

## Electronic supplementary information (ESI)

### Self-Assemblies from Six-Arm Star Triblock ABC Copolymer: pH-Tunable Morphologies and Drug Release

Ping Zhou, Yu-Yang Liu,\* Lu-Ying Niu and Jie Zhu

The Key Laboratory of Space Applied Physics and Chemistry, Ministry of Education and Key Laboratory of Macromolecular Science and Technology of Shaanxi Province, Department of Applied Chemistry, Northwestern Polytechnical University, Xi'an 710072, P.R. China

\*E-mail: liu\_yyang1120@nwpu.edu.cn

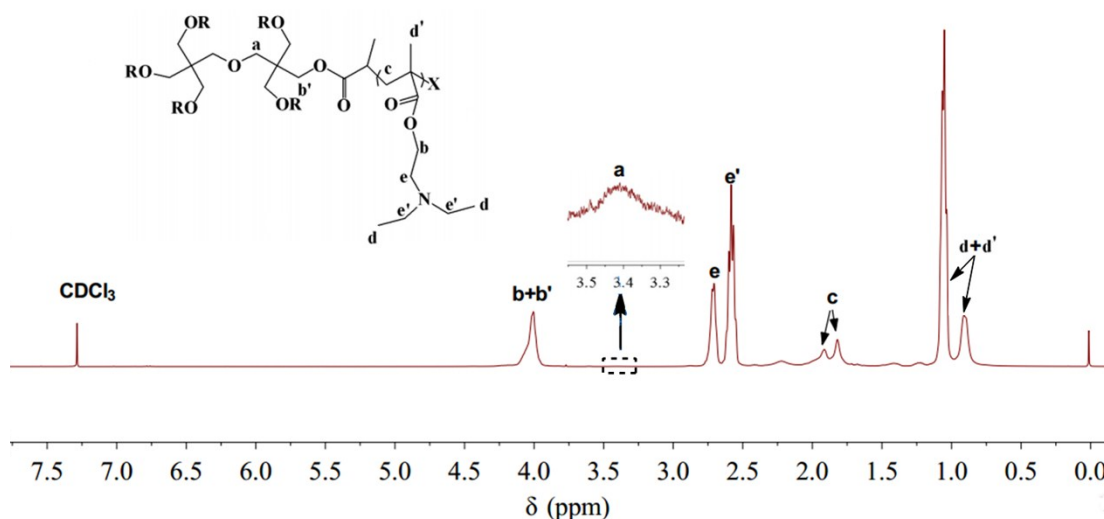


Figure S1.  $^1\text{H}$  NMR spectrum of  $s\text{-(PDEA)}_6$  (400 MHz).

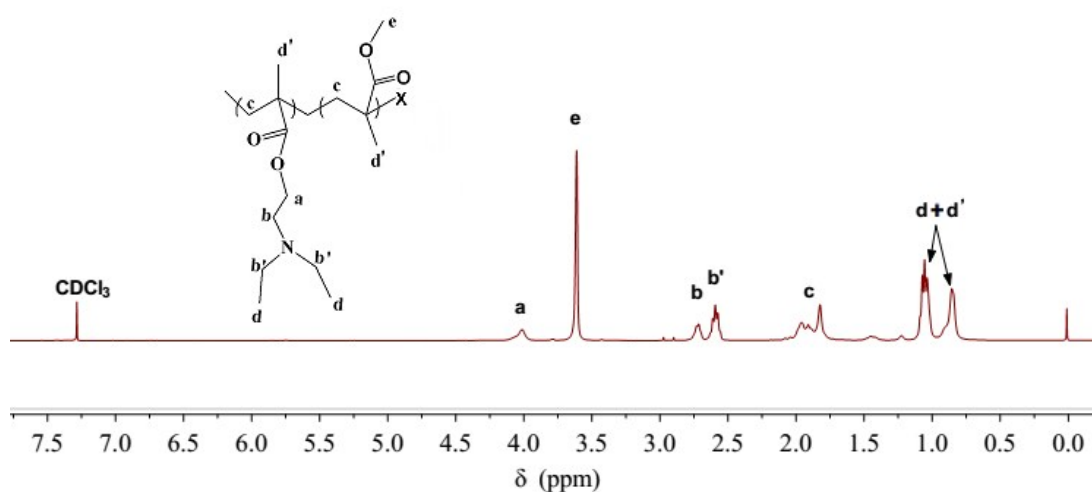


Figure S2.  $^1\text{H}$  NMR spectrum of  $s\text{-(PDEA-}b\text{-PMMA)}_6$  (400 MHz).

