Abstract Submitted
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Complex fluid pinch-off in bubble rafts[1] CHIN-CAHNG KUO, University of California, Irvine, SHERYLL NERY, University of California, Los Angeles, MIKE ARCINIAGA, MICHAEL DENNIN, University of California, Irvine, DEPARTMENT OF PHYSICS AND ASTRONOMY TEAM — Pinch-off processes have been investigated in two and three dimensional liquid systems. A common element of pinch-off is the existence of a well-defined scaling regime in which the minimum radius of the system decreases as a power-law in time. The exact value for the power-law depends on the dominant mechanism in the material and the dimensionality. For complex fluids, the dynamics are strongly dependent on the applied stress, rate of strain, and the inner structure of the material, which lead to interesting pinch-off behavior. Here we present the experimental results for pinch-off in bubble rafts pulled by two parallel plates on a liquid surface. Power-law behavior is observed, and we will report on the impact of pulling speed and composition on the value of the power-law exponents.

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Chin-Cahng Kuo
University of California, Irvine

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