Advanced Applications of Supercritical Fluids in Energy Systems

Part of the Advances in Chemical and Materials Engineering Book Series

Lin Chen (Tohoku University, Japan and JSPS, Japan) and Yuhiro Iwamoto (Nagoya Institute of Technology, Japan)

Description:

Supercritical fluids have been utilized for numerous scientific advancements and industrial innovations. As the concern for environmental sustainability grows, these fluids have been increasingly used for energy efficiency purposes.

Advanced Applications of Supercritical Fluids in Energy Systems is a pivotal reference source for the latest academic material on the integration of supercritical fluids into contemporary energy-related applications. Highlighting innovative discussions on topics such as renewable energy, fluid dynamics, and heat and mass transfer, this book is ideally designed for researchers, academics, professionals, graduate students, and practitioners interested in the latest trends in energy conversion.

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Topics Covered:

- Chemical Engineering
- Compressible Flow
- Cryogenics
- Fluid Dynamics
- Heat and Mass Transfer
- Renewable Energy
- Supercritical Engines and Turbines

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Lin Chen is now a granted JSPS Research Fellow in Institute of Fluid Science, Tohoku University, Japan. He obtained his B.E and PhD in Mechanics (Energy and Resources Engineering) from Peking University. His current research topics include energy resources, oceanic methane hydrate utilization, supercritical fluids, microscale compressible fluid flows, and multiscale heat/mass transfer. He has authored over 80 international journal papers and/or conference presentations, and books/chapters. He received the Outstanding Young Scholar of the MOE (China) in 2012 and 2013, the Innovation Award in 2011, 2012, and 2014, the Best Paper of the Chinese Association of Refrigeration in 2015, and the Elsevier Excellent Reviewer of the year in 2013, 2014, and 2015. He is also a Reviewer, an Editorial/Advisory Member, and the Guest Editor of many renowned international journals. He is currently an Executive Editor of the Journal of Natural Gas Science and Engineering (Elsevier).

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