

Double diffusion development on MHD Unsteady Heat and Mass Transfer of Prandtl Nanofluid across a convectively heated stretching sheet in the existence of chemical reaction and thermal radiation

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Abstract: The current research work aimed to analyze the heat and mass transfer of MHD unsteady Prandtl nanofluid flow onto a convectively heated stretching sheet in the existence of chemical reaction along with thermal radiation and double diffusion effects. The mathematical modeling of the physical situation contains system of non-linear PDE's which are converted into ODE's with the help of symmetry group techniques. The influenced of non-dimensional parameter's on the velocity, the concentration and the temperature profile is illustrated graphically. The outcomes of the study are discussed in detail along with their physical elucidation.