Electronic Supplementary Information (SI) for

Rational construction of dual-emitter luminescent Eu-doped Y-MOF for ratiometric temperature sensing

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1. Experimental section

1.1 Materials and Methods.

All chemicals used in the syntheses were purchased from commercial sources and were used as received. Powder X-ray diffraction (PXRD) pattern was collected by a Rigaku MiniFlex600 diffractometer with Cu Kα (λ =1.54056 Å). The crystal image and semi-quantitative elemental analyses of samples were performed by using Thermo Fisher Verios G4 equipped and its energy dispersive spectroscopy (EDS) detector. X-ray photoelectron spectroscopy (XPS) analysis measurement was collected on a Thermo-Scientific K-Alpha Plus X-ray photoelectron spectrometer using Al Kα source. FT-IR spectra were recorded on a Bruker Tensor 27 spectrophotometer using KBr pellets in the range of 4000–400 cm^{-1}. The solid-state photoluminescence (PL) spectrum of SNNU-325 and Eu@SNNU-325 was recorded on an Edinburgh FLS1000 at room temperature. The temperature-dependent luminescent measurements of Eu@SNNU-325 were recorded an Edinburgh FLS980.

Table S1 Fitting parameters of Eu@SNNU-325 with Boltzmann equation by using software OriginPro 8.5.

MOF	Thermometric parameter	A_1	A_2	T_0	dT
Eu@SNNU-325	I_{618}/I_{544}	10.87208	106.74441	326.27981	35.93929

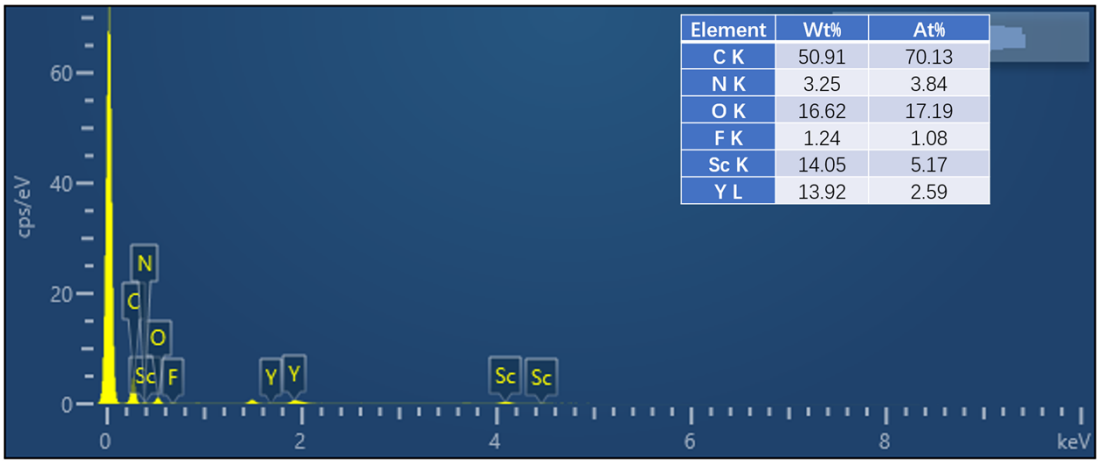

Fig. S1 EDS analysis of as-synthesized SNNU-325.

