Electronic Supplementary Information

Multifunctional LaPO$_4$:Ce/Tb@Au mesoporous microspheres:
synthesis, luminescence and controllable light triggered drug release

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Fig. S1 The UV-vis absorption spectrum and calibration curve of DOX solution (inset).
Fig. S2 XRD patterns of LaPO$_4$ and LaPO$_4$:Ce$^{3+}$/Tb$^{3+}$. 
Fig. S3 TEM image of the La(OH)CO₃:Ce/Tb precursor.
Fig. S4 SEM image of the as-prepared LaPO$_4$;Ce/Tb@Au MMs (A-C) and the diameter distribution diagrams of the precursor and LaPO$_4$;Ce/Tb@Au (D).
Fig. S5 The absorption spectrum of gold nano-sphere solution.
Fig. S6 Nitrogen adsorption/desorption isotherm (A) and DOX release efficiency (B) of LaPO₄:Ce/Tb MMs with different initial pH values.
Fig. S7 DOX release efficiency of LaPO₄:Ce·Tb@Au MMs (A) and the release efficiency with and without the UV irradiation (B).
Fig. S8 H&E stained images of mice heart, liver, spleen, lung, and kidney organs treated with different groups: control, pure DOX, and LaPO$_4$:Ce$^+$/Tb@Au MMs-DOX with UV irradiation.