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## Supplementary material

## The drug delivery system based on switchable photo-controlled p-coumaric acid derivative anchored on mesoporous silica

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**Fig. S1** <sup>1</sup>H NMR spectrum of compound **1**, methyl (2E)-3-(4-hydroxyphenyl)-2-propenoate.



Fig. S2 FT-IR spectrum of compound 1, methyl (2E)-3-(4-hydroxyphenyl)-2-propenoate.



**Fig. S3** <sup>1</sup>H NMR spectrum of compound **2**, methyl (2E)-3-(4-allyloxyphenyl)-2-propenoate.



Fig. S4 FT-IR spectrum of compound 2, methyl (2E)-3-(4-allyloxyphenyl)-2-propenoate.



**Fig. S5** FT-IR spectrum of compound **3**, methyl (2E)-3-(4-(triethoxysilyl)propoxyphenyl)-2-propenoate.



Fig. S6 FT-IR spectra of the samples MCM-41, MCM-41-pCA, MCM-41-pCA-N.



**Fig. S7** The calibration curve for naproxen concentration determination by HPLC and a standard chromatogram trace of naproxen.