Record Nr. UNINA9910765545003321 Autore Okedu Kenneth Eloghene Titolo Exergy: new technologies and applications / / Kenneth Eloghene Okedu Pubbl/distr/stampa London:,:IntechOpen,, 2023 **ISBN** 1-83768-545-2 Descrizione fisica 1 online resource: illustrations Disciplina 333.79 Soggetti Power resources Power resources - Research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Exergy of Solar Dryer -- 2. High Synthetic Image Coding System --3. Nonreciprocal Photovoltaics: The Path to Conversion of Entire Power-Beam Exergy -- 4. Comparison of Evaporation in Conventional Diesel and Bio-Fuel Droplets in Engine Cylinder -- 5. Computational Simulation of Heat Transfer in a Dip Shrink Tank Using Two Different Arrangements of Electrical Resistances -- 6. Nature as a Teacher for Abiota Self-Organization in Terms of Entropy Analysis -- 7. State-ofthe-Art on the Marine Current Turbine System Faults -- 8. Using Exergy-Based Metrics in Assessing Sustainability of Fossil-Fueled Thermal Energy Systems. Sommario/riassunto This book discusses the topology of exergy as a measure of energy quality with regards to any type of machinery. Because exergy takes the second law of thermodynamics, it is partially destroyed in every process of energy conversion. Consequently, this book focuses on entropy creation in irreversible processes of low temperatures resulting in generation of waste heat. It also addresses ideas on thermodynamic systems and environment, considering temperature, chemical decomposition, and electric potential characteristics and imaging. Finally, the book provides a description of energy utilization expressed as energy efficiency.