Electronic Supplementary Material (ESI) for RSC Advances.

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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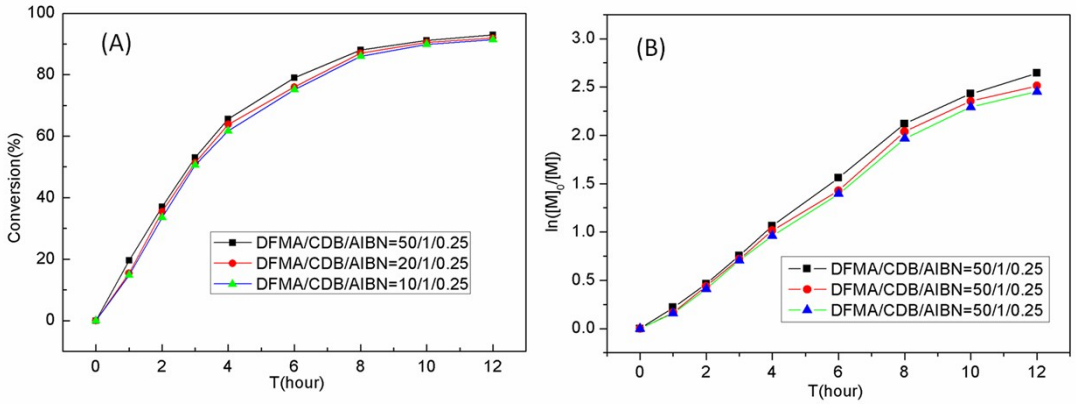

Figure S1. Time dependence of monomer conversion (A) and $\ln([M]_0/[M])$ (B) of the DFMA polymerization under different DFMA/CDB/AIBN ratios.

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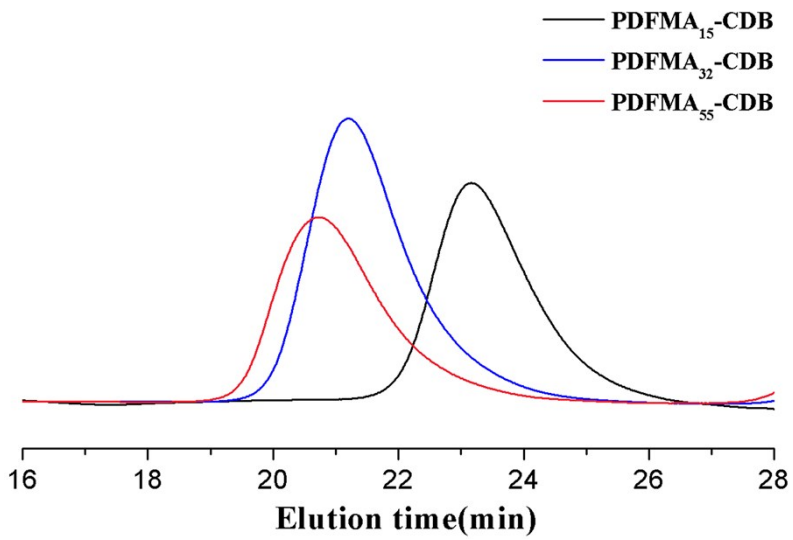

Figure S2. GPC traces of the fluorinated macro-RAFT PDFMA-CDB with different chain lengths

