

**Facile Preparation of Coating Fluorescent Hollow Mesoporous Silica
Nanoparticles with pH-Sensitive Amphiphilic Diblock Copolymer for Controlled
Drug Release and Cell Imaging**

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Supporting Information

Table S1 Properties of poly (MPEG(x)-b-DBAM(y))with different feed ratios.

Feed ratio (x:y)	Conversion (%)	<i>M_n</i> (g/mol)	PDI	Polymer Composition (x:y)
1:25	90	14700	1.12	1:22.5
1:30	91	16800	1.24	1:27.3
1:50	92	24780	1.19	1:45.8

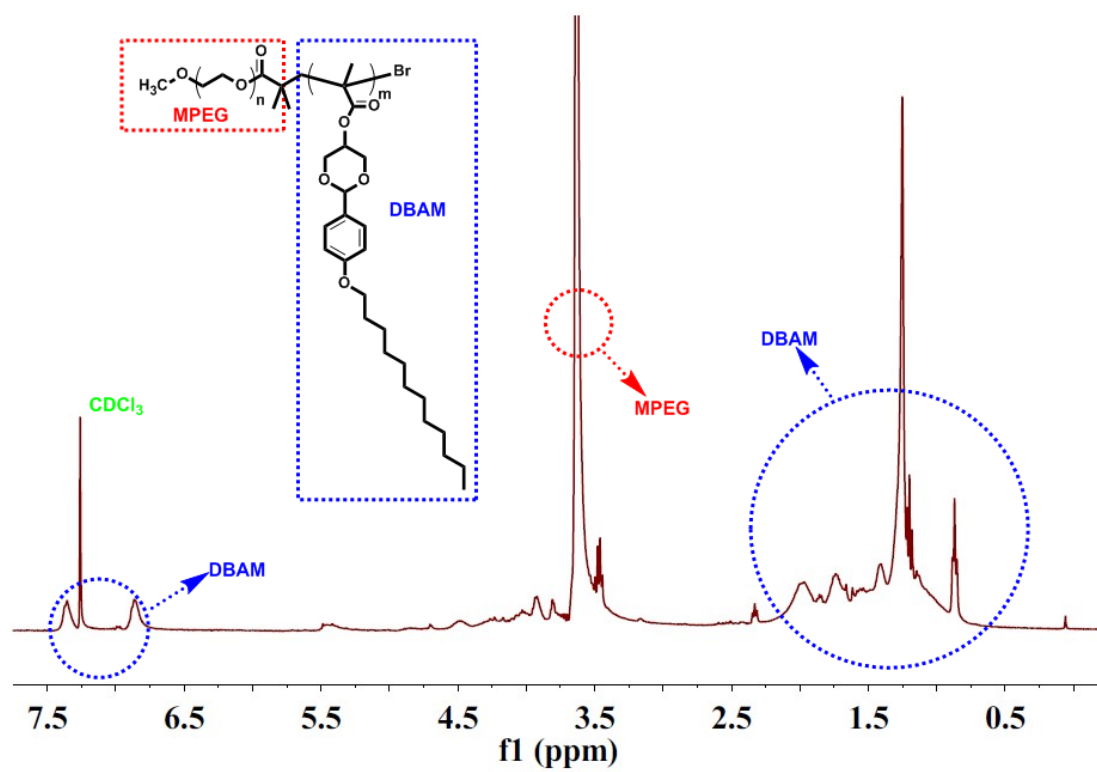


Figure S1 ^1H NMR spectrum (CDCl_3 , 400MHz) of MPEG-b-DBAM

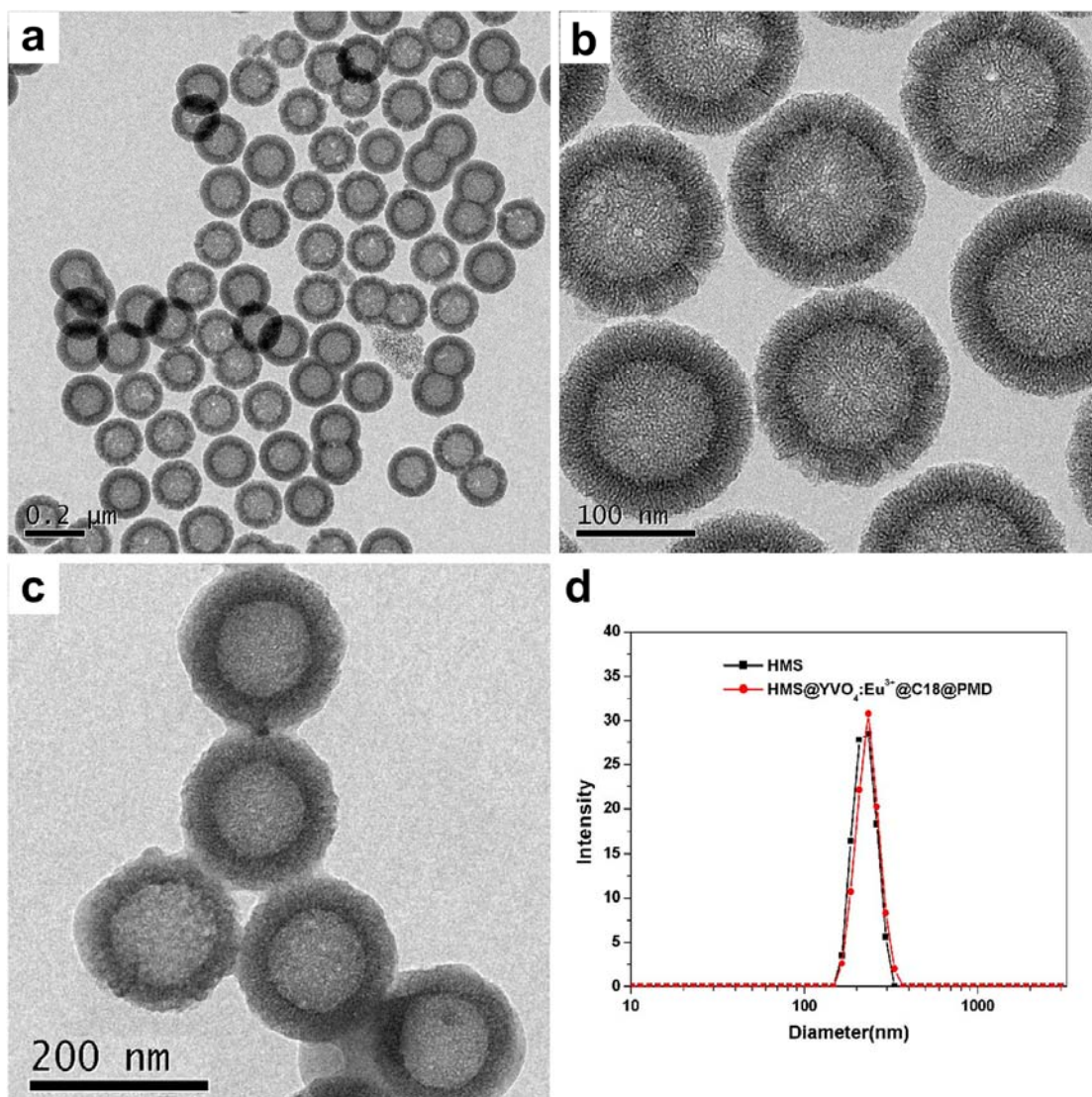


Figure S2 TEM images of HMS (a), (b), IBU@HMS@YVO₄:Eu³⁺@C18@PMD (c), size distribution of HMS and HMS@YVO₄:Eu³⁺@C18@PMD (d)

