



TECHNOLOGY

Electroacoustic Wave for Enhancing Heat Transport in Nanofluids (Colloids)

OVERVIEW

Downscaling or miniaturization has been a recent major trend in modern science and technology. Engineers now fabricate microscale devices such as microchannel heat exchangers and micropumps that are the size of dust specks. Further major advances would be obtained if the coolant flowing in the microchannels were to contain nanoscale particles to enhance heat transfer. Nanofluid technology will thus be an emerging and exciting technology of the 21st century

Researchers at University of Maryland College Park have proposed an innovative technique to enhance heat transfer between the heat transfer surface and heat transfer fluids (e.g. nanofluids) by employing electroacoustic waves. Inventors have specified how these waves will produce the oscillating motion enhancing the heat transport. Also illustrated is surface electroacoustic wave which causes vortical acoustic streaming and bubble cavitation to promote heat transfer, especially in the vicinity of the heat transfer surface.

For additional information please contact the Office of Technology Commercialization, University of Maryland. Phone: 301-405-2924.

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Nanotechnology + Nanoparticles + Nanomaterials

EXTERNAL RESOURCES

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