Synthesis and Self-assembly of Janus and Patchy Particles by Lift-up Microcontact Printing

SHAN JIANG, STEVE GRANICK, University of Illinois at Urbana and Champaign — Janus and patchy particles were synthesized by a simple and novel lift-up microcontact printing method. The geometry of the particles is revealed by both optical fluorescence microscopy and scanning electron microscopy. It is demonstrated that the Janus balance (geometry) of the particles can be easily fine tuned. Interesting and unique cluster structures were self-assembled from particles synthesized by this method. The method allows particles not only of divalent but also of trivalent geometry to be formed in large quantity.