

1. Record Nr.	UNINA9910619463703321
Autore	Xie Yanjie
Titolo	Hydrogen Sulfide and Reactive Oxygen Species, Antioxidant Defense, Abiotic Stress Tolerance Mechanisms in Plants
Pubbl/distr/stampa	MDPI - Multidisciplinary Digital Publishing Institute, 2022
ISBN	3-0365-5375-4
Descrizione fisica	1 electronic resource (248 p.)
Soggetti	Mathematics & science Biology, life sciences Molecular biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Hydrogen sulfide (H₂S), which was previously considered to be toxic, is now regarded as a burgeoning endogenous gaseous transmitter. H₂S plays a vital role in the mechanism of response/adaptation to adverse environmental conditions as well as crosstalk with other signaling molecules, including ROS, by affecting the corresponding gene expression and subsequent enzyme activities. Both H₂S and ROS are potent signaling molecules that can provoke reversible and irreversible oxidative post-translational modifications on cysteine residues of proteins such as sulfenylation or persulfidation, affecting the redox status and function of the target proteins. The dynamic interplay between persulfidation and sulfenylation occurring on cysteine residues is of great importance in response to environmental changes. The present Special Issue of IJMS has the aim of providing the most current findings on the function of signaling molecules, including H₂S and ROS, in higher plants, and it is open to different types of manuscripts, including original research papers, perspectives, or reviews where either ROS, H₂S, or related molecules could be involved at the biochemical or physiological levels.</p>