

Fabrication of Janus-Type Polymer Latexes

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Abstract

The fabrication of polymer latexes with a Janus-type morphology will be described. When the Janus morphology is targeted amphiphilic, these complex colloids potentially show interesting self-assembly features. Known fabrication procedures, however, have the shortcoming that they are difficult to scale-up. We now report a versatile route towards the fabrication of amphiphilic Janus polymer latexes using a combination of entropic phase separation of swollen cross-linked microgels and living radical polymerization, i.e. SET-ATRP. The self-assembly behavior of these Janus particles in dilute aqueous solutions is studied from a theoretical viewpoint.