Supporting Information

Transferrin-Decorated, MoS_2-Capped Hollow Mesoporous Silica Nanospheres as a Self-Guided Chemo-Photothermal Nanoplatform for Controlled Drug Release and Thermotherapy

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Supporting Figures

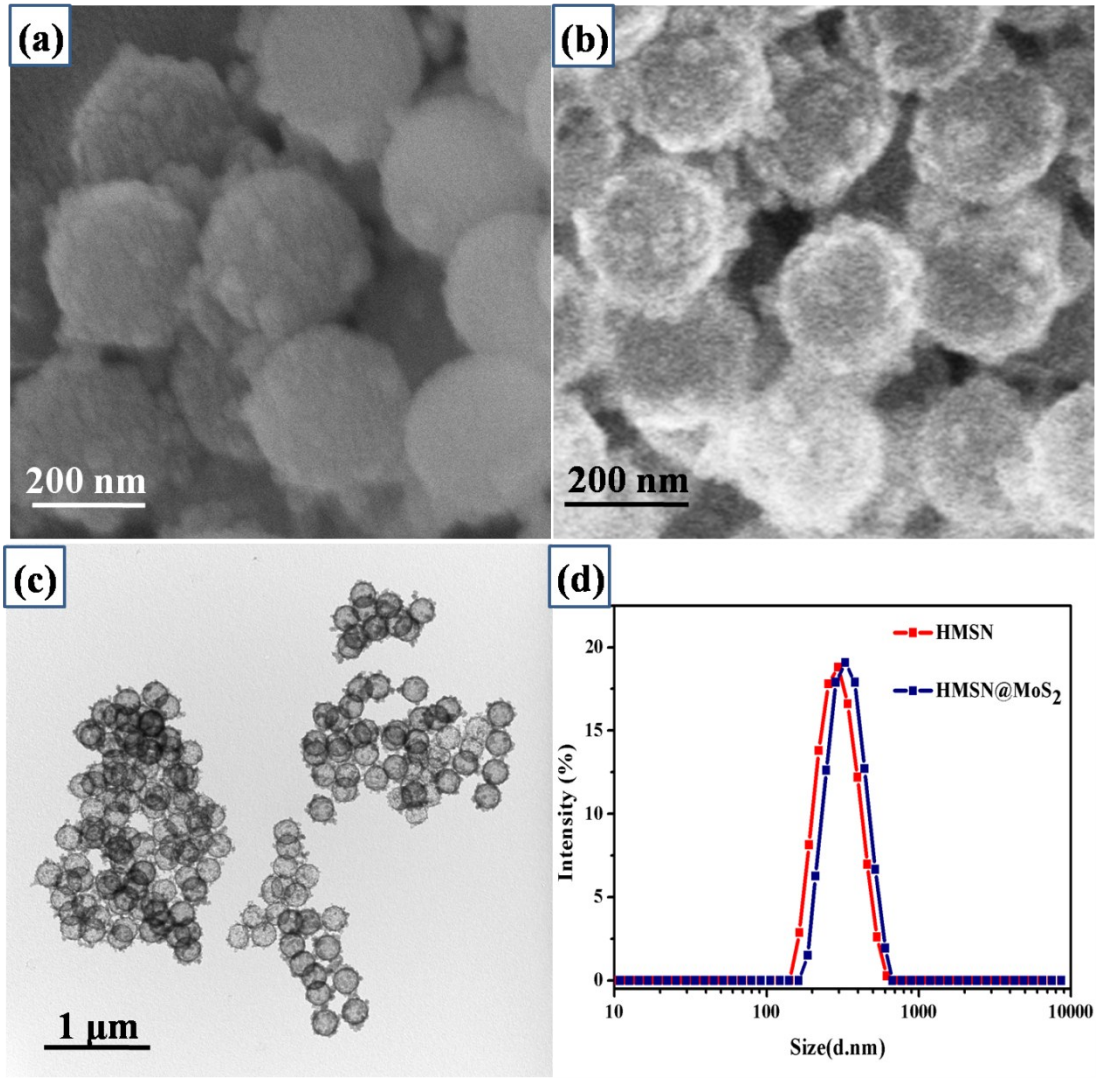


Figure S1. SEM images of (a) PS@SiO_2 nanoparticles and (b) HMSN; (c)TEM image of HMSN@MoS_2; (d) DLS of HMSN and HMSN@MoS_2.

