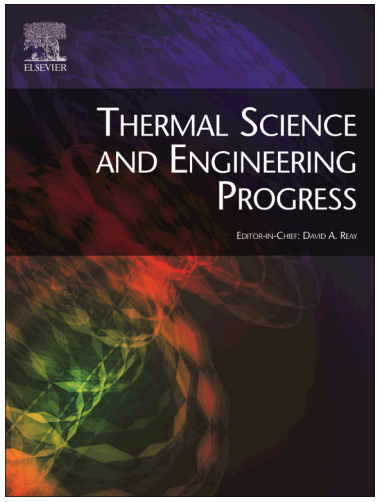

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Three dimensional flow of Maxwell fluid with suspended nanoparticles past a bidirectional porous stretching surface with thermal radiation

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Abstract

This article concerned with the three-dimensional flow fills the porous space bounded by a bidirectional stretching sheet with non-linear thermal radiation and heat source/sink. Maxwell fluid model is accounted as a working liquid. The imposed conditions for temperature and nanoparticle concentration are convective type. The self-similar forms of equations are obtained by the implementation of similarity variables. The solutions are computed via shooting algorithm with fourth-fifth-order Runge-Kutta-Fehlberg procedure. Comparison of obtained results with the known numerical solution is made and examined an excellent agreement. It is noted that the role of Brownian motion in temperature and heat transfer rate is significant. The results reveal