and High Temperature Stress: A Physiological Perspective -- Nitric Oxide in Drought Stress Signaling and Tolerance in Plants -- Nitric Oxide and Plant Hemoglobins Improve the Tolerance of Plants to Hypoxia -- Nitric Oxide as a Mediator of Cold Stress Response: a Transcriptional Point of View -- Nitric Oxide and UV-B Radiation -- Nitric Oxide Impact on Plant Adaptation to Transition Metal Stress -- Nitric Oxide Action in the Improvement of Plant Tolerance to Nutritional

Stress -- Role of Nitric Oxide in Heavy Metal Stress -- Role of Nitric Oxide in Salt Stress-induced Programmed Cell Death and Defense Mechanisms -- Nitric Oxide and Postharvest Stress of Fruits, Vegetables and Ornamentals -- Insights into the Participation of Nitric Oxide and Extra Cellular ATP in Wounding.

Sommario/riassunto

This book offers an up-to-date review of the regulatory role of nitric oxide (NO) changes in the morphological, physio-biochemical as well as molecular characteristics of plants under abiotic stress. The first of two parts comprises four chapters and focuses on the properties, chemical reactions involving NO and reactive nitrogen species in plants. The second part, consisting of eleven chapters, describes the current understanding of the role of NO in the regulation of gene expression, NO signaling pathways, and its role in the up-regulation of the endogenous defense system and programmed cell death. Furthermore, its interactions with other signaling molecules and plant hemoglobins under environmental and soil related abiotic stresses, including post-harvest stress in fruits, vegetables and ornamentals, and wounding are discussed in detail. Together with the companion book Nitric Oxide in Plants: Metabolism and Role in Stress Physiology, this volume provides a concise overview of the field and offers a valuable reference work for teachers and researchers in the fields of plant physiology, biochemistry and agronomy.
