

# 2<sup>nd</sup> International Conference and Exhibition on **Mechanical & Aerospace Engineering** September 08-10, 2014 Hilton Philadelphia Airport, USA

## A review on nanofluid heat pipe

**Maryam Shafahi**  
California State Polytechnic University, USA

This work reviews the improvement in the heat pipe's performance using nanofluid as the working fluid. The use of nanofluid enhances heat transfer in the heat pipe due to its improved thermo-physical properties, such as a higher thermal conductivity. Nanofluids proved to be the innovative approach to a variety of applications, such as electronics, medical instruments, and heat exchangers. The experimentation of different nanoparticles, such as Al<sub>2</sub>O<sub>3</sub>, CuO, and TiO<sub>2</sub>, on cylindrical heat pipes has been studied. Utilizing nanofluid as the working fluid leads to a significant reduction in heat pipe thermal resistance, an increase in maximum heat transfer, and an improvement of temperature distribution.

### Biography

Maryam Shafahi received her PhD at Mechanical Engineering from University of California, Riverside in 2010. She has published 7 papers in reputed journals and has been serving as an editorial board member for different journals such as *International Journal of Heat and Mass Transfer*, *ASME Journal of Heat Transfer* and *Heat Transfer Engineering*.

[maryam.shafahi@email.ucr.edu](mailto:maryam.shafahi@email.ucr.edu)