

Description of Additional Supplementary Files

File name: Supplementary Movie 1

Description: Parametric pumping and structure control of levitated particles. Demonstration of parametric pumping of a levitated 2-particle 'molecule', destabilizing a levitated cluster of five particles, controlling the transition between the pentagon and the cross structure, and switching between the two configurations on the fly.

File name: Supplementary Movie 2

Description: Parametric pumping and shape control of a levitated granular raft. Demonstration of parametric pumping to activate bulk vibration modes in a levitated granular raft comprising hundreds of particles, and the frequency dependence of terminal raft size after 20 pump-quench cycles with different pumping frequencies.