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Mesoporous Carbon Nanoparticles with Polyacrylic Acid Capping as Drug Carrier for Bi-trigger Drug Continuous Release

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Electronic Supplementary Information

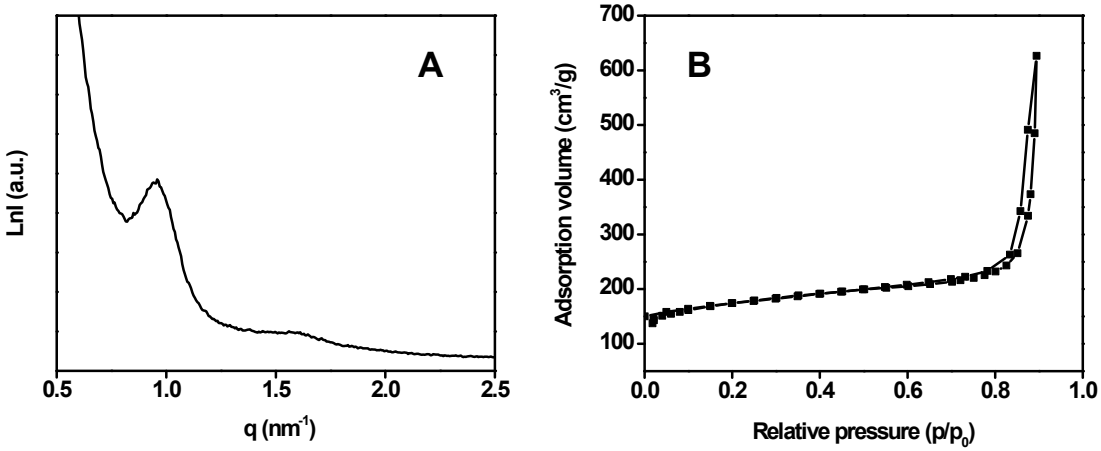

Fig. S1. (A) Small-angle X-ray scattering of the oxidized mesoporous carbon nanoparticles (ox-MCNs). (B) Nitrogen adsorption/desorption isotherms of ox-MCNs.

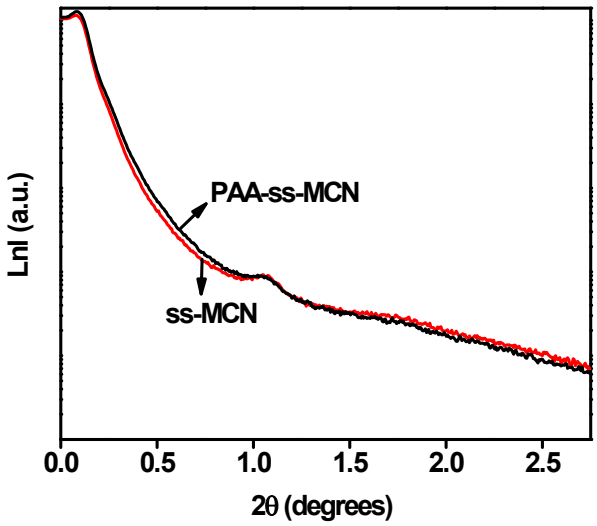

Fig. S2. Small-angle X-ray scattering of the ss-MCN and PAA-ss-MCN.

Table S1. The changes of binding energy area of ss-MCN and PAA-ss-MCN

Name	Peak Bing Energy (eV)		Area (P) CPS. eV		At. %	
	ss-MCN	PAA-ss-MCN	ss-MCN	PAA-ss-MCN	ss-MCN	PAA-ss-MCN
C1s	284.6	284.3	17658.5	12729.0	73.48	76.05
N1s	400.7	399.3	1379.3	501.7	3.23	1.68
S2p	163.7	163.5	1459.1	188.8	3.6	0.67
O1s	532.8	531.8	13462.5	10286.6	19.69	21.6

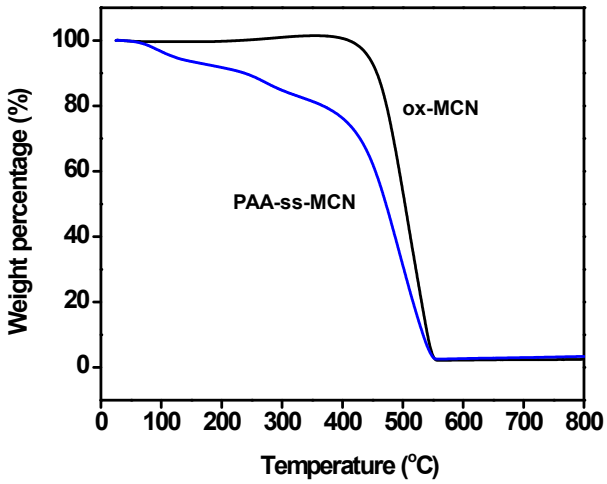

Fig. S3. TGA analysis results for primary ox-MCN and PAA-ss-MCN.

