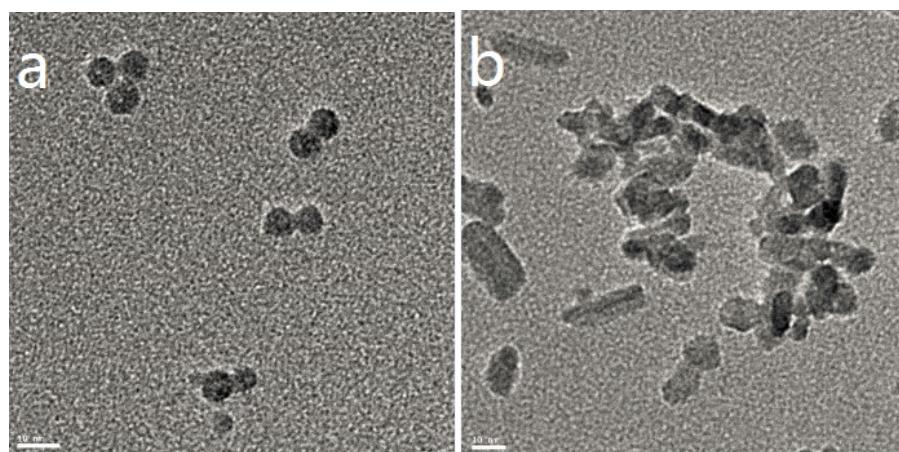


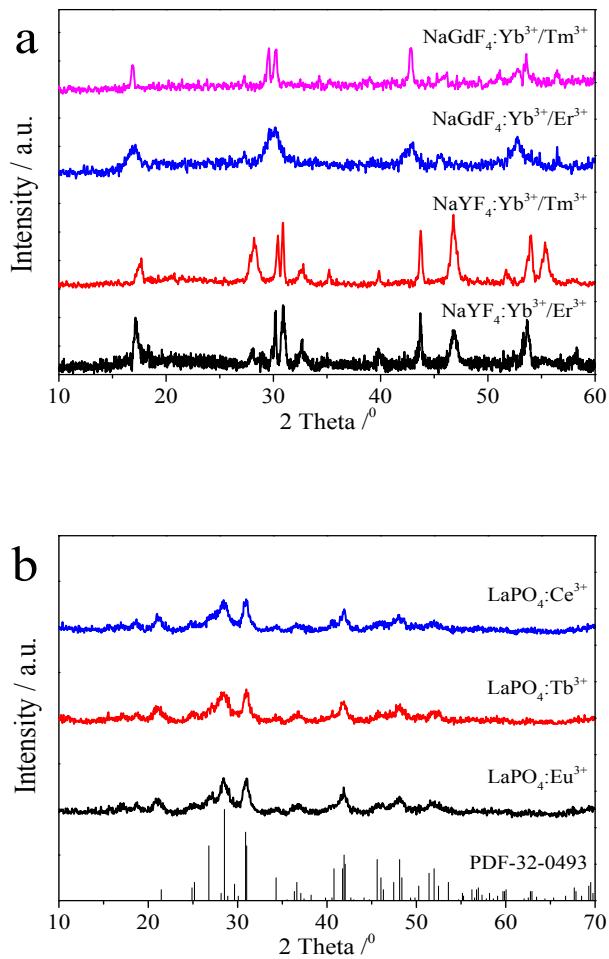
## Electronic Supporting Information

### Photofunctional nanocomposites based on the functionalization of metal-organic framework by up/downconverion luminescent nanophosphors

