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Amino/Quaternary Ammonium Groups Bifunctional Large Pore Mesoporous Silica for pH–Responsive Large Drug Delivery

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SUPPORTING INFORMATION

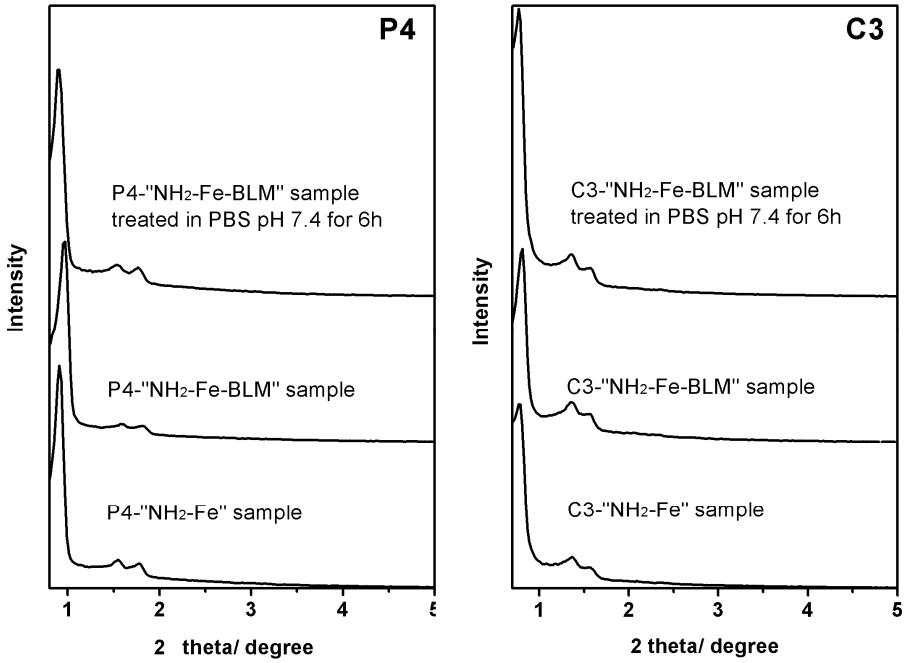

Fig. S1. The XRD patterns of organic functionalized SBA-15 mesoporous silica nanoparticles of P4 sample and C3 sample during pH-responsive release process.

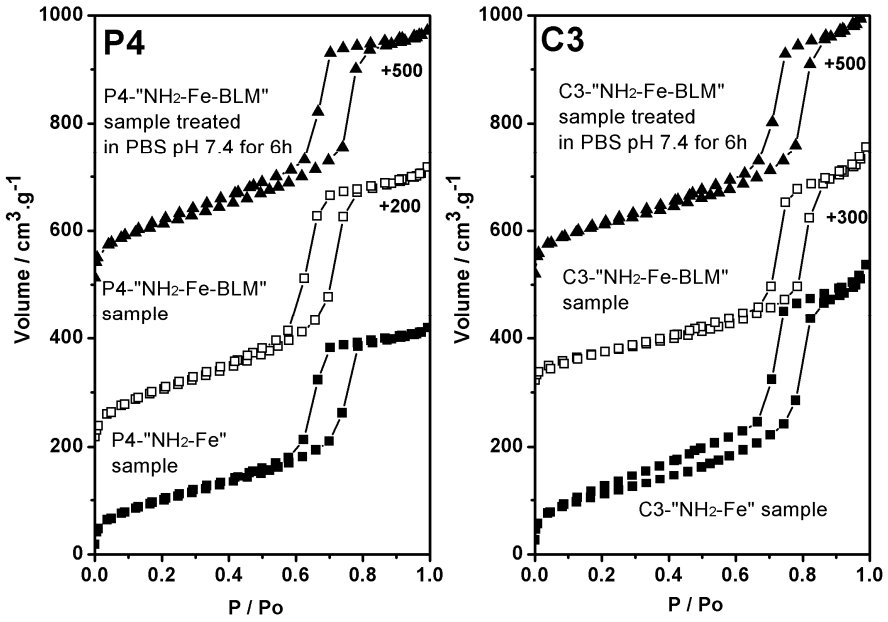

Fig. S2. The Nitrogen adsorption/desorption isotherms of organic functionalized SBA-15 mesoporous silica nanoparticles of P4 sample and C3 sample during pH-responsive release process.

Table S1. Porous and compositional properties and N loading amount.

	Surface area (m^2/g)	Pore volume (mm^3/g)
P4-"NH_2-Fe" sample	385	0.72
P4-"NH_2-Fe-BLM" sample	332	0.67
P4-"NH_2-Fe-BLM" sample Treated in PBS pH 7.4 for 6h	413	0.73
C3-"NH_2-Fe" sample	401	0.83
C3-"NH_2-Fe-BLM" sample	325	0.72
C3-"NH_2-Fe-BLM" sample Treated in PBS pH 7.4 for 6h	401	0.79

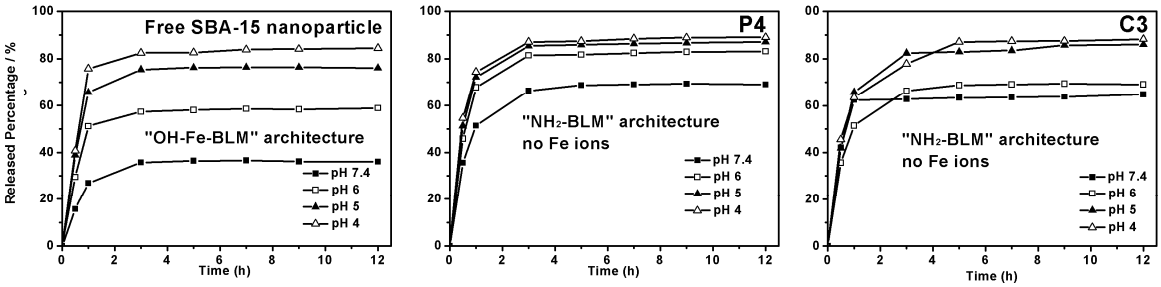

Fig. S3. Control experiments of the release of BLM molecules from different pH–responsive systems.

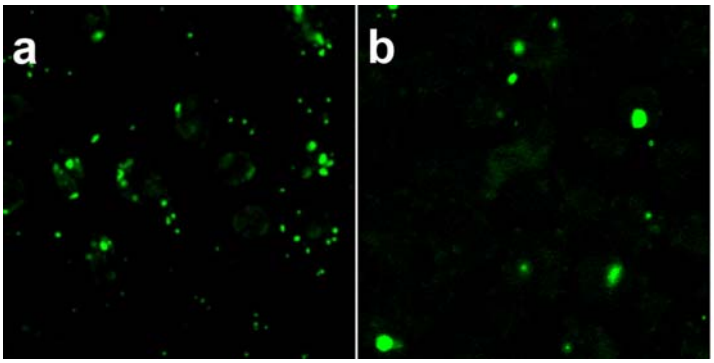

Fig. S4. Fluorescence confocal images of SPCA-1 cells after incubation with calcein loaded amino functionalized SBA-15 samples by using post-synthesis method (a) and co-condensation method (b).