Special Issue

Advancements and Future Prospects of Heat Exchangers in Thermal and Energy Management

Message from the Guest Editors

The evolution of heat exchangers represents a basis for advancing thermal and energy management systems across various industrial sectors. These devices are indispensable in enhancing energy efficiency, reducing environmental impact, and enabling innovations in diverse applications. Heat exchangers continue to undergo significant advancements from conventional climate control systems to innovative thermal management solutions in electric vehicles, aerospace, renewable energy systems, industrial processes, and electronic devices. This progress is driven by innovations in materials, computational modeling, manufacturing techniques, and integration with smart control systems. Prospects include further miniaturization, enhanced heat transfer capabilities, integration with renewable energy sources, and adaptation to emerging technologies like artificial intelligence for predictive maintenance and optimization. This Special Issue aims to explore and disseminate the latest breakthroughs in heat exchanger technology.

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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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