Biomimetic Star-Shaped Poly(ε-caprolactone)-b-Glycopolymer Block Copolymers with Porphyrin-core for Targeted Photodynamic Therapy

Xiao-Hui Dai[1*, 2] , Zhi-Ming Wang[1], Ya-fei Huang [4], Jian-Ming Pan [1*], Yong-sheng Yan[1, 2], Dong-Ming liu[3], Lin Sun[5]

1. Department of Chemical Engineering, School of Chemistry and Chemical Technology, Jiangsu University, Zhenjiang 212013, P. R. China

2. State Key Laboratory of Natural and Biomimetic Drugs, Peking University, Beijing, 100191, P. R. China

3. Hospital Affiliated to Jiangsu University, Zhenjiang 212013, P. R. China

4. School of Pharmacy, Jiangsu University, Zhenjiang, 212013, P. R. China
5. CSR Qingdao Sifang Co. Ltd., Qingdao, Shandong, 266111,China

TableS1. Thermal properties of SPPCL and SPPCL-b-PGAMA.

Entry	$T_m{}^a$(℃)	$f_{PGAMA}{}^b$ (%)	$\Delta H_m{}^b$(J/g)	$X_c{}^c$(%)
SPPCL$_{24}$	56.3	0	92.3	66.1
SPPCL$_{24}$-PGAMA$_3$	52.5	21.0	23.7	17.0
SPPCL$_{24}$-PGAMA$_{18}$	44.5	65.0	3.4	2.4
SPPCL$_{24}$-PGAMA$_{37}$	35.2	79.0	0.7	0.5

a:Tm denotes the maximal melting temperature of PCL block within copolymer in the heating run;

b:f_{PGAMA} denotes the weight fractions of PGAMA in copolymers;

c:ΔHm denotes the fusion enthalpy of PCL block within copolymer in the heating run;

d:Xc denotes the degree of crystallization of PCL block within copolymer, and $X_c = \Delta H_m/\Delta H^0{}_{m,PCL}$, $\Delta H^0{}_{m,PCL} =$
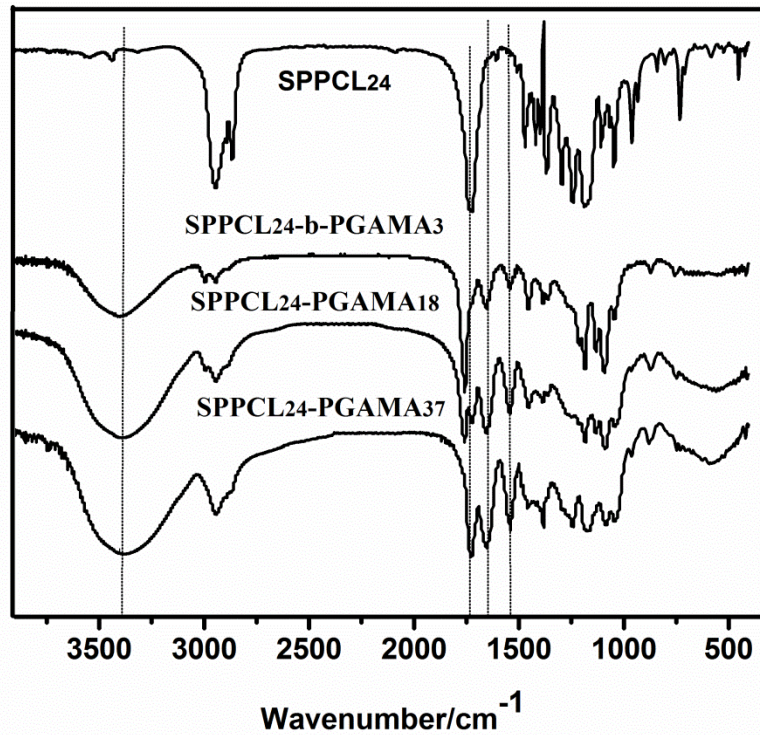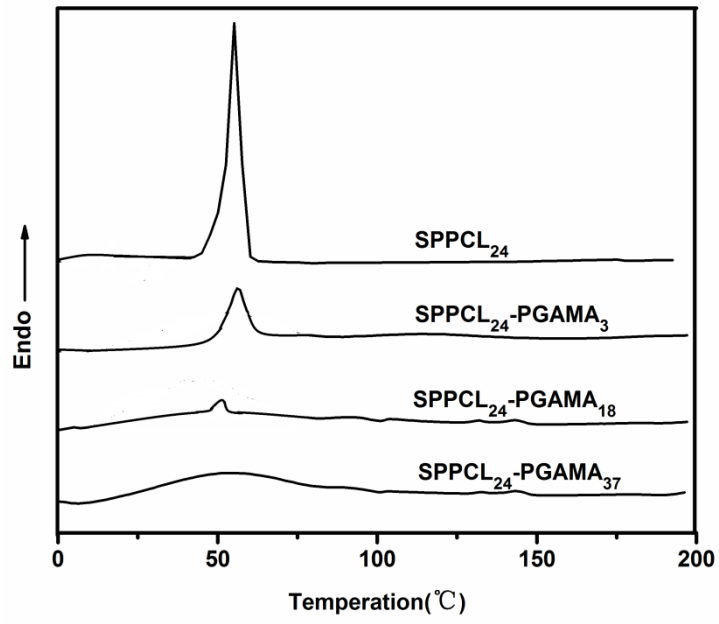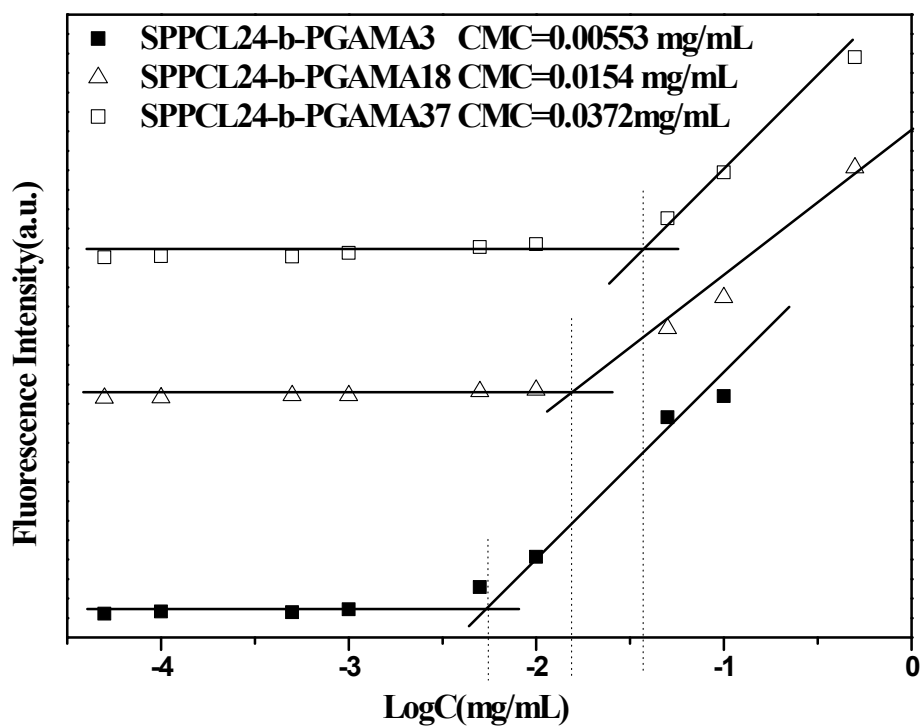
139.6 J/g.

