JOULE HEATING EFFECT ON ENTROPY GENERATION IN MHD MIXED CONVECTION FLOW OF CHEMICALLY REACTING NANOFLUID IN A VERTICAL CHANNEL

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Abstract In this article the laminar mixed convective flow of an incompressible chemically reacting nanofluid in vertical channel has been investigated by considering Joule heating effect. The nonlinear governing equations are non-dimensionalized and then solved by using HAM. The entropy generation rate and Bejan number are calculated numerically. The effect of magnetic parameter, Joule heating, Brinkman number and chemical reaction parameters on thedimensionless velocity, temperature, nanoparticle concentration, entropy generation and Bejan number are investigated and represented geometrically.