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Mhd free convective flow past an impulsively moving vertical plate with ramped heat flux through porous medium in the presence of inclined magnetic field

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Abstract
A theoretical investigation of unsteady hydromagnetic free convection flow with heat and mass transfer of a viscous, incompressible, electrically conducting, optically thick radiating and chemically reactive fluid near an impulsively moving vertical plate with ramped heat flux through fluid saturated porous medium in the presence of inclined magnetic field is carried out. Exact solutions of the governing equations for fluid velocity, fluid temperature and species concentration are obtained by Laplace transform technique. The expressions for the skin-friction, rate of mass transfer at the plate and plate temperature are also derived. Numerical results for fluid velocity, fluid temperature and species concentration are displayed graphically whereas those of skin-friction, rate of mass transfer at the plate and plate temperature are presented in tabular form for various values of pertinent flow parameters. It is found that fluid flow is accelerated/retarded by varying the angle of inclination of magnetic field. © 2016, Global Digital Central. All rights reserved.

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