Supporting Information

Synthesis of fluorinated nanoparticles via RAFT dispersion Polymerization-Induced Self-Assembly using Fluorinated macro-RAFT agents in supercritical carbon dioxide

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Figure S1. Time dependence of monomer conversion (A) and ln([M]₀/[M]) (B) of the DFMA polymerization under different DFMA/CDB/AIBN ratios.

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Figure S2. GPC traces of the fluorinated macro-RAFT PDFMA-CDB with different chain lengths

Figure S3. GPC traces of the PDFMA$_{15}$-CDB homopolymer and PDFMA$_{15}$-b-PMMA$_n$ diblock copolymers.
Figure S4. GPC traces of the PDFMA$_{15}$-CDB homopolymer and PDFMA$_{55}$-$b$-PMMA$_n$ diblock copolymers.

Figure S5. SEM images of the PDFMA$_{32}$-$b$-PMMA$_x$ diblock nanoparticles prepared with RAFT dispersion in sc CO$_2$ using PDFMA$_{32}$-CDB as a macro-RAFT agent. $D_n$ = Particle size. $D_w/D_n$ = Size distribution. (A) PDFMA$_{32}$-$b$-PMMA$_{112}$, $D_n$ and $D_w/D_n$ values could not be identified by SEM images; (B) PDFMA$_{32}$-$b$-PMMA$_{341}$, $D_n$=165 nm, $D_w/D_n$=1.22; (C) PDFMA$_{32}$-$b$-PMMA$_{545}$, $D_n$=152 nm, $D_w/D_n$=1.14; (D) PDFMA$_{32}$-$b$-PMMA$_{774}$, $D_n$=153 nm, $D_w/D_n$=1.06)
Figure S6. SEM images of the PDFMA$_{55}$-b-PMMA$_x$ diblock nanoparticles prepared with RAFT dispersion in sc CO$_2$ using PDFMA$_{55}$-CDB as a macro-RAFT agent. $D_n$ = Particle size. $D_w/D_n$ = Size distribution: (A) PDFMA$_{55}$-b-PMMA$_{91}$, $D_n$ and $D_w/D_n$ values could not be identified by SEM images.; (B) PDFMA$_{55}$-b-PMMA$_{365}$, $D_n$ and $D_w/D_n$ values could not be identified by SEM images; (C) PDFMA$_{55}$-b-PMMA$_{493}$, $D_n$=81 nm, $D_w/D_n$=1.09; (D) PDFMA$_{55}$-b-PMMA$_{862}$, $D_n$=102 nm, $D_w/D_n$=1.08)