

Abstract Submitted  
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**Fabrication**

**of Uniform Janus Microparticles by Photopolymerization-Driven Phase Separation and their Asymmetric Hybridization with Metal Nanoparticles** JANGWOO CHO, JEONG WON KIM, JIN WOONG KIM, Hanyang Univ —

In the field of colloid science, there is growing interest in synthesis of anisotropic particles, since they are desirable for controlling light scattering. These anisotropic particles have been developed by using sophisticated techniques, including clusterization, stamping, microfluidics, and controlled nucleation and precipitation. This study introduces a facile approach for fabrication of uniform Janus microparticles with anisotropic phases as well as selected surface chemistry. The technique we employed to synthesize these microparticles was the seeded swelling and polymerization method, in which complete compartmentalization of the particles into two distinct phases occurred upon polymerizing the monomer-swollen droplets. Then, we patched nanoparticles, such as gold nanoparticles and magnetic nanoparticles, onto one of the compartmentalized phases of the Janus microparticles. Finally we demonstrate that these asymmetrically hybridized Janus microparticles are of great importance and play a role in the designated colloidal 2D array.

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