

## Synthesis and self-assembly of CO<sub>2</sub>-responsive dendronized triblock copolymers

Meng Huo,<sup>a,b</sup> Qiquan Ye,<sup>a</sup> Hailong Che,<sup>a</sup> Mengzhen Sun,<sup>a</sup> Jinying Yuan<sup>\*a</sup> and Yen Wei<sup>\*b</sup>

<sup>a</sup> Key Lab of Organic Optoelectronics and Molecular Engineering of Ministry of Education, Department of Chemistry, Tsinghua University, Beijing, P. R. China

<sup>b</sup> Key Lab of Bioorganic Phosphorus Chemistry & Chemical Biology of Ministry of Education, Department of Chemistry, Tsinghua University, Beijing, P. R. China

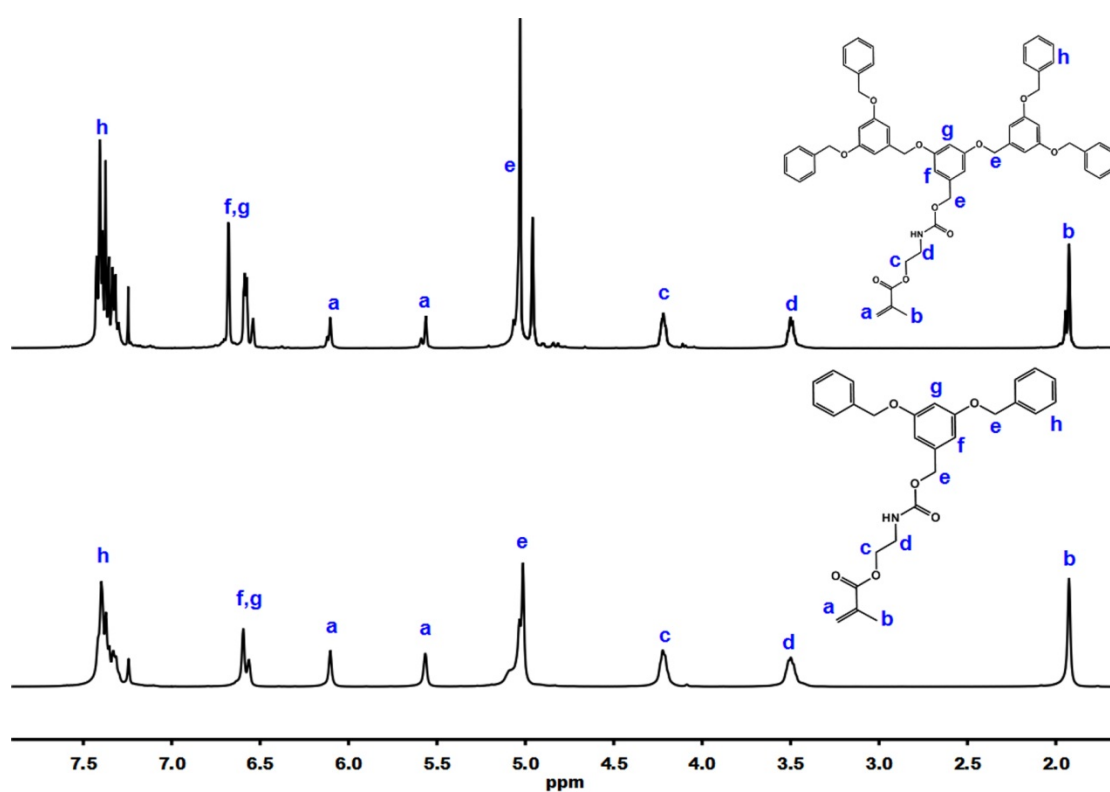
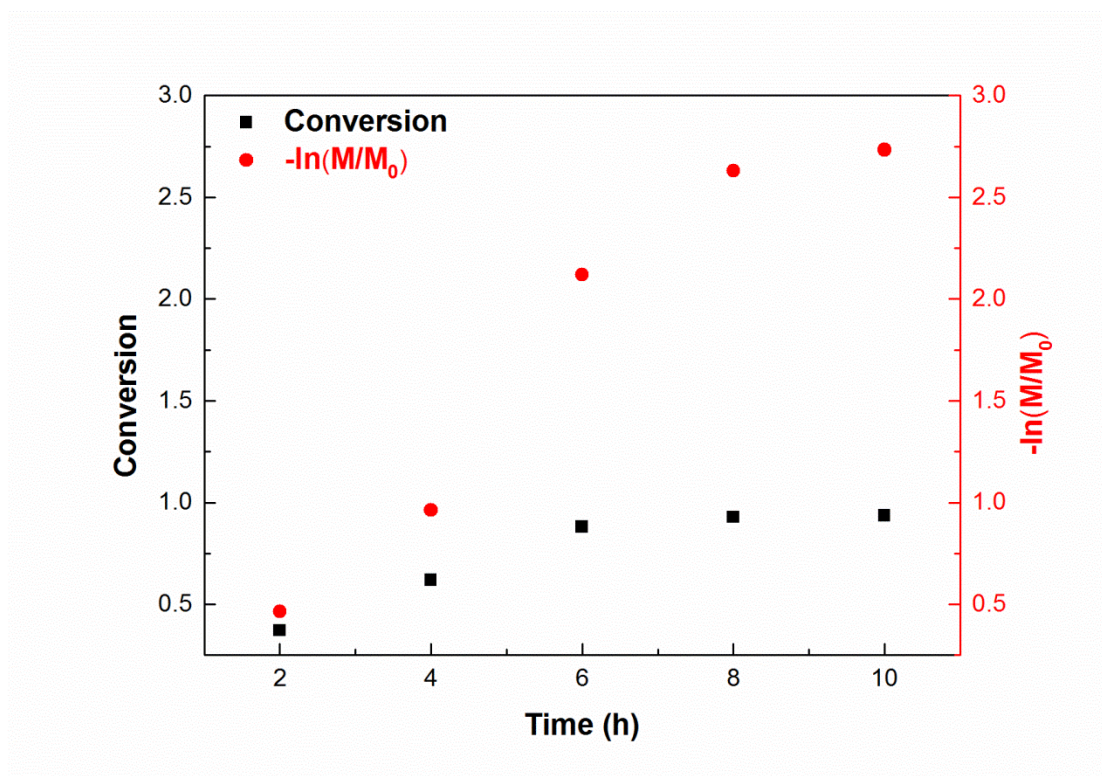
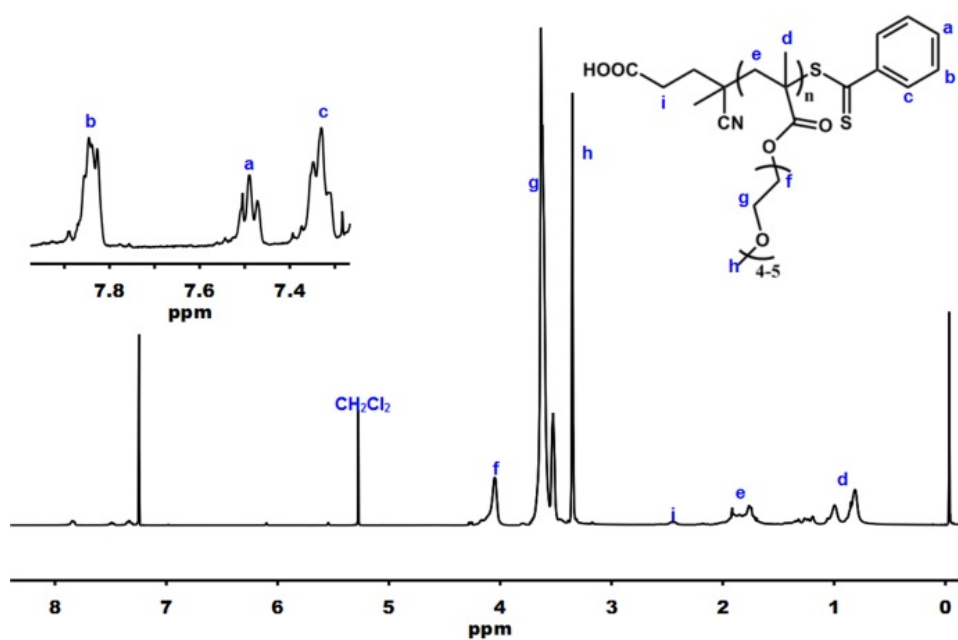


