

Supporting Information

Janus Dimers from Tunable Phase Separation and Reactivity Ratio

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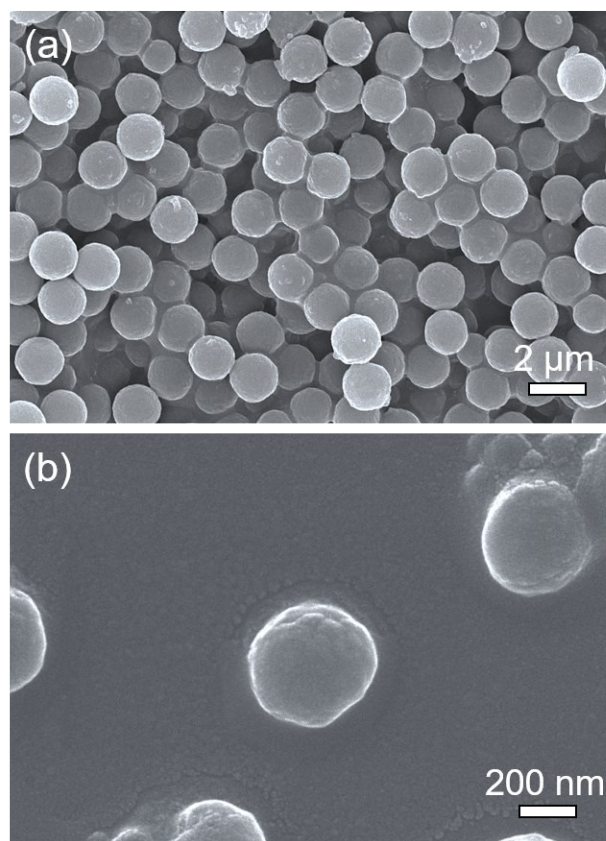


Figure S1. Dispersion polymerization of GMA with 20% MMA.

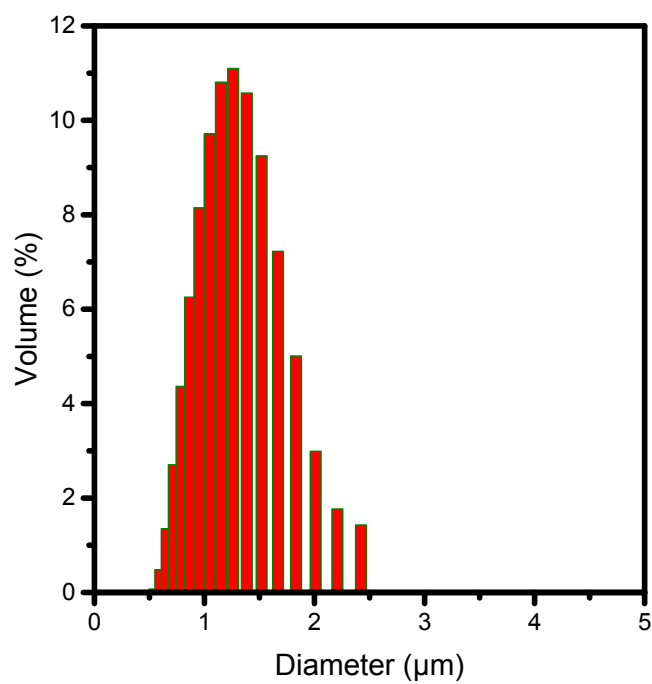


Figure S2. DLS size distribution of PGMA/PSMA Janus dimers.

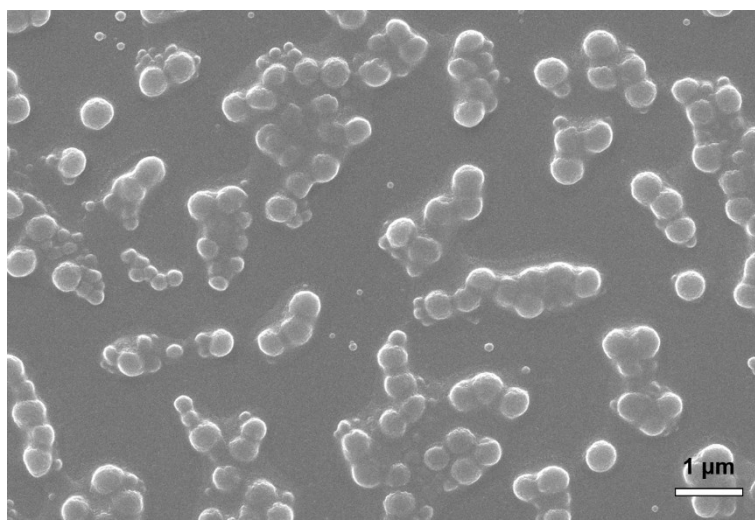


Figure S3. SEM image of spherical PGMA/PS particles prepared by dispersion polymerization of GMA and St at 80 °C.

Table S1. The reactivity ratios of different monomers calculated by Q-e Scheme.

Monomer Group-1	Q	e	Reactivity ratio
GMA	1.03	0.57	1.29
SMA	0.87	0.72	0.76
Monomer Group-2	Q	e	Reactivity ratio
GMA	1.03	0.57	0.47
St	1	-0.8	0.32
Monomer Group-3	Q	e	Reactivity ratio
SMA	0.87	0.72	0.29
St	1	-0.8	0.34
Monomer Group-4	Q	e	Reactivity ratio
GMA	1.03	0.57	1.26
MMA	0.74	0.4	0.77
Monomer Group-5	Q	e	Reactivity ratio
St	1	-0.8	0.52
MMA	0.74	0.4	0.46

Table S2. The difference of solubility parameters of polymer groups.