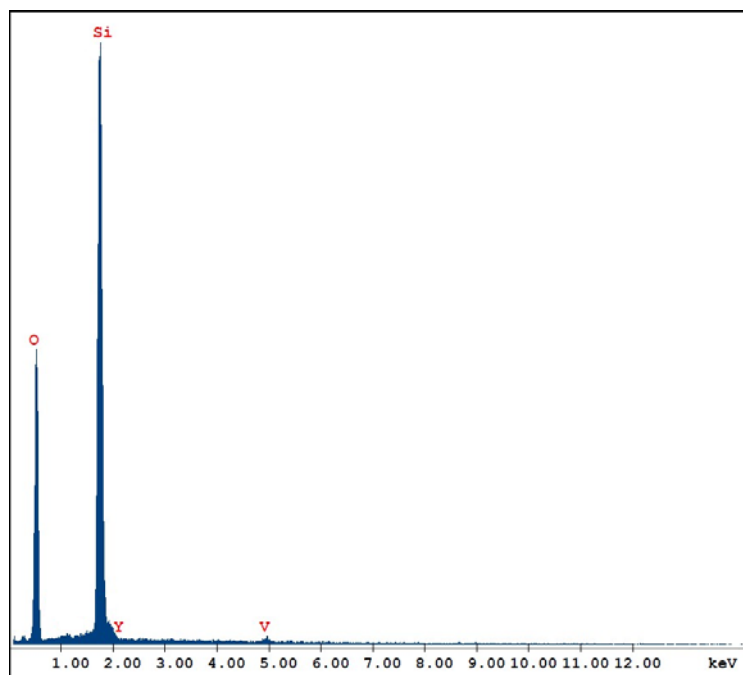


Figure S3 EDS spectrum of HMS@YVO₄:Eu³⁺

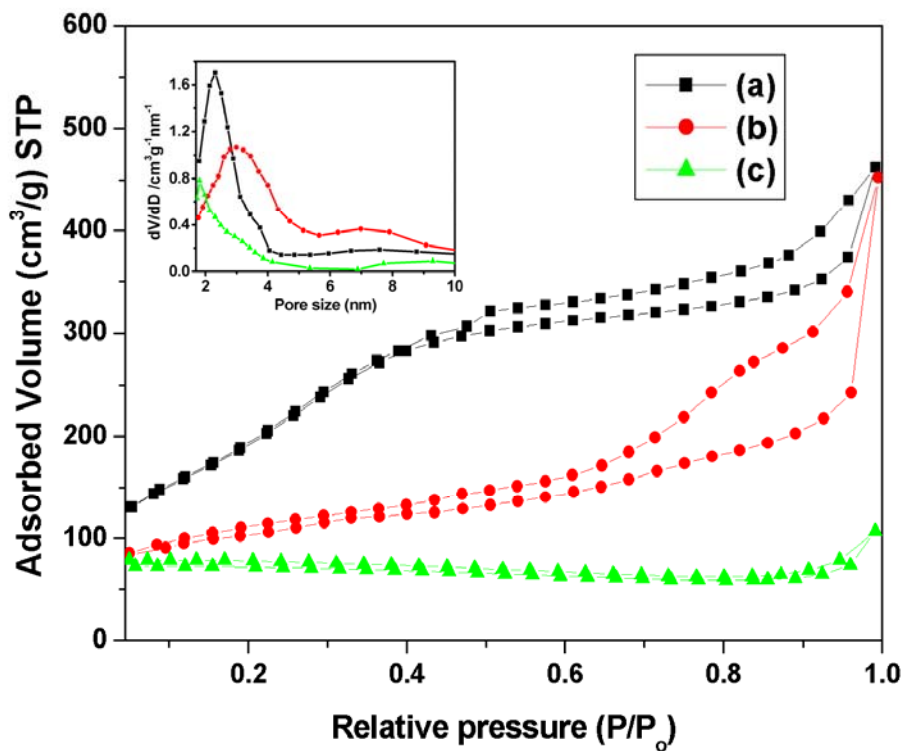


Figure S4 N₂ adsorption-desorption isotherm and the corresponding pore size distribution inset of (a) HMS, (b)

HMS@YVO₄:Eu³⁺@C18 and (c) IBU@HMS@YVO₄:Eu³⁺@C18.

