Supplementary Information:

Aptamer-Mediated Up-conversion Core/ MOF Shell Nanocomposites for Targeted Drug Delivery and Cell Imaging

Kerong Deng^{1,2}, Zhiyao Hou^{*1}, Xuejiao Li¹, Chunxia Li¹, Yuanxin Zhang¹, Xiaoran Deng^{1,2}, Ziyong Cheng¹ & Jun Lin *¹

¹ State Key Laboratory of Rare Earth Resource Utilization, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, P. R. China

² University of Chinese Academy of Sciences, Beijing 100049, P. R. China

The Supplementary Information includes:

Supplementary Figures S1-S8



Figure S1 Size distributions of UCNPs@MOF NCs in different physiological solutions (A: deionized water; B: cell culture media containing FBS).



Figure S2 The XRD patterns of UCNPs@MOF NCs (b) with the standard card of β -NaYF₄ (JCPDs No. 16–0334), and simulated from the crystallographic data of MIL-100(Fe) (a).



Figure S3 FT-IR spectra of UCNPs@MOF NCs (a) and the raw material H_3BTC (b).



Figure S4 XPS spectra of the core–shell UCNPs@MOF NCs.



Figure S5 N_2 adsorption/desorption isotherms for UCNPs@MOF NCs.



Figure S6 Cell viability of 293 cells treated with UCNPs@MOF NCs.



Figure S7 Cumulative DOX release profiles of UCNPs@MOF-DOX in PBS buffer of different pH values (7.4 and 5.0) at 37 °C.



Figure S8 TEM image of the as-obtained UCNPs@MOF NCs without PVP modified

on the surface of UCNPs during the same synthesis process.