Polymer Groups	PGMA- PMMA	PGMA- PS	PGMA- PSMA	PS- PSMA	PS- PMMA
$\Delta\delta$	0.2	1.1	2.9	1.8	1.3

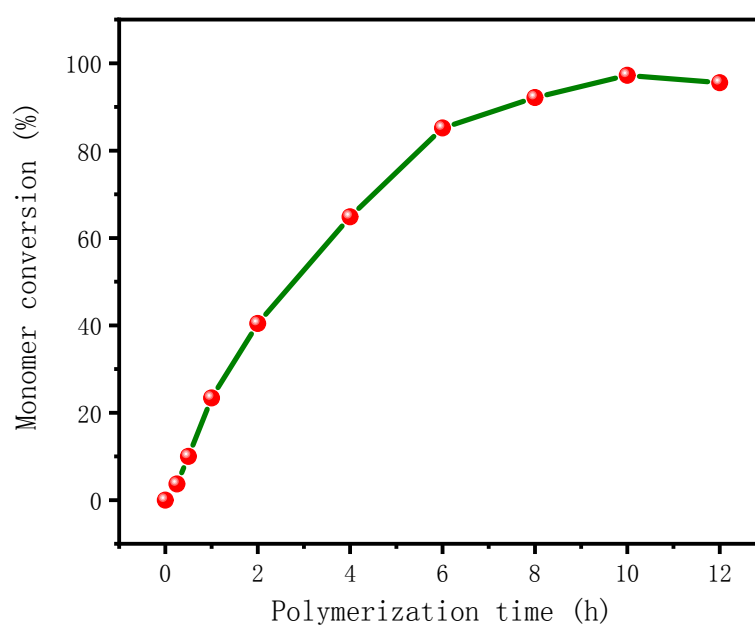


Figure S4. The monomer conversion of GMA-SMA dispersion polymerization.

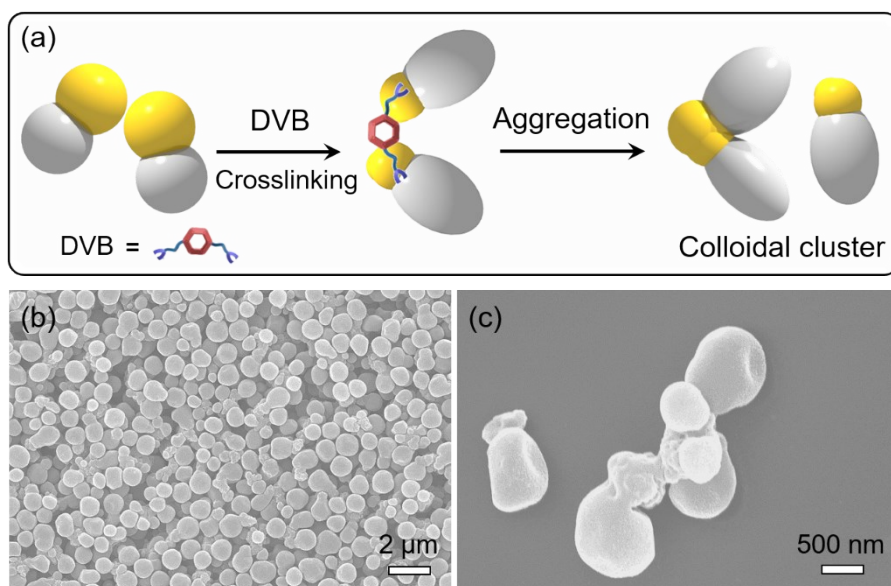


Figure S5. Fabrication of colloidal clusters. (a) Schematic illustration of the formation of colloidal clusters (b-c) SEM images of PGMA/PSMA crosslinked particles with 1.0% DVB.

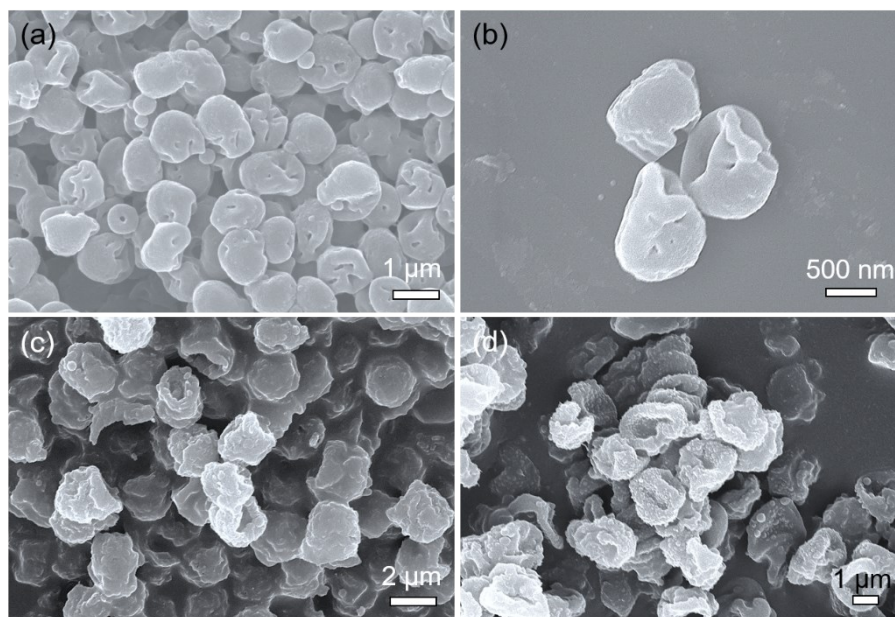


Figure S6. Seeded emulsion polymerization of PGMA/PSMA Janus dimers. (a,b) SEM images of swollen Janus particles. (c) Polymerized PGMA/PSMA@PSt particles and (d) PGMA/PSMA@P(St-MAA) particles.