

Special Issue

Heat Transfer with Micro/Nano Structures

Message from the Guest Editor

The growing demand for effective thermal management in advanced technologies, such as high-power computing and AI chips, hypersonic vehicles, deep space exploration, and next-generation reactors, has made heat transfer enhancement increasingly critical. Micro- and nanoscale structures have emerged as powerful tools in this effort due to their passive nature and strong potential for performance improvement. This Special Issue aims to highlight breakthroughs in micro- and nano-structures and their applications in enhancing heat transfer. We welcome studies that introduce novel structures with exceptional thermal performance, explore innovative fabrication methods suitable for large-scale and cost-effective production, and investigate the underlying physical mechanisms that drive this enhancement. We invite original research articles and review papers. Topics of interest include, but are not limited to:

- Novel micro/nano structures with outstanding heat transfer capabilities;
- Scalable and cost-effective fabrication techniques for these structures;
- Fundamental mechanisms that govern heat transfer enhancement in micro/nano-engineered surfaces.

We look forward to receiving your contributions.

Guest Editor

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Deadline for manuscript submissions

closed (31 January 2026)



Micromachines

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Impact Factor 3.0
CiteScore 6.0
Indexed in PubMed



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