# Support Information

## Core-shell Structured Upconversion Luminescent and Mesoporous $NaYF_4:Yb^{3+}/Er^{3+}@nSiO_2@mSiO_2$ Nanospheres as Carriers for Drug Delivery

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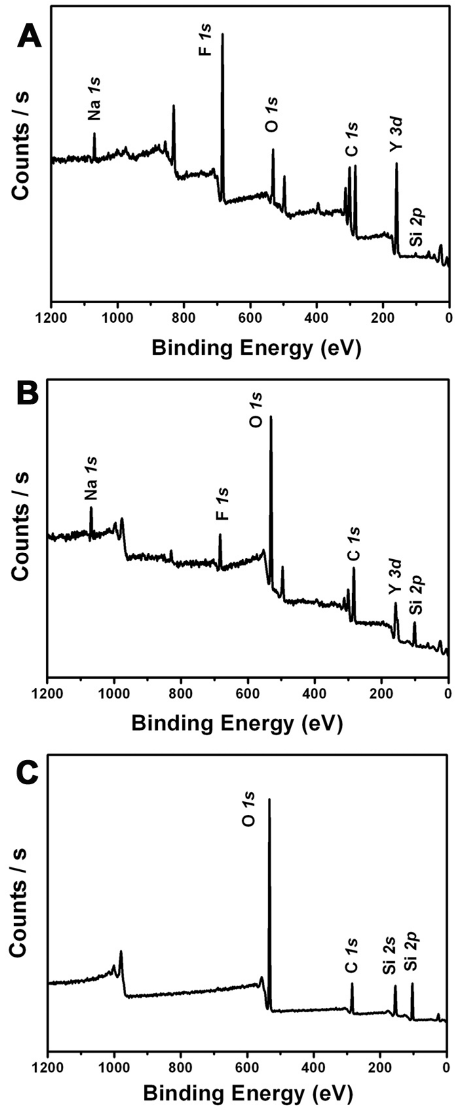


**Figure S1** XPS of $NaYF_4$:$Yb^{3+}$/$Er^{3+}$@n$SiO_2$ (A), NaSiSi-0.10 (B), and NaSiSi-0.30 (C).

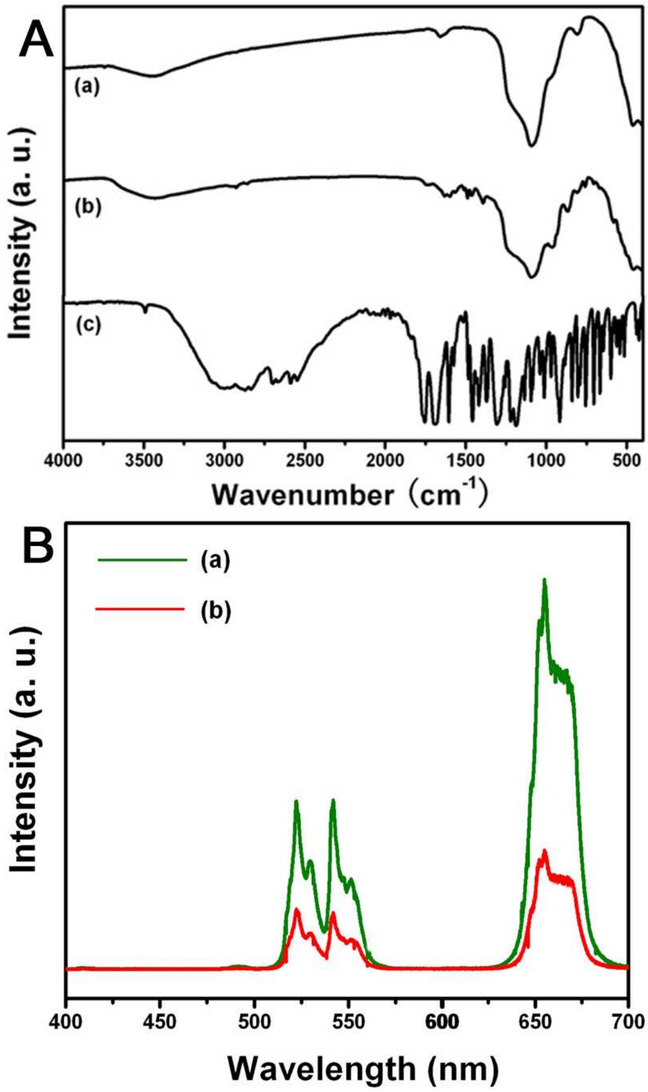


**Figure S2** (A) IR spectra of NaSiSi-0.15 (a), aspirin- NaSiSi-0.15 (b), and aspirin (c). (B) Up-conversion emission spectra of NaSiSi-0.15 (a) and aspirin- NaSiSi-0.15 (b) under 980 nm laser excitation. For aspirin-NaSiSi-0.15, the phenyl bands at 669, 1384, 1461 $cm^{-1}$, and ν (COOH) band at 1710 $cm^{-1}$ can be detected, suggesting successful loading of aspirin molecules into the sample.