Figure S1. <sup>1</sup>H NMR spectra of macromonomers 3 and 4.



**Figure S2.** Monomer conversion versus time and pseudo-first-order kinetic plot for RAFT polymerization of OEGMA at 70 °C in toluene with CPADB as the RAFT agent and  $[AIBN]/[CPADB]/[OEGMA] = 1/6/150$ .



**Figure S3.**  $^1\text{H}$  NMR spectra of POEGMA.

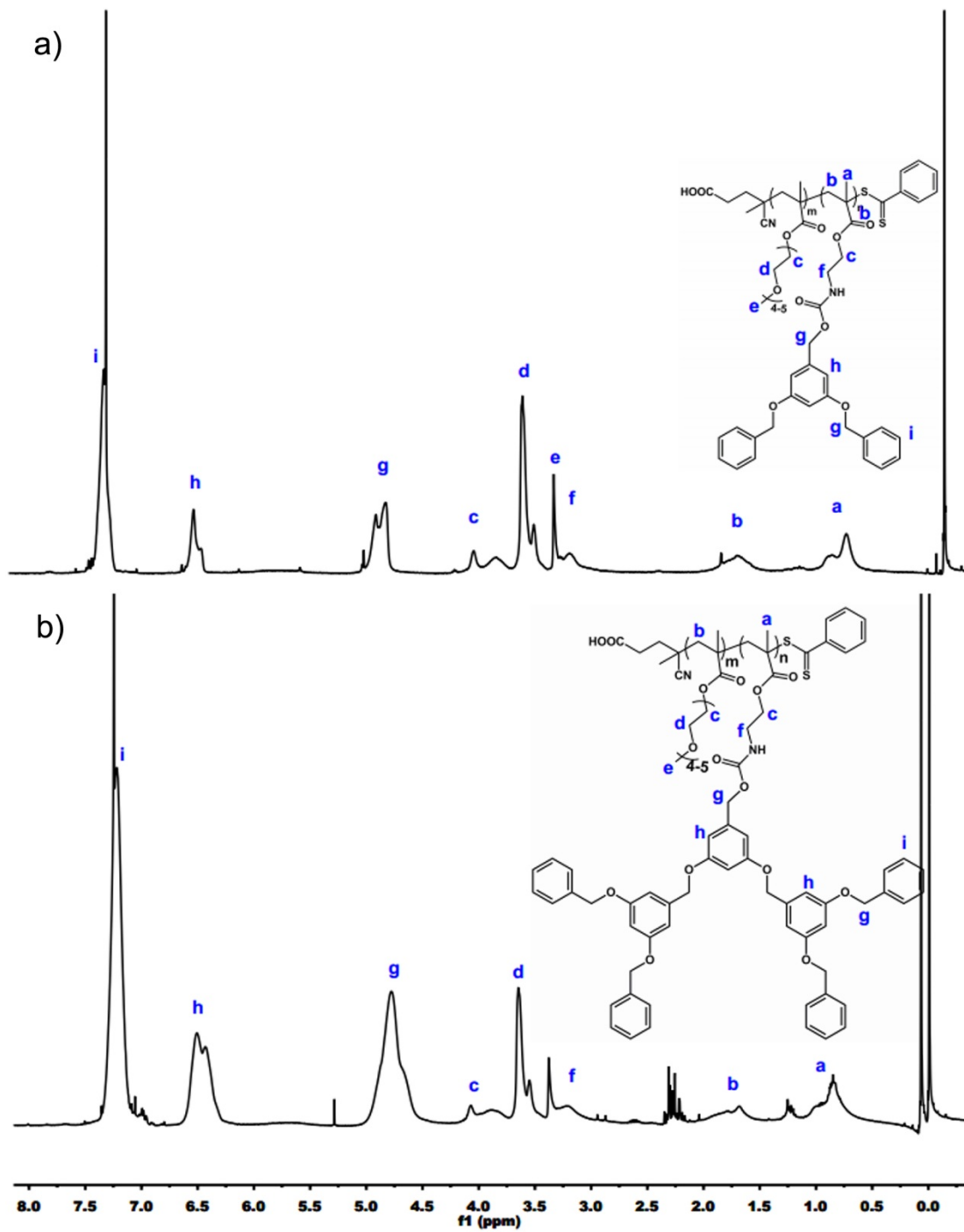
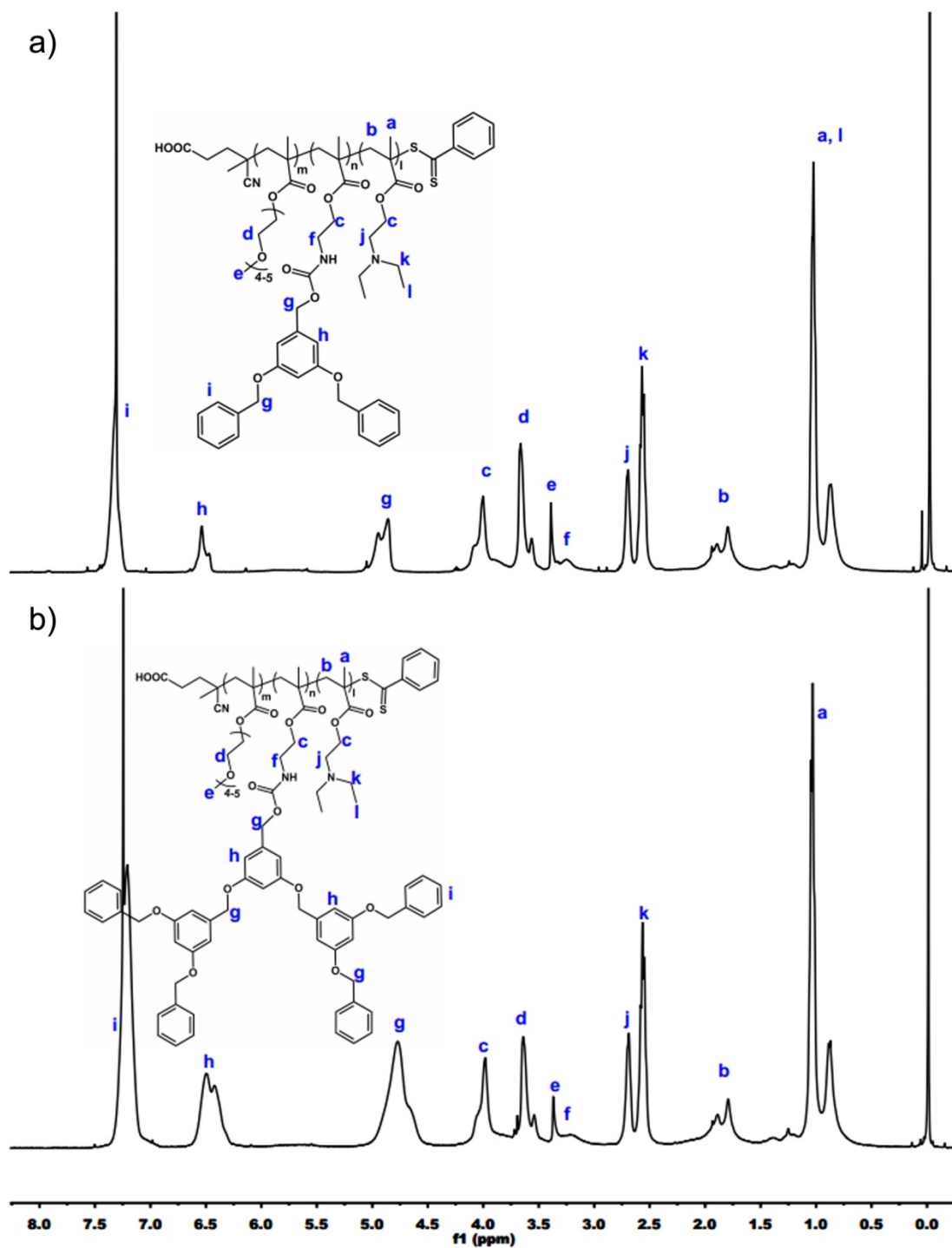
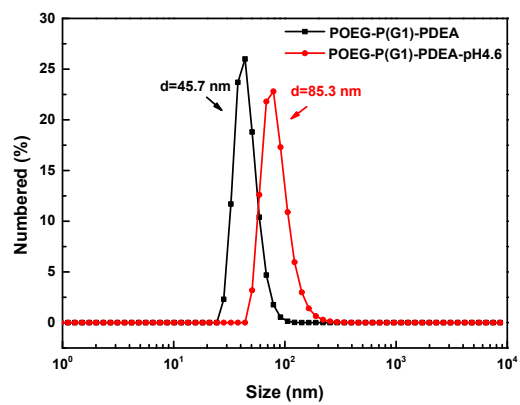


