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Electronic Supplementary Information

Visual detection of fluoride in water by dual-emitting Eu-doping Sc-based metal organic frameworks

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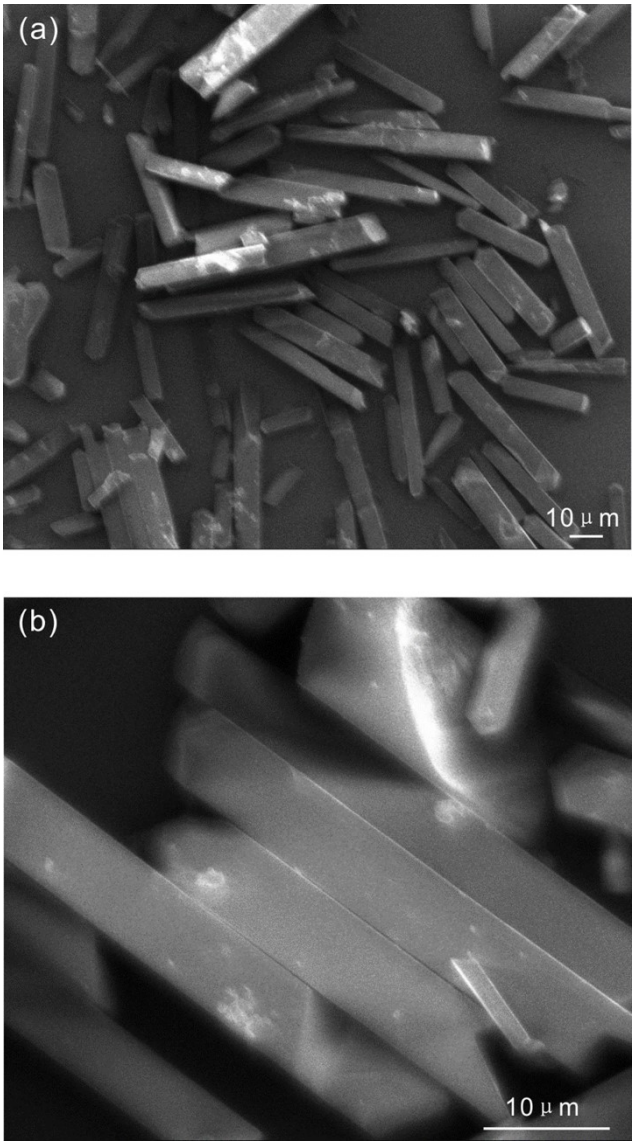

Figure S1. SEM images of (a) the (5%Eu/Sc)-EBTC particles and (b) the corresponding magnified picture.

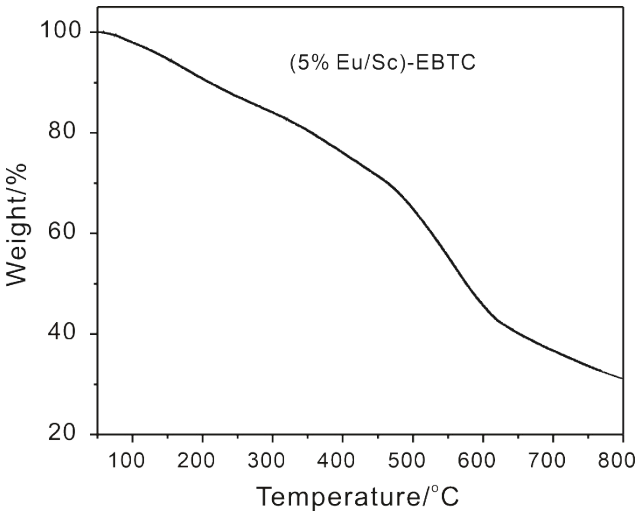

Figure S2. Thermogravimetric analysis curves of the as-synthesized (5%Eu/Sc)-EBTC under nitrogen (N_2) atmosphere.

