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Transfer of colloidal particles using the reversible buckling patterns. DONG CHOON HYUN, UNYONG JEONG, Department of Material Science and Engineering, Yonsei University, Seoul, Korea — Buckling or wrinkling is a well-known phenomenon. It is realized by releasing strain applied to a hard film on an elastomer substrate. Strain engineering allows the buckling to have the highly ordered and regular wavy surfaces. The amplitude of the buckling can be reversibly tuned by a cycle of applying and releasing strain. This reversible nature of buckling was used to deposit the spherical colloids in the trenches of the wavy patterns and transfer the colloids to flat surfaces. The colloidal deposition and transfer was repeatedly carried out to fabricate identical patterns of colloidal assembly. In this presentation, we will demonstrate complex colloidal patterns (hydrogels colloids, silica, Au nanoparticles, magnetic nanoparticles) transferred from the buckled surfaces.

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