Supplementary Data

Reductively Degradable α-Amino Acid-Based Poly(ester amide)-Graft-Galactose Copolymers: Facile Synthesis, Self-Assembly, and Hepatoma-Targeting Doxorubicin Delivery

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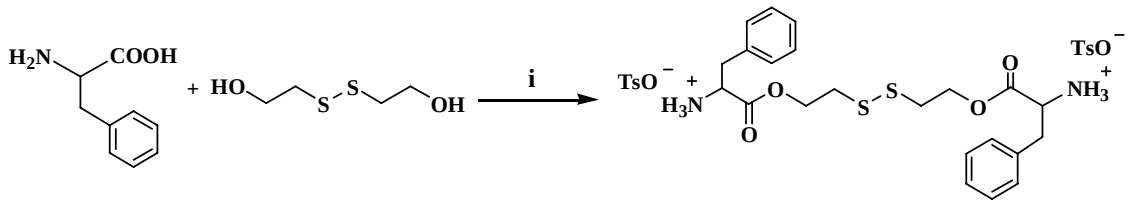
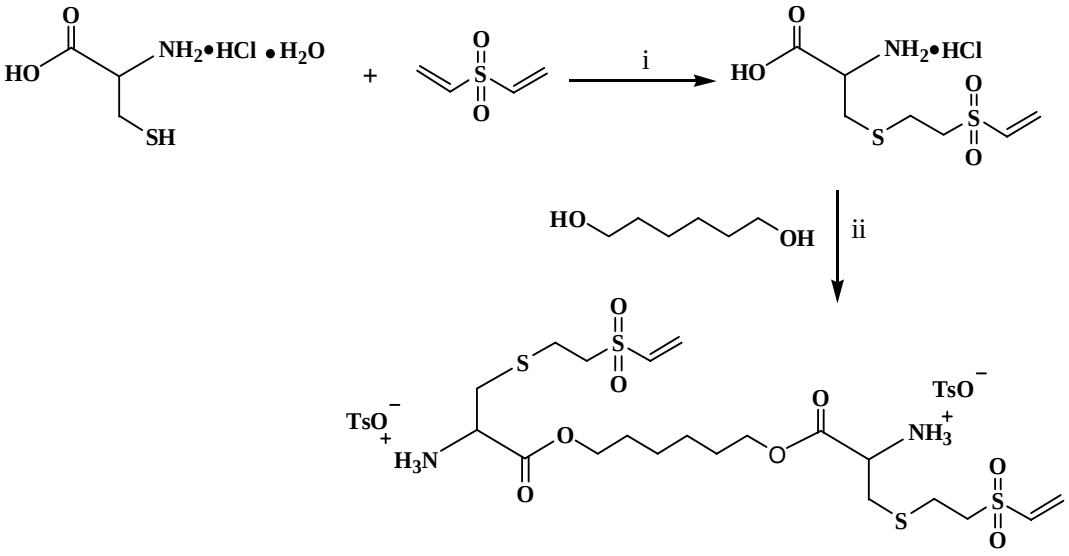


Scheme S1 Synthetic pathway of Phe(TDE)·2TsOH. Conditions: TsOH·H_2O, Toluene, refluxing 8 h.



Scheme S2 Synthetic pathway of VSC(HD)·2TsOH. Conditions: (i) Methanol, 30°C, 3 d; (ii) TsOH·H_2O, Toluene, 130°C, 8 h.

