

Comment

Comment on Vishalakshi et al. MHD Hybrid Nanofluid Flow over a Stretching/Shrinking Sheet with Skin Friction: Effects of Radiation and Mass Transpiration. *Magnetochemistry* 2023, 9, 118

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1. First Error

In Figure 1, in [1], it is clearly shown that the x -axis is horizontal and the y -axis is vertical. The horizontal(u) momentum Equation (2) in [1] is as follows:

$$u \frac{\partial u}{\partial x} + v \frac{\partial u}{\partial y} = \nu_{hnf} \frac{\partial^2 u}{\partial y^2} + \vec{g} \beta (T - T_{\infty}) - \frac{\sigma_{hnf} B_0^2}{\rho_{hnf}} \sin^2(\tau) u \quad (1)$$

It is well known in Physics that gravity acts in the vertical direction. Therefore, Equation (1) is incorrect because the gravity term $\vec{g} \beta (T - T_{\infty})$ in Equation (1) must be zero. The incorrect gravity term from Equation (1) has been transferred to dimensionless Equation (13) in [1] as $\frac{Ra_s}{Pr} \theta$ and as $\frac{Ra_s}{Pr} \lambda f_1$ in Equation (17) in [1], and these equations are incorrect. Two papers with the same error have been criticized in [2,3].



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2. Second Error

Equation (20) in [1] is as follows:

$$f(Y) = V_C + d \left(\frac{1 - e^{-\delta Y}}{\gamma} \right) \quad (2)$$

Equation (4c) in [1] is as follows:

$$T = T_{\infty} + \gamma (T_w - T_{\infty}) x \quad (3)$$

In a Physics equation, all terms must have the same units, and from Equation (3), it is found that the units of γ are $m^{-1}(\text{length})^{-1}$. In Equation (2), the parameters $f(Y)$, V_C , d , Y , δ are dimensionless, whereas γ is dimensional, and Equation (3) is incorrect.

Conflicts of Interest: The authors declare no conflicts of interest.



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