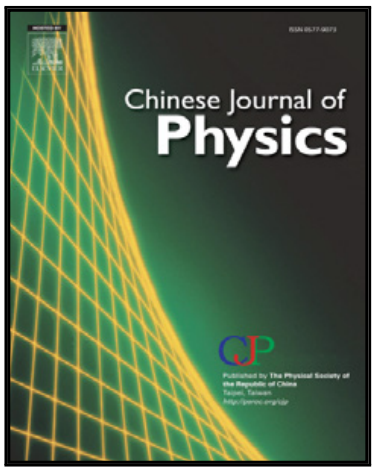

MESOSCOPIC ANALYSIS OF HEATLINE AND MASSLINE DURING DOUBLE-DIFFUSIVE MHD NATURAL CONVECTION IN AN INCLINED CAVITY

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Highlights

1. Lattice Boltzmann method is used to discretize the governing equations.
2. The heat and mass transfer rate decreases with MHD and increase with Ra.
3. The impact of Ø is maximum for higher Ra and negligible for lower Ra (10^3).
4. Le influences the mass transfer rate to increase and heat transfer to decrease.
5. The avg.Nu and Sh decreases with decreasing the N value until a critical value.