Handbook of Research on Advancements in Supercritical Fluids Applications for Sustainable Energy Systems

Part of the Advances in Chemical and Materials Engineering Book Series

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Description:

Supercritical fluids are increasingly being used in energy conversion and fluid dynamics studies for energy-related systems and applications. These

new applications are contributing to both the increase of energy efficiency as well as greenhouse gas reduction. Such research is critical for scientific advancement and industrial innovations that can support environmentally friendly strategies for sustainable energy systems.

Handbook of Research on Advancements in Supercritical Fluids Applications for Sustainable Energy Systems is a comprehensive reference that covers the most recent and challenging issues and outlooks for the applications and innovations of supercritical fluids. The book first converts basic thermo-dynamic behaviors and "abnormal" properties from a thermophysical aspect, then basic heat transfer and flow properties, recent new findings of its physical aspect and indications, chemical engineering properties, micro-nano-scale phenomena, and transient behaviors in fast and critical environments. It is ideal for engineers, energy companies, environmentalists, researchers, academicians, and students studying supercritical fluids and their applications for creating sustainable energy systems.

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Topics Covered:

Energy Conversion Energy Systems Fluid Flow Modeling Heat Transfer Near-Critical Fluids Nuclear Power Engineering Piston Effect Supercritical Fluids Thermal Power Engineering Thermal Mechanical Effect

Subject: Science and Engineering	Classification: Edited Reference
Readership Level: Advanced-Academic Level (Research Recommended)	Research Suitable for: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners