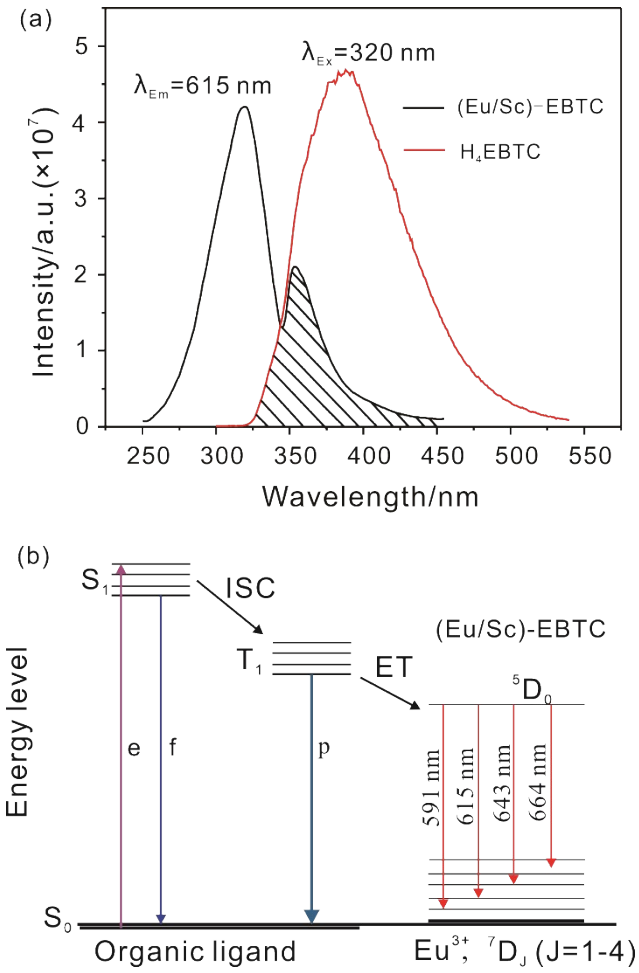

Figure S3. Excitation spectrum of (5%Eu/Sc)-EBTC with λ_{Em} at 615 nm and emission spectrum of H_4EBTC with λ_{Ex} at 320 nm. Overlap indicates the potential of energy transfer for excitation of Eu^{3+} with the emission from H_4EBTC within (5%Eu/Sc)-EBTC.

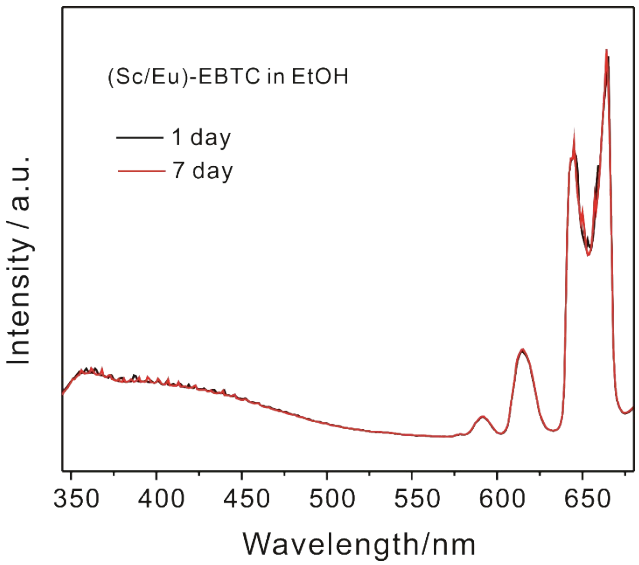

Figure S4. Emission spectra of (Eu/Sc)-EBTC immersed in ethanol for one day and seven days, respectively.

