Supporting Information for

Photocontrollable Volume Phase Transition of Azobenzene Functionalized Microgel and Its Supramolecular Complex

Liqiang Zhu,^a Chuanzhuang Zhao,^{*a} Jiawei Zhang,^b Dirong Gong^a

(^aDepartment of Polymer Science and Engineering, Faculty of Materials Science and Chemical Engineering, Ningbo University, Ningbo 315211, P.R.China; ^bDivision of Polymer and Composite Materials, Ningbo Institute of Material Technology and Engineering, Chinese Academy of Science, Ningbo 315201, China; ^{*}E-mail: zhaochuanzhuang@nbu.edu.cn)



Fig. S1 Photoisomerization kinetics of Azo-MG ((3.3 mol% AAc and 5.8 mol% azobenzene).) (a) under UV and (b) visible light. Inset figures exhibit the absorbance at 349 nm wavelength at different irradiation time .

The UV-Vis spectra of Azo-MG was collected after it was irradiated with UV or visible light for different time. As shown in Figure S1, the absorbance at 349 nm (A_{349}) decreases gradually with increasing irradiation time of UV (Figure S1a), while increases gradually with increasing irradiation time of visible light (Figure S1b). Moreover, as shown in the inset figures of Figure S1, both the decreasing of A_{349} under UV and increasing of A_{349} under visible light reaches a plateau after 60 s of irradiation, indicating the photoisomerization can reach their maximum conversion in 1 min.



Fig. S2. Scattering intensity autocorrelation functions of AAc-MG (9.1% AAc) and Azo-MG (3.3 mol% AAc and 5.8 mol% Azo) at pH 6.0 or 4.2 and 20 °C, in the absence or presence of 5.0 mM α -CD.



Fig. S3. Scattering intensity autocorrelation functions of Azo-MG (3.3 mol% AAc and 5.8 mol% Azo): (a) pH 4.2, 30°C and in the absence of α -CD, (b) at pH 4.2, 35°C and in the presence of 5.0 mM α -CD.