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A lattice Boltzmann method for axisymmetric multicomponent flows with high viscosity ratio

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Highlights

- A color-gradient LBM is developed for immiscible axisymmetric multiphase flows.The method consists of three separate operators in which axisymmetric effects are considered.
- The method is demonstrated to be accurate for a very wide range of viscosity ratios.
 Viscosity ratio is found to affect significantly growth of Rayleigh instability but have negligible effect on droplet size.

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