

Documents

Sreedevi, P., Sudarsana Reddy, P., Rao, K.V.S.N., Chamkha, A.J.

Heat and mass transfer flow over a vertical cone through nanofluid saturated porous medium under convective boundary condition suction/injection
(2017) *Journal of Nanofluids*, 6 (3), pp. 478-486. Cited 1 time.

Abstract

In this paper, the impact of magnetic field, thermal radiation, Brownian motion, thermophoresis, thermal radiation, suction/injection, and first order chemical reaction on MHD boundary layer heat and mass transfer inherent of over a vertical cone through nanofluid saturated porous medium under the convective boundary condition with suction/injection is numerically criticized. The transformed boundary layer equations for momentum, temperature and concentration subject to the sophisticated boundary conditions are solved numerically by using an optimized, dynamic and extensively validated Finite element method. The sway of various pertinent parameters on hydrodynamic, thermal and solutal boundary layers is cognized and the results are displayed graphically. Furthermore, the value of local skin-friction coefficient, rate of temperature and rate of concentration is also inspected for various values of non-dimensional parameters and the results are shown in tabular form. The comparison of present results with existing results shows good agreement. © 2017 by American Scientific Publishers All rights reserved.

2-s2.0-85046413643

Document Type: Article

Publication Stage: Final

Source: Scopus