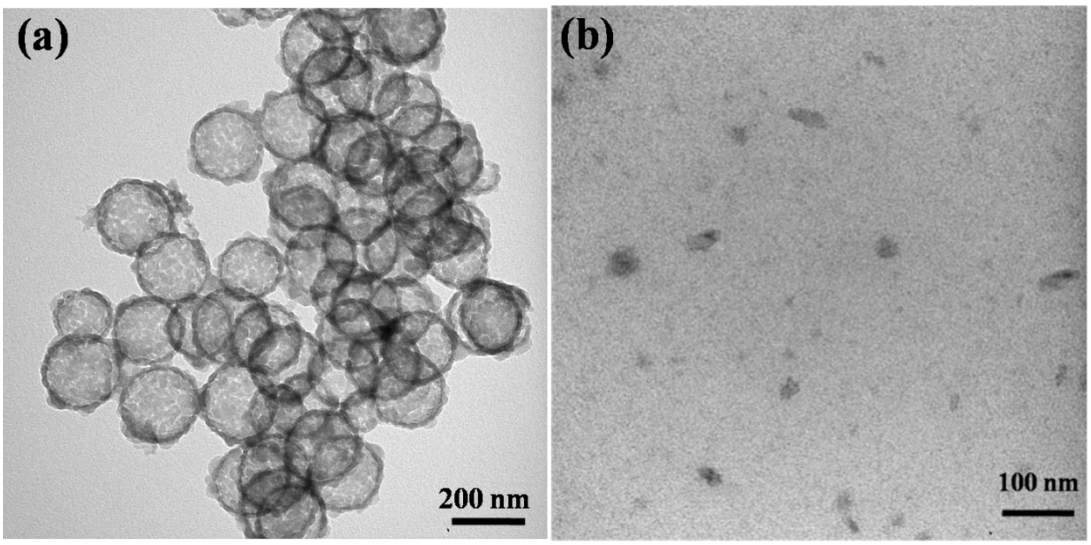
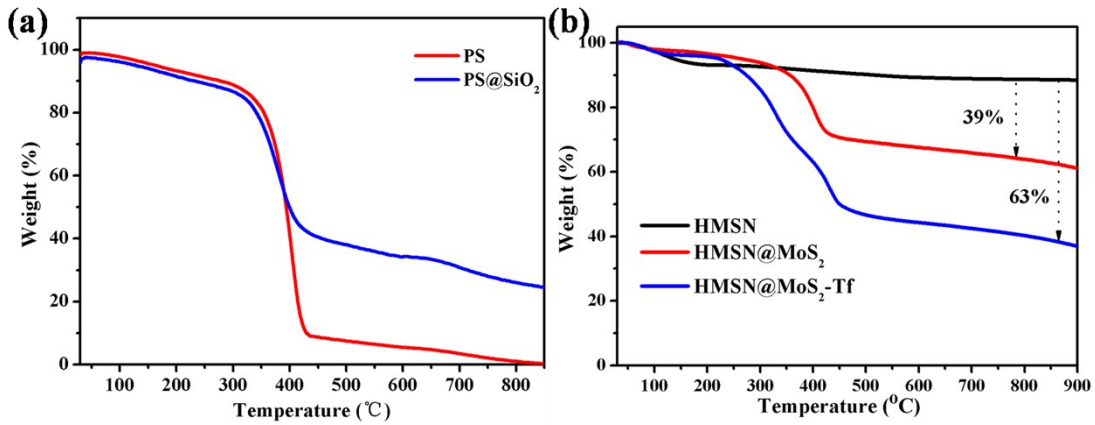
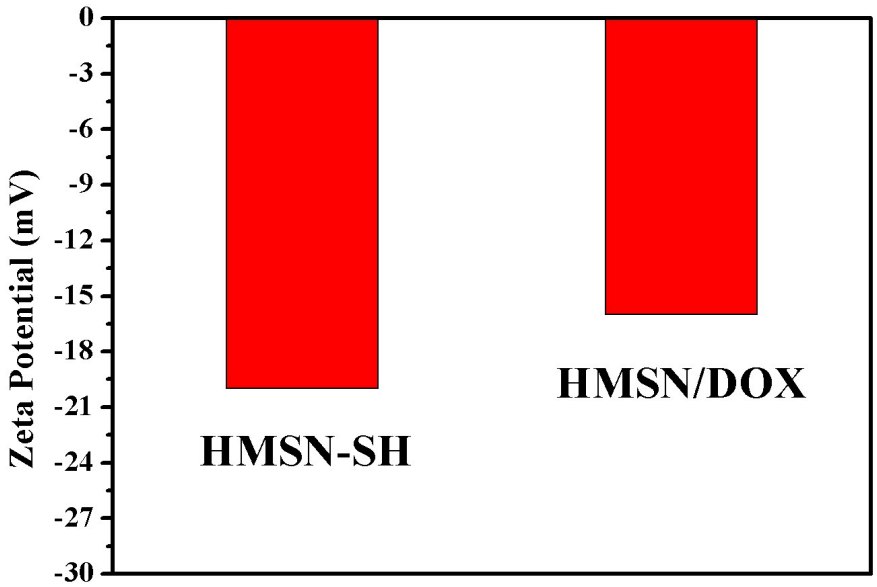


