1. Record Nr. UNINA9910782602703321

Autore	Rice Stanley A. <1957->
Titolo	Green planet [[electronic resource]] : how plants keep the Earth alive / / Stanley A. Rice
Pubbl/distr/stampa	New Brunswick, N.J., : Rutgers University Press, c2009
ISBN	1-282-03358-1 9786612033582 0-8135-4653-2
Descrizione fisica	1 online resource (314 p.)
Disciplina	581.7
Soggetti	Plant ecology Vegetation and climate Plants, Useful
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 268-285) and index.
Nota di contenuto	An injured paradise -- Plants put the oxygen in the air -- Greenhouse earth : plants help to keep the Earth from overheating -- Shade : trees make good air conditioners -- The water cycle : plants prevent droughts and floods -- Plants feed the world -- Plants create soil -- Plants create habitats -- Plants heal the landscape -- How agriculture changed the world -- Why we need plant diversity -- What can we do?
Sommario/riassunto	2009 Choice Outstanding Academic Title Plants are not just a pretty part of the landscape; they keep the entire planet, with all of its human and nonhuman inhabitants, alive. Stanley Rice documents the many ways in which plants do this by making oxygen, regulating the greenhouse effect, controlling floods, and producing all the food in the world. Plants also create natural habitats for all organisms in the world. With illustrations and clear writing for non-specialists, Green Planet helps general readers realize that if we are to rescue the Earth from environmental disaster, we must protect wild plants. Beginning with an overview of how human civilization has altered the face of the Earth, particularly by the destruction of forests, the book details the startling consequences of these actions. Rice provides compelling reasons for government officials, economic leaders, and the public to support

	efforts to save threatened and endangered plants. Global campaigns to solve environmental problems with plants, such as the development of green roofs and the Green Belt Movementùa women's organization in Kenya that empowers communities worldwide to protect the environmentùshow readers that efforts to save wild plants can be successful and beneficial to the economic well-being of nations. Through current scientific evidence, readers see that plants are vital to the ecological health of our planet and understand what can be done to lead to a betterùand greenerùfuture Benefits of plants: Help modulate greenhouse gases Produce almost all oxygen in the air Create cool shade that reduces energy costs Prevent floods, droughts, and soil erosion Produce all of the food in the world Create and preserve soil Create natural habitats Heal the landscape after natural and human disasters

2.	Record Nr.	UNINA9910886987103321
	Autore	Soni Vijay
	Titolo	Antimicrobial Resistance: Factors to Findings : Omics and Systems Biology Approaches / / edited by Vijay Soni, Ajay Suresh Akhade
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2024
	ISBN	3-031-65986-4
	Edizione	[1st ed. 2024.]
	Descrizione fisica	1 online resource (459 pages)
	Altri autori (Persone)	AkhadeAjay Suresh
	Disciplina	571.96 616.079
	Soggetti	Immunology Immune response Pathogenic microorganisms Bioinformatics Diseases - Causes and theories of causation Genomics Antimicrobial Responses Computational and Systems Biology Pathogenesis
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia

Nota di contenuto	Antimicrobial resistance and factors -- Genomics as a tool to track global AMR -- Meta-transcriptomics to reveal mechanisms of drug action and resistance -- Use of proteomics to study bacterial virulence and AMR -- Metabolomics to understand bacterial and drug metabolism -- Microbiome and AMR: A One Health perspective -- Environmental reservoirs, genomic epidemiology, and mobile genetic elements -- Multiomics approach to control AMR -- Systems biology and AMR -- Host-directed omics approaches to control AMR -- Role of AI and Machine Learning in omics analysis of AMR evolution and surveillance -- Drug discovery and AMR treatments using an omics-based approach -- Future perspectives of omics-systems biology to control AMR: Recommendations and future directions.
Sommario/riassunto	Antimicrobial resistance (AMR) is increasing globally at an incredible rate, and many infectious diseases have already reached an alarming stage of resistance to existing treatments. WHO reports that nearly1.27 million people currently die each year due to resistant infections, and AMR is projected to account for 10 million annual deaths globally by 2050. There is an urgent need for novel approaches to address this issue. Omics technologies are powerful research tools used extensively to study pathogen biology and the activity of microbial agents. These tools, paired with systems biology approaches, can provide novel insights into antimicrobial susceptibility and resistance, and aid in the development of new, more effective measures to combat resistant pathogens. This book provides a comprehensive overview of omics technologies to study pathogen biology, including proteomics, genomics, transcriptomics, metabolomics, and microbiome analysis, and the role of systems biology in developing strategies to combat resistant pathogens. It addresses environmental reservoirs and mobile genetic agents in AMR, host-pathogen interactions and physiology in the development of resistance, drug repurposing and development, and cutting-edge tools such as machine learning, AI for big data analysis, and genomic surveillance. The final section discusses future perspectives on omics-systems biology in AMR, and identifies opportunities for scientific collaboration in the global fight against antimicrobial resistance. This book serves as a comprehensive and accessible resource for researchers in academia and industry focused on immunology, drug development, biotechnology, and systems biology.

3. Record Nr. UNINA9910728395903321

Autore	Nazarchuk Z. T (Zinovii Teodorovich)
Titolo	Optical Metrology and Optoacoustics in Nondestructive Evaluation of Materials / / by Zinoviy Nazarchuk, Leonid Muravsky, Dozyslav Kuryliak
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9912-26-1
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (415 pages)
Collana	Springer Series in Optical Sciences, , 1556-1534 ; ; 242
Disciplina	620.1127
Soggetti	Optics Optical measurements Metrology Materials - Analysis Applied Optics Optical Metrology Materials Characterization Technique
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Optical Metrology and Optoacoustics Techniques for Nondestructive Evaluation of Materials -- Phase Shifting Interferometry Techniques for Surface Parameters Measurement -- Application of Phase Shifting Interferometry Methods for Diagnostics of Materials Surface -- Digital Speckle Pattern Interferometry for Studying Surface Deformation and Fracture of Materials -- New Methods of Speckle Metrology in Analysis of Rough Surfaces -- Methods for Processing and Analyzing the Speckle Patterns of Materials Surface -- Mathematical Modeling of Elastic Waves Interaction with Interface Crack-type Defects.
Sommario/riassunto	This book includes the description, modeling and realization of new optical metrology techniques for technical diagnostics of materials. Special attention is paid to multi-step phase shifting interferometry with arbitrary phase shifts between interferograms, phase shifting and correlation digital speckle pattern interferometry, optical-digital speckle correlation, and digital image correlation, as well as dynamic speckle patterns analysis. Optoacoustic techniques can be treated as a separate branch of optical metrology and can solve many problems of

technical diagnostics, including detection and localization of subsurface defects in laminated composite materials. The utility of such techniques can be increased by illumination of the object via acoustic waves at certain frequencies. Hence, an effective theoretical approach to the modeling of an elastic wave field interaction with an interphase defect, and to defect visualization using dynamic speckle patterns, is also includedin this book. The experimental proof of the proposed approaches was achieved using a specially created hybrid optical-digital system for detection of different subsurface defects. This book is intended for engineers, researchers and students engaged in the field of nondestructive evaluation of materials and technical diagnostics of structural elements, hybrid optical systems, speckle metrology and optoacoustic imaging techniques.