



energies

an Open Access Journal by MDPI



Advanced Research on Supercritical Carbon Dioxide in Thermal Energy and Power Engineering

Guest Editors:

Prof. Dr. Jinliang Xu

School of Energy, Power and Mechanical Engineering, North China Electric Power University, Beijing 102206, China

Prof. Dr. Lu Liu

Department of Power Engineering, North China Electric Power University, Baoding 071003, China

Prof. Dr. Lei Zhang

Department of Power Engineering, North China Electric Power University, Baoding 071003, China

Deadline for manuscript submissions:

closed (10 April 2023)

Message from the Guest Editors

With the proposal of low carbon economy, supercritical carbon dioxide system has a wide application prospect in the future energy system because of its compact structure and high efficiency. The aims and topics of this Energies Special Issue on “Advanced Research on Supercritical Carbon Dioxide in Thermal Energy and Power Engineering” cover the cutting-edge research of supercritical carbon dioxide in the field of thermal energy and power engineering, including fundamental scientific research and frontier technology in energy conversion, power generation, energy storage, compressors, heat exchangers, etc.

The following topics, among others, are included in this issue:

1. Numerical simulation and experiments of thermodynamic, fluid flow and heat transfer of supercritical carbon dioxide
2. Application of supercritical carbon dioxide in advanced energy conversion, power generation and energy storage technology
3. Design and optimization of high-performance supercritical carbon dioxide compressors
4. Design and optimization of high-performance supercritical carbon dioxide heat exchangers
5. Enhanced heat transfer technology in supercritical carbon dioxide



mdpi.com/si/113727

Special Issue



energies



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank: CiteScore - Q1 (*Engineering (miscellaneous)*)

Contact Us

Energies Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/energies
energies@mdpi.com
[X@energies_mdpi](https://x.com/energies_mdpi)