Special Issue

Optimization and Innovations in Thermal Cycles and Heat Management Systems

Message from the Guest Editors

With the progress of society and technological advancements, the increasing amounts of energy consumed in industrial production and daily life necessitate enhanced energy utilization efficiency in thermodynamic cycle systems. These thermodynamic systems include, but are not limited to, solar power generation systems; geothermal energy conversion systems; air/water-source heat pump systems; industrial waste heat recovery systems; LNG cold energy power generation systems; and gas pressure energy recovery systems. As these systems primarily focus on the conversion of thermal energy, their performance enhancement relies not only on the optimization of their cycle structure or working fluids but also on advanced thermal management methodologies and heat utilization technologies. Notably, efficient thermal management approaches also demonstrate the potential for their broad application across other important and emerging domains, such as HVAC systems in buildings and cooling solutions for large-scale data centres. Innovative optimization methods for these energy utilization and heat management systems have consequently emerged as a critical research focus in the energy sector.

Guest Editors

Dr. Yiming Zhao

Department of Chemical Machinery, Dalian University of Technology, Dalian 116012, China

Dr. Haotian Ye

School of Chemical Engineering, Dalian University of Technology, Dalian 116012, China

Deadline for manuscript submissions

25 November 2025

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/242422

Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

mdpi.com/journal/energies

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/journal/energies

About the Journal

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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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 (Control and Optimization)

MDPI