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Supporting Information

Noncovalent assembly of reduced graphene oxide and alkyl-grafted mesoporous silica: an effective drug carrier for near-infrared light-responsive controlled drug release

Dinggeng He,† Xuecai Li,† Xiaoxiao He,* Kemin Wang,* Jinlu Tang, Xiaoxiao Yang, Xing He, Xue Yang and Zhen Zou

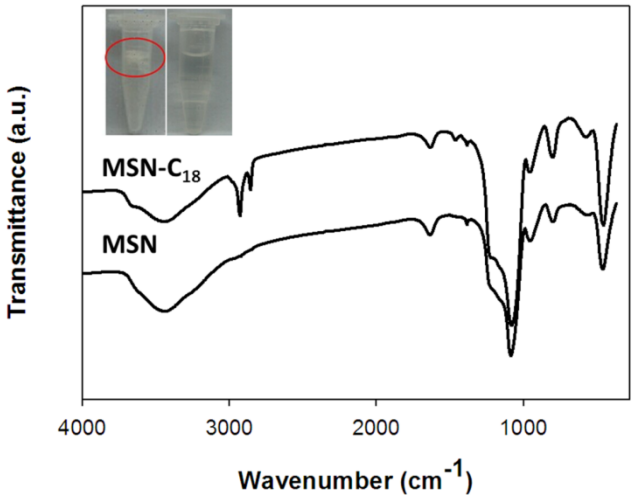

Fig. S1 FTIR spectra of the synthesized MSN-C_{18} and MSN. Inset: photo of MSN-C_{18} (left) and MSN (right) solutions. The red circle illustrates the hydrophobicity of MSN-C_{18}.

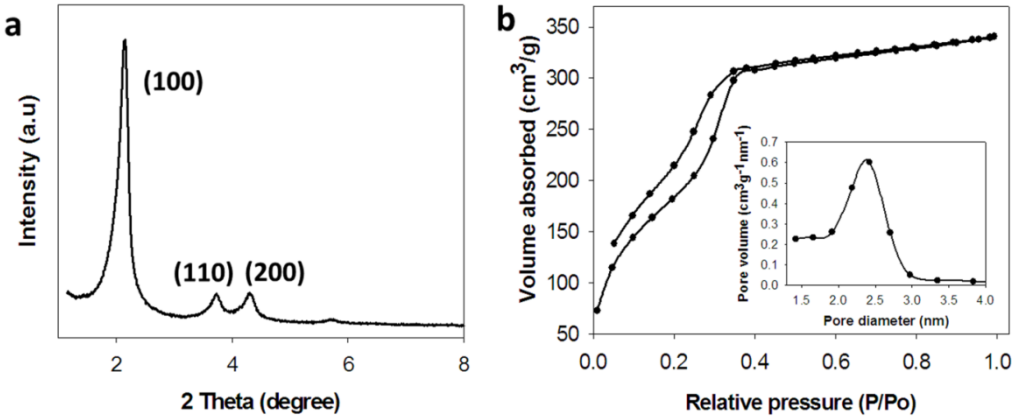

Fig. S2 a) Powder XRD pattern of MSN-C_{18}. b) BET nitrogen adsorption-desorption isotherm of MSN-C_{18}. Inset: BJH pore size distribution of MSN-C_{18}.

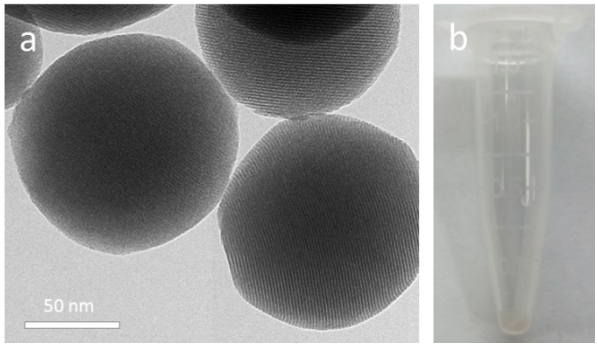

Fig. S3 a) TEM image of MSN nanoparticles after being treated with RGO sheets. b) photo of MSN nanoparticles treated with RGO sheets. A white precipitate was observed in the bottom of centrifuge tube, further indicating that RGO sheets did not exist in the MSN surface.

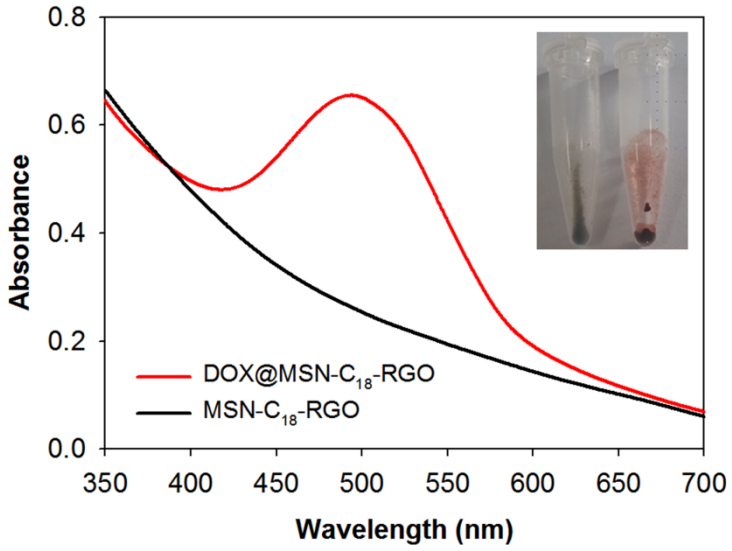

Fig. S4 UV-vis spectra of MSN-C_{18}-RGO and DOX@MSN-C_{18}-RGO in aqueous solution (1.0 mg mL^{-1}). Inset: photo of MSN-C_{18}-RGO (left) and DOX@MSN-C_{18}-RGO (right) nanoparticles.

