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| Title | Fully thermal radiation and electric field on magneto-hydrodynamic nanofluid convective mass transfer flow with activation energy |
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| Published Journal Name | American Institute of Physics (AIP Advances) |
| Type of Publication |  Article |
| Volume | 15 | Issue | 9 |
| Publisher | American Institute of Physics (AIP Publishing) |
| Publication Date |  22 September 2025 |
| ISSN | 2158-3226 |
| DOI | https://doi.org/10.1063/5.0277801 |
| URL | <https://www.researchgate.net/publication/395719139_Fully_thermal_radiation_and_electric_field>\_on\_magneto-hydrodynamic\_nanofluid\_convective\_mass\_transfer\_flow\_with\_activation\_energy |
| Other Related Info. |  |
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| Abstract |  |
| The chemical reaction, viscous dissipation, non-linear thermal radiation, and activation energy on MHD laminar nano fluid flow across the vertical flat plate are considered in our present study. We also considered the uniform electric field $\left(0,0,-E\_{0}\right)$which is perpendicular to $xy-$plane. By taking suitable similarity functions and variables, Prandtl boundary layer typed momentum and energy equations are changed to simultaneous ordinary nonlinear differential equations (ODEs). The numerical solutions program of Simultaneous ODEs is constructed by bvp5c (Explicit Finite Difference Codes) built in MATLAB software. The numerical results are then displayed graphically with the help of MS-excel in the form of required physical properties (velocity, temperature and concentration) for considering various parameters. Skin friction $\left(Re^{1/2}C\_{f}\right)$, Nusselt number $\left(Nu Re^{-1/2}\right)$ and Sherwood number $\left(Sh Re^{-1/2} \right)$ are provided in tabular form that is our physical interest. Validation of numerical results of the present mathematical model with previously published data are provided in table1.  |