

Movie Captions

- Movie 1

Flow field evolution for the $(J), \Phi(J)$ -rheology in the well-posed, low packing fraction ($\phi_0 = 0.35$), regime. Here the initial data is a small sinusoidal perturbation in vertical velocity. External magnetic field changing the motion pattern of a ferrofluid droplet, in oscillatory shear. A y-oriented field is turned on after three oscillation periods. Simulation parameters: $Ca = 1.00$, $\omega = 1.00$, $\lambda = 1.00$, $Ca_{mag} = 16.00$, $\zeta = 2.0$.