

Supplemental Information

Stimuli-Responsive Microgels Formed by Hyperbranched Poly(ether amine) Decorated with Platinum Nanoparticles

Rui Wang, Xuesong Jiang*, Bing Yu, Jie Yin

School of Chemistry & Chemical Technology, State Key Laboratory for Metal Matrix Composite

Materials, Shanghai Jiao Tong University

Shanghai 200240, People's Republic of China.

Tel.: +86-21-54743268; Fax: +86-21-54747445. E-mail: ponygle@sjtu.edu.cn

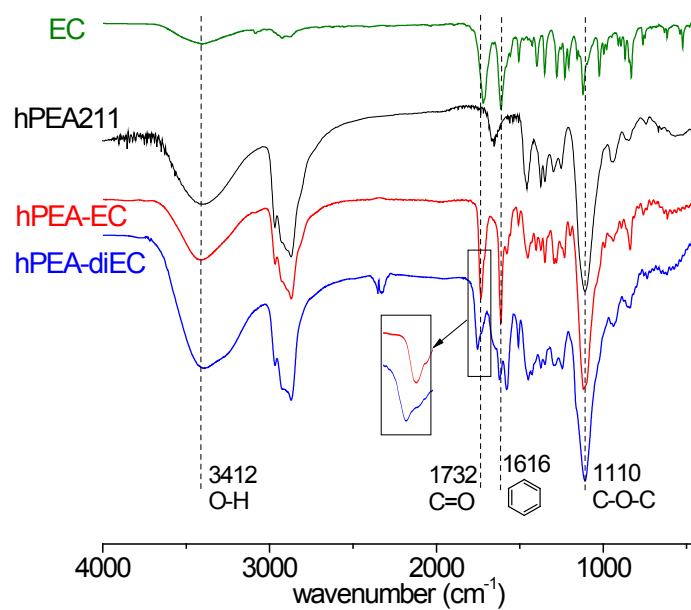


Fig. S1. FT-IR spectra of (A) EC, (B) hPEA, (C) hPEA-EC and (D) hPEA-diEC.

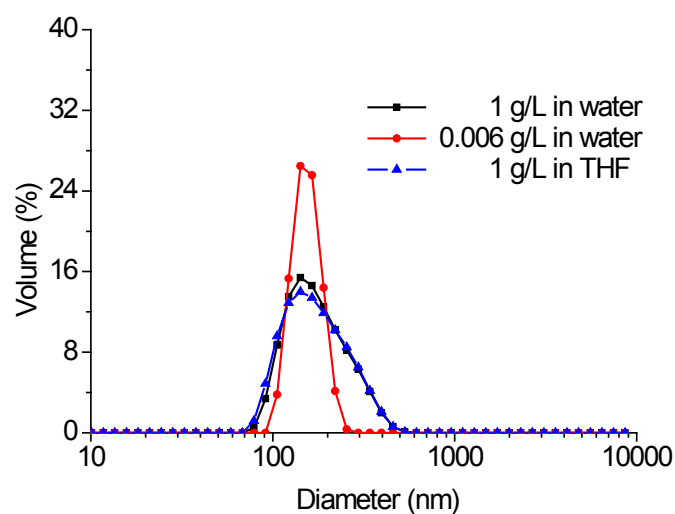


Fig. S2. Volume-weighted size distribution of crosslinked hPEA-diEC aqueous and THF solution obtained by DLS at 25 °C.

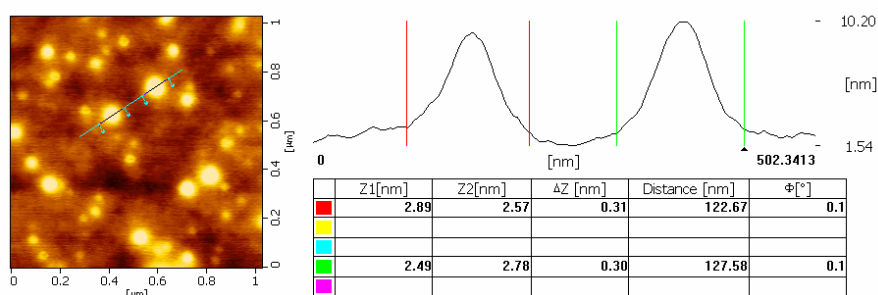


Fig. S3. AFM image and profile data of hPEA-diEC microgels at room temperature ($c=1$ g/L).

