

Supporting Information for

Synthesis and Self-Assembled Behaviour of pH-Responsive Liquid Crystal Amphiphilic Copolymers Based on Diosgenyl-Functionalized Aliphatic Polycarbonate

Zhi-Hao Guo ¹, Xiao-Feng Liu ¹, Jian-She Hu ^{1*}, Li-Qun Yang ^{2,*} and Zhang-Pei Chen ¹

¹ Center for Molecular Science and Engineering, College of Science, Northeastern University, Shenyang 110819, China; 1610046@stu.neu.edu.cn (Z.-H.G.); 1510048@stu.neu.edu.cn (X.-F.L.); chenzhangpei@mail.neu.edu.cn (Z.-P.C)

² Key Laboratory of Reproductive Health and Medical Genetics, National Health and Family Planning Commission, Shenyang, 110031, China; yanglq@lnszjk.com.cn (L.-Q.Y)

* Correspondence: E-mail: hujs@mail.neu.edu.cn (J.-S.H.); Tel.: +86-024-8368-7671

MBC ¹H NMR (600 MHz, CDCl₃, δ , ppm): 7.40-7.33 (m, 5H, *J*=7.0, *H*-1), 5.22 (s, 2H, *H*-2), 4.71 (d, 2H, *J*=10.8, *H*-3), 4.21 (d, 2H, *J*=10.8, *H*-4), 1.33 (s, 3H, *H*-5).

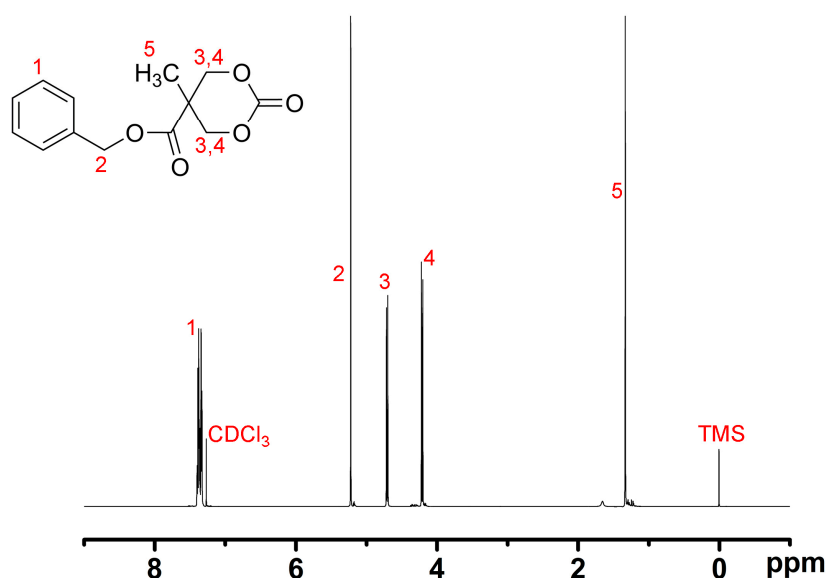


Figure S1. ¹H NMR spectra of MBC.

mPEG₄₃-*b*-PMBC₄₀ ¹H NMR (600 MHz, CDCl₃, δ, ppm): 7.35-7.28 (m, *H*-1), 5.14 (s, *H*-2), 4.29 (m, *H*-3), 3.65 (s, *H*-4), 1.24 (s, *H*-5).

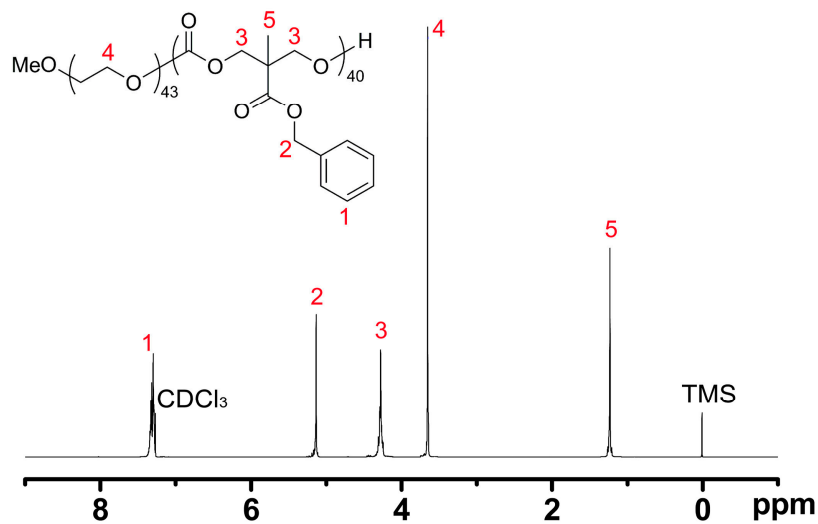


Figure S2. ¹H NMR spectra of mPEG₄₃-*b*-PMBC₄₀.

