Supporting information

One-pot Synthesis of Mesoporous Silica Nanocarriers with Tunable Particle Sizes and Pendent Carboxylic Groups for Cisplatin Delivery

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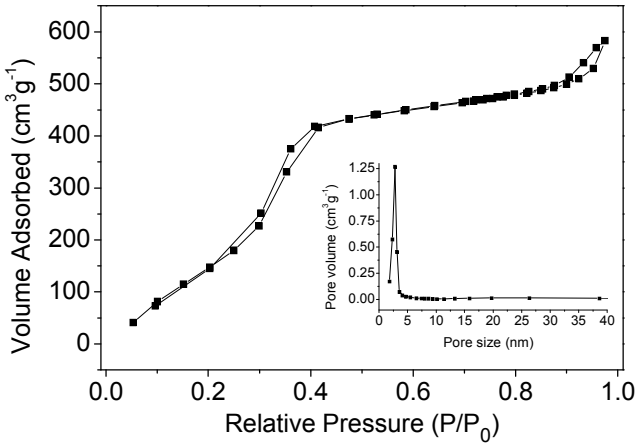

Figure S1. Nitrogen adsorption-desorption isotherm for the synthesized MSNs-C250. The inset demonstrates the BJH pore size distribution of the sample.

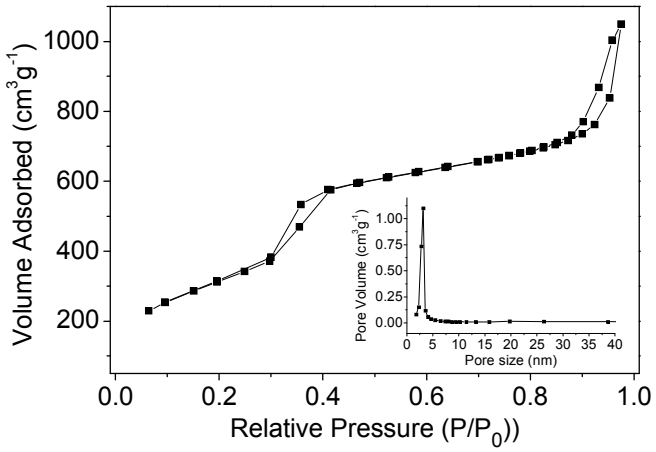

Figure S2. Nitrogen adsorption-desorption isotherm for the synthesized MSNs-C450. The inset demonstrates the BJH pore size distribution of the sample.

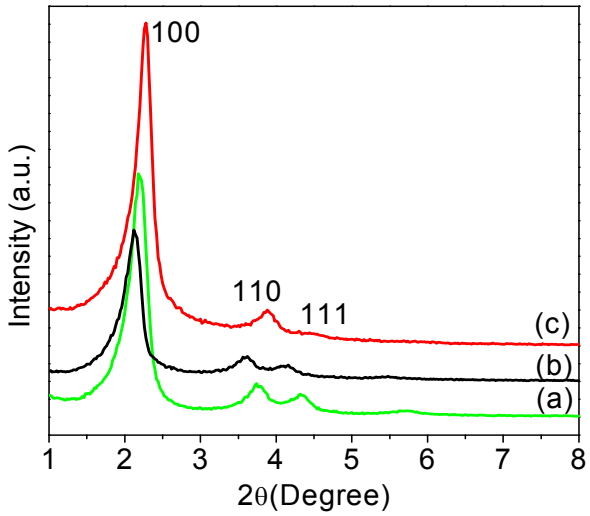

Figure S3. Small angle XRD patterns of the resultant MSNs-C synthesized with different molar ratios of CES to TEOS of 0.047 (a); 0.094 (b) and 0.14 (c), respectively.

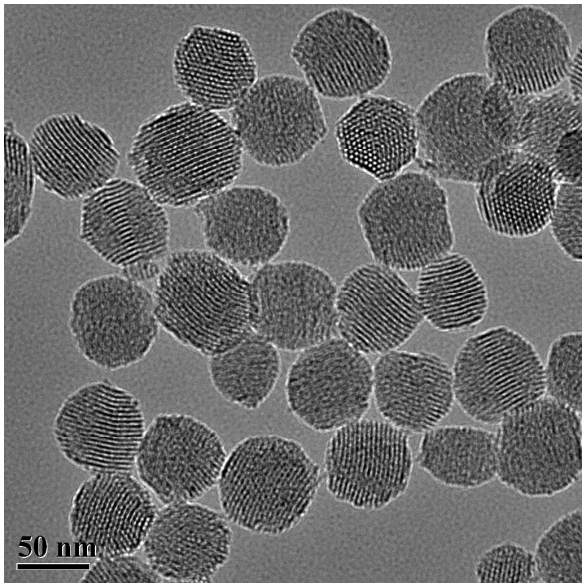

Figure S4. Typical TEM image for MSNs-C prepared with the molar ratio of CES to TEOS of 0.047.

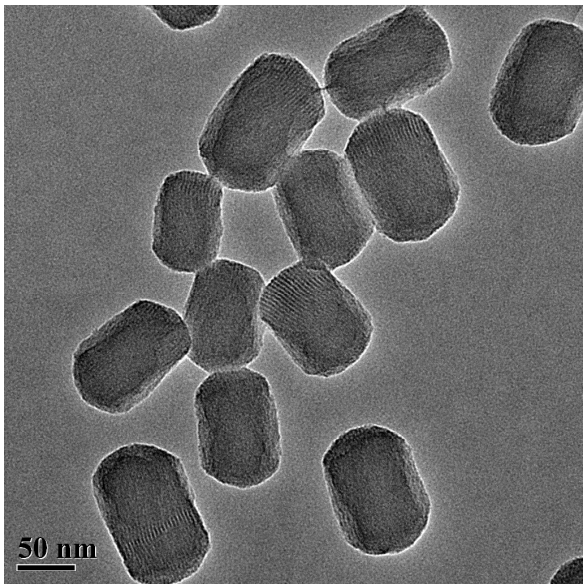

Figure S5. Typical TEM image for MSNs-C prepared with the molar ratio of CES to TEOS of 0.14.