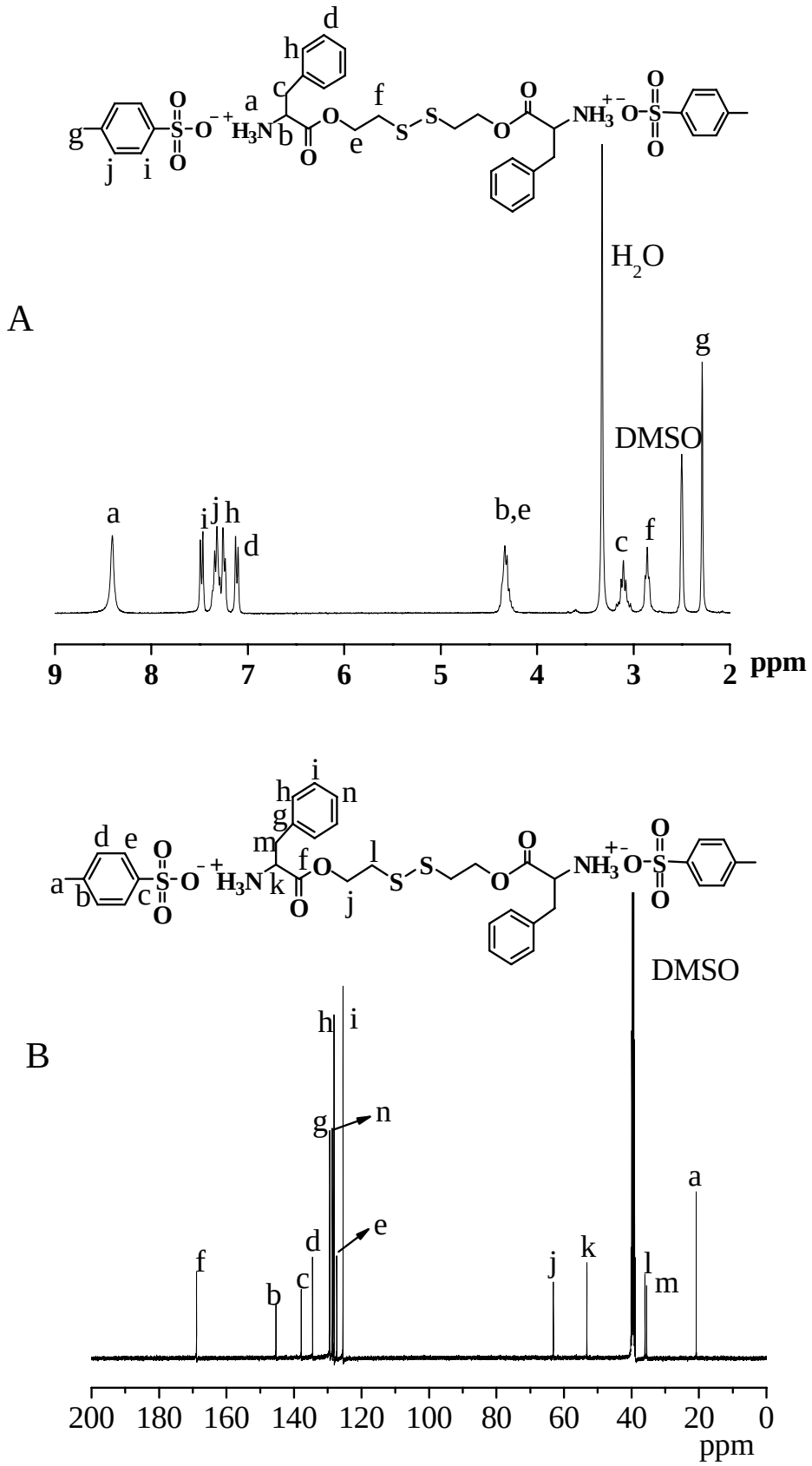


Fig. S1 **^{1}H NMR (400 MHz) (A) and ^{13}C NMR (100 MHz) (B) of Phe(TDE)·2TsOH (DMSO-d_6).**

