

Reactive Oxygen Species Mediated Theranostic Using a Fenton Reaction Activable Lipo-polymersome

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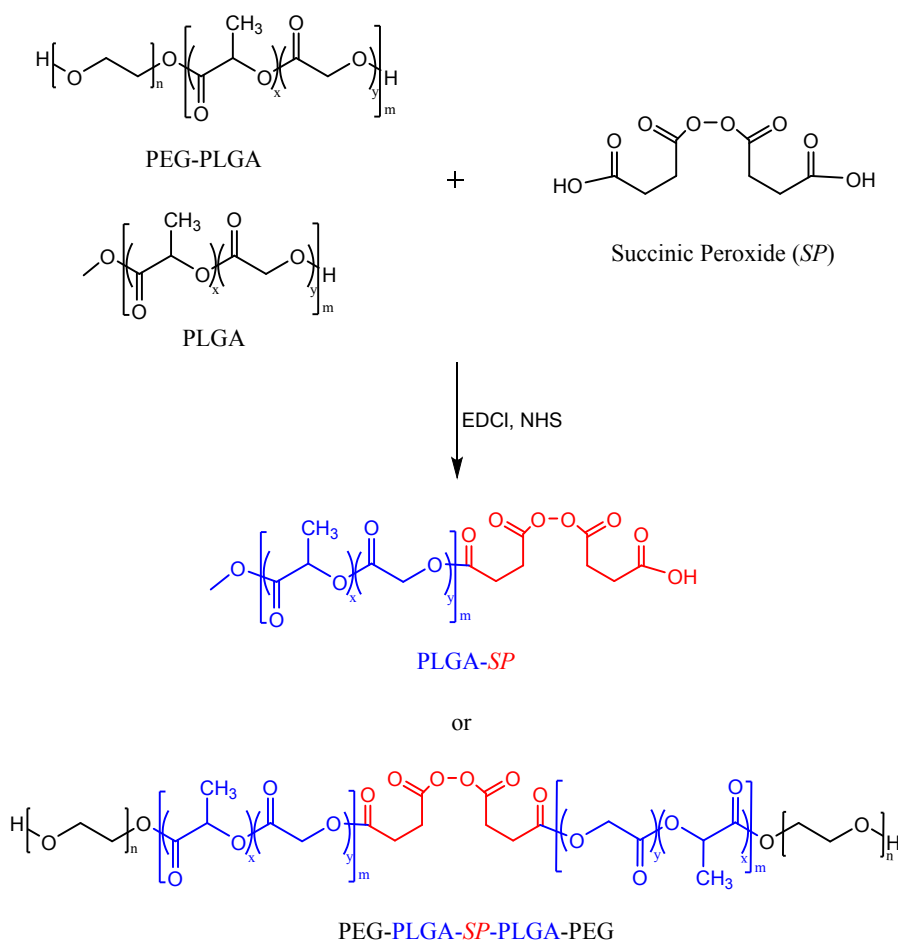
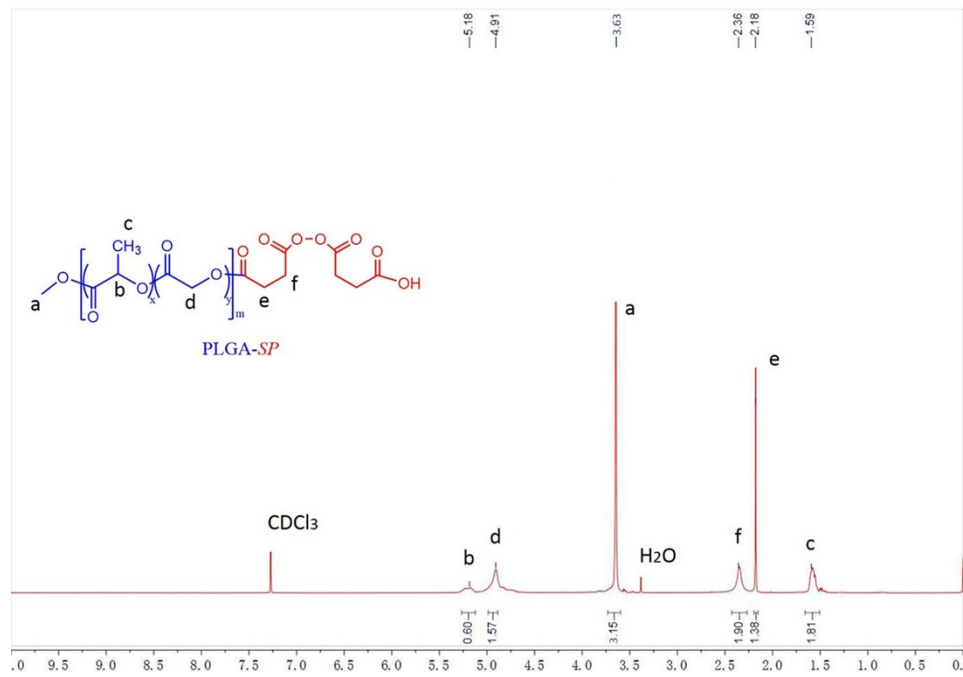
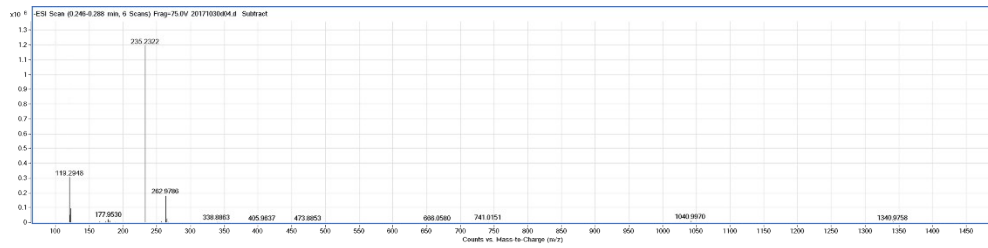
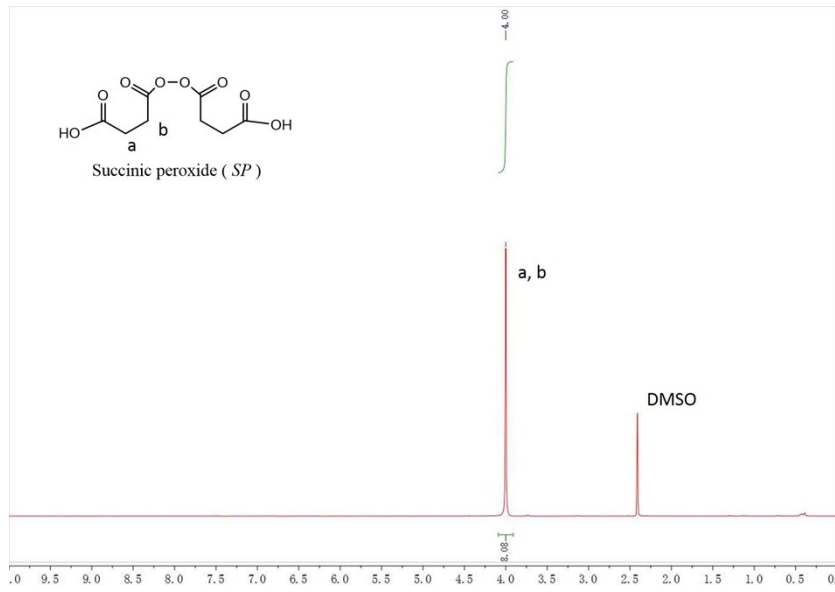


