Supporting Information

Upper Critical Solution Temperature Polymer Grafted Hollow Mesoporous Silica for Near-Infrared-Radiated Drug Release

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1. Synthesis of N-acryloyl glycinamide (NAGA).

Glycinamide hydrochloride (8.30 mg, 73.6 mmol), anhydrous potassium hydroxide (8.42 mg, 148.6 mmol), potassium carbonate (3.11 mg, 22.3 mmol) and magnesium sulfate (18.90 mg, 156.2 mmol) were dissolved in methanol (50 mL) at 0 °C. On the other hand, acryloyl chloride (6.08 mg, 65.2 mmol) was dissolved in diethyl ether (60 mL) at 0 °C. Then the acryloyl chloride solution was added dropwise to the above mixture while maintaining vigorous stirring at 0 °C for 2 h. The reaction was allowed to proceed at room temperature for another 6 h to ensure a complete reaction. The diethyl ether was then removed by rotary evaporation at 25 °C. The insoluble salts were filtered off and the methanol was removed by rotary evaporation at 40 °C. Finally, the product was further purified by recrystallization from a mixture of methanol (60 mL) and acetone (120 mL) at -25°C.

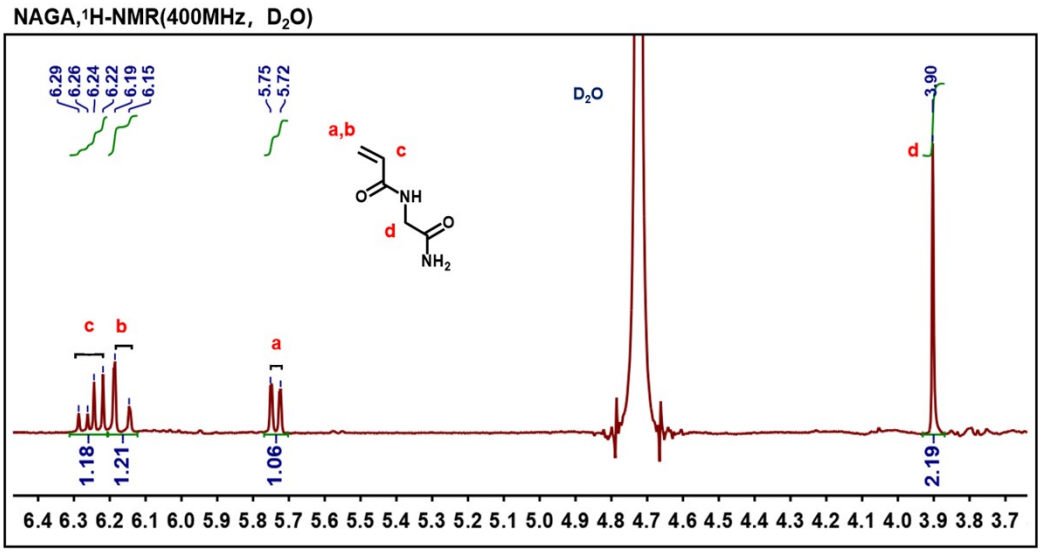

Figure S1. ^{1}H-NMR spectrum of the synthesized monomer NAGA with D_2O solvent.