Figure S1.   FT-IR spectra of SPPCL, SPPCL-Br and SPPCL-b-PGAMA

FigS2. The DSC curves of SPPCL$_{24}$ polymer and SPPCL$_{24}$-PGAMA$_3$, SPPCL$_{24}$-PGAMA$_{18}$, SPPCL$_{24}$-PGAMA$_{37}$ copolymers

FigS3. CMC curves of the $SPPCL_{24}$-$PGAMA_3$, $SPPCL_{24}$-$PGAMA_{18}$ and $SPPCL_{24}$-$PGAMA_{37}$ copolymers
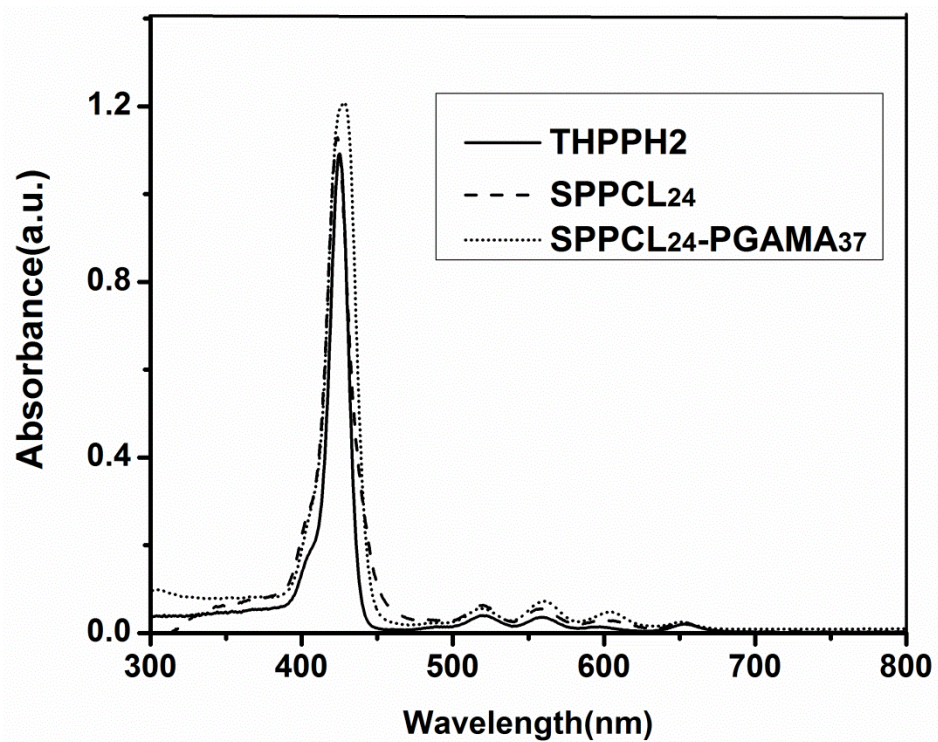
Figure S4. UV-vis spectra of THPPH2, SPPCL and SPPCL-b-PGAMA in DMSO solution