

## Supporting Information

### **Bimetallic zeolitic imidazolate framework as an intrinsic two-photon fluorescence and pH-responsive MR imaging agent**

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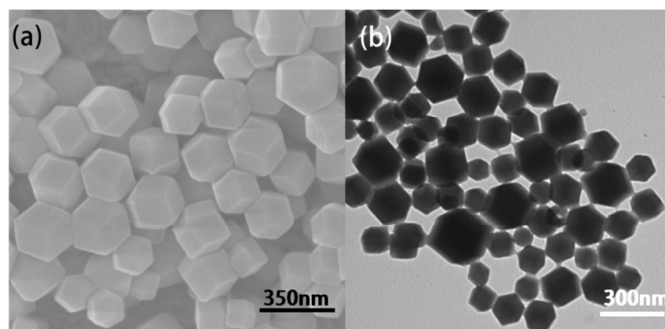


Figure S1. (a) SEM and (b) TEM images of the precursor ZIF-8.

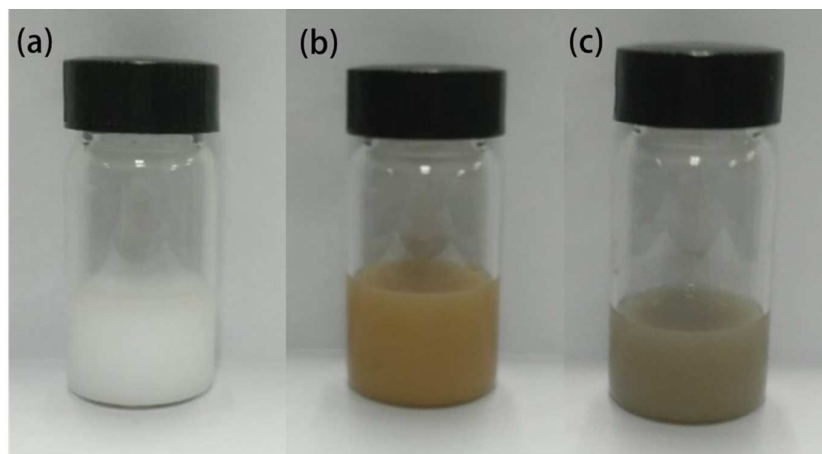


Figure S2. Photograph of (a) ZIF-8 (b) Mn-Zn-ZIF and (c) Mn-Zn-ZIF-PEG dispersed in methanol solution.

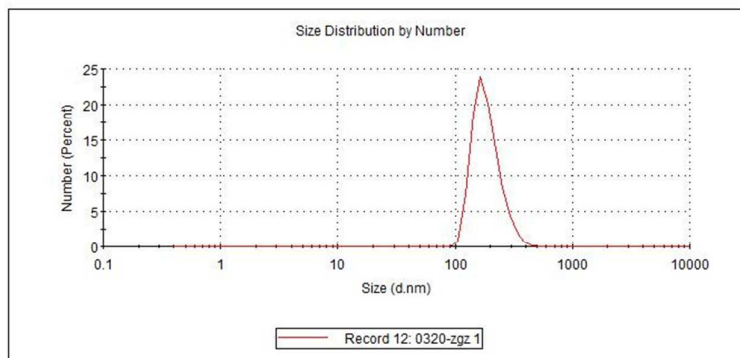


Figure S3. Hydrodynamic size distribution of the Mn-Zn-ZIF nanoparticles.

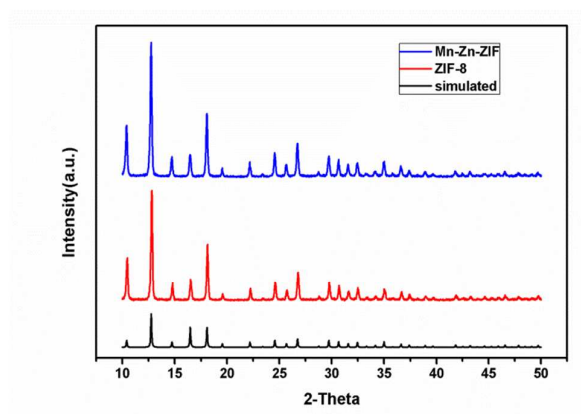


Figure S4. X-ray diffraction (XRD) patterns of simulated ZIF-8, synthesized ZIF-8 and Mn-Zn-ZIF nanoparticles.

