

U	stretching velocity, m. s ⁻¹
U_0	reference velocity, m. s ⁻¹
u, v	velocity components in x, y , directions, m. s ⁻¹
V	velocity at the wall, m.s ⁻¹

Greek symbols

ν	kinematic viscosity, m ² . s ⁻¹
σ	electrical conductivity of the fluid, S. m ⁻¹
ρ	fluid density, kg. m ⁻³
α	inclination angle
τ_w	surface shear rate, Pa
β	Casson fluid parameter
h_f	convective heat transfer coefficient of the fluid
k	thermal conductivity of the fluid, W. m ⁻¹ . k ⁻¹
σ^*	Stefan-Boltzman constant, W. m ⁻² . K ⁻⁴
c_p	specific at constant pressure, J.K ⁻¹ .kg ⁻¹
P	fluid pressure, Pa

μ_B	plastic dynamic viscosity of the fluid, Pa. s
g	acceleration due to gravity, m. s ⁻²
f'	velocity profiles, m. s ⁻¹
θ	temperature profile
φ	concentration profile
k^*	mean absorption coefficient, m ⁻¹
ζ	similarity variable
Γ	chemical reaction rate
λ	buoyancy parameter
δ	solatal buoyancy parameter
γ	chemical reaction parameter
β_T	coefficient of thermal expansion
β_C	coefficient of solatal expansion

Subscript

s	
w	conditions at the wall
∞	ambient condition