Soft Matter



CORRECTION

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Correction: Flow and clogging of capillary droplets

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The authors regret that an incorrect version of Fig. 2 was included in the original article. The correct version of Fig. 2 is presented below.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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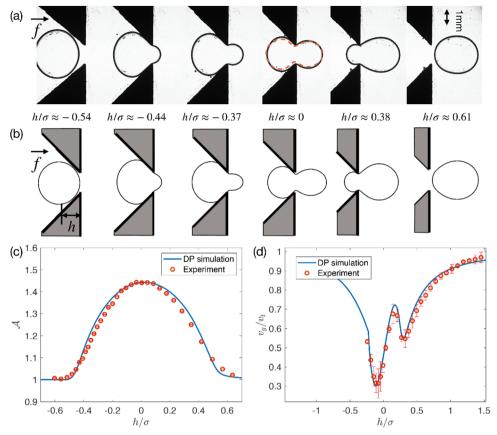


Fig. 2 Series of images of a single droplet flowing through a narrow orifice with width $w = 0.4\sigma$ from (a) oil-in-water experiments with undeformed droplet diameter $\sigma \approx 3.5$ mm and tilt angle $\theta \approx 28^{\circ}$ and (b) a DP simulation in 2D at dimensionless line tension $\Gamma = \Gamma^*$ and near-wall drag coefficient $b_0 = 10^{\circ}$ b_0^* . The scale bar indicates 1 mm. The rightward pointing arrow indicates the direction of droplet flow. Below panel (a), we provide the distances of the droplet center of mass to the orifice h at which the images are captured. We find that $\Gamma^* \approx 0.16$ and $b_0^*/b_\infty \approx 0.064$ minimize the deviation in the droplet's center of mass speed Δ_{ν} between the DP simulations and experiments. These best-fit values give $\Delta_{\nu} \approx 0.09$ and $\Delta_{\omega} \approx 0.01$. In panel (a), we overlay the shape of the droplet from the DP simulations at h = 0 (red dashed line) onto the corresponding droplet image for the experiments (black solid line). Droplet (c) shape parameter $\mathscr A$ and (d) center of mass speed in the driving direction $\nu_{\rm q}$ plotted as a function of h/σ for both experiments (open circles) and DP simulations (solid lines). We estimate the dimensionless surface tension in the experiments to be $\Gamma_{\rm exp} \approx 0.57$. The error bars for the experimental data are obtained using the standard deviation of the measured quantities from at least five different trials with one droplet.