## **Supporting Information**

Dual-responsive recurrent self-assembly of supramolecular polymer based on the host-guest complexation interaction between  $\beta$ -cyclodextrin and azobenzene

Ping Shen, Liyan Qiu\*

Ministry of Educational (MOE) Key Laboratory of Macromolecular Synthesis and Functionalization, Department of Polymer Science and Engineering, Zhejiang University, Hangzhou 310027, China

\* Corresponding author: Prof. Liyan Qiu, Tel: +86 571 87952306, Fax: +86 571 87952306, Email: <u>lyqiu@zju.edu.cn</u>.



Figure S1. MALDI-TOF spectrum of CD-PEG.



Figure S2. GPC curves of PAE and PAE-g-Azo.



Figure S3. <sup>1</sup>H NMR spectrum (500MHz, CDCl<sub>3</sub>, room temperature) of the precipitates



**Figure S4**. <sup>1</sup>H NMR spectrum (500MHz, DMSO-d<sub>6</sub>, room temperature) of the residual polymers in the transparent solution.



Figure S5. TEM images of the reconstructed supramolecular assemblies at different  $\beta$ -CD/Azo molar ratios (A) 1:2 (B) 2:1