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Altri autori (Persone)	El Mehdi Elkhatabi
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Nota di contenuto	1. Seismic fragility analysis of reinforced concrete structures using pushover-based method -- 2. Investigation into the damage analysis of Acrylonitrile Butadiene Styrene (ABS) specimens, involving both static damage study and a unified theory approach to predict the material's lifespan -- 3. Transverse vibration analysis of functionally graded beams with magnetostrictive layers of Terfenol-D on a Winkler foundation using the finite element method -- 4. Analysis of the transverse vibrations of a carbon nanotube resting on a Winkler foundation subjected to low temperature thermal load -- 5. First principal investigation of Structural electronic properties of hybrid

oorganic-inorganic perovskite $[\text{NH}_3\text{-(CH}_2\text{)}_4\text{-NH}_3\text{]MCl}_4$ compound -- 6. Study and Analysis of the Free Transverse Vibration of Two Beams Coupled by an Elastic System Formed by a Double Spring-Mass -- 7. Different Measurement Modes of a GPR radar for a Homogeneous Isotropic medium Using the FDTD and ETD Methods -- 8. A Review on the Dynamics of Metal-Insulator Transitions of Vanadium Dioxide -- 9. Computational study of vertical falling film absorber working in a LiBr-H₂O absorption refrigeration system -- 10. Modelling and Simulation of the Influence of 3D Printing Parameters on Crack Propagation: Filament Orientation -- 11. Review of Recent Results of Methods for Estimating the State of Charge of Li-ion Batteries for Electric Vehicles -- 12. Evaluation of sanitation pipe quality through infrared spectroscopy: Identification of compounds and examination of structural alterations due to aging induced by sulfated solutions -- 13. Treatment of Volatile Organic Compounds (VOCs) by Condensation. -14. Exploring the Electronic Transport Characteristics of Single-Walled Carbon Nanotubes with Donor-Acceptor Characteristics, filled with Caffeine Molecules -- 15. Raman Active Modes of black phosphorene and phosphorene nanoribbons (PNRs) -- 16. The technical impacts of the emergence of renewables energies decentralized in the distribution grid (MV) -- 17. Low-Cost Polymer-Graphene Oxide Nanocomposite-Based Nanofiltration Membranes for Dyes and Heavy Metals Removal -- 18. Realization of a digital teslameter based on an analog low-cost Hall effect sensor.

Sommario/riassunto

This book delves into the realm of sustainable energy and presents a comprehensive analysis of novel nanomaterials with potential applications in this field. Each chapter offers a unique perspective, contributing to the understanding and development of advanced energy materials. From the infrared spectroscopy analysis of boron nitride nanotubes to the investigation of optical properties of ZnO thin films and the study of double perovskite oxides, this collection covers a wide range of topics. It explores iron-based nitrides, phase change materials for smartphones, thermochromic glazing with vanadium dioxide, and the influence of magnetic pressure on smart materials. The physical properties and applications of 2D phosphorene, carbon nanotube interactions, and metalloporphyrin-encapsulated carbon nanotubes are also discussed. Moreover, the collection investigates the thermal and phonon properties of carbon nanomaterials, optoelectronic properties of perovskite materials, and the physical properties of phosphorene nanotubes. Featuring extended chapters selected as exceptional contributions to the 2023 International Conference on Advanced Materials for Sustainable Energy and Engineering in Meknes, Morocco, this book provides researchers and practitioners with a comprehensive overview of some of the latest advancements in novel nanomaterials. With its interdisciplinary approach and rigorous scientific analysis, this edited collection serves as a valuable resource for those striving to develop sustainable energy solutions for the future.