Fig. S1 the synthesis routes of SP conjugated polymers.



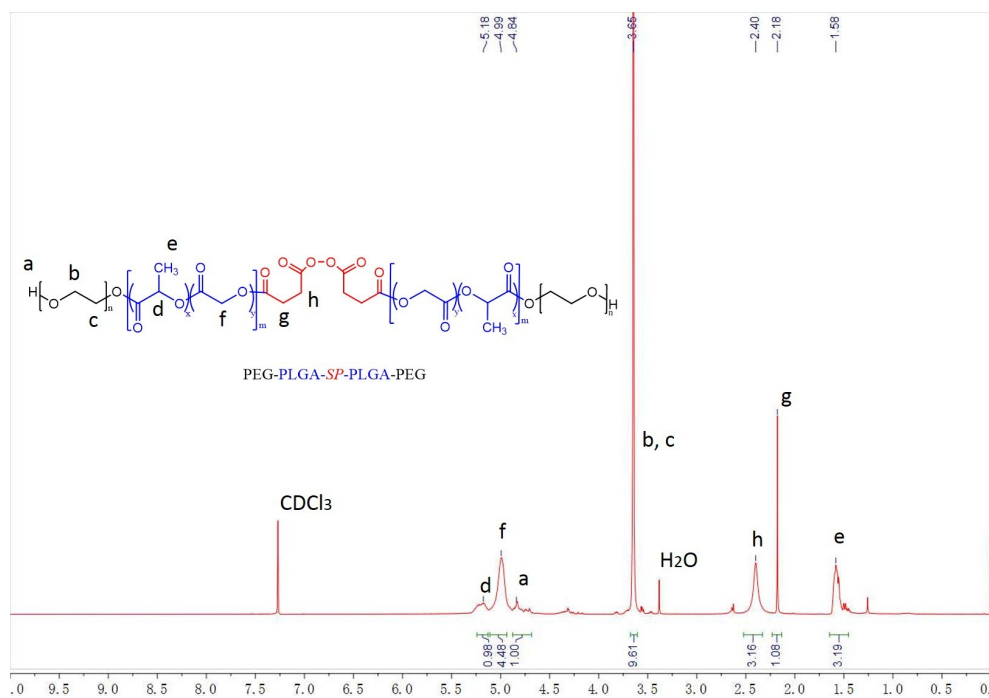


Fig. S2d ^1H NMR spectral analysis of $(\text{PEG-PLGA})_2\text{-SP}$ conjugated polymer

Table S1 Detailed information of synthesized SP conjugated polymer

Polymer	Mn (GPC)	Mw (GPC)	Yield (%)
PLGA	1014	1085	N/A
PLGA-SP	1256	1310	68%
PEG-PLGA	2035	2113	N/A
$(\text{PEG-PLGA})_2\text{-SP}$	4306	4412	76%

Table S2 Particle size, PDI, Fe_3O_4 , SP and Pt contents of the lipo-polymerosomes with different ratio of $(\text{PEG-PLGA})_2\text{-SP}$

Feed mass (mg)	Size (nm)	PDI	DLC (wt%)
Fe_3O_4 : $(\text{PEG-PLGA})_2\text{-SP}$: PLGA-SP			Fe_3O_4 ; SP; Pt
4:1:5	93.9	0.214	3.67; 2.87; 3.94
4:2:5	105.2	0.143	6.82; 3.16; 4.46
4:3:5	113.6	0.226	9.81; 3.45; 4.85
4:4:5	131.2	0.121	9.78; 3.73; 4.93

