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Double diffusive nanofluid flow in a duct with cavity heated from below

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Highlights

- Entropy generation due to fluid friction increases with increasing of nanoparticle volume fraction.
- Entropy generation due to heat transfer and concentration increase with increasing of nanoparticle volume fraction.
- Increasing of Buoyancy ratio enhances the convection inside the cavity. Also, increasing of Lewis number increases the convection.
- A circulation cell is formed inside the cavity with increasing of Reynolds number and domination of convection enhances with Reynolds number.
- Thermal boundary layer becomes thinner with increasing of Richardson number.

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