Facile synthesis of fluorescent porous zinc sulfide nanospheres and their application for potential drug delivery and live cell imaging

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Fig. S1. Typical TEM image (left) and its size distribution based on statistical analysis (right) of ZnS FPNSs.

Fig. S2 FT-IR spectra of ZnS FPNSs and GA.
**Fig. S3** Typical TEM image of ZnS FPNSs prepared for 24 h.

**Fig. S4**. Typical SEM image of ZnS FPNSs prepared at 140 °C.

**Fig. S5**. The hydrodynamic diameter of ZnS FPNSs determined by DLS in water.
**Fig. S6.** The zeta potential and hydrodynamic diameter of ZnS FPNSs in DMEM+10%FBS.

**Fig. S7.** FT-IR spectra of the ST-ZnS system, ZnS and ST.

**Fig. S8.** The maximum excitation (A) and emission spectra before loading (B), and emission spectra after loading (C) of the diluted solution of fluorescent dye safranine-T (ST).
**Fig. S9.** The *in vitro* release kinetics of ST from the ST-ZnS system against PBS buffer (pH 7.4) at 37 °C.