1. Record Nr. UNINA9910135971903321

Autore	Overdieck Dieter
Titolo	CO2, Temperature, and Trees : Experimental Approaches / / by Dieter Overdieck
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2016
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (IX, 240 p. 98 illus., 12 illus. in color.)
Collana	Ecological Research Monographs, , 2191-0707
Disciplina	581.7
Soggetti	Plant ecology Climatic changes Plant physiology Trees Plant Ecology Climate Change Plant Physiology Tree Biology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 Introduction -- 2 Research methods -- 3 CO2 net assimilation of leaves -- 4 Respiration in plant compartments -- 5 Water use efficiency and stomatal conductance -- 6 Nonstructural and structural carbohydrates -- 7 Secondary metabolites -- 8 Macro- and micronutrients -- 9 Anatomy -- 10 Growth and mass -- 11 Phenology -- 12 Expanding the outlook to effects on ecosystems -- 13 Modeling responses to [CO2] and temperature -- Subject Index -- Organism Index.
Sommario/riassunto	This comprehensive book discusses the ecophysiological features of trees affected by the two most prominent factors of climate change: atmospheric CO2 concentration and temperature. It starts with the introduction of experimental methods at the leaf, branch, the whole-tree, and tree group scales, and in the following chapters elaborates on specific topics including photosynthesis of leaves, respiration of plant organs, water use efficiency, the production of and/or distribution

patterns of carbohydrates, secondary metabolites, and nutrients, anatomy of cells and tissues, height and stem-diameter growth, biomass accumulation, leaf phenology and longevity, and model ecosystems (soil-litter-plant enclosures). The current knowledge is neatly summarized, and the author presents valuable data derived from his 30 years of experimental research, some of which is published here for the first time. Using numerous examples the book answers the fundamental questions such as: What are the interactions of elevated CO2 concentration and temperature on tree growth and matter partitioning? How do different tree groups react? Are there any effects on organisms living together with trees? What kinds of models can be used to interpret the results from experiments on trees? This volume is highly recommended for researchers, postdocs, and graduate students in the relevant fields. It is also a valuable resource for undergraduate students, decision-makers in the fields of forest management and environmental protection, and any other scientists who are interested in the effect of global change on ecosystems.

2. Record Nr. UNINA9911035162403321

Autore	Koul Shiban K
Titolo	Microwave Absorbers : Materials Engineering / / by Shiban K. Koul, M. Praveen, Karthikeya G. S
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	9789819695966
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (353 pages)
Collana	Engineering Materials, , 1868-1212
Altri autori (Persone)	PraveenM G. SKarthikeya
Disciplina	621
Soggetti	Physics Telecommunication Materials - Analysis Materials Carbon Chemistry Condensed matter Applied and Technical Physics Microwaves, RF Engineering and Optical Communications Materials Characterization Technique Carbon Materials Two-dimensional Materials

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- About the Authors -- List of Abbreviations -- 1. Introduction to Electromagnetic Absorbers -- 2. Material Characterization Methods -- 3. Microwave Characterization Techniques -- 4. Inorganic Materials for Electromagnetic Shielding -- 5.Carbon-based Materials for Electromagnetic Shielding -- 6. Polymers for Electromagnetic shielding -- 7. Frequency Selective Surfaces (FSS) -- 8. Future Scopes of Material Design for EMI Shielding -- 9. Research Gaps in Electromagnetic Shielding Materials -- 10. Conclusions and Areas for Future Research.
Sommario/riassunto	With the exponential rise of wireless devices, the electromagnetic interference (EMI) phenomenon affects the performance of these devices. Hence, it is critical to investigate various approaches to hinder the EMI effects. One of the most popular techniques to reduce EMI is to design and deploy microwave absorbers. This book presents the design requirements of novel electromagnetic wave shielding materials for modern commercial devices. A detailed in-depth analysis of the material synthesis with numerous practical case studies are presented in this book. The principles of microwave characterization of these materials are also explored. The definitions and procedural methods to characterize the shielding effectiveness are also presented. The practical use of polymer nanocomposite prepared by MWCNT, SWCNT, nanofibers, graphene and various ferrites in the polymer matrix is discussed. Practical use-case scenarios of design processes of various polymers along with general nanomaterials, carbon nanomaterials, inorganic magnetic nanoparticles, are also investigated. Lastly, alternate shielding methods are reported in the book. .