

## عنوان مقاله:

Study about the Effect of Magnetic Field on Heat Transfer Coefficient of Water-Fe<sub>3</sub>O<sub>4</sub>nanofluid in Pulsating Heat Pipes

## محل انتشار:

کنفرانس ملی نانو ساختارها، علوم و مهندسی نانو (سال: 1395)

تعداد صفحات اصل مقاله: 9

## نویسندگان:

MOHAMMAD BANEZHAD JANNATI - MSc Student, Mechanical Engineering, Islamic Azad University, Mashhad, Iran

HAMIDREZA GOSHAYESHI - Associated Professor , Mechanical Engineering, Islamic Azad University, Mashhad, Iran

## خلاصه مقاله:

Pulsating heat pipe is an efficient heat exchange device which is being used for cooling and heating recovery .In the present work, we made a closed-loop pulsating heat pipe with six U-turns and we used water in our system with 40% and 50% filling ratios. Moreover, the use of water-Fe<sub>3</sub>O<sub>4</sub> nanofluid was studied with two different filling ratios 40% and 50% and 1% mass concentration. Then, we used several magnets to produce 100 G magnetic field. At the end, we calculated heat resistance and heat transfer coefficients of water and water-Fe<sub>3</sub>O<sub>4</sub> nanofluid in each step and compared the results and showed that 50% filling ratio of water-Fe<sub>3</sub>O<sub>4</sub> nanofluid with magnetic field was the best choice in our study because of the best heat transfer coefficient

## کلمات کلیدی:

Pulsating heat pipe, water-Fe<sub>3</sub>O<sub>4</sub>nanofluid, magnetic field, filling ratio, heat resistance coefficient, heat transfer coefficient

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/651946>