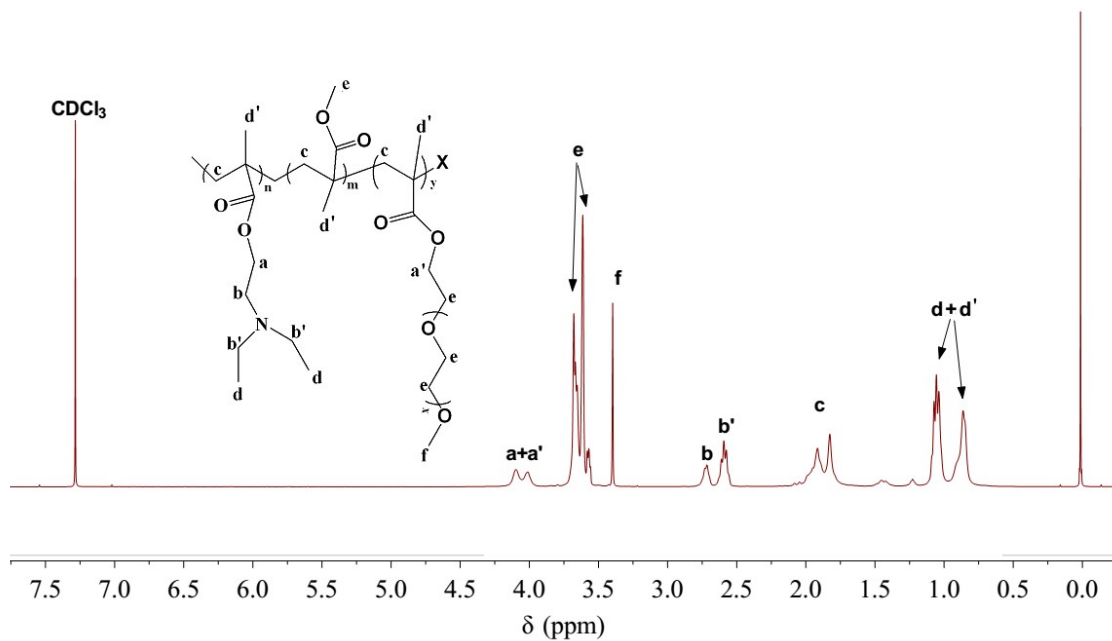


Figure S3.  $^1\text{H}$  NMR spectrum of  $s\text{-(PDEA-}b\text{-PMMA-}b\text{-PPEGMA)}_6$  (400 MHz).

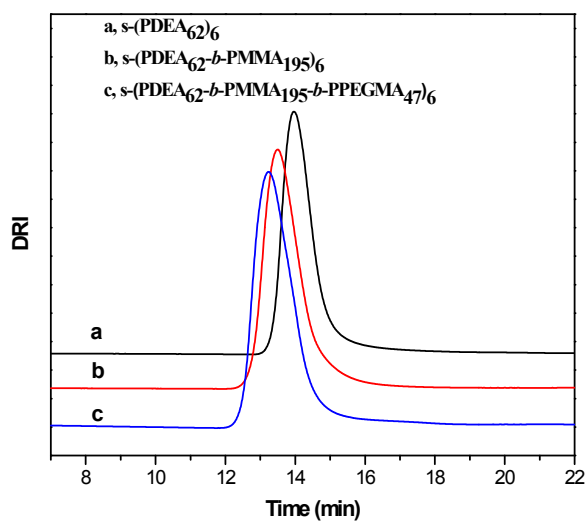
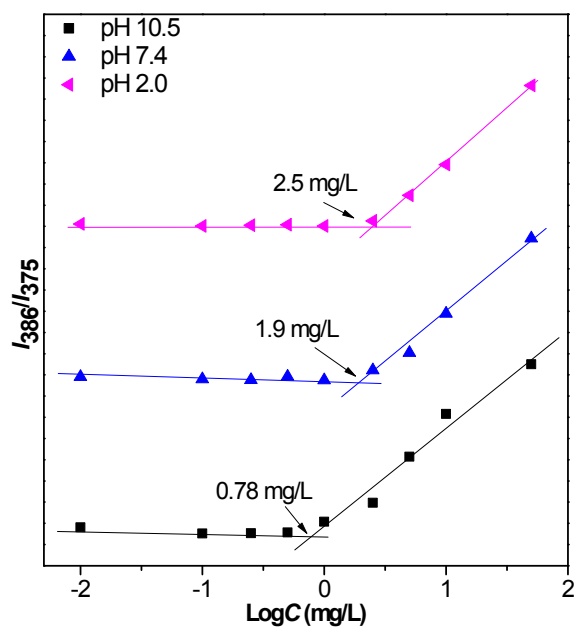
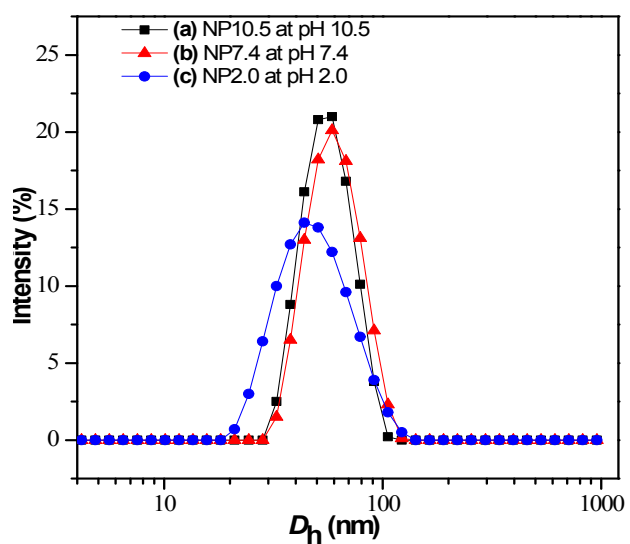