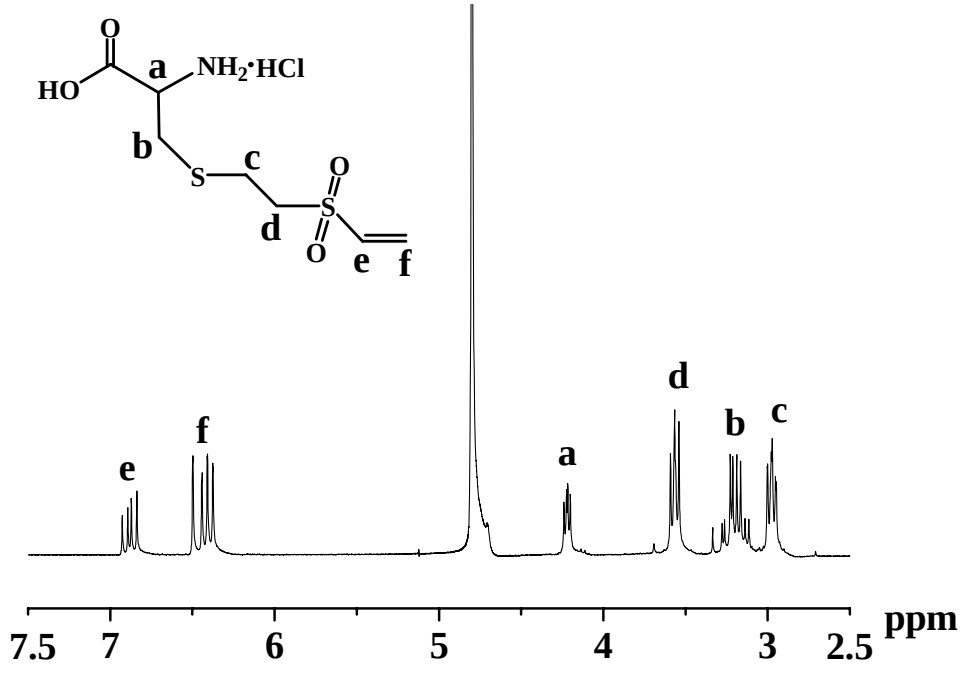


Fig. S2 ^{1}H NMR spectrum (400 MHz, D_2O) of vinylsulfone substituted cysteine (VSC).