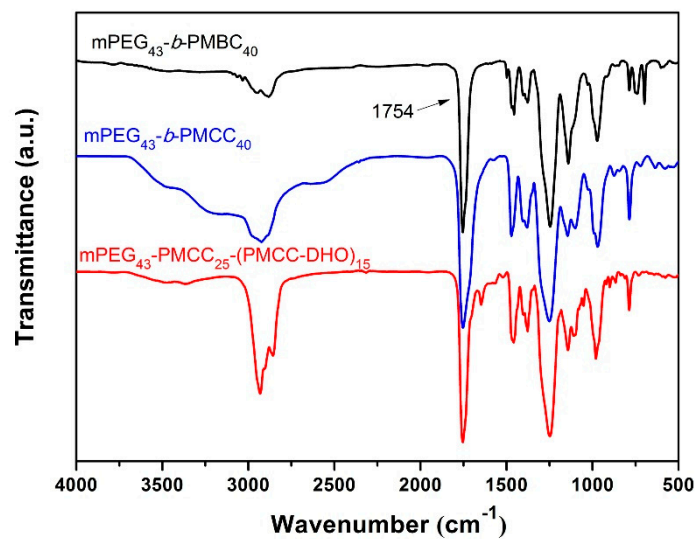


Figure S3. FT-IR spectroscopy of copolymers.

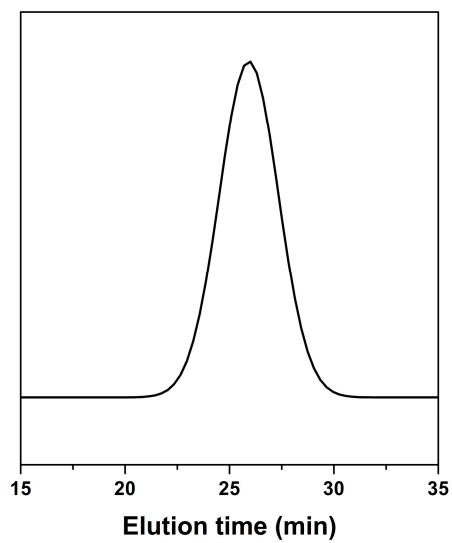


Figure S4. GPC profiles (THF as an eluent, 1 mL/min) of mPEG₄₃-*b*-PMBC₄₀.

mPEG₄₃-*b*-PMCC₄₀ ¹H NMR (600 MHz, CDCl₃, δ, ppm): 4.19 (m, *H*-1), 3.50 (s, *H*-2), 1.14 (s, *H*-3).

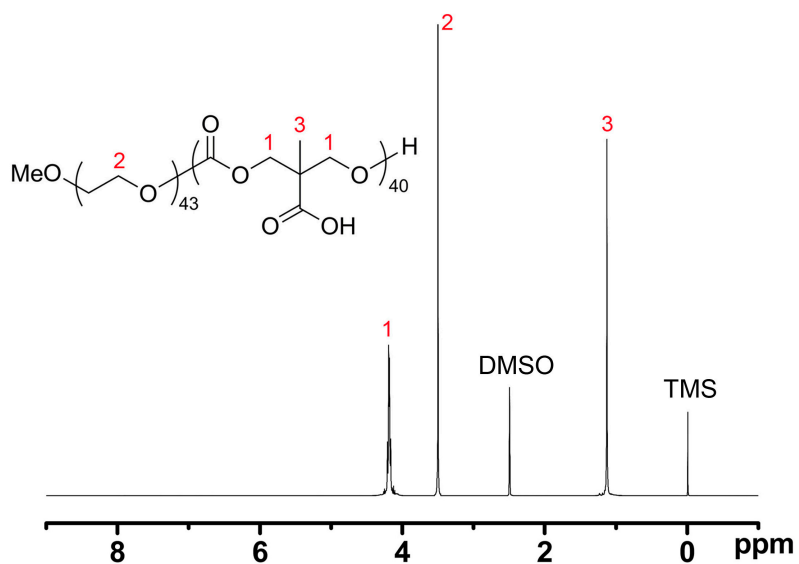


Figure S5. ¹H NMR spectra of mPEG₄₃-*b*-PMCC₄₀.

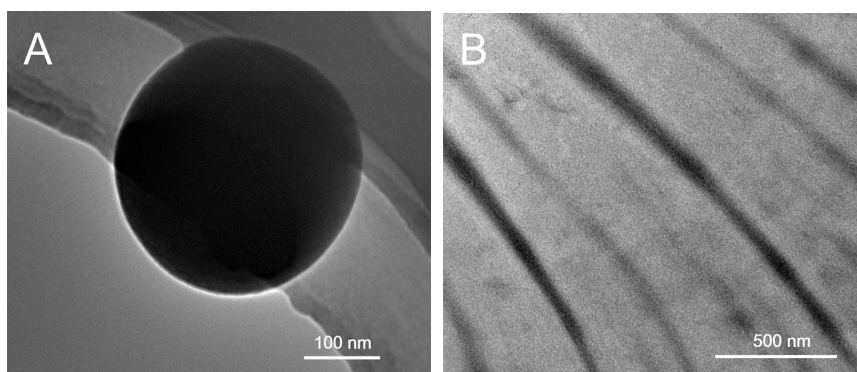


Figure S6. TEM images of mPEG₄₃-PMCC₂₅-P(MCC-DHO)₁₅ self-assembly obtained in water at (A) pH = 6 and (B) pH = 8.