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NOMENCLATURE

C_1, C_2	boundary concentrations [K]
C_0	reference concentration
L	channel width [m]
g	acceleration due to gravity [m s^{-2}]
Gr_C	concentration Grashoff constant
Gr_T	thermal Grashoff constant
$H = 2L$	hydraulic diameter [m]
K	thermal conductivity
Nu_1, Nu_2	Nusselt numbers defined in (24)
p	pressure [Pa]
R_C	concentration difference ratio
Re	Reynolds number
R_T	temperature difference ratio concentration
u	dimensionless velocity component along X – axis
Sh_1 ,Sh_2	Sherwood numbers as in (25
T	temperatures [K]
T_1, T_2	boundary temperatures [K]
T_0	reference temperature
U	velocity component along X – axis [m s^{-1}]
U_0	reference velocity
X	streamwise coordinate[m]
y	dimensionless transverse coordinate
Y	transverse coordinate [m]
D	concentration diffusivity constant

Greek letters

α	concentration parameter
α_1	thermal diffusivity
θ	dimensionless temperature
Φ	dimensionless concentration
μ	dynamic viscosity [Pa s]
β_T	thermal expansion coefficient
ψ	heat generation/absorption parameter
ν	kinematic viscosity [m s^{-1}]
η	couplestress parameter
β_C	concentrationexpansion coefficient