

MHD Casson nano fluid over a nonlinear penetrable elongated sheet with thermal radiation and chemical reaction

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Abstract

Consider a steady flow in two-dimensional of a viscous, incompressible Casson nano liquid over a nonlinear penetrable elongated sheet with radiation and chemical reaction. The Casson liquid rheological model is used to explain the non-Newtonian liquid attributes. Similarity variables are utilized to evaluate the governing flow model into set of nonlinear total differential equations. The outcomes of the flow equations were gotten by using Runge-Kutta alongside the shooting techniques. In other to explain the physics of the problem, impact of flow parameters are presented in graphs while computations on engineering curiosity are presented in table. Ahike in the Casson liquid term is observed to degenerate the fluid velocity alongside the momentum layer thickness. The impact of the imposed magnetic is felt by decreasing the velocity owing to the Lorentz force

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