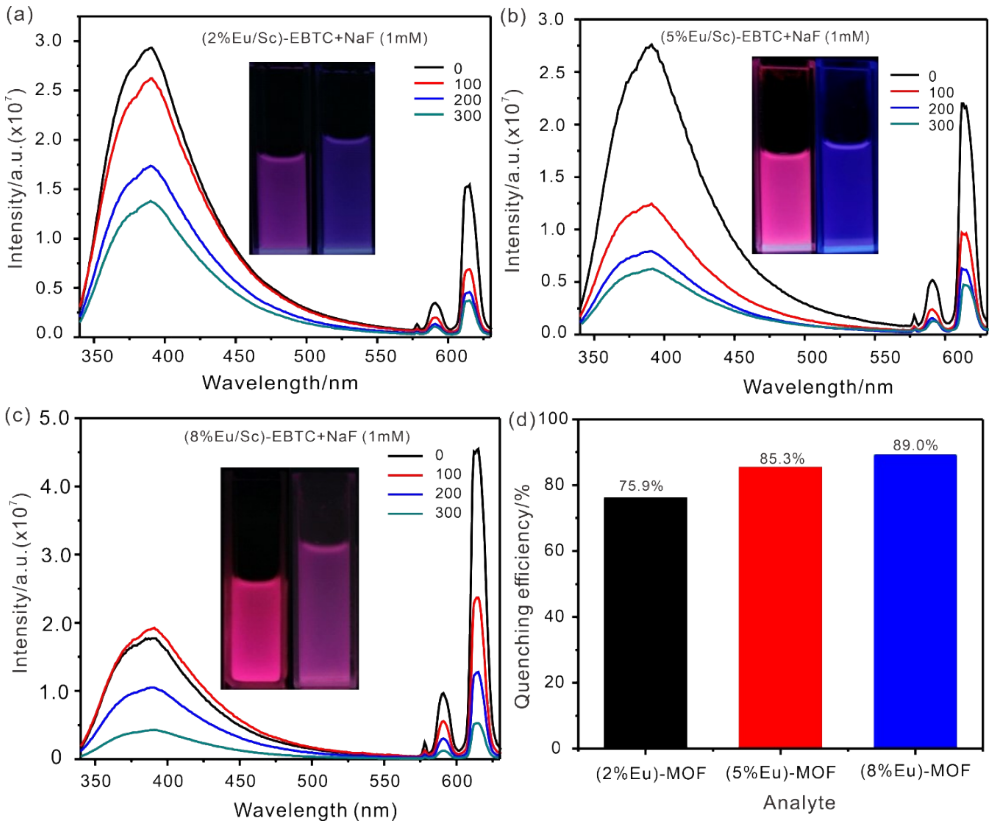

Figure S5. Emission spectra of (a) (2%Eu/Sc)-EBTC, (b) (5%Eu/Sc)-EBTC), and (c) (8%Eu/Sc)-EBTC after adding different volume (0-300 μL) of F^- solution (1 mM). (d) The quenching efficiency of (Eu/Sc)-EBTC doped with different Eu^{3+} content (2%, 5%, and 8%) after adding 300 μL F^- solution, and the corresponding photographs.