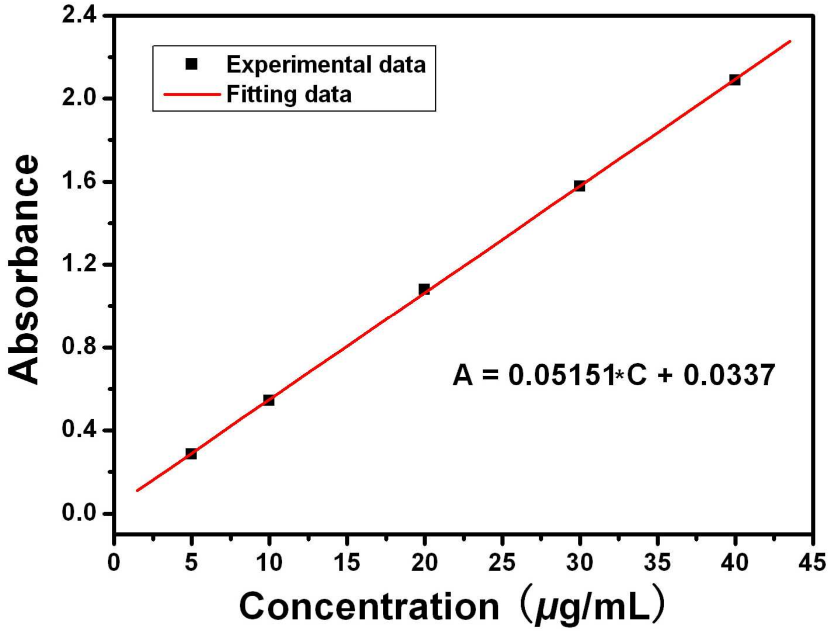


**Figure S3** The calibration curve of IBU.

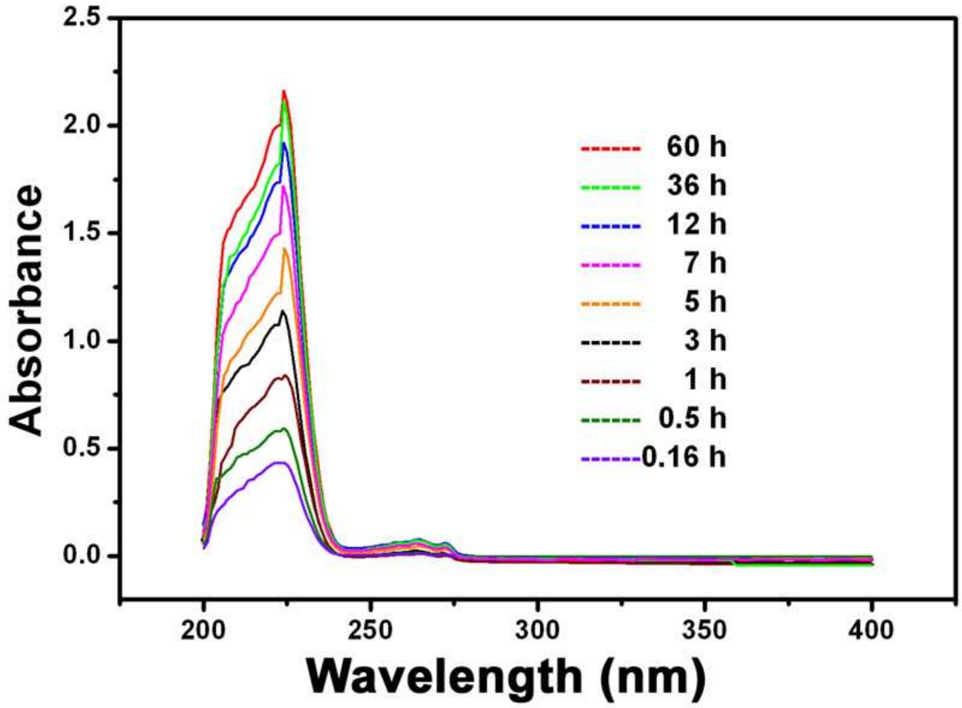


**Figure S4** The UV-*vis* spectra of IBU-NaSiSi-0.15 system at different release time.

**Table S1** Summary of relationship between release time and absorbency of IBU released from IBU-NaSiSi-0.15 system into SBF.

| Time/h | 0.16 | 0.5 | 0.67 | 1 | 3 | 5 | 7 | 9 | 12 | 24 | 36 | 48 | 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Absorbency of IBU/a. u. | 0.442 | 0.589 | 0.593 | 0.83 | 1.123 | 1.445 | 1.695 | 1.913 | 1.953 | 2.054 | 2.084 | 2.096 | 2.104 |
| Cumulative released IBU/% | 13.8 | 19.6 | 21.1 | 30.4 | 42.3 | 54.3 | 68.2 | 80 | 86.8 | 92.3 | 93.5 | 97.6 | 100 |