

## Highlighting research from the nonequilibrium physics laboratory at Nagoya University.

Classification of the reversible—irreversible transitions in particle trajectories across the jamming transition point

The reversible–irreversible (RI) transition of particle trajectories in athermal colloidal suspensions under cyclic shear deformation is an archetypal nonequilibrium phase transition. We study the RI transitions for a broad range of densities, below and above the jamming transition. We reveal that the nature of the RI transitions in the intermediate densities is very rich.



