1. Record Nr. UNINA9910337951903321

Titolo	Nitric Oxide and Hydrogen Peroxide Signaling in Higher Plants / / edited by Dharmendra K. Gupta, José M. Palma, Francisco J. Corpas
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-11129-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (275 pages)
Disciplina	571.742 581.0724
Soggetti	Plant physiology Botanical chemistry Plants - Development Plant diseases Cytology Stress (Physiology) Plant Physiology Plant Biochemistry Plant Development Plant Pathology Cellular Stress
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Hydrogen peroxide and nitric oxide generation in plant cells: Overview and queries -- Chapter 2.Nitric oxide and hydrogen peroxide signalling network -- Chapter 3.H2O2 and NO derived posttranslational modifications -- Chapter 4.Transcriptional regulation of gene expression related to NO and H2O2.-Chapter 5.Metabolism and interplay of reactive oxygen and nitrogen species in plant mitochondria -- Chapter 6.Hydrogen peroxide and nitric oxide metabolism in chloroplasts -- Chapter 7.Participation of nitric oxide and hydrogen peroxide in regulation of seed germination -- Chapter 8. Nitric oxide and hydrogen peroxide in root organogenesis -- Chapter

	9.Nitric oxide and Hydrogen peroxide: signals in fruit ripening -- Chapter 10.Plant abiotic stress: function of Nitric oxide and Hydrogen peroxide -- Chapter 11.Nitric oxide and Hydrogen peroxide in plant response to biotic stress -- Chapter 12.Biotechnological application of Nitric oxide and Hydrogen peroxide in plants. .
Sommario/riassunto	This book describes nitric oxide (NO) and hydrogen peroxide (H2O2) functions in higher plants. Much progress has been made in the field of NO and H2O2 research regarding the various mechanisms and functions of these two molecules, particularly regarding stress tolerance and signaling processes, but there are still gaps to be filled. NO and H2O2 are both crucial regulators of development, and act as signaling molecules at each step of the plant lifecycle, while also playing important roles in biotic and abiotic responses to environmental cues. The book summarizes key advances in the field of NO and H2O2 research, focusing on a range of processes including: signaling, metabolism, seed germination, development, sexual reproduction, fruit ripening, and defense. .