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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Chapter-1: Omics of Model Plants -- Chapter-2:Instrumental techniques and methods: their role in plant omics -- Chapter-3:Next generation sequencing and assembly of plant genomes -- Chapter-4: Functional genomics: applications in plant science -- Chapter-5: Cytogenomics and mutagenomics in plant functional biology and breeding -- Chapter-6: Plant Epigenetics and Crop Improvement -- Chapter-7: Plant miRNomics: novel insights in gene expression and regulation -- Chapter-8:Plant Proteomics: Technologies and applications -- Chapter-9: Plant Metabolomics: An overview of technology platforms for applications in metabolism -- Chapter-10: Plant Glycomics: advances and applications -- Chapter-11: Plant Lipidomics: Signalling and Analytical Strategies -- Chapter-12: Plant

secretomics: unique initiatives -- Chapter-13: Phenomics: Technologies and applications in plant and agriculture -- Chapter-14: Plant Cytomics: Novel Methods to View Molecules on the Move -- Chapter-15:Plant Physiomics: Photo-electro-chemical and molecular retrograde signaling in plant acclimatory and defence responses -- Chapter-16: Signalomics: diversity and methods of analysis of systemic signals in plants -- Chapter-17: Signalome in salt stress -- Chapter-18: Thiolomics: Molecular mechanisms of thiol-cascade in plant growth and nutrition -- Chapter-19: Chloroplast Omics: global strategies for study of plastid biology -- Chapter-20: Transplastomics: A convergence of genomics and biotechnology -- Chapter-21:Plant Mitochondrial Omics: state of the art knowledge -- Chapter-22: Micromorphomics: a morphological dissection to unveil environmental stress -- Chapter-23: Microbiomics: An approach to community microbiology -- Chapter-24: Cryobionomics: evaluating the concept in plant cryopreservation -- Chapter-25: Nanobiotechnology: applications in plant and agriculture -- Chapter-26: Plant pharmacogenomics: from drug discovery to personalized ethnomedicine -- Chapter-27: Machine learning approaches in plant biology -- Chapter-28: Applications of bioinformatics in plant and agriculture -- Chapter-29: Plant system biology: insights and advancements -- Chapter-30: Plantomics and Futuromics.

Sommario/riassunto

PlantOmics: The Omics of Plant Science provides a comprehensive account of the latest trends and developments of omics technologies or approaches and their applications in plant science. Thirty chapters written by 90 experts from 15 countries are included in this state-of-the-art book. Each chapter describes one topic/omics such as: omics in model plants, spectroscopy for plants, next generation sequencing, functional genomics, cyto-metagenomics, epigenomics, miRNAomics, proteomics, metabolomics, glycomics, lipidomics, secretomics, phenomics, cytomics, physiomics, signalomics, thiolomics, organelle omics, micro morphomics, microbiomics, cryobionomics, nanotechnology, pharmacogenomics, and computational systems biology for plants. It provides up to date information, technologies, and their applications that can be adopted and applied easily for deeper understanding plant biology and therefore will be helpful in developing the strategy for generating cost-effective superior plants for various purposes. In the last chapter, the editors have proposed several new areas in plant omics that may be explored in order to develop an integrated meta-omics strategy to ensure the world and earth’s health and related issues. This book will be a valuable resource to students and researchers in the field of cutting-edge plant omics.