Scopus

Documents

Chamkha, A.J., Selimefendigil, F., Oztop, H.F.

MHD mixed convection and entropy generation in a lid-driven triangular cavity for various electrical conductivity models
(2018) *Entropy*, 20 (12), art. no. 903, . Cited 1 time.

Abstract
In this study, effects of different electrical conductivity models for magneto- hydrodynamic mixed convection of nanofluids in a lid-driven triangular cavity was numerically investigated with a finite element method. Effects of Richardson number and Hartmann number on the convective heat transfer characteristics were analyzed for various electrical conductivity models of nanofluids. Average Nusselt number decreases for higher Hartmann and Richardson numbers. Discrepancies in the local and average heat transfer exist between different electrical conductivity models, which is higher for higher values of Richardson number and Hartmann number. The total entropy generation rate was found reduced with higher values of Richardson number and Hartmann number while discrepancies exist between various electrical conductivity models. When the magnetic field is imposed, different behaviors of entropy generation rate versus solid particle volume fraction curve is obtained and it is dependent upon the range of solid particle volume fraction. © 2018 by the authors.

2-s2.0-85058958256
Document Type: Article
Publication Stage: Final
Source: Scopus
Access Type: Open Access