

| | |
|-------------------------|--|
| 1. Record Nr. | UNINA9910918598103321 |
| Autore | Mequanint Kibret |
| Titolo | Sustainable Development Research in Materials and Energy : Advancement of Science and Technology // edited by Kibret Mequanint, Ababay Ketema Worku, Muluken Zegeye Getie, Zerihun Getahun Workineh |
| Pubbl/distr/stampa | Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024 |
| ISBN | 9783031698606 3031698606 |
| Edizione | [1st ed. 2024.] |
| Descrizione fisica | 1 online resource (349 pages) |
| Collana | Green Energy and Technology, , 1865-3537 |
| Altri autori (Persone) | WorkuAbabay Ketema GetieMuluken Zegeye WorkinehZerihun Getahun |
| Disciplina | 621.042 |
| Soggetti | Renewable energy sources Materials Wind power Energy storage Photovoltaic power generation Renewable Energy Materials Engineering Wind Energy Mechanical and Thermal Energy Storage Photovoltaics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Chapter 1. Optimization, characterization and Evaluation of starch based biodegradable micro plastic film using clay as a reinforcing agent -- Chapter 2. Assessment of Residual Elastic Properties In Damaged Composite Materials -- Chapter 3. Analysis On Thermal Behavior of Bamboo Leaf Ash Blended Cement Paste -- Chapter 4. Parametric Analysis on Heavy Quadricycle Vehicle Front Crash for Safety Optimization -- Chapter 5. Experimental investigation of the impact strength of sunflower oil-treated Ethiopian highland bamboo fiber |

reinforced polyester composites -- Chapter 6. Effects of Aggregate Size and Water to Cement Ratio on Fracture Energy of Normal Weight Concrete -- Chapter 7. Investigation of Synthetic Versus Natural Fiber On Interlocking Compressed Stabilized Earth Blocks: A comparison of Plastic Bottle Fiber and "Teff" Straw -- Chapter 8. Use of Sisal Fiber for reduction of plastic shrinkage cracking in concrete -- Chapter 9. Synthesis of Novel Polyaniline-Nanosphere Composite for the Detection of Ammonia in Poised Meat -- Chapter 10. Investigating the thermal performance of different solar-assisted dryers for agricultural produce: A review -- Chapter 11. Recent developments on design and thermal performance enhancement of parabolic dish solar -- Chapter 12. Parameter Identification of Single Diode Solar Photovoltaic Model Using Particle Swarm Optimization Hybrid with Newton Raphson Method -- Chapter 13. Thermal Modeling and Fuzzy Logic control Design for Forced Conviction Solar Dryer -- Chapter 14. Standalone Solar PV system design and analysis using PVsyst software: (a Case of Bahir Dar, Ethiopia) -- Chapter 15. Solar Energy Resource Potential Assessment and the Impacts of Solar PV System Integration on the Performance of Radial Distribution Network -- Chapter 16. Theoretical Analysis of Working Fluid inside Solar Thermal Trackers -- Chapter 17. Pre-feasibility study of wind power and site suitability analysis in Dire Dawa, Ethiopia -- Chapter 18. Thermodynamics modeling and optimization of Stirling heat pump: Review -- Chapter 19. State of the art of human energy acquisition technologies for electric power generation- A review -- Chapter 20. Influence of S/N Ratio on Biogas Desulfurization Performance using Conventional Anoxic Bioreactor (ABR) and Membrane Bioreactor (AMBR).

Sommario/riassunto

This book presents current research, recent advances, and emerging technologies on sustainable development issues in materials and energy. It covers various methods, including numerical and experiment analysis. The coverage of materials includes: Advanced manufacturing and materials processing; Biodegradable and bio-inspired materials; Functional materials and their behavior; Investigation on synthetic versus natural fiber; Thermal and strength analysis of bamboo; Materials for energy storage, conversion, and transmission and structural materials; Soft materials, composites, and fibers. Studies on renewable and green energy systems and sources include: Research on wind, solar, and biomass energy conversion systems; Renewable resources potential assessment, energy storage; Energy-saving and efficient technologies; Stirling heat pumps; Human energy acquisition; CO₂ capture storage and utilization; Energy conversion systems; Energy policies and economics; State-of-the-art renewable energy conversion systems. The book provides researchers, engineers, industry professionals, graduate students, and practitioners with state-of-the-art research on engineering materials, material science, sustainable energy engineering, and energy technology in developing countries. Covers current basic green materials and energy research; Relevant for researchers, academics, students, and professionals; Includes selected papers from the 11th EAI International Conference on Advancements of Science and Technology.
