

1. Record Nr.	UNINA9910568271803321
Titolo	Light-Matter Interactions Towards the Nanoscale // edited by Maura Cesaria, Antonio Calà Lesina, John Collins
Pubbl/distr/stampa	Dordrecht : , : Springer Netherlands : , : Imprint : Springer, , 2022
ISBN	94-024-2138-6
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (348 pages)
Collana	NATO Science for Peace and Security Series B: Physics and Biophysics, , 1874-6535
Disciplina	621.365
Soggetti	Nanophotonics Plasmonics Optics Photonics Nanophotonics and Plasmonics Light-Matter Interaction Topological effects in photonic systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Part 1: Lectures -- 1. Plasmonic Effects on Photonic Processes and Devices -- 2. Surface Plasmon-Mediated Decay Processes of Ions in Solids -- 3. Workshop in Computational Nanophotonics -- 4. Interaction Between a Plasmonic Nano-Resonator and a Whispering Gallery Mode Photonic Resonator Described through Coupled Mode Theory and Experiment -- 5. Time Reversal Symmetry and Topology in Electromagnetics -- 6. All-dielectric Nonlinear Meta-Optics -- 7. Nanophotonic Circuits for Unconventional Computing Applications -- 8. Terahertz Light-Matter Interactions -- 9. An Alternative Starting Point for Electromagnetism -- 10. Absorption, Emission, and Vacuum Fluctuations -- 11. Nd ³⁺ Ion as a Structural Probe in Selected Oxide Host Lattices: Coupling the Low-Temperature High-Resolution Spectroscopic Techniques with Microscopy -- 12. Efficient and Fast Scintillator Garnet Crystals: The Role of Ce ⁴⁺ in Ce ³⁺ , Mg ²⁺ -Co-Doped Gd ₃ Al ₂ Ga ₃ O ₁₂ from Spectroscopic and XANES Characterizations -- Part 2: Short Seminars -- 13. Refractive Index

Sensing by Phase Shift Cavity Ringdown Spectroscopy -- 14. Hyperpolarizability of plasmonic nanostructures: a method to quantify the SHG emission from a metasurface -- 15. Nonlinear up- and down-conversion in AlGaAs microdisks integrated in a photonic circuit -- 16. Tuning of Phonons and Surface Phonon Polaritons -- 17. Defect-related Optical Properties of ZnO Nanoparticles in ZnO/SiO₂ Systems -- 18. Integrated Slot Waveguide-based Phase Shifter -- 19. Radiation by a Finite-length Electric Dipole in a Uniaxial Medium -- 20. How Integrated Photonics can Help to Understand our Brain -- 21. Polarized and Diffracted Second Harmonic Generation from Semiconductor Metasurfaces -- 22. Simple Multidimensional Two-fluid Plasma Model Solver based on PseudoSpectral Time-Domain Method.

Sommario/riassunto

The investigation of light-matter interactions in materials, especially those on the nanoscale, represents perhaps the most promising avenue for scientific progress in the fields of photonics and plasmonics. This book examines a variety of topics, starting from fundamental principles, leading to the current state of the art research. For example, this volume includes a chapter on the sensing of biological molecules with optical resonators (microspheres) combined with plasmonic systems, where the response this system are described in a fundamental and elegant manner using coupled mode theory. Symmetry plays a major role in the book. One chapter on time reversal symmetry in electromagnetic theory describes how to control the properties of light (e.g. scattering and directionality of the flow of light) in materials with certain topological invariants. Another chapter where symmetry is prominent reformulates, using a gentle and pedagogical approach, Maxwell's Equations into a new set of fields that reveal a "handedness" symmetry in electromagnetic theory, which can be applied to photonic systems in, for example, the sensing of chiral molecules and understanding the conditions for zero reflection. Also, for students and researchers starting in the field of nanoplasmonics, the book includes a tutorial on the finite element time domain simulation of nanoplasmonic systems. Other topics include photonic systems for quantum computing, nanoplasmonics, and optical properties of nano and bulk materials. The authors take a pedagogical approach to their topic, making the book an excellent reference for graduate students and scientists starting in the fields of photonics or plasmonics.

2. Record Nr.	UNINA9910299671903321
Titolo	Engineering Asset Management - Systems, Professional Practices and Certification : Proceedings of the 8th World Congress on Engineering Asset Management (WCEAM 2013) & the 3rd International Conference on Utility Management & Safety (ICUMAS) // edited by Peter W. Tse, Joseph Mathew, King Wong, Rocky Lam, C.N. Ko
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-09507-2
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (1758 p.)
Collana	Lecture Notes in Mechanical Engineering, , 2195-4364
Disciplina	620 658.5 658514 670
Soggetti	Industrial management Technological innovations Manufactures Industrial Management Innovation and Technology Management Machines, Tools, Processes
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 and index.
Nota di contenuto	A Bearing Fault Detection Method base on Compressing Sensing -- A Combined Life Prediction Method for Product Based on IOWA operator -- A Distributed Intelligent Maintenance System based on Artificial Immune Approach and Multi-Agents System -- Bayesian acceptance sampling plan for exponential distribution under type-I and type-II censoring -- Bayesian approach to determine the test plan of Reliability Qualification Test -- Bayesian Optimal design for SSADT based on Gamma process and Relative Entropy -- Calculation of failure rate of Semiconductor devices based on mechanism consistency -- Calculation of the expected number of failures for a repairable asset system -- Dealing with uncertainty in the asset replacement decision -- Effect of

Sommario/riassunto

This proceedings represents state-of-the-art trends and developments in the emerging field of engineering asset management as presented at the Eight World Congress on Engineering Asset Management (WCEAM). The Proceedings of the WCEAM 2013 is an excellent reference for practitioners, researchers and students in the multidisciplinary field of asset management, covering topics such as: 1. Asset condition monitoring and intelligent maintenance, 2. Asset data warehousing, data mining and fusion, 3. Asset performance and level-of-service models, 4. Design and life-cycle integrity of physical assets, 5. Deterioration and preservation models for assets, 6. Education and training in asset management, 7. Engineering standards in asset management, 8. Fault diagnosis and prognostics, 9. Financial analysis methods for physical assets, 10. Human dimensions in integrated asset management, 11. Information quality management, 12. Information systems and knowledge management, 13. Intelligent sensors and devices, 14. Maintenance strategies in asset management, 15. Optimisation decisions in asset management, 16. Risk management in asset management, 17. Strategic asset management, 18. Sustainability in asset management King WONG served as Congress Chair for WCEAM 2013 and ICUMAS 2013 is the President of the Hong Kong Institute of Utility Specialists (HKIUS) and Convener of International Institute of Utility Specialists (IIUS). Peter TSE is the Director of the Smart Engineering Asset Management laboratory (SEAM) at the City University of Hong Kong and served as the Chair of WCEAM 2013 Organising Committee. Joseph MATHEW served as the Co-Chair of WCEAM 2013 is also WCEAM's General Chair. He is the Chief Executive Officer of Asset Institute, Australia.