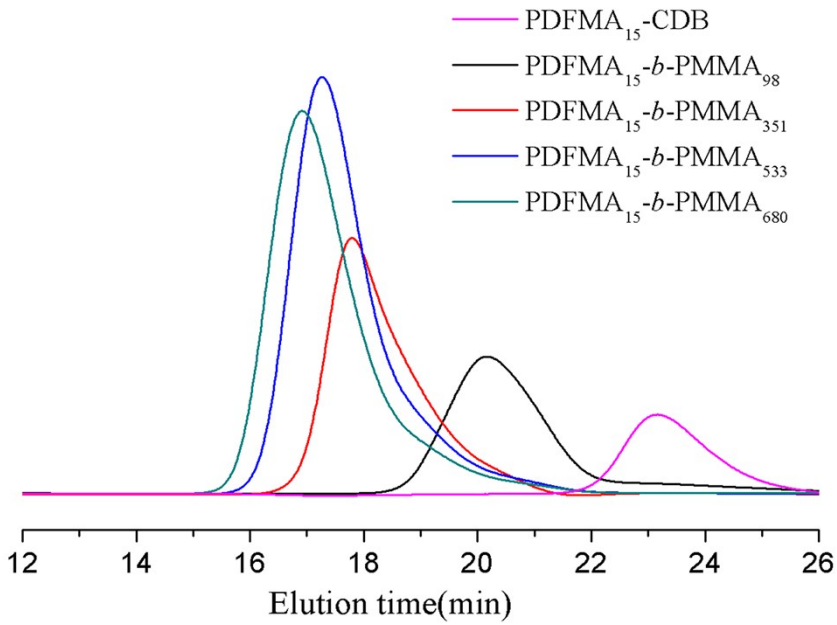

Figure S3. GPC traces of the $PDFMA_{15}$-CDB homopolymer and $PDFMA_{15}$-*b*-$PMMA_n$ diblock copolymers.

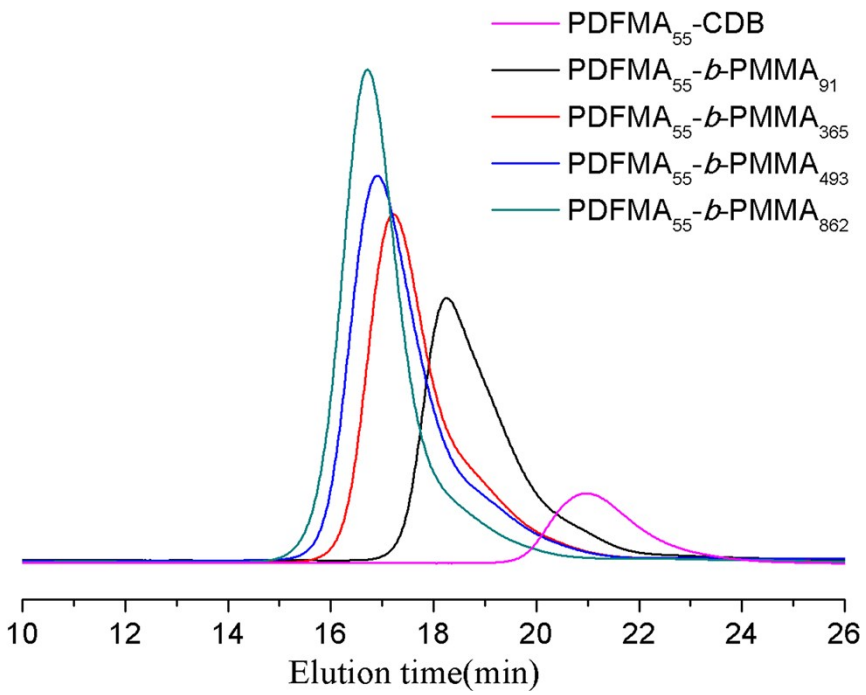

Figure S4. GPC traces of the $PDFMA_{15}$-CDB homopolymer and $PDFMA_{55}$-*b*-$PMMA_n$ diblock copolymers.

