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RamReddy, C., Murthy, P.V.S.N., Rashad, A.M., Chamkha, A.J.

Soret effect on stagnation-point flow past a stretching/shrinking sheet in a nanofluid-saturated non-Darcy porous medium
(2016) *Special Topics and Reviews in Porous Media*, 7 (3), pp. 229-243. Cited 7 times.

Abstract
The significance of the Soret effect on the boundary-layer stagnation-point flow past a stretching/shrinking sheet in a nanofluid-saturated non-Darcy porous medium is investigated in this study. The nanofluid-saturated porous medium is considered by incorporating the Brownian motion and thermophoresis effects. A similarity transformation is used to reduce the governing fluid flow equations into a set of differential equations and then solved numerically by an accurate implicit finite-difference method. The flow; temperature; concentration and nanoparticle concentration fields; skin friction coefficient; and heat, mass, and nanoparticle mass transfer rates are affected by the complex interactions among the various physical parameters involved in the analysis. These profiles are illustrated graphically in order to reveal interesting phenomena. © 2016 by Begell House, Inc.

2-s2.0-85014611431
Document Type: Article
Publication Stage: Final
Source: Scopus