**Fabrication of pH/H2O2-responsive POSS self-assembled fluorescent vesicles for enhanced *in vivo* anti-tumor efficacy**

**Fig.S1** 1H NMR spectrum of OTB in CDCl3

**Fig. S2** 1H NMR spectrum of PEG-COOH in CDCl3

**Fig. S3** 13C NMR spectrum of PEG-COOH in CDCl3

**Fig. S4** 1H NMR spectrum of POSS-OH in CDCl3

**Fig. S5** 13C NMR spectrum of POSS-OH in CDCl3

**Fig. S6** 1H NMR spectrum of PEG-POSS in CDCl3

**Fig. S7** The size of PEG-POSS-OTB(c) vesicles in different solvents. H2O(a), 10-4mol/L H2O2 solution(b), PBS solution(c). The PDI of PEG-POSS-OTB(c) in different solvents.

**Fig. S8** The Ultraviolet spectra of OTB and PEG-POSS-OTB in THF(a). The Ultraviolet spectrum of PEG-POSS-OTB(c) in water(b).