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Nonlinear elasticity near jamming probed in bidisperse foams

ALEXANDER SIEMENS, MARTIN VAN HECKE — An unusual characteristic of the jamming transition is the difference in scaling of the bulk and shear modulus of frictionless soft particles near jamming. We probe this scaling by compressing a bidisperse foam monolayer sandwiched between a glass plate and a fluid surface. We also determine the weakly nonlinear effective bubble-bubble interactions in a 1D chain of bubbles under compression.

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