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An implicit surface tension model for the analysis of droplet dynamics

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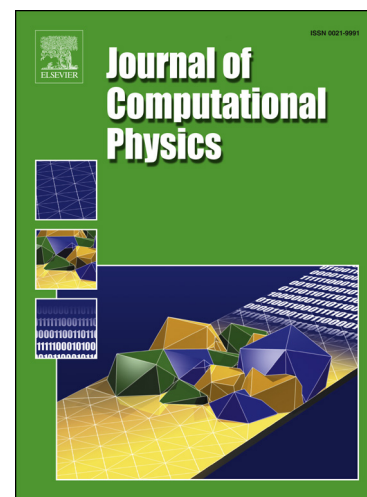
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Highlights

- An implicit numerical model for the treatment of surface tension dominated flows is proposed.
- A novel fully implicit embedded formulation for two-phase flow problems is presented.
- The model allows for an increase in the critical time step size of one to two orders of magnitude.
- Predicted results for sessile drops agree with experimental data.
- The model is used to analyze a drop-by-drop inkjet nozzles.

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