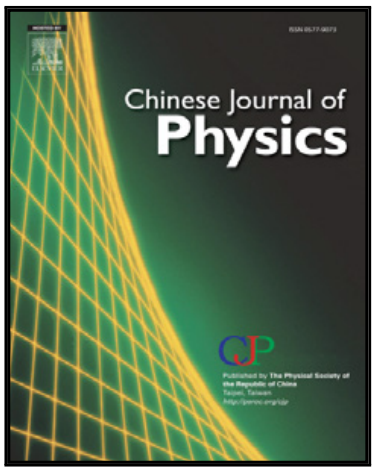

Numerical Simulation of The Forced Convective Nanofluid Flow Through an Annulus Sector Duct

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PII: S0577-9073(16)30426-9
DOI: 10.1016/j.cjph.2017.02.020
Reference: CJPH 219

To appear in: *Chinese Journal of Physics*

Received date: 30 July 2016
Revised date: 7 January 2017
Accepted date: 6 February 2017

Please cite this article as: Farhan Ahmed , Noreen Sher Akbar , Numerical Simulation of The Forced Convective Nanofluid Flow Through an Annulus Sector Duct, *Chinese Journal of Physics* (2017), doi: 10.1016/j.cjph.2017.02.020

Highlights

- Effects of Lorentz force and power law index, on the magneto hydrodynamic (MHD) electrically conducting power law fluid is discussed.
- The effect of Lorentz force due to Hartman number, Ha, and power law index, n, on the quantities of interest such as dimensionless velocity, temperature, friction factor and Nusselt number are discussed for different configuration geometry both for pseudoplastic and dilatant fluids.
- It has been observed that MHD and power law index has direct relationship with the heat transfer coefficient and friction factor.
- Furthermore, limiting case results obtained in this study, are comparable with the literature