

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.

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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.

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