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(G*) The Pendant Drop Experiment for Aggregates of Adhesive Granular Particles

Wednesday 8 June 2022 14:00 (15 minutes)

There is interest in reproducing macroscopic continuous matter experiments with granular systems to predict their properties and explore the analogues between granular and continuum systems. The classic pendant drop experiment can be used to measure interfacial tension in liquids. Here we prepare a granular 'liquid', consisting of adhesive, frictionless, monodisperse oil droplets in an aqueous solution, and perform a pendant drop experiment to determine the effective surface tension of the granular liquid. We tune parameters such as the buoyancy and the adhesion between the granular particles and present a simple model to predict the 'granular surface tension'.

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