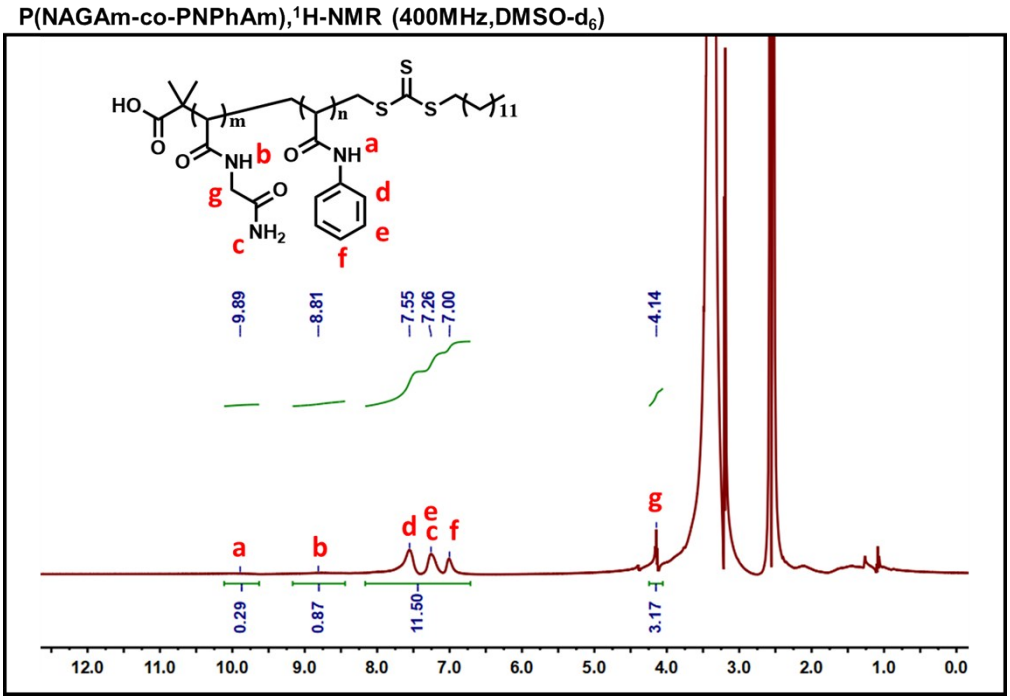

Figure S2. [1]H-NMR spectrum of polymer P(NAGAm-co-PNPhAm) with DMSO-*d*6 solvent.

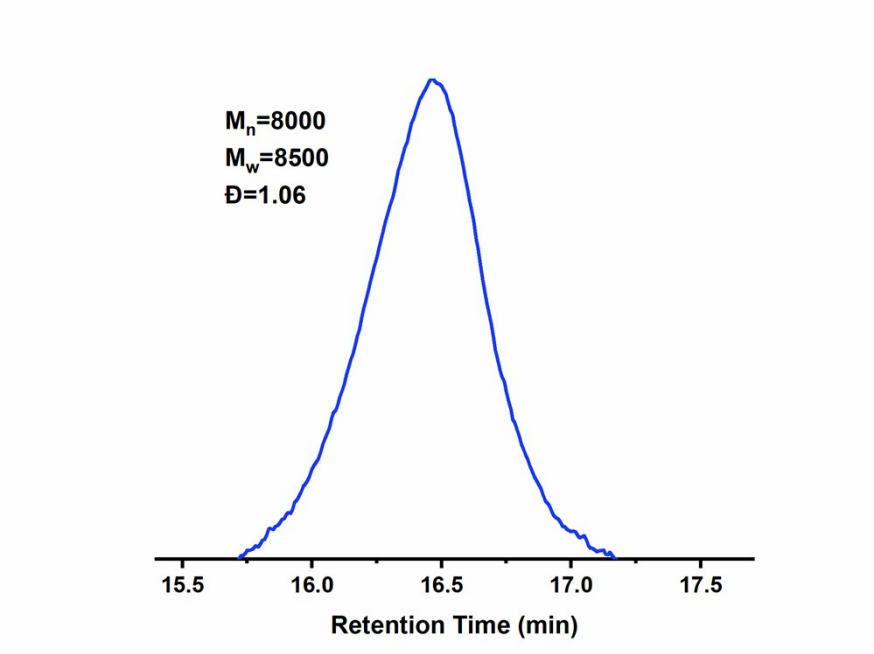

Figure S3. GPC curves of P(NAGAm-co-NPhAm).

