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Large Amplitude Oscillatory Shear near Jamming BRIAN TIGHE, Delft Univ of Technology, SIMON DAGOIS-BOHY, Leiden University, ELLAK SOMFAI, Hungarian Academy of Sciences, MARTIN VAN HECKE, Leiden University — Jammed solids such as foams and emulsions can be driven with oscillatory shear at finite strain amplitude and frequency. On a macro scale, this induces nonlinearities such as strain softening and shear thinning. On the micro scale one observes the onset of irreversibility, caging, and long-time diffusion. Using simulations of soft viscous spheres, we systematically vary the distance to the jamming transition. We correlate crossovers in the microscopic and macroscopic response, and construct scaling arguments to explain their relationships.

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