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Nota di contenuto	Assessment of Energy Potential of Residential Solid Waste in Asokore Mampong Municipality of Greater Kumasi Metropolitan Area -- Toxicity, Nutritional Quality, and Microbial Loads of Source-Separated Dried Food Waste as Poultry Feed -- Methanogenic Potential of Palm Oil Mill Effluents -- Strategies for Improving the Quality of Low-Pressured Rice Husk Briquette: A Mini-Review -- Carbonization of Mango Waste for Use as Biofuel -- Testing used Tyres as Soil and Water Conservation Control Measures to Favour Circular Economy in Mali -- The Case for Integrated Tyre Recycling Systems in West Africa: Environmental and Health Impacts of Tyres as Fuel for Meat Preparation -- Sustainable Solutions for Growing Cities in Sub-Saharan Africa: Trends in Urban Energy Demand -- Energy Access Implications for Unserved Communities in Sub-Saharan Africa: Challenges and Opportunities -- Comparative Study of Conventional and Biofuels for Sustainable Mobility :A Case Study of Ghana -- Green Hydrogen Economy: Paving the Way for a Just and Inclusive Energy Transition -- Systematic

Literature Review of Hydrogen Production Technologies, Feedstocks and Pathways, and its Prospects in Sub-Saharan Africa -- An Evaluation of a Proposed Solar Plant System for Ceramics Production in Ghana -- Impact of Digestate Formed During Biogas Generation Process on Hydrogen Production -- Performance Parameters of an Off-Grid Photovoltaic System in The Gambia -- Higher Heating Value Analysis for Waste to Energy Intelligence Model Optimization-Prediction -- Predictive Modelling of Electricity Consumption in Togo using Deep Learning: A Comparative Approach.

Sommario/riassunto

This book provides a comprehensive analysis of Africa’s evolving role in sustainable energy, focusing on waste management, renewable energy, and green hydrogen production. Featuring predominantly African-led research, it highlights cutting-edge innovations driving the continent’s green transition. Drawing from research presented at the Second International Conference on Circular Economy, Renewable Energy, and Green Hydrogen in Lomé, Togo, in October 2024, the book explores key areas shaping Africa’s energy landscape. It examines waste-to-energy technologies that transform waste into valuable resources, supporting both environmental sustainability and the circular economy. It also addresses the development of decentralized and hybrid renewable energy solutions designed to meet the growing demands of expanding urban populations. Additionally, it discusses the latest technological advancements, including predictive analytics and off-grid performance optimization, enhancing energy efficiency and system flexibility across the continent. Beyond technical advancements, the book explores the social and economic dimensions of sustainability, analyzing how green innovations drive economic growth, create jobs, and promote social equity. It serves as an essential resource for researchers, policymakers, and practitioners seeking insights into Africa’s green transition and its increasing influence in the global shift toward sustainable energy solutions.