Special Issue

Advances of Nanoscale Fluid Mechanics

Message from the Guest Editors

Nanoparticles have great potential in improving fluid heat transfer performance. In recent years, research in nanofluids has become an important hotspot. Different kinds of nanoparticles, such as single particles and mixed particles of various shapes, have been used to produce nanofluids. Theoretical and experimental work has been carried out to verify the performance of nanofluids. This Special Issue welcomes original research articles on nanofluid research, including experimental and numerical studies, focusing on the performance and mechanism analysis of new nanofluids and their applications, new nanofluid models, and new applications of nanofluids in complex physical environments. Groundbreaking research to discuss the latest trends of nanofluids and the application of new working fluids in thermodynamics is particularly welcome. In addition, research related to new working fluids and nanofluids for enhancing heat transfer, including basic principles, materials, components, and systems, is also welcome.

- nanofluid
- hybrid nanofluid
- nanofluid model
- multiphysical fields
- heat transfer
- transport mechanism

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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