

## Documents

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**Three dimensional MHD stagnation point flow of Al-Cu alloy suspended water based nanofluid with second order slip and convective heating**  
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### Abstract

**Purpose** - The paper aims to examine the boundary layers of a three-dimensional stagnation point flow of Al-Cu nanoparticle-suspended water-based nanofluid in an electrically conducting medium. The effect of magnetic field on second-order slip effect and convective heating is also taken into account.

**Design/methodology/approach** - The thermophysical properties of alloy nanoparticles such as density, specific heat capacity and thermal conductivity are computed using appropriate formula. The nonlinear parabolic partial differential equations are transformed to ordinary differential equations and solved by shooting technique.

**Findings** - The influence of compositional variation of alloy nanoparticle, nanoparticle concentration, magnetic effect, slip parameters and Biot number are presented for various flow characteristics. Interesting results on skin friction and Nusselt number are obtained for different composition of aluminium and copper. Originality/value - A novel result of the analysis reveals that impact of magnetic field near the boundary is suppressed by the slip effect. © Emerald Publishing Limited.

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