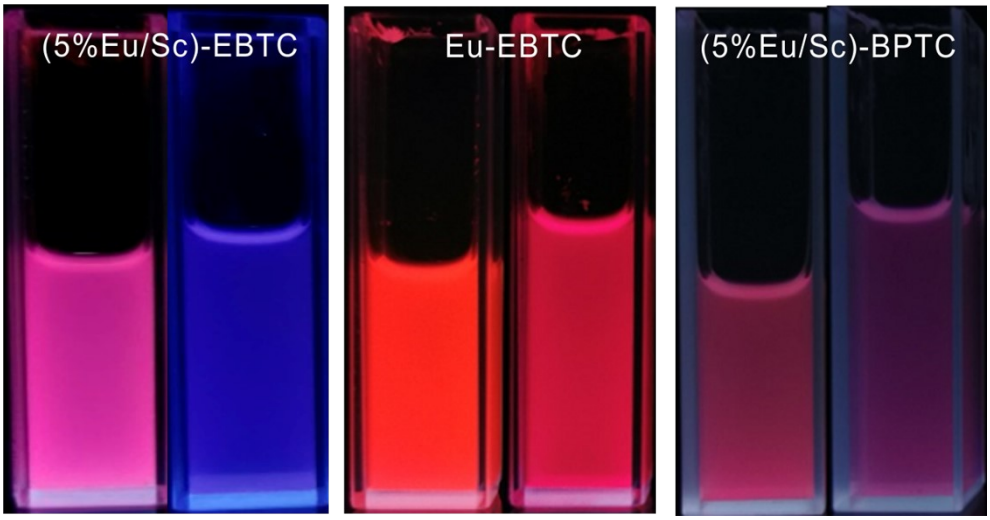

Figure S6. Photographs of (5%Eu/Sc)-EBTC, Eu-EBTC, and (5%Eu/Sc)-BPTC before and after adding 300 μL F^- solution (1 mM).

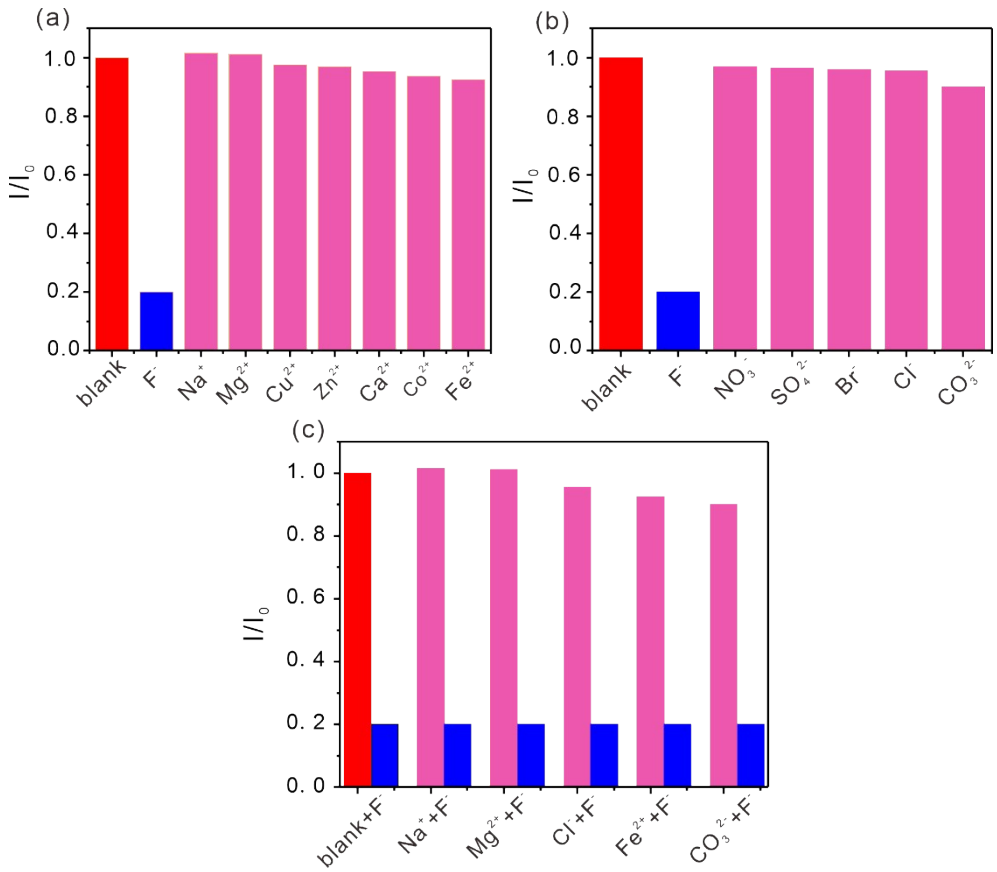

Figure S7. Fluorescence intensity ratios (I/I_0) from (5%Eu/Sc)-EBTC in the presence of F^- (0.1 mM), (a) different cations (0.5 mM), (b) anions (0.5 mM), and mixed ions (I and I_0 are the fluorescence intensity of (5%Eu/Sc)-EBTC before and after adding ions, respectively).