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Amphiphilic Soft Janus Particles as Interfacial Stabilizers WENDA WANG, SUNNY NIU, CHRIS SOSA, ROBERT PRUDHOMME, RODNEY PRIESTLEY, Princeton Univ, PRIESTLEY POLYMER GROUP TEAM, PRUD'HOMME RESEARCH GROUP TEAM — Janus particles, which incorporate two or more "faces" with different chemical functionality, have attracted great attention in scientific research. Amphiphilic Janus particles have two faces with distinctly different hydrophobicity. This can be thought of as colloidal surfactants. Theoretical studies on the stabilization of emulsions using Janus particles have confirmed higher efficiency. Herein we synthesize the narrow distributed amphiphilic polymeric Janus particles via Precipitation-Induced Self-Assembly (PISA). The efficiency of the amphiphilic Janus particles are tested on different oil/water systems. Biocompatible polymers can also be used on this strategy and may potentially have wide application for food emulsion, cosmetics and personal products.

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