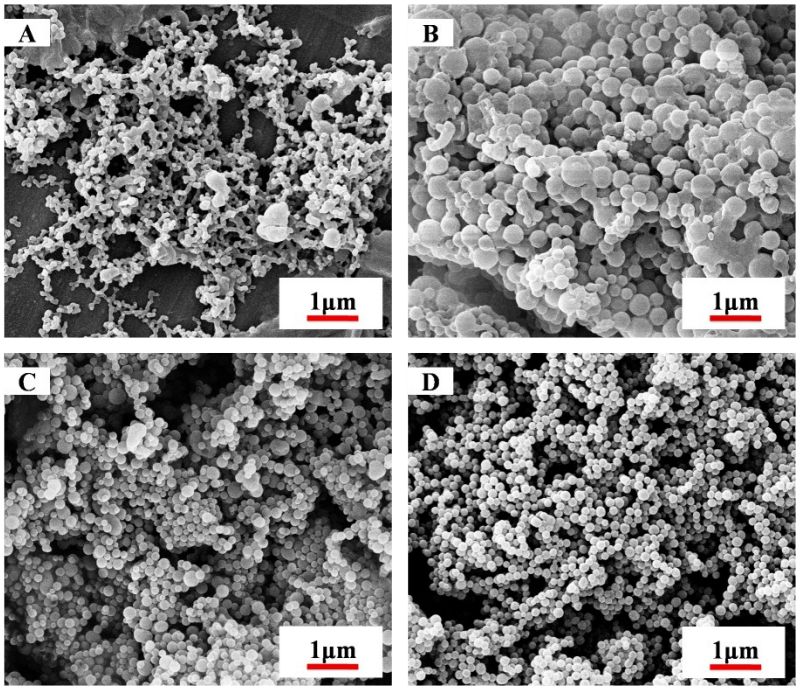

Figure S5. SEM images of the $PDFMA_{32}$-*b*-$PMMA_x$ diblock nanoparticles prepared with RAFT dispersion in sc CO_2 using $PDFMA_{32}$-CDB as a macro-RAFT agent. D_n =Particle size. D_w/D_n =Size distribution. (A) $PDFMA_{32}$-*b*-$PMMA_{112}$, D_n and D_w/D_n values could not be identified by SEM 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)

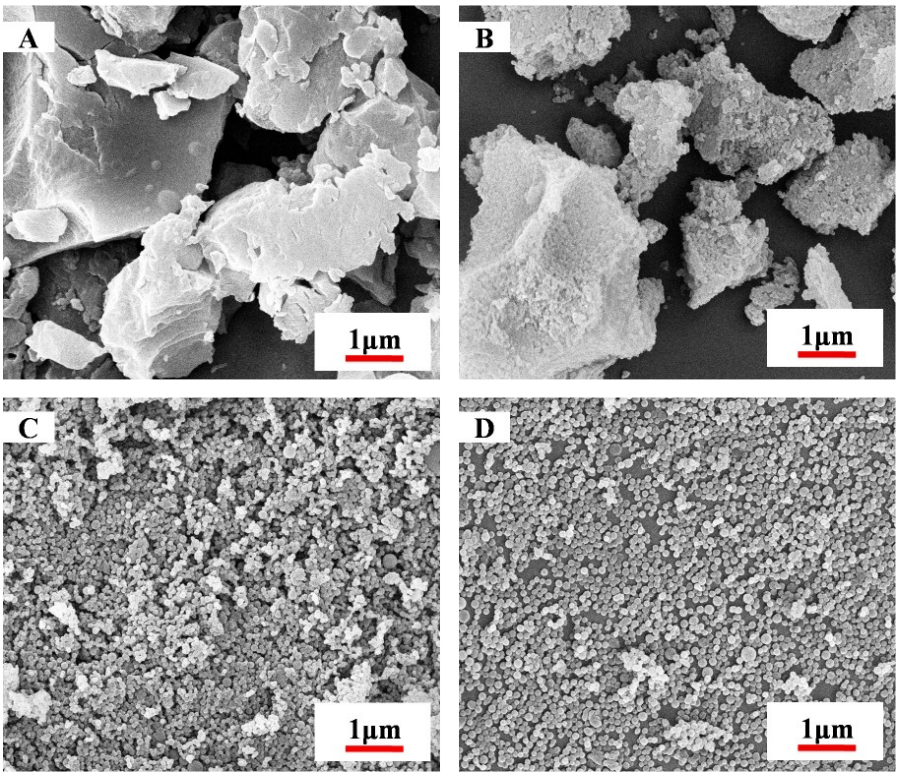

Figure S6. SEM images of the PDFMA$_{55}$-*b*-PMMA$_x$ diblock nanoparticles prepared with RAFT dispersion in sc CO_2 using PDFMA$_{55}$-CDB as a macro-RAFT agent. D_n =Particle size. D_w/D_n =Size distribution: (A) PDFMA$_{55}$-*b*-PMMA$_{91}$, D_n and D_w/D_n values could not be identified by SEM images.; (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)