Tabel S1. Pore structural parameters of the synthesized samples with CES volumes of 0.25 (MSNs-025C), 0.5 (MSNs-050C) and 0.75 (MSNs-075C) mL in the initial synthesis mixture, and the content of CDDP bonded in the resultant MSNs-C calculated by ICP measurements.

Samples	S_{BET} (m^2/g)	D_{BJH} (nm)	V_P(cm^3/g)	Pt content (wt.%)
MSNs-025C	1210	2.77	1.62	
MSNs-025C-CDDP	886	2.73	1.22	5.9
MSNs-050C	1130	2.79	1.51	
MSNs-050C-CDDP	814	2.71	1.27	8.7
MSNs-075C	1090	2.80	1.50	
MSNs-075C-CDDP	740	2.75	1.14	11.3

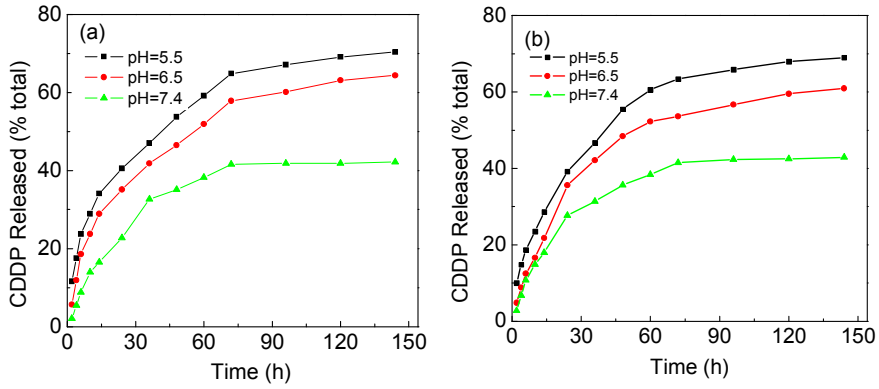

Figure S6. (a) Cumulative release profiles of CDDP from the synthesized MSNs-C250 (a) and MSNs-C450 (b) in PBS at 37 ^{o}C. The drugs are released at pH values of 7.4 (Green), 6.5 (Red) and 5.5 (Black).

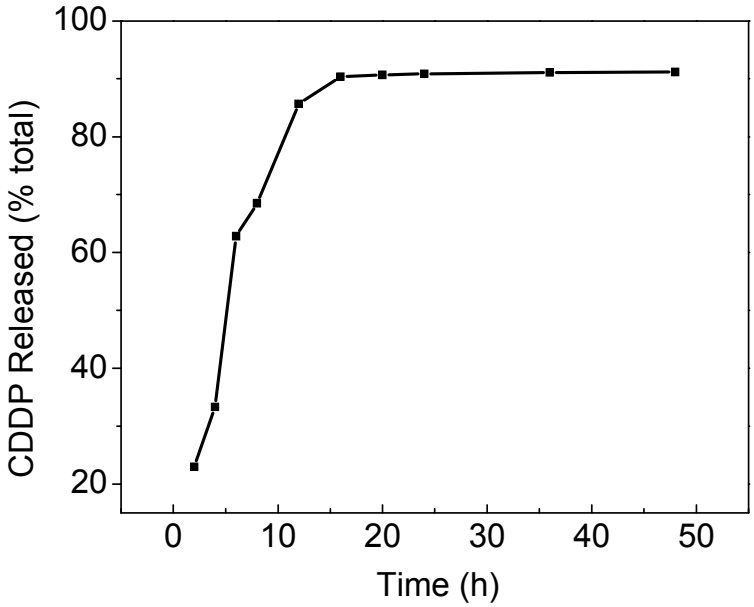

Figure S7. Cumulative release profiles of CDDP from the pure MSNs in PBS at 37 ^{o}C.

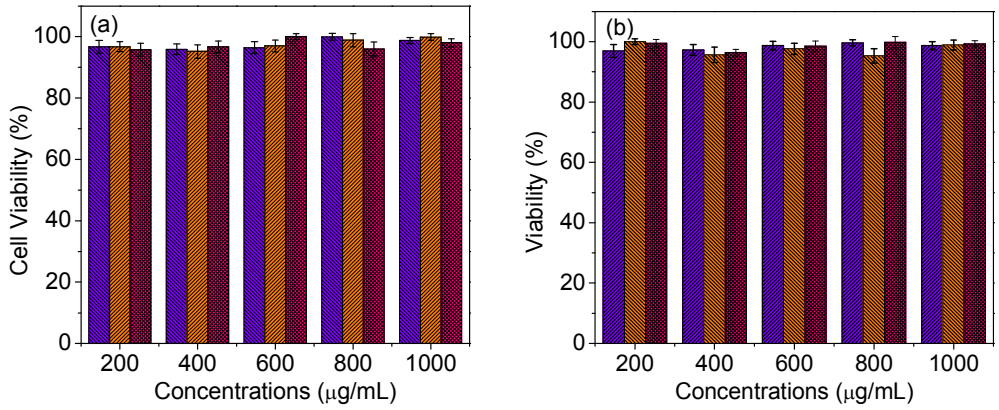

Figure S8. Viability tests of HeLa (a) and MCF-7 (b) cells with different concentrations of MSNs-C250 (Violet), MSNs-C350 (Orange) and MSNs-C450 (Pink) in 48 h of incubation.