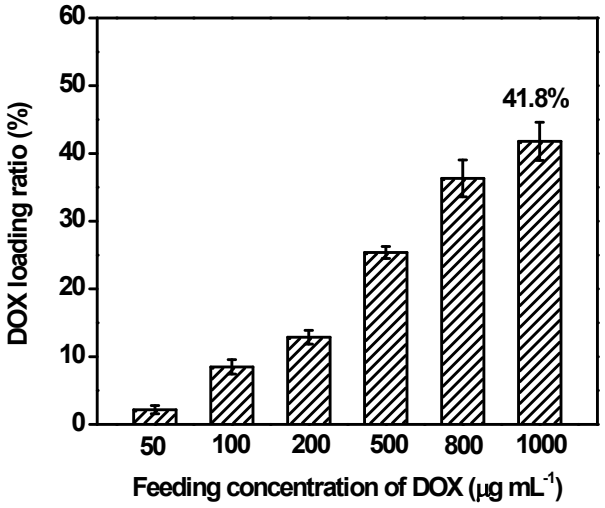

Fig. S4. Drug loading ratio in PBS buffer (10 mM, pH 7.4) with different primary concentrations of DOX; PAA-ss-MCN: 2 mg.

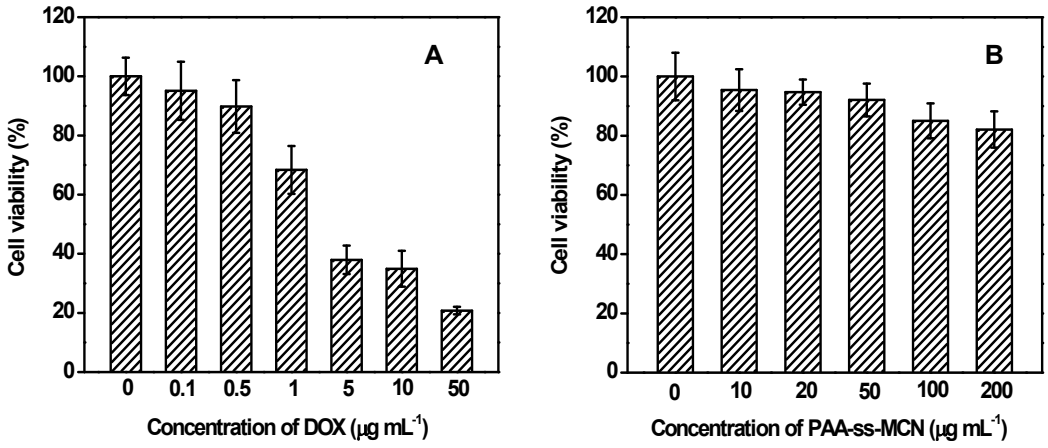

Fig. S5. Relative viability of HeLa cells incubating with different concentrations of DOX (A) and PAA-ss-MCN (B) for 24 h at 37℃, 5% CO_2.

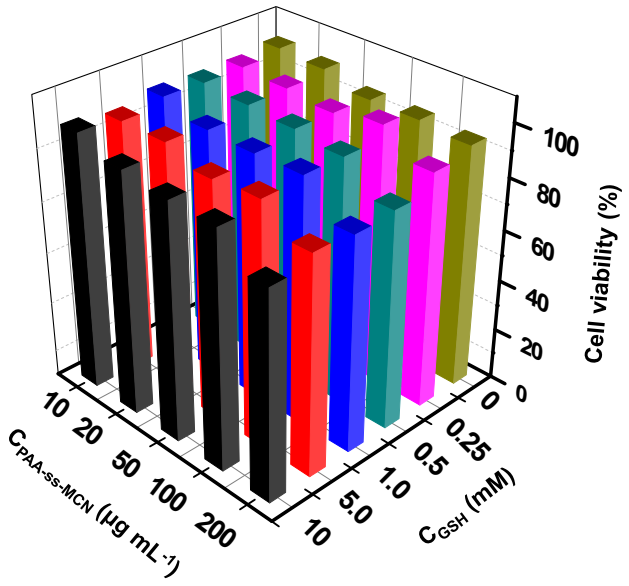

Fig. S6. Relative viability of HeLa cells incubating with various concentrations of PAA-ss-MCN in the presence of various concentrations of GSH for 24 h at 37℃, 5% CO_2.

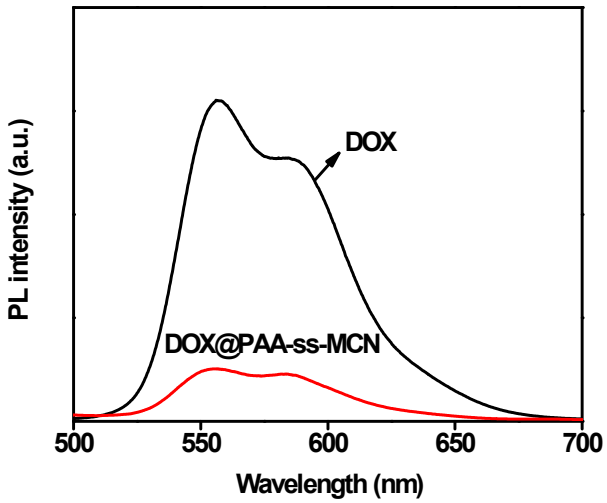

Fig. S7. (A) Fluorescence emission spectra of DOX and that of DOX@PAA-ss-MCN containing same amount of DOX. The fluorescence spectra are recorded at an excitation wavelength 470 nm.