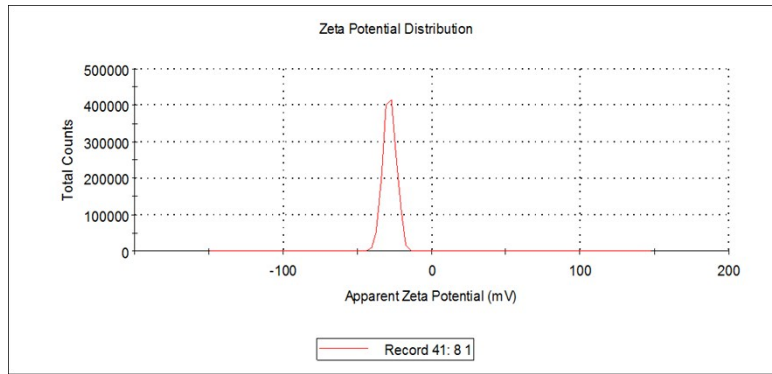


Fig. S3 the zeta potential of Pt/Fe₃O₄@SP-PLGA LPs

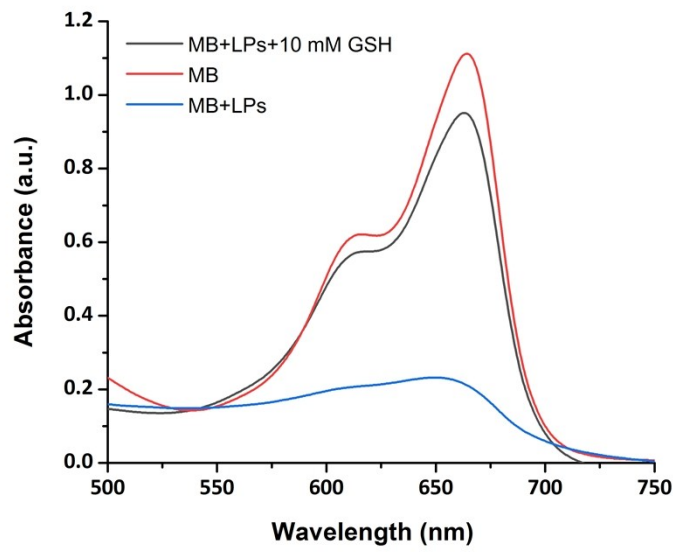


Fig. S4. UV/Vis absorption spectra of MB after treatment with LPs solution or 10 mM GSH alone.

Lipo-polymerosomes solution : 100 mM.

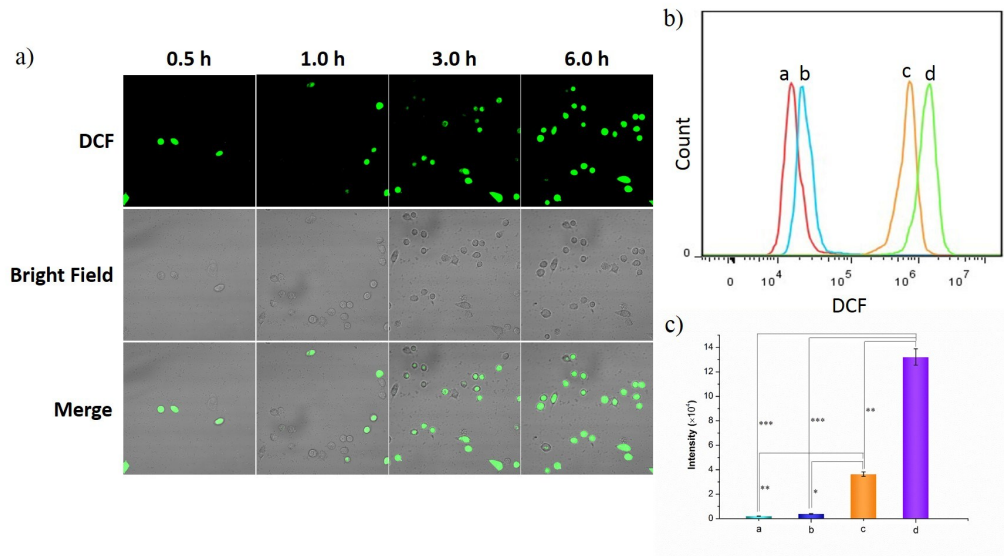


Fig. S5. Evaluation the capability of ROS generation of Pt/Fe₃O₄@SP-PLGA LPs in vitro. (a) CLSM images of MCF-7 cells incubated with Pt/Fe₃O₄@SP-PLGA LPs for different incubation time. Flow cytometric analysis (b) and quantitation (c) of ROS levels in MCF-7 cells. (n = 3). *: P < 0.05, **: P < 0.01 and ***: P < 0.001.