

Abstract Submitted
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When Colloids Can Deform JIE ZHANG, CHANGQIAN YU, SUNG CHUL BAE, STEVE GRANICK, UIUC — Most colloidal systems that have been explored so far are hard-spheres, which limits their phase behavior and other physical properties to be not so rich as atomic and molecular systems. Here we present a new class of soft and deformable microgel colloidal particles with thermo-sensitivity and ability to display autonomous oscillation when driven by special fuels. The deformability, size changes and structure formation of micron-sized poly(NiPAM) particles and dumbbells of polystyrene-poly(NiPAM) interpenetrating networks can be imaged in situ and analyzed. Other mechanical and other physical properties attributable to deformability can be measured.

Jie Zhang
UIUC

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