عنوان مقاله:

MHD stagnation point flow of Carreau nanofluid over a radially stretching sheet

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خلاصه مقاله:

The numerical investigation on the flow of Carreau nanofluid past a radially stretching sheet close to a stagnation point along with convective boundary conditions has been considered. Moreover, the radiation effects and magnetic field are examined. In addition to this, the effects of heat generation/absorption are also explored. The conversion of non-linear partial differential equations describing the proposed flow problem to a set of ordinary differential equations has been carried out by employing appropriate similarity transformations. The numerical solution of the proposed flow equations is derived by the shooting method. The impact of pertinent flow parameters on the non-dimensional velocity, temperature and concentration profiles have been illustrated via tables and graphs. The limiting case of the present study affirms that the obtained numerical results reflect a very good agreement with those from open literature.

کلمات کلیدی:

Carreau nanofluid, heat generation/absorption, thermal radiation, MHD, Stagnation point, radially stretching sheet