

Abstract Submitted
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Softening and Irreversibility in Jammed Solids¹ JULIA BOSCHAN,
BRIAN TIGHE, Delft Univ of Tech — Materials like foams and emulsions display
complex rheological behavior close to their jamming transition. When driven too
hard the initial linear stress-strain response breaks down and the material softens.
Using simulations of soft repulsive spheres, we characterize the softening crossover
by establishing the relevant strain scale below which linear response is valid. We
further perform shear reversal tests to investigate the interplay between proximity
to jamming and the onset of irreversibility.

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