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## Topological Engineering of the Amphiphilic Copolymer via RAFT Dispersion Copolymerization of Benzyl Methacrylate and 2-(Perfluorooctyl)ethyl Methacrylate for Polymeric Assemblies with Tunable Nanostrucrtures

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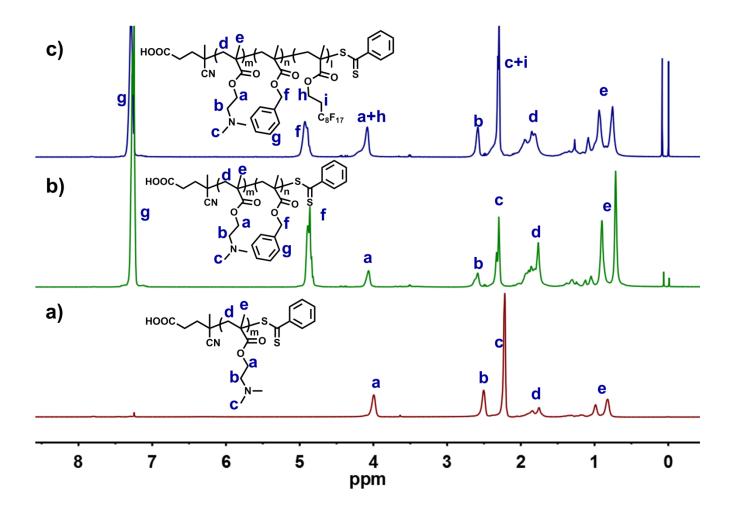
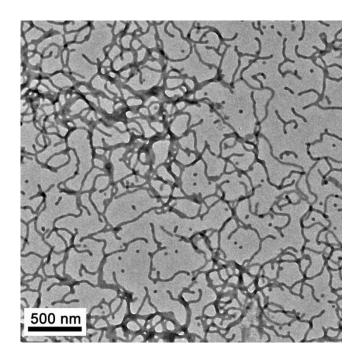
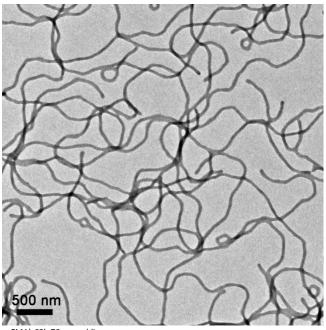


Fig. S1 a) <sup>1</sup>H NMR spectra of a) PDMA<sub>42</sub>, b) PDMA-*b*-PBzMA-35k, and c) PDMA-*b*-P(BzMA-*co*-FMA)-35k-50. Solvent: CDCl<sub>3</sub> for PDMA<sub>42</sub> and PDMA-*b*-PBzMA-35k; CDCl<sub>3</sub>/CF<sub>2</sub>CICFCl<sub>2</sub> (1/1, v/v) for PDMA-*b*-P(BzMA-*co*-FMA)-35k-50.



**Fig. S2** TEM image of PDMA-*b*-P(BzMA-*co*-FMA)-35k-50 assemblies.



**Fig. S3** TEM image of PDMA-*b*-P(BzMA-*co*-FMA)-63k-70 assemblies.

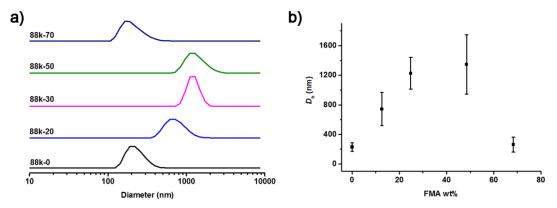


Fig. S4 a) DLS profiles and b) number-averaged diameters of the PDMA-b-P(BzMA-co-FMA)-88k-x (x = 0, 20, 30, 50, 70) assemblies.

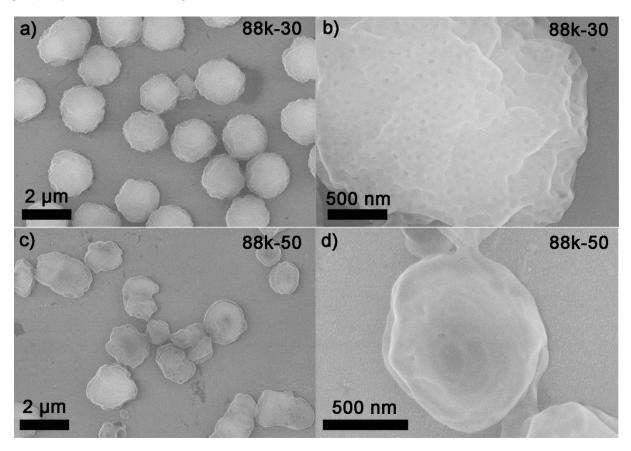
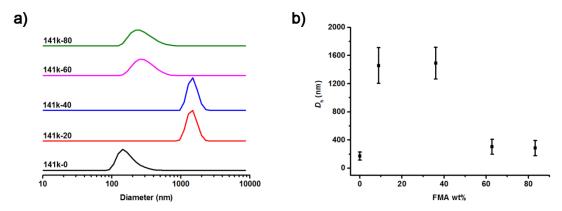


Fig. S5 SEM images of a), b) PDMA-b-P(BzMA-co-FMA)-88k-30 and c), d) PDMA-b-P(BzMA-co-FMA)-88k-50 assemblies.



 $\textbf{Fig. S6} \ a) \ DLS \ profiles \ and \ b) \ number-averaged \ diameters \ of \ the \ PDMA-b-P(BzMA-co-FMA)-141k-x \ (x=0,20,40,60,80) \ assemblies.$ 

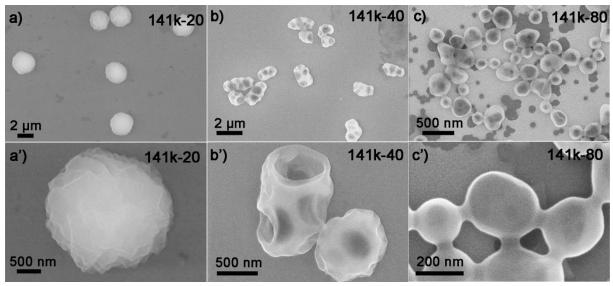


Fig. S7 SEM images of a) a') PDMA-b-P(BzMA-co-FMA)-141k-20, b) b') PDMA-b-P(BzMA-co-FMA)-141k-40 and c) c') PDMA-b-P(BzMA-co-FMA)-141k-80 assemblies.