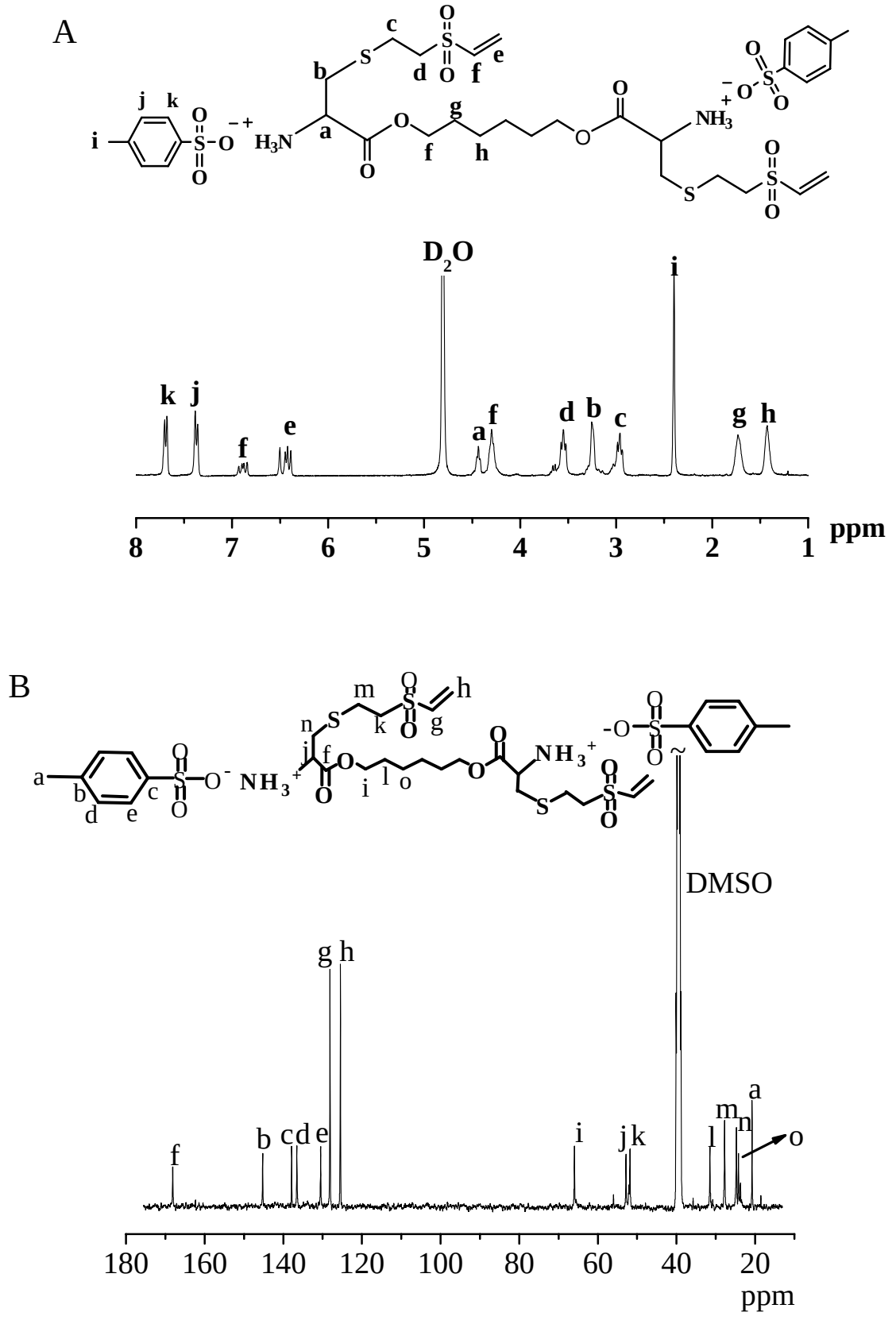


Fig. S3 ^{1}H NMR (400 MHz) (A) and ^{13} C NMR (100 MHz) (B) of VSC(HD)·2TsOH (DMSO-d_6).

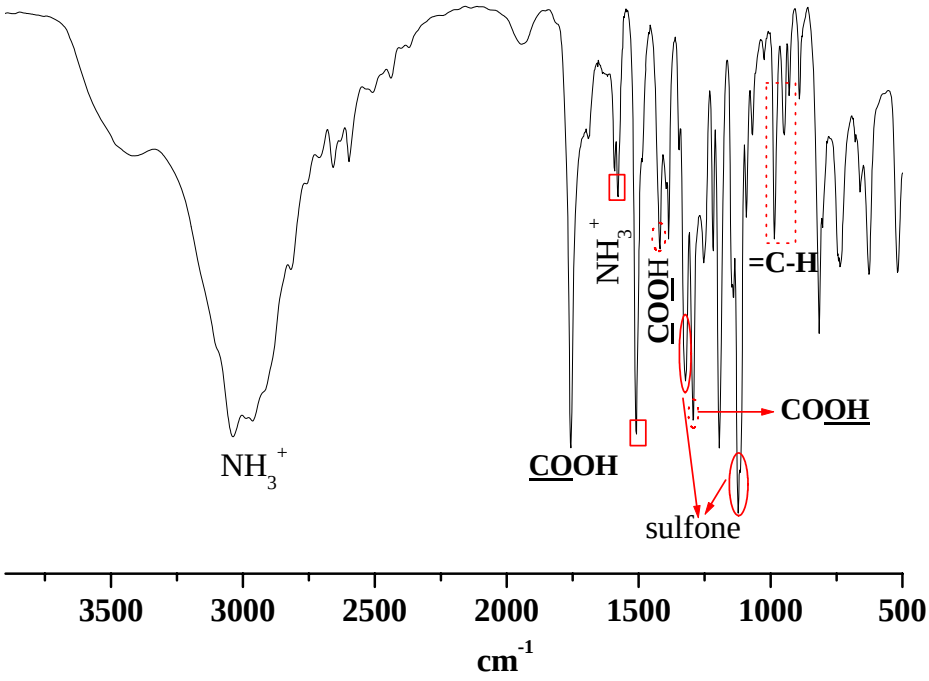


Fig. S4 FTIR spectrum of vinylsulfone substituted cysteine (VC).

FTIR spectrum (**Fig. S4**) displayed the characteristic absorption bands of NH_3^+ stretch from cysteine unit (~3000 cm^{-1}), C=O stretch of carboxyl groups (~1760 cm^{-1}), C-O stretch of carboxyl groups (~1417 cm^{-1}), O=S=O stretch (~1332 and 1125 cm^{-1}), NH_3^+ bend from cysteine unit (~1579 and 1500 cm^{-1}), O-H bend of carboxyl groups (~1293 cm^{-1}), and =C-H bend of vinyl groups (988 and 926 cm^{-1}).

