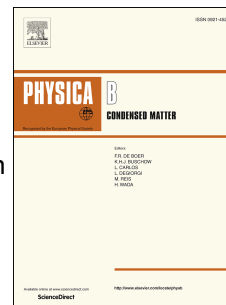


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Nonlinear radiative heat flux and heat source/sink on entropy generation minimization rate

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Abstract: Entropy generation minimization in nonlinear radiative mixed convective flow towards a variable thicked surface is addressed. Entropy generation for momentum and temperature is carried out. The source for this flow analysis is stretching velocity of sheet. Transformations are used to reduce system of partial differential equations into ordinary ones. Total entropy generation rate is determined. Series solutions for the zeroth and mth order deformation systems are computed. Domain of convergence for obtained solutions is identified. Velocity, temperature and concentration fields are plotted and interpreted. Entropy equation is studied through nonlinear mixed convection and radiative heat flux. Velocity and temperature gradients are discussed through graphs. Meaningful results are concluded in the final remarks.

Keywords: Entropy generation; Heat source/sink; Nonlinear mixed convection; Nonlinear thermal radiation; Bejan number.

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