Scopus

Documents

Chamkha, A.J., Dogonchi, A.S., Ganji, D.D.

Magneto-hydrodynamic flow and heat transfer of a hybrid nanofluid in a rotating system among two surfaces in the presence of thermal radiation and Joule heating

(2019) *AIP Advances*, 9 (2), art. no. 025103, . Cited 11 times.

Abstract
In this paper, the researchers explore heat transfer and magneto-hydrodynamic flow of hybrid nanofluid in a rotating system among two surfaces. The upper and lower plates of the system are assumed penetrable and stretchable, respectively. The thermal radiation and Joule heating impacts are considered. A similarity technic is applied to alter governing energy and momentum equations into non-linear ordinary differential ones that contain the convenient boundary conditions and used the Duan-Rach Approach (DRA) to solve them. Influences of assorted parameters including rotation parameter, suction/blowing parameter, radiation parameter, Reynolds number, hybrid nanofluid volume fraction, and magnetic parameter on temperature and velocity profiles are examined. Also, a correlation for the Nusselt number has been developed in terms of the acting parameters of the present study. The outcomes indicate that Nusselt number acts as an ascending function of injection and radiation parameters, as well as volume fraction of nanofluid. © 2019 Author(s).

2-s2.0-85061345134
Document Type: Article
Publication Stage: Final
Source: Scopus
Access Type: Open Access