



New Research on Heat Transfer with Properties of Nanofluids

Guest Editor:

Dr. Salman Saleem

Department of Mathematics,
King Khalid University, Abha
61413, Saudi Arabia

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Message from the Guest Editor

In last two decades, advances in nanotechnology and nanomaterials have led to the development of new class of heat transfer fluids (Nanofluids) containing nanoparticles usually made up of metals, carbides, oxides or carbon nanotubes. Among other methods to increase heat transfer efficiency, one way is to increase the thermal conductivity of the working fluid. Nanofluids exhibit superior heat transfer characteristics to conventional heat transfer fluids. Due to these enhanced properties, nanofluids are used in several electronic applications, pharmaceutical processes, transportation industry, in biomedical and many others. A nanofluid coolant could flow through tiny passages in MEMS to improve its efficiency. Nanofluids can be used to cool automobile engines and welding equipment and to cool high heat-flux devices such as high power microwave tubes and high-power laser diode arrays. Explicitly, ethylene glycol-based nanofluid is used as a medium for convective heat transfer in liquid cooled computers and automobiles.

The aim of this Special Issue is to highlight the impact of new research on heat transfer with nanofluid properties.





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Editor-in-Chief

Prof. Dr. Shirley Chiang

Department of Physics, University
of California Davis, One Shields
Avenue, Davis, CA 95616-5270,
USA

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.

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Nanomaterials Editorial Office
MDPI, St. Alban-Anlage 66
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