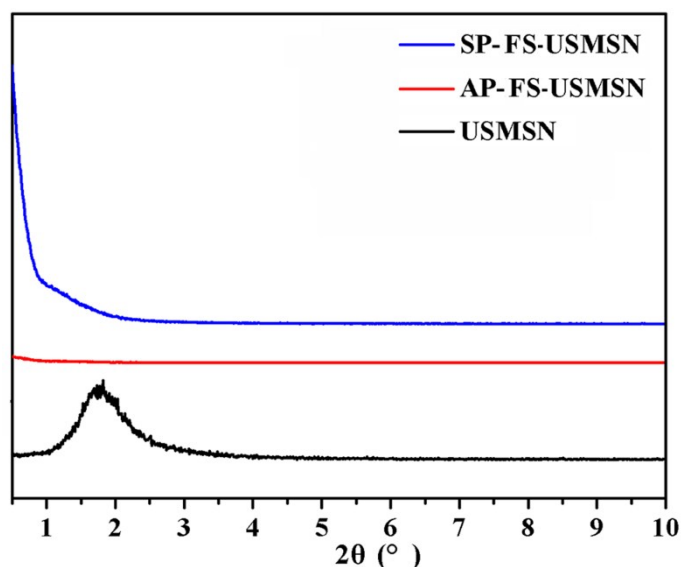
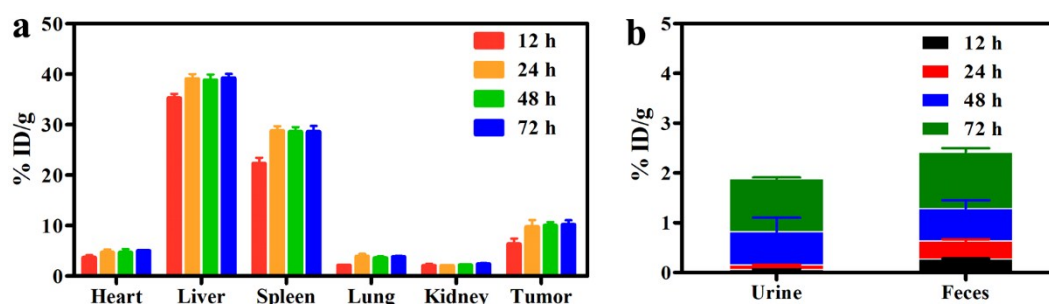


## A pH-responsive dissociable mesoporous silica-based nanoplatform enabling efficient dual-drug co-delivery and rapid clearance for cancer therapy

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**Figure S1.** XRD patterns of SP-FS-USMSN, AP-FS-USMSN and USMSN.



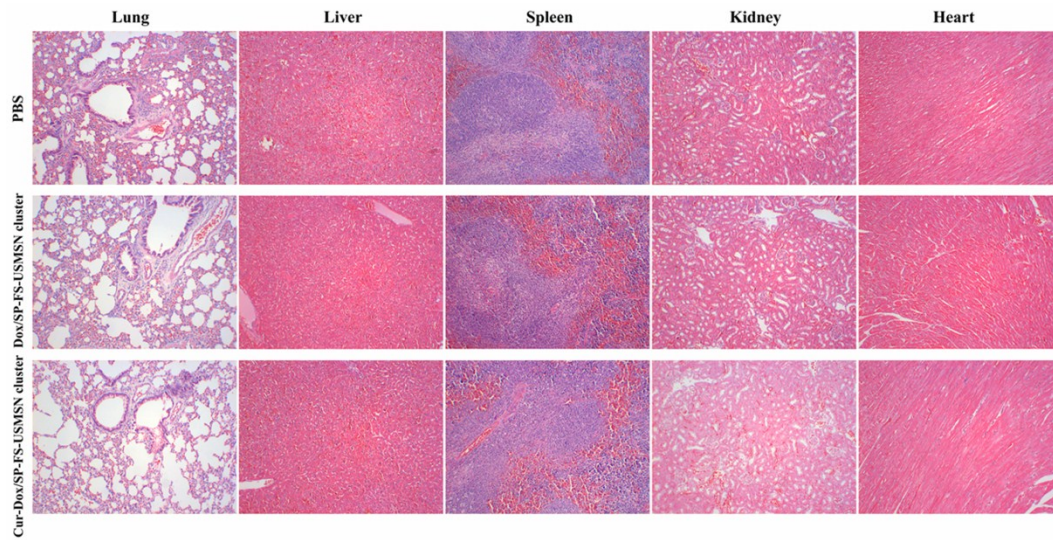
**Figure S2** In-vivo clearance. The time-dependent biodistribution of Si element (% inject dose (ID) of Si per gram of tissues) in main organs and tumor tissue of mice after i.v. injection of 100 nm-sized MSN without dissociation ability (a). Excretion profiles of Si element in mice after i.v. injection of 100 nm-sized MSN without dissociation ability (b).

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**Figure S3** Corresponding H&E stained slices obtained from the lung, liver, spleen, kidney and heart of HepG2-tumor xenograft mice on the day 15 post treatment.