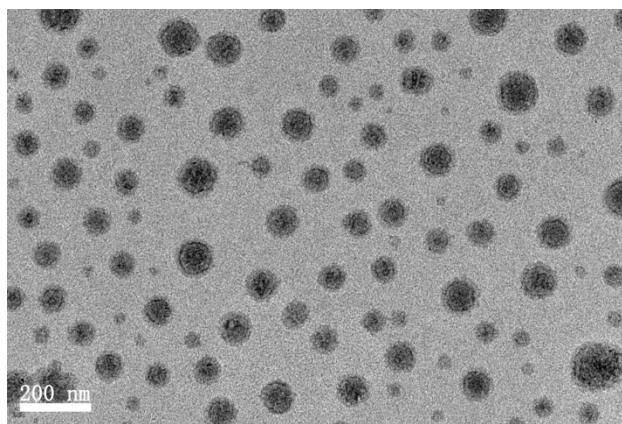
Figure S4. <sup>1</sup>H NMR spectra of a) POEGMA-*b*-P(G1) and b) POEGMA-*b*-P(G2).



**Figure S5.**  $^1\text{H}$  NMR spectra of a) POEGMA-*b*-P(G1)-*b*-PDEAEMA, and b) POEGMA-*b*-P(G2)-*b*-PDEAEMA.



**Figure S6.** Size variation of POEGMA-*b*-P(G1)-*b*-PDEAEMA (DMF/H<sub>2</sub>O) upon tuning pH to 4.6 by HCl.



**Figure S7.** TEM photograph of POEGMA-*b*-P(G1)-*b*-PDEAEMA micelles (DMF/H<sub>2</sub>O) upon tuning pH to 4.6 by HCl.