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Modeling and optimization of MHD mixed convection in a lid-driven trapezoidal cavity filled with alumina-water nanofluid: Effects of electrical conductivity models

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Highlights

- MHD mixed convection in trapezoidal cavity with nanofluid was performed.
- Different electrical conductivity models (σ) were utilized.
- As the value of the Ri enhance, discrepancy between Nu increases for different σ .
- As the value of Ha and φ enhance, discrepancy between Nu enhances for different σ .

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