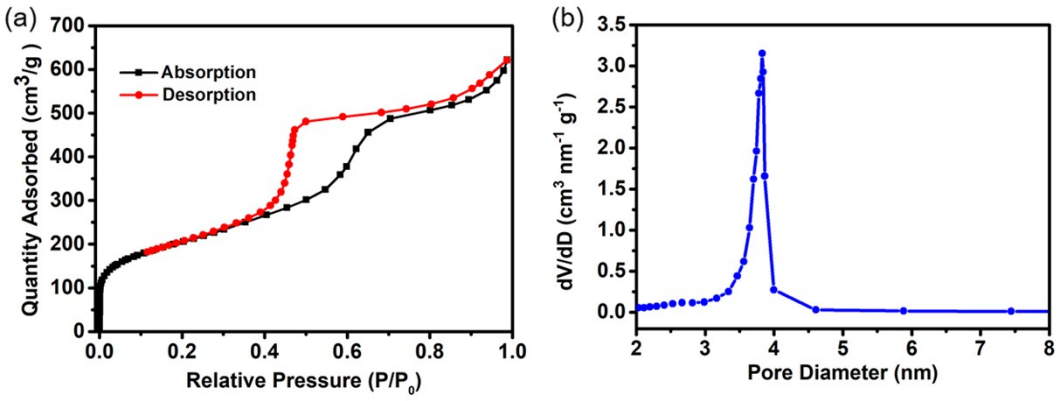

Figure S4. Specific surface area and aperture characterization of HMSNs and UCST@HMSNs. (a) Nitrogen adsorption isotherm of HMSNs. (b) Barett-Joyner-Halenda (BJH) pore size distribution of HMSNs.

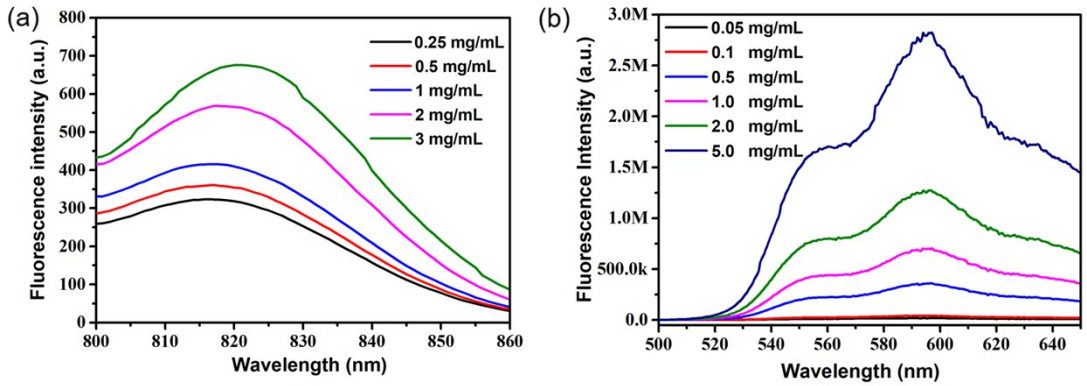

Figure S5. Fluorescence intensity curves of different concentrations of (a) ICG and (b) DOX.

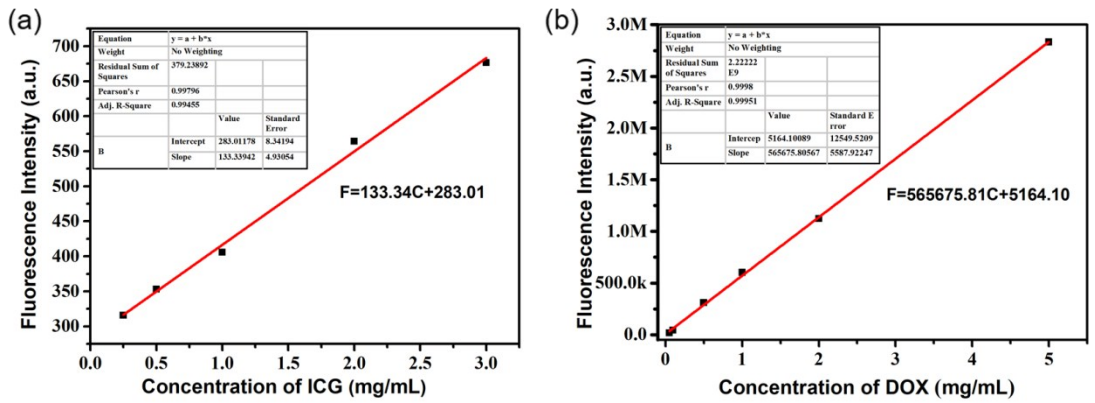

Figure S6. Standard curves of fluorescence intensity corresponding to concentration of (a) ICG and (b) DOX.