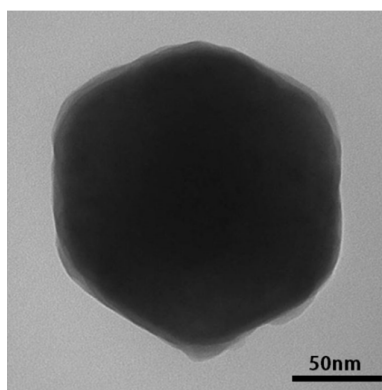


Figure S5. Enlarged TEM image of Mn-Zn-ZIF-PEG with a thin coated layer.

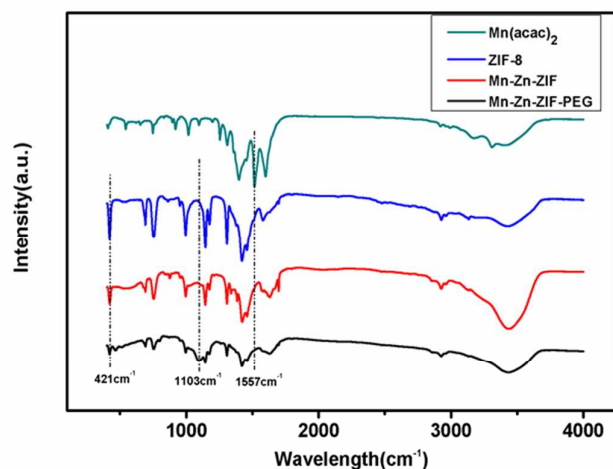


Figure S6. Fourier transform infrared spectroscopy (FTIR) patterns of  $\text{Mn}(\text{acac})_2$ , the precursor ZIF-8, Mn-Zn-ZIF and Mn-Zn-ZIF-PEG nanoparticles (full spectra).

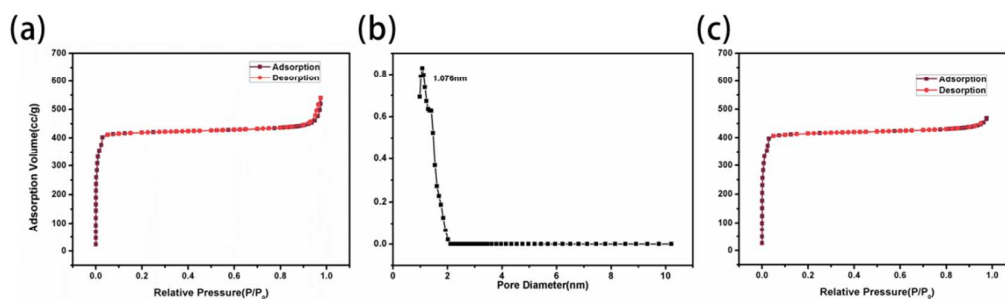


Figure S7. Nitrogen adsorption-desorption isotherms curves of (a) ZIF-8 and (c) Mn-Zn-ZIF; (b) the corresponding pore size distribution of ZIF-8 nanoparticles.

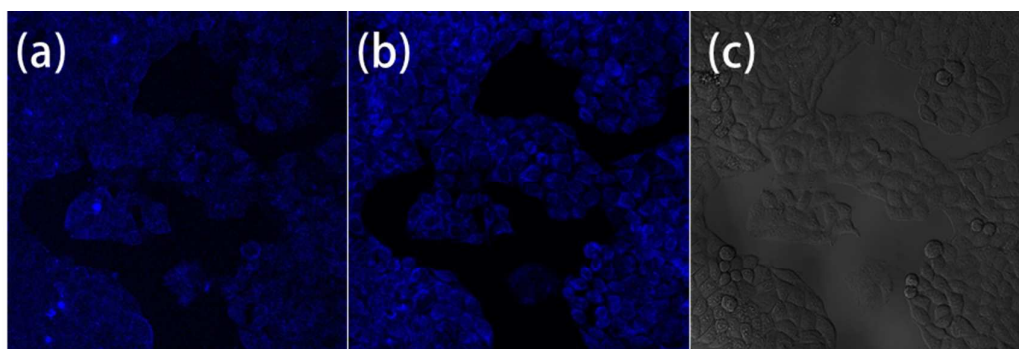


Figure S8. CLSM images of ZIF-8 excited by (a) 360 nm single-photon excitation and (b) 720 nm two-photon excitation and (c) bright field images.