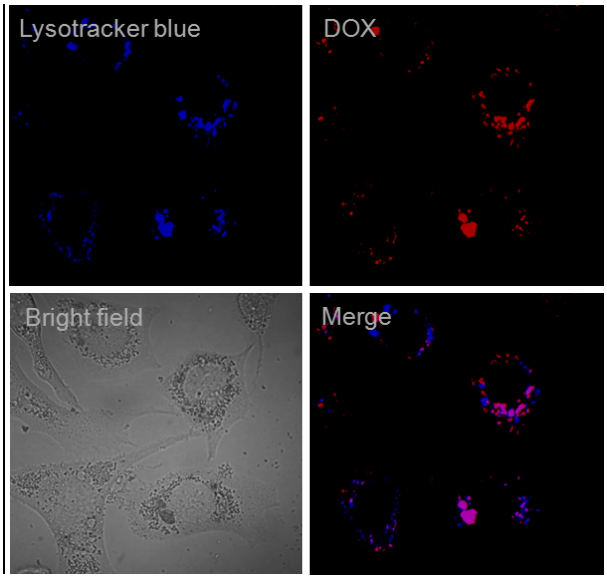

Fig. S5 CLSM images of SMMC-7721 cells after being incubated with DOX@MSN-C_{18}-RGO for 1 h. Lysotracker Blue (blue fluorescence) was used to stain the lysosomes. Cells were imaged using a 100× oil-immersion objective.

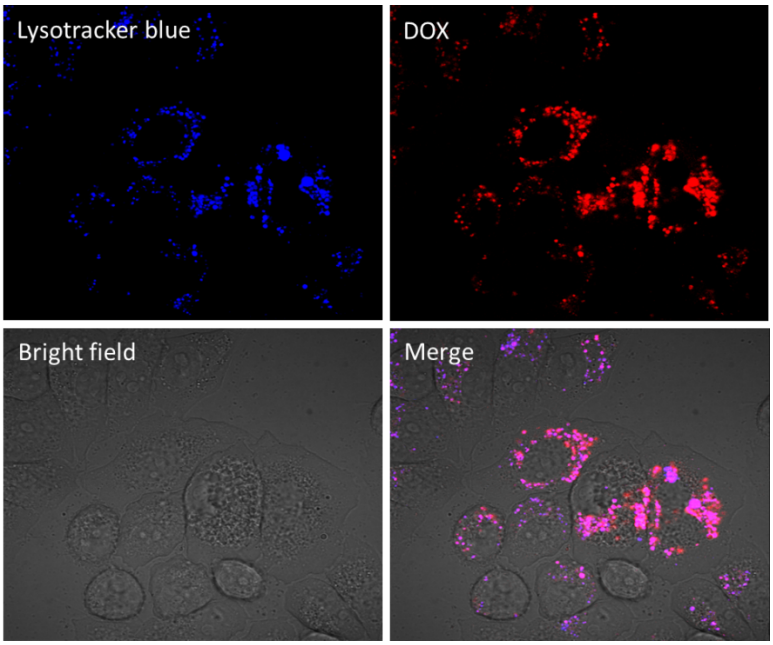

Fig. S6 CLSM images of SMMC-7721 cells after being treated with DOX@MSN-C_{18}-RGO for 8 h in the absence of NIR light irradiation. Lysotracker Blue (blue fluorescence) was used to stain the lysosomes. Cells were imaged using a 100× oil-immersion objective.

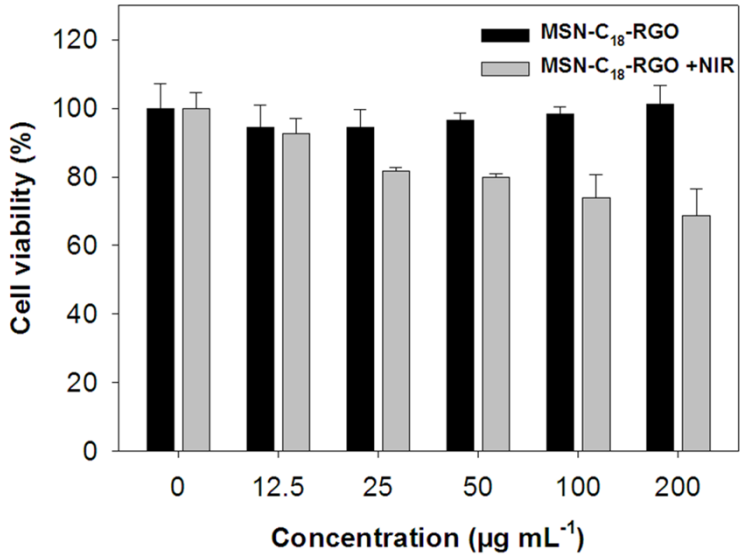

Fig. S7 Viability of SMMC-7721 cells incubated with various MSN-C_{18}-RGO (0-200 μg mL^{-1}) concentrations with and without NIR light irradiation.