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Nota di contenuto	Chapter 1 Adaptation of Lichens to Extreme Conditions -- Chapter 2 Adaptive mechanisms of Desiccation Tolerance in Resurrection Plants -- Chapter 3 Dehydration- and Freezing Resistance of Lichenized Fungi -- Chapter 4 Adaptation in Algae to Environmental Stress and Ecological Conditions -- Chapter 5 Biochemical and Molecular Responses in Higher Plants Under Salt Stress -- Chapter 6 Biochar Mitigates Salinity Stress in Plants -- Chapter 7 Fly Ash-Induced Metabolic Adaptations in Three Ferns -- Chapter 8 The multiple Properties of Some of the Lichenized Ascomycetes: Biological Activity and Active Metabolites -- Chapter 9 Metabolic Profiling and Its Plausible Environmental Significance in a Common Himalayan Lichen -- Chapter 10 Heavy Metal Tolerance in Crop Plants: Physiological and Biochemical Aspects -- Chapter 11 Plant Adaptation to Recalcitrant

Chemicals -- Chapter 12 Plant Growth Under Stress Conditions: Boon or Bane -- Chapter 13 Adaptation Strategies of Plants Against Common Inorganic Pollutants and Metals -- Chapter 14 Impacts of Climate Change on Agriculture: Adaptation, Mitigation and Environmental Policy -- Chapter 15 Nitric Oxide (NO) and Physio-Biochemical Adaptation in plants Against Stress.

Sommario/riassunto

This book addresses the crucial aspects of plant adaptation strategies in higher as well as lower plant groups. Stress induced by changing environmental conditions disrupts or alter various physiological and metabolic processes in organisms, however, plants have evolved various defence strategies to cope with external perturbations. The book discusses speciation changes in response to extreme ecological conditions such as cold, heat, aridity, salinity, altitude, incidental UV radiation and high light intensity, which are particularly relevant in the current scenario of global warming. It also explores the effects of human activities and emission of phytotoxic gases. Further, it describes the overall adaptation strategies and the multifaceted mechanisms involved (integrated complex mechanism), ranging from morphological to molecular alterations, focusing on plants' capabilities to create an inner environment to survive the altered or extreme conditions. This book is a valuable tool for graduate and research students, as well as for anyone working on or interested in adaptation strategies in plants.