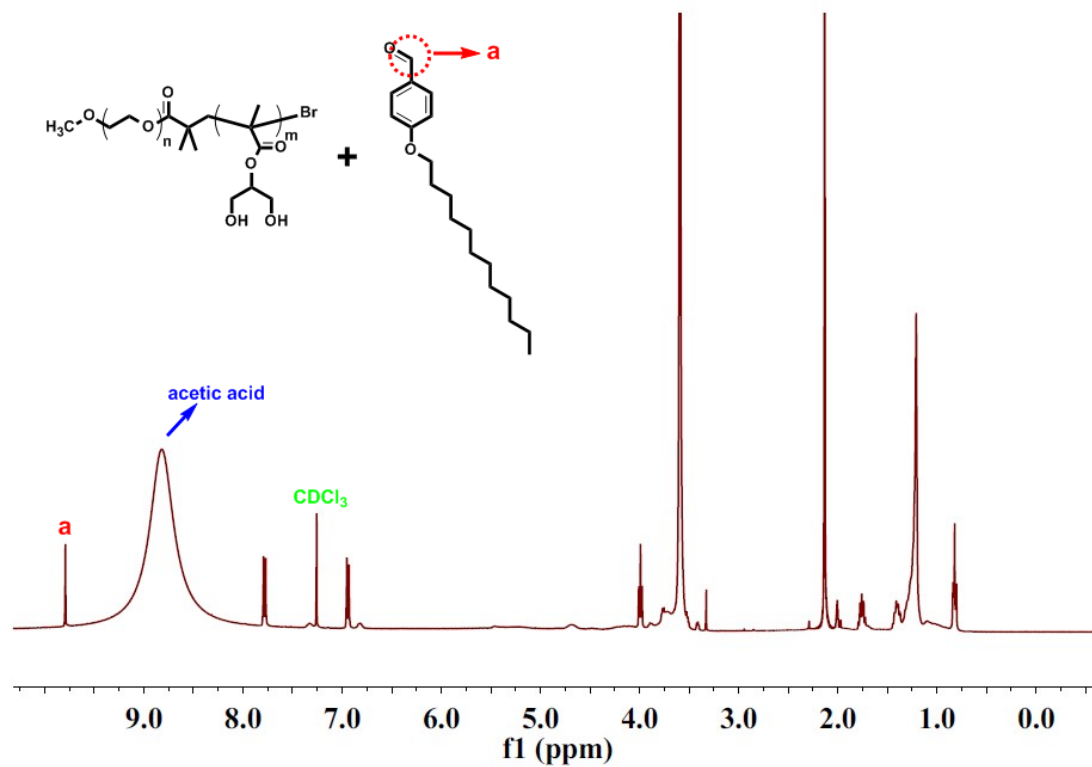


Figure S5 ¹H NMR spectrum (CDCl₃, 400MHz) of MPEG-b-DBAM after degradation

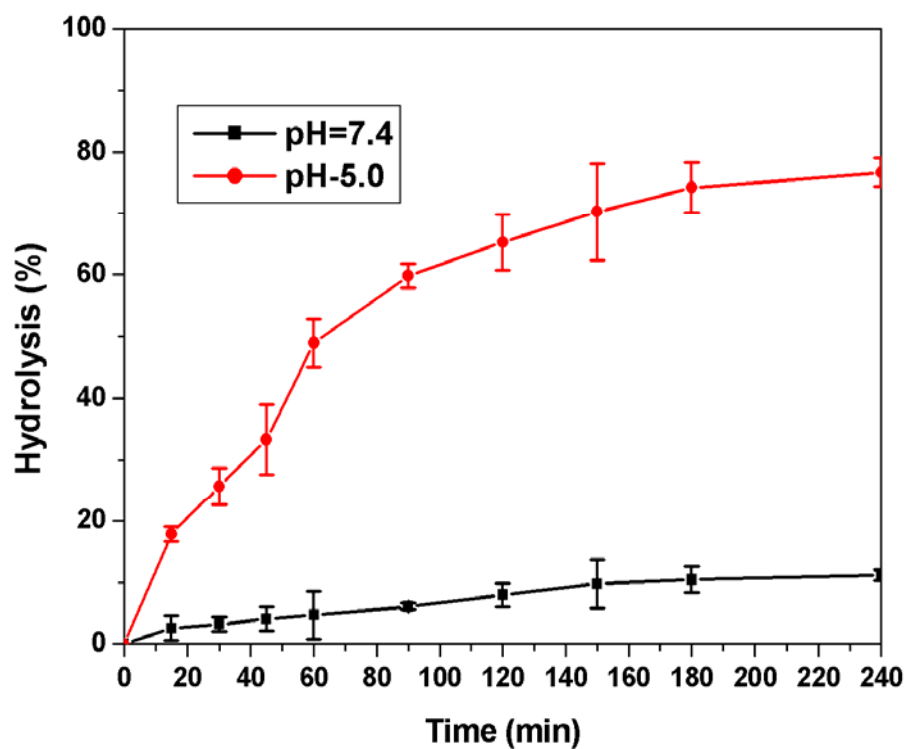