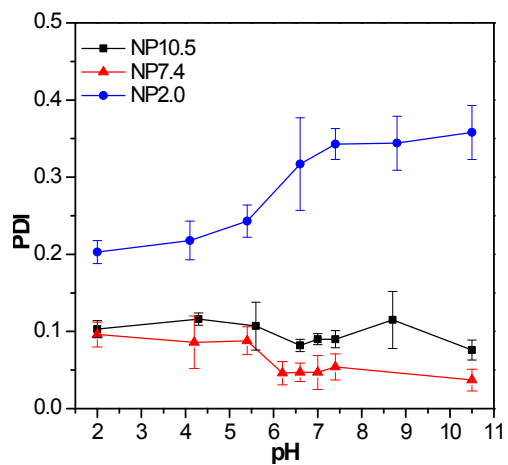
Figure S4. DRI signals of SEC/MALLS measurements of  $s\text{-(PDEA-}b\text{-PMMA-}b\text{-PPEGMA)}_6$  and its precursors.



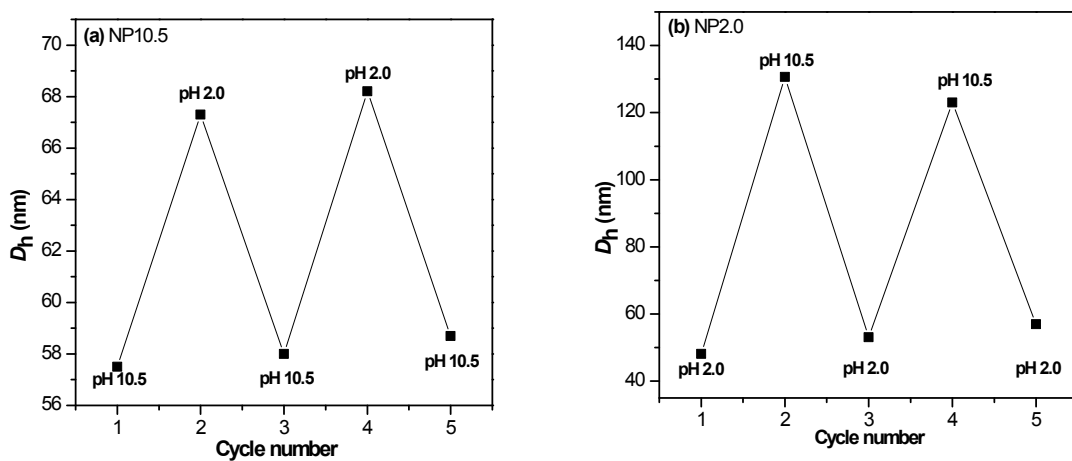
**Figure S5.** The intensity ratios ( $I_{386}/I_{375}$ ) as function of logarithm of s-(PDEA-*b*-PMMA-*b*-PPEGMA)<sub>6</sub> concentrations in aqueous solutions of different pH.



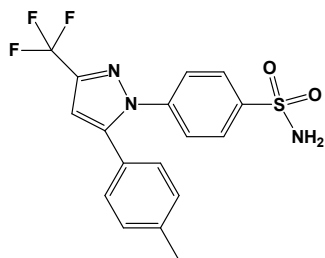
**Figure S6.** DLS measurement results of NP10.5 at pH 10.5, NP7.4 at pH 7.4 and NP2.0 at pH 2.0.



**Figure S7.** PDI values of NP10.5, NP7.4 and NP2.0 as a function of pH (polymer concentration, 0.05 mg/mL).



**Figure S8.** Diameter changes of NP10.5 (a) and NP2.0 (b) under the alternation pH between 10.5 and 2.0 (polymer concentration, 0.05 mg/mL).



**Figure S9.** Molecular structure of celecoxib.