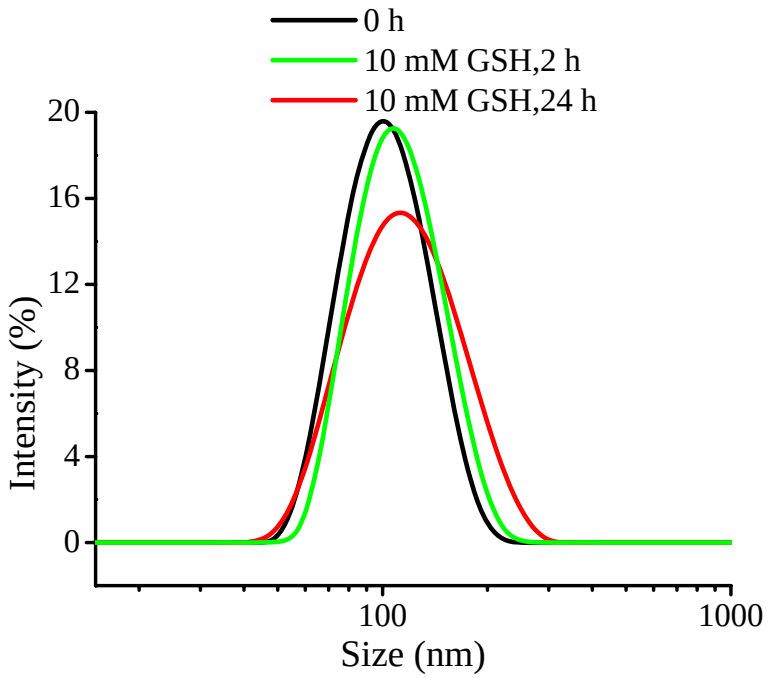


Fig. S5 The change in size distribution profiles of PEA-Gal$_{42}$ nanoparticles in response to 10 mM GSH in PBS (10 mM, pH 7.4).

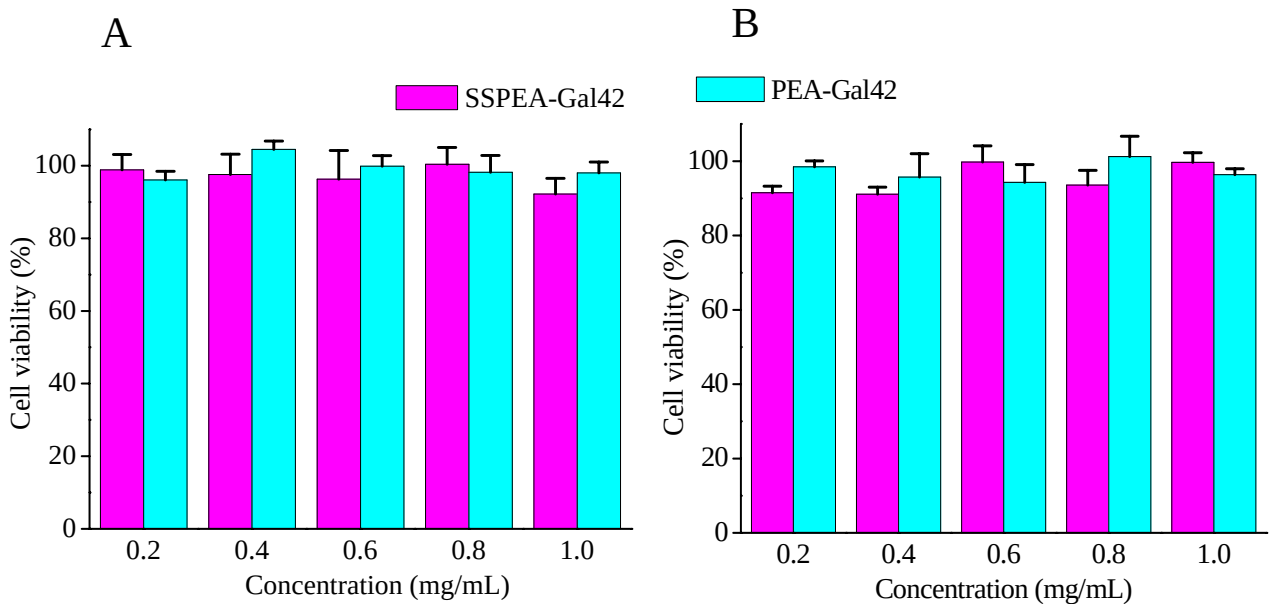


Fig. S6 Cytotoxicity of SSPEA-Gal42 and PEA-Gal42 nanoparticles against HepG2 (A) and MCF-7 (B) cells by MTT assays at 48 h incubation. Data are presented as the average ± SD (n = 4).