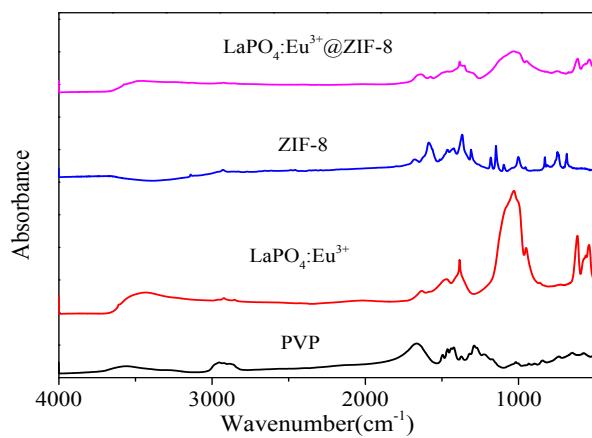
Chang Liu, Bing Yan\*



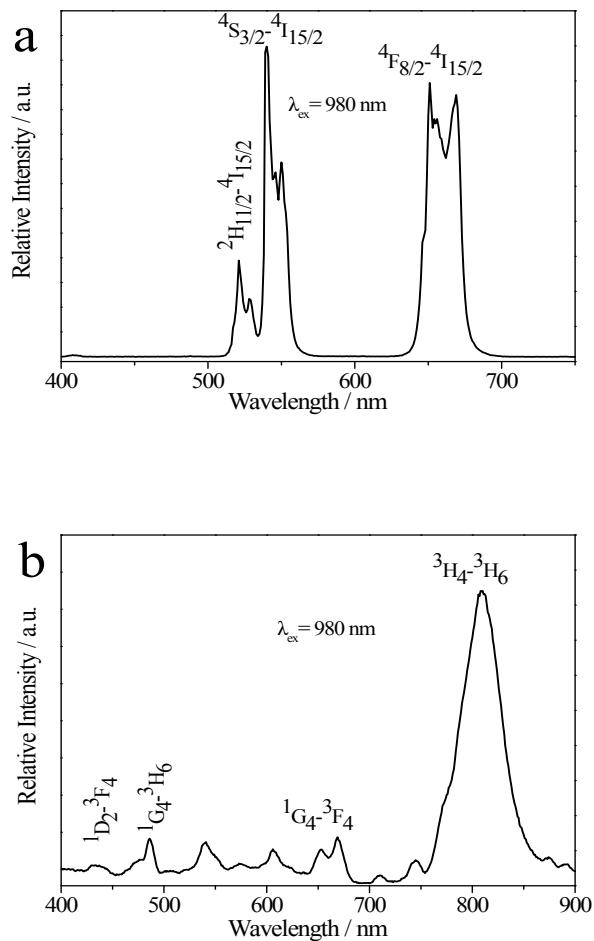
**Figure S1.** TEM images of  $\text{NaYF}_4:\text{Yb}^{3+}/\text{Er}^{3+}$  nanoparticles (**a**), and  $\text{LaPO}_4:\text{Eu}^{3+}$  nanocrystals (**b**). The scale bar is 10 nm in both TEM images.



**Figure S2.** X-ray diffraction patterns of upconversion nanoparticles **(a)**, and LaPO<sub>4</sub>:Ln<sup>3+</sup> nanoparticles **(b)**.



**Figure S3.** The FT-IR spectra of PVP, LaPO<sub>4</sub>:Eu<sup>3+</sup>, ZIF-8 and LaPO<sub>4</sub>:Eu<sup>3+</sup> @ZIF-8.



**Figure S4.** Up-conversion emission spectra of NaGdF<sub>4</sub>:Yb<sup>3+</sup>/Er<sup>3+</sup>@ZIF-8 (**a**) and NaGdF<sub>4</sub>:Yb<sup>3+</sup>/Tm<sup>3+</sup>@ZIF-8 (**b**) under 980 nm laser diode excitation.

ed a gradual weight-loss step of 28.3%  
aing to partial loss of guest spe  
rmanide (DEF) and 3 H<sub>2</sub>O, calcd  
plateaued at 50°C). More impressiv  
IF-11 revealed a sharp weight-loss s  
, corresponding to the escape  
amide (DEF) solvent molecules tr  
DEF (calcd 22.6%).

**Figure S5.** Photographs of the transparent thin films, NaYF<sub>4</sub>:Yb<sup>3+</sup>/Er<sup>3+</sup> @ZIF-8 (**a**) and LaPO<sub>4</sub>:Eu<sup>3+</sup>@ZIF-8 (**b**), respectively.