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عنوان مقاله:

Free Convection of Micropolar Fluid over an Infinite Inclined Moving Porous Plate

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خلاصه مقاله:

The present paper analyzes free convective heat and mass transfer of non-conducting micropolar fluid flow over an infinitely inclined moving porous plate in the presence of heat source and chemical reaction. Moreover, the effect of thermal radiation is also taken care of in the same study. The present investigation is relevant to the fabrication system in industries corresponding to the materials composed with high-temperature. Similarity technique is adopted with similarity variable to transform the non-dimensional form of the partial differential equations into ordinary differential equations. To get the approximate solution of these transformed complex nonlinear set of ODEs we have employed fourth order Runge–Kutta method in conjunction with shooting technique. The validation of the present result as well as critical issues is addressed in the discussion section refereeing to the previously published work as a particular case. The behavior of physical parameters governs the flow phenomena are displayed via graphs and .tables

کلمات کلیدی:

Micropolar Fluid, Free convection, Inclined plate, Heat source/sink, Chemical reaction, Runge-Kutta method

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