Figure S2. TEM images of (a) HMSN in PBS (pH=7.4) for 3 days and (b) the prepared MoS_2 nanosheets.



FigureS3. TGA analysis of (a) pure PS nanoparticles and PS@SiO_2; (b) HMSN, HMSN@MoS_2 and HMSN@MoS_2-Tf.



FigureS4. Zeta potential of HMSN-SH and DOX loaded HMSN-SH (HMSN/DOX).

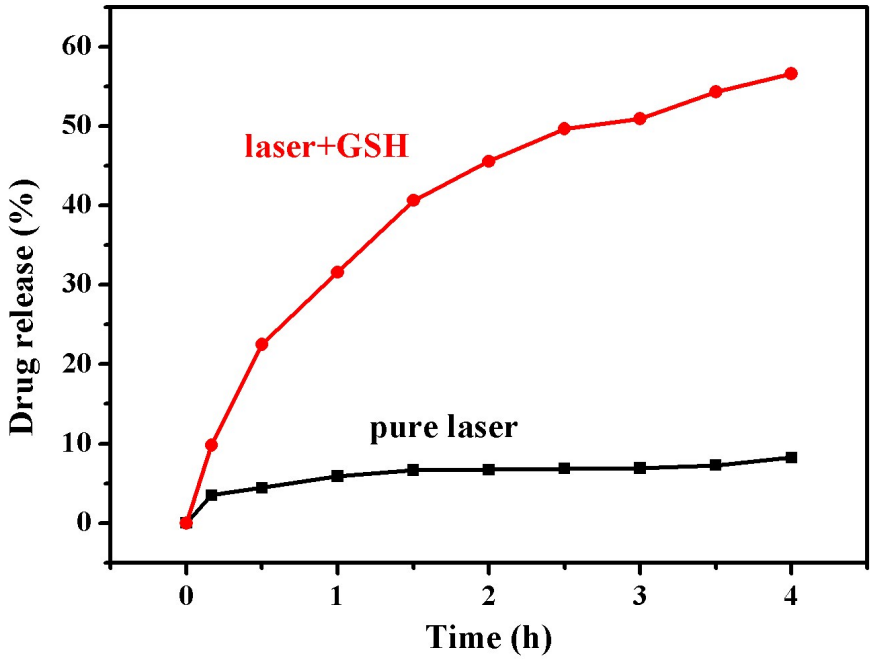


Figure S5. Drug release profile of HMSN/DOX@MoS_2 with and without the presence of GSH under the 808 nm laser irradiation for 10 min at 37 ^{o}C.

