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Thermocapillary migration and interaction of two nondeformable drops. (English)

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Summary: A numerical study on the interaction of two spherical drops in the thermocapillary migration is presented in the microgravity environment. Finite-difference methods are adopted. The interfaces of the drops are captured by the front-tracking technique. It is found that the arrangement of the drops directly influences their migration and interaction, and the motion of one drop is mainly determined by the disturbed temperature field because of the existence of the other drop.

MSC:

76T99 Multiphase and multicomponent flows
76M20 Finite difference methods applied to problems in fluid mechanics

Full Text: DOI

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