# Heat and mass transfer flow of a viscoelastic nanofluid over a stretching/shrinking sheet with slip condition

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**Abstract.**
In this study, heat and mass transfer flow of a viscoelastic (Walter's liquid-B model) nanofluid over a stretching/shrinking sheet with slip velocity condition is considered. The governing equations for the model which is non-linear partial differential equations are first transformed by using similarity transformation. Runge-Kutta-Fehlberg (RKF) method is employed to solve the transformed ordinary differential equations. Numerical solutions are obtained for the reduced Nusselt number, the Sherwood number and the skin friction coefficient. It is found that the Walter's viscoelastic nanofluid provided the higher heat and mass transfer rate compared to the ordinary nanofluid and the presence of the velocity slip reduces the effects of the stretching parameter on the skin friction coefficient.