## Fabrication of POSS-embedded supramolecular hyperbranched polymers with multi-responsive morphology transitions

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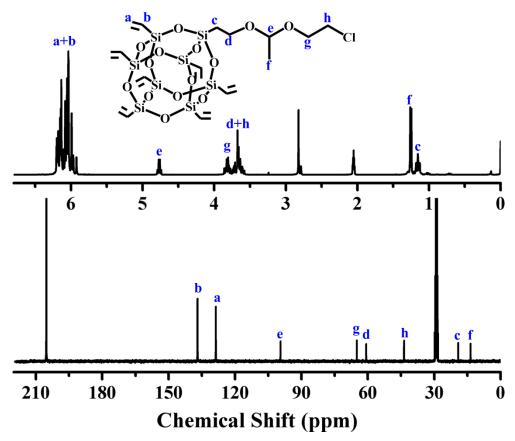


Fig. S1 <sup>1</sup>H and <sup>13</sup>C NMR spectra of the Cl-acetal-POSS-(vinyl)<sub>7</sub> at CDCl<sub>3</sub>.

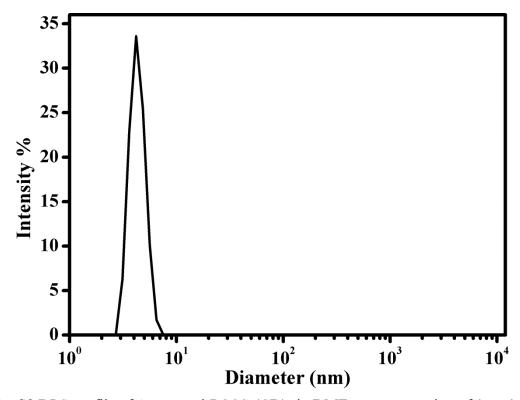
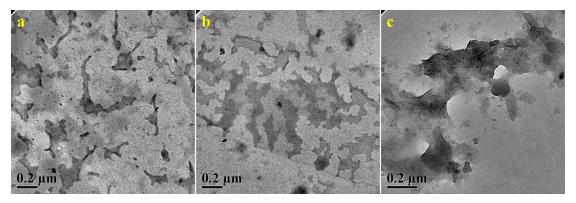


Fig. S2 DLS profile of Azo-acetal-POSS-(CD)<sub>7</sub> in DMF at concentration of 1 mg/mL.



**Fig. S3** TEM images of the POSS-SSHPs formations at the concentration of (a) 12, (b) 15 and (c) 18 mg/mL in aqueous solutions.

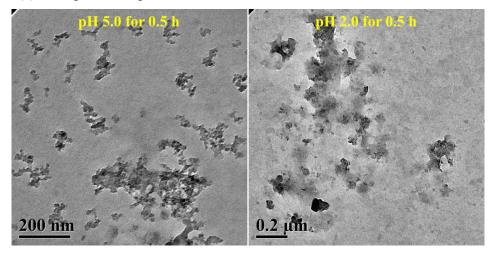
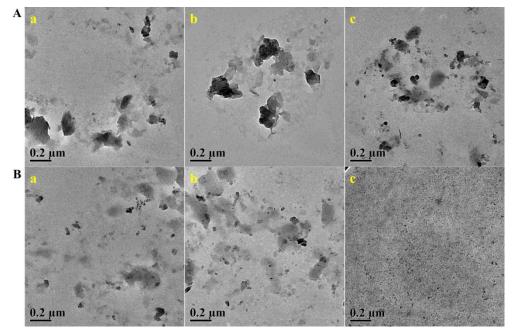


Fig. S4 TEM images of the nanoparticles after various treatment conditions.



**Fig. S5** TEM images of the self-assemblies (10 mg/mL) in (a) acetone/ $H_2O$ , (b) MeOH/ $H_2O$  and (c) DMF/ $H_2O$  mixtures after treatment of (A) pH 2.0 for 0.5 h and (B) UV irradiation for 5 min.