Shape Memory Behaviors of Micro- and Nano-Particles LEWIS
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of shape memory polymers to be programmed into temporary shapes and recovery their original geometries have been well investigated at the macro-scale. Here,
we examine the shape memory behaviors of micro- and nano-particles. The programming of these particles with nanoimprint lithography and the recovery of these
particles were systematically investigated. Particularly, the overall shape memory
effect is influenced by the substrate-particle adhesion, mechanical constraints of the
metal capping layer, particle sizes, and programing conditions. By controlling these
factors, particles (including Janus particles) with systematically varying morphology
and properties can be achieved.

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