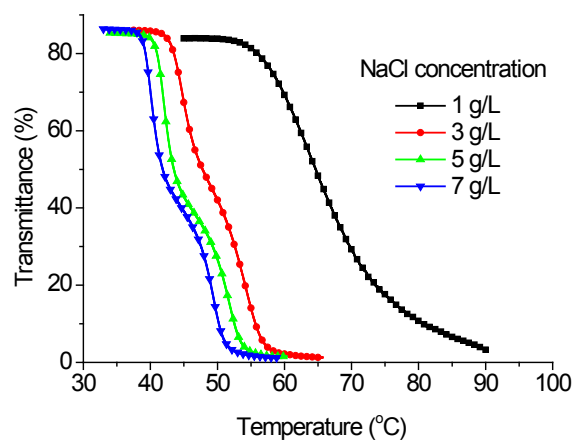


Fig. S4. Optical transmittance at 500 nm vs temperature curves for 3 g/L hPEA-diEC in aqueous solution at different NaCl concentration.

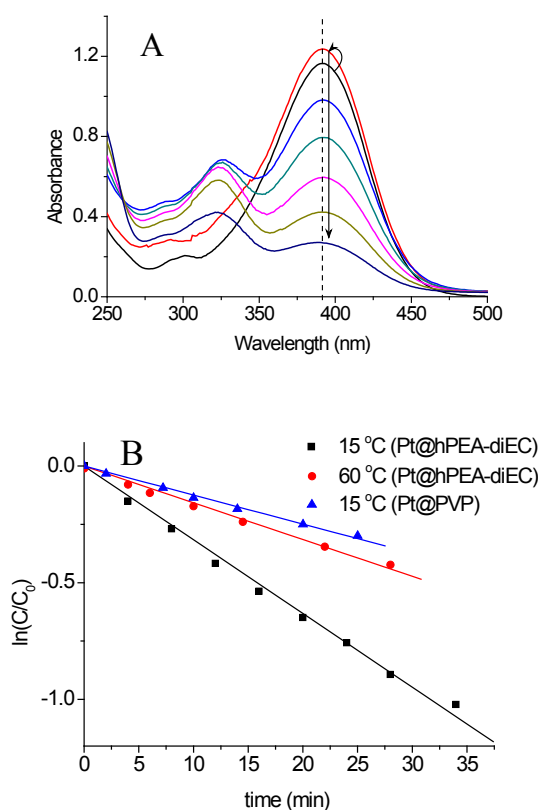


Fig. S5. (A) UV-vis kinetic curves of 4-nitro-3-(trifluoromethyl)phenol (CF₃Nip) during the reduction catalyzed by Pt@hPEA-diEC. (B) First-order time-conversion plots of the reduction of 4-nitro-3-(trifluoromethyl)phenol catalyzed by Pt@PVP at 15 °C and Pt@hPEA-diEC at 15 °C & 60 °C.

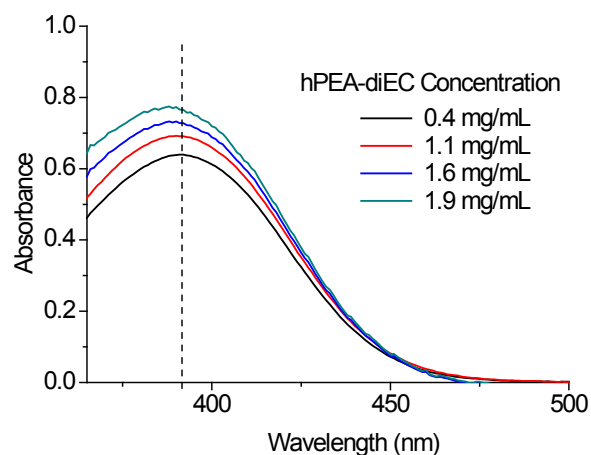


Fig. S6. UV-vis spectra of CF₃Nip dispersed in water by various concentrations of hPEA-diEC.