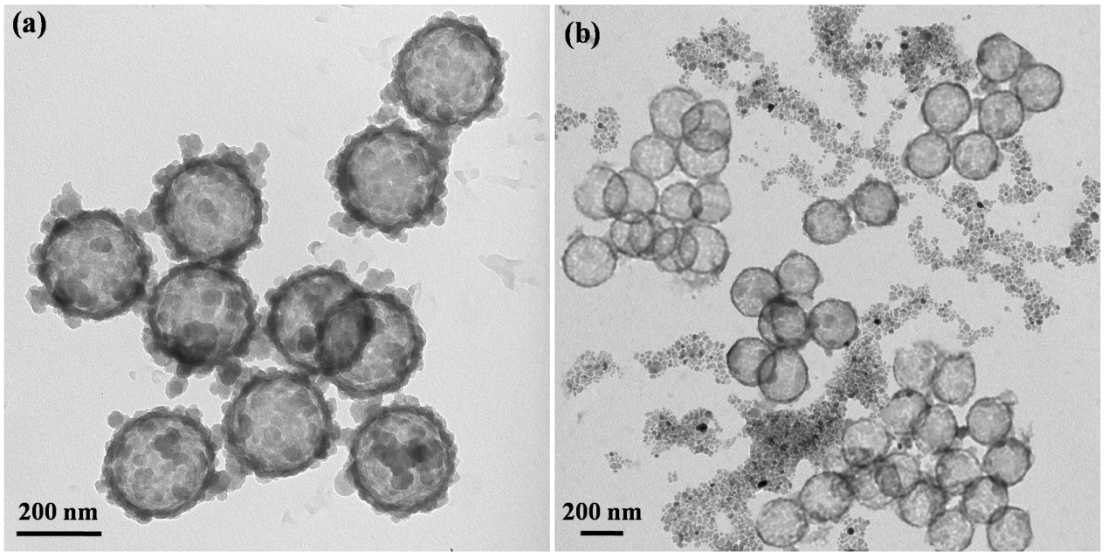


Figure S6. TEM images of HMSN@MoS_2 (a) before and (b) after the addition of 10 mM GSH.

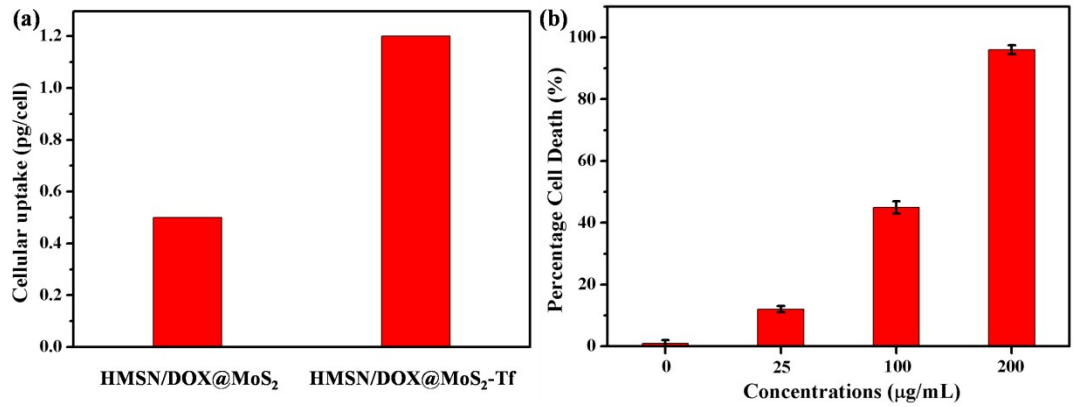


Figure S7. (a) Cellular uptake of HMSN/DOX@MoS_2 and HMSN/DOX@MoS_2-Tf. (b) Quantitative data collected from the calcein-AM/PI co-stained fluorescence images of HeLa cells treated with different concentrations of HMSN@ MoS_2 under NIR irradiation. The results were expressed as the mean percentage from different fields of cells. Image-Pro plus 6 software was used for the quantification.

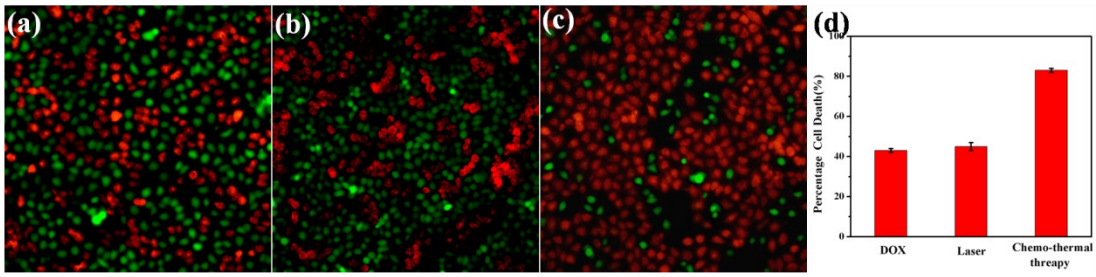


Figure S8. Confocal fluorescence images of HeLa cells treated with (a) pure DOX, (b) HMSN@MoS_2 and (c) HMSN/DOX@MoS_2-Tf under the NIR irradiation for 10 min for calcein-AM/PI cell-survival assay; (d) the corresponding quantitative data of dead cells collected from the fluorescence images.