Figure S6 hydrolysis degree of MPEG-b-DBAM as a function of time at different pH at 37°C

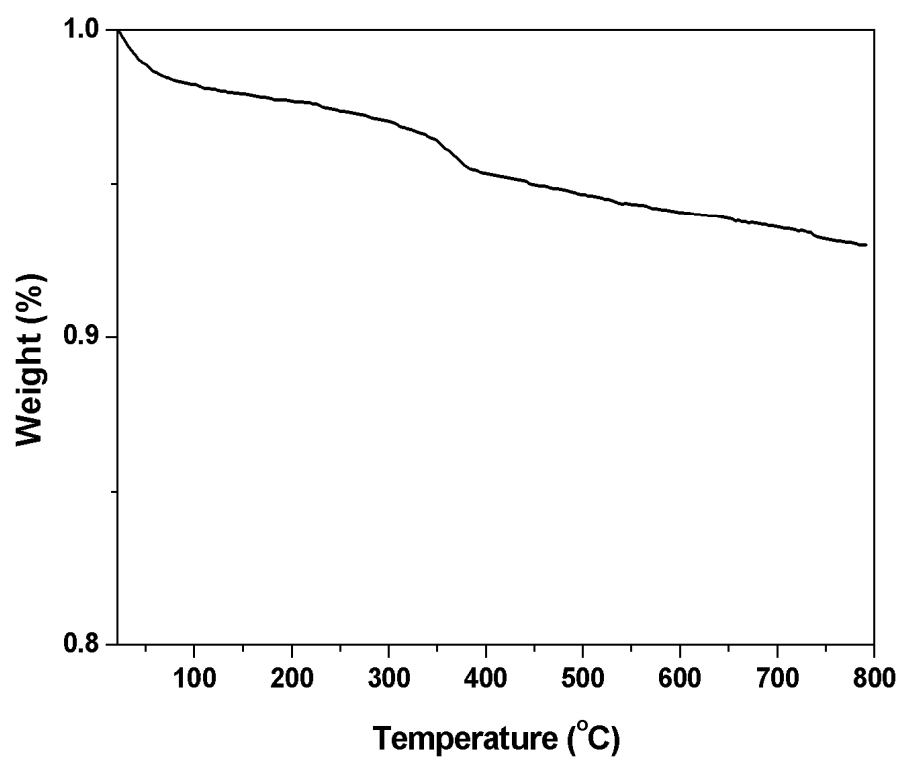


Figure S7 TG analysis of HMS@YVO₄:Eu³⁺@C18