Title of Article: Double-diffusive convection from a permeable vertical surface under convective boundary condition in the presence of heat generation and thermal radiation.

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Abstract: We analyze the simultaneous effects of thermal and concentrations on a mixed convection boundary layer flow over a permeable surface under convective surface boundary condition in the presence of heat generation and thermal radiation. Using a similarity variable, the governing nonlinear partial differential equations have been transformed into a set of coupled nonlinear ordinary differential equations, which are solved numerically using Maple 14 which uses a fifth-sixth order Runge–Kutta–Fehlberg algorithm together with shooting method. It is seen that as buoyancy force parameter $N$ and the Biot number $Bi$ increases, the skin-friction coefficient, heat transfer rate and the mass transfer rate also increases. It is also noticed that increasing the thermal radiation and the internal heat generation parameters, it enhances the skin-friction coefficient and the mass transfer rate while it decreases the heat transfer rate at the wall surface. The heat generation parameters $\gamma$ enhances the skin friction coefficient and the mass transfer rate. Similarly, the embedded flow parameters have significant influence on the double-diffusive convection and that heat generation and radiation parameters enhances the skin-friction coefficient and mass transfer while it reduces the heat transfer rate.