

Special Issue

Thermal Synergy for Sustainable Futures: Innovations in Heat Transfer and Energy System Integration

Message from the Guest Editors

Heat transfer technique is a key process in thermal energy conversion in many industry fields, such as solar energy systems, compact nuclear power systems, energy storage systems, biomass energy utilization, new energy vehicles, advanced aerospace engines, etc. In recent years, the heat transfer technique has undergone many innovations integrated with various energy systems, to meet the extreme working conditions, coupled multi-physical fields and various design demands. Many advanced heat and mass transfer techniques, such as micro/nano scale heat and mass transfer, supercritical flow heat transfer, compact heat exchanger, electromagnetic coupling heat and mass transfer, multi-objective design, etc., have been developed and investigated. In this Special Issue, we want to report the advanced heat and mass transfer theories and techniques in power and energy systems over the past few decades. The scopes are not limited to conduction, convection and radiation heat transfers. We especially encourage the heat and mass transfers in micro/nano scales, multi-physical fields coupled, extremely working conditions, new design methods, etc.

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Deadline for manuscript submissions

17 March 2027



Sustainability

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 7.7



mdpi.com/si/275542

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