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Titolo	Advanced Manufacturing in Biological, Petroleum, and Nanotechnology Processing : Application Tools for Design, Operation, Cost Management, and Environmental Remediation // edited by Augustine O. Ayeni, Olagoke Oladokun, Oyinkepreye David Orodu
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ISBN	3-030-95820-5
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (360 pages)
Collana	Green Energy and Technology, , 1865-3537
Disciplina	660.63
Soggetti	Biochemical engineering Sustainability Production engineering Nanotechnology Cogeneration of electric power and heat Fossil fuels Pollution Bioprocess Engineering Process Engineering Fossil Fuel
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Section A: Design and Application of Process Systems -- Nanotechnology: Applications, Challenges, and Prospects -- Development of Energy Efficient Processes and Products From Renewable and Nonrenewable Resources in Nigeria -- an Overview Application of Natural Oil as a Sustainable Plasticizer in the Production of Biopolymers -- Manufacturing of Brake Pad Using Aluminium Silicon Carbide Reinforced With Alumina for Automobile Industry -- Overview of Nanofluid Applications and Their Sustainability -- Enhancing the Rheology of Water-based Mud Using Micronized Starch.-influence of Cutting Fluid on Machining Processes -- Nanofluid- a Sustainable Alternative Coolant for Metal Working and Machining Operations -- the

Essence of Intermetallic Phases in AA6061/Clay Composites -- Section B: Pollution Control and Management -- Public-private Initiatives: a Remedy for Environmental Pollution and Infrastructural Degeneration in Nigeria -- Smart Toilets and Toilet Gadgets in Sustainable Smart Cities: An Overview of Personal Health Monitoring -- Biomedical Engineering Education: Equipment, Prospect, and Challenges for Environmental Healthcare in Nigeria -- Inhibition Performance of Admixed Grapefruit and Lemongrass Oil Extracts as Low Carbon Steel in Weak Acid Formulation -- Corrosion Inhibitive Behaviour of Moringa Oleifera in Acidic Medium -- Phosphating Technique: a Reliable Approach to Corrosion Resistance of A36 Mild Steel -- Environmental Process Engineering for Public Health and Sustainable Development -- Adsorptive Performance of Immobilized Activated Carbon for Effective Removal of Dibenzothiophene From a Synthetic Petroleum Distillate in a Packed-bed Column -- Sustainable Waste Management Towards Circular Economy in Nigeria Context: Challenges, Prospects and Way Forward -- Biomedical Waste Management Practices in Sub-saharan Africa: Insights of Its Impacts and Strategies for Its Mitigation -- Bioplastic, a Sustainable Remedy to Manage Environmental Waste -- Section C: Process Modeling and Simulation -- Design of Water Retaining Structures and Application of Process Engineering for Sustainable Environment -- Development of Robust Fractional Order Controllers to Provide Effective Economic Load Dispatch Management in an Interconnected Area Network -- Digital Technology and Sustainable Manufacturing: The Nexus.

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#### Sommario/riassunto

This book covers advanced manufacturing in biological, petroleum, and nanotechnology processing for the development of novel products and systems that incorporate enhanced pollution control and waste management for environmental remediation. The book is divided into three parts. The first section looks at the design and application of process systems, the second section focuses largely on pollution control and management, and the final section discusses areas related to process modeling and simulation. Coverage highlights the integration of smart tools and solutions and looks at current advances in monitoring industrial and environmental processes that can assist in making significant progress in process design for the effective control of pollution and waste management. Presents advanced methods for manufacturing industrial products; Highlights new solutions for pollution and waste management; Explores modeling and simulation of industrial and environmental processes. .

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