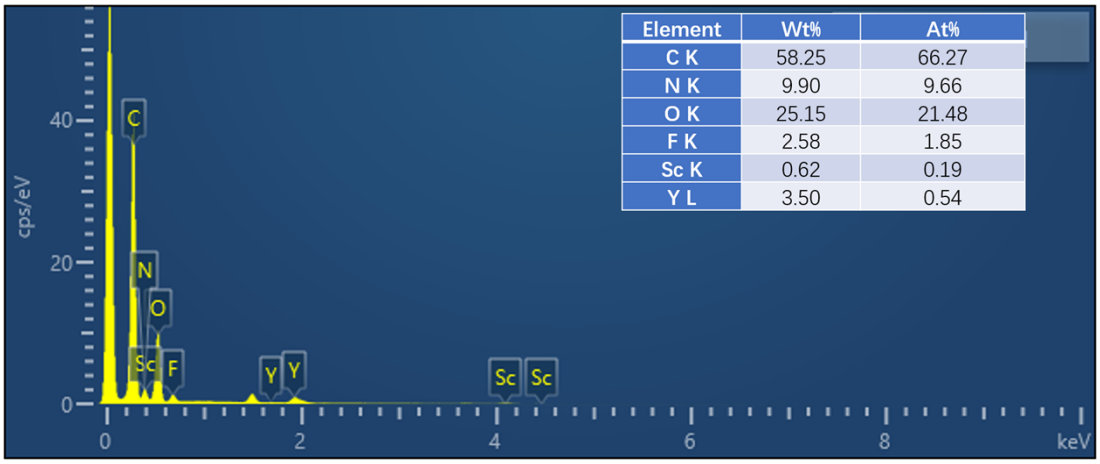

Fig. S2 EDS analysis of SNNU-325 after immersed in MeOH for 4 days.

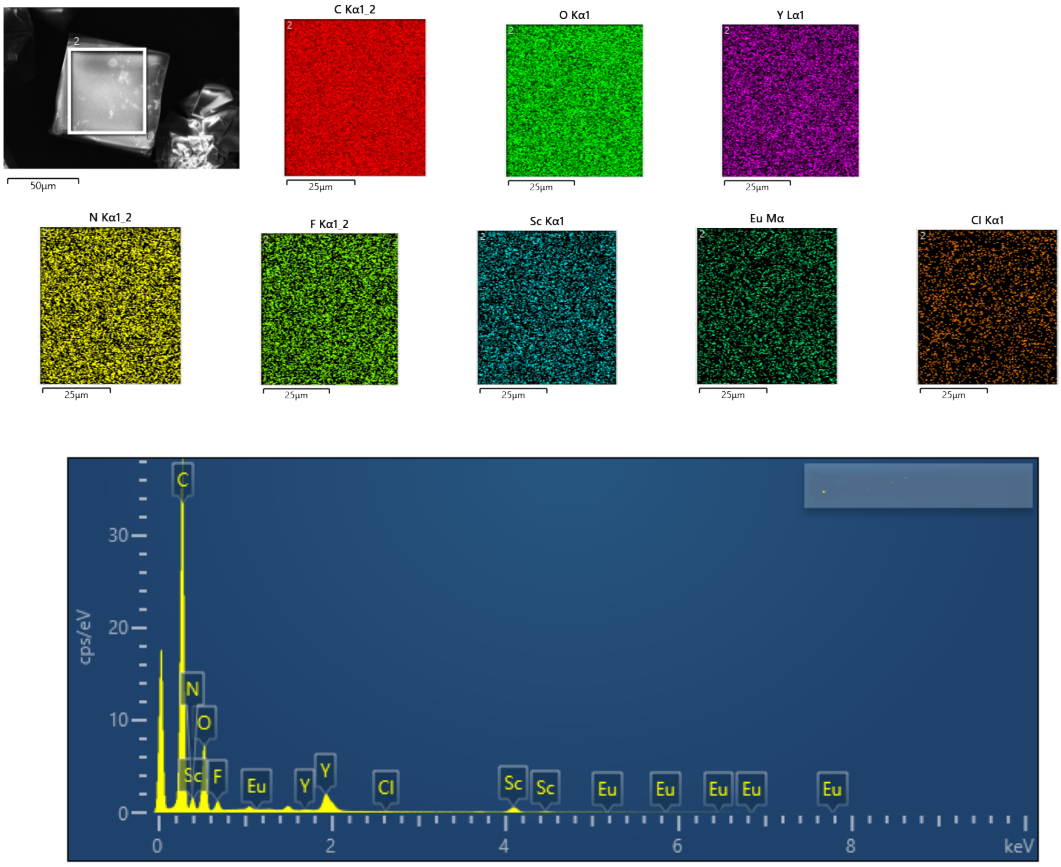

Fig. S3 SEM elemental mapping images and EDS energy spectrum analysis of Eu@SNNU-325.