

Stereospecific recognition and rapid determination of D-amino acid in human serum based on luminescent metal-organic frameworks

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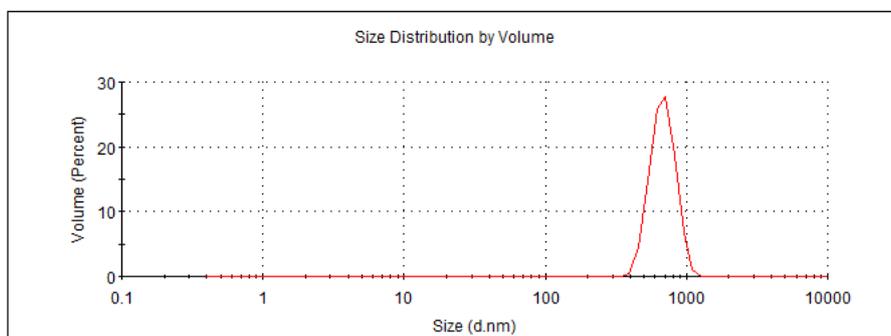
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a

	Size (d.nm):	% Volume:	St Dev (d.nm):
Z-Average (d.nm): 970.5	Peak 1: 689.2	100.0	134.4
Pdl: 0.422	Peak 2: 0.000	0.0	0.000
Intercept: 0.925	Peak 3: 0.000	0.0	0.000

Result quality : Refer to quality report



b

	Size (d.nm):	% Volume:	St Dev (d.nm):
Z-Average (d.nm): 921.3	Peak 1: 555.5	100.0	86.76
Pdl: 0.271	Peak 2: 0.000	0.0	0.000
Intercept: 0.944	Peak 3: 0.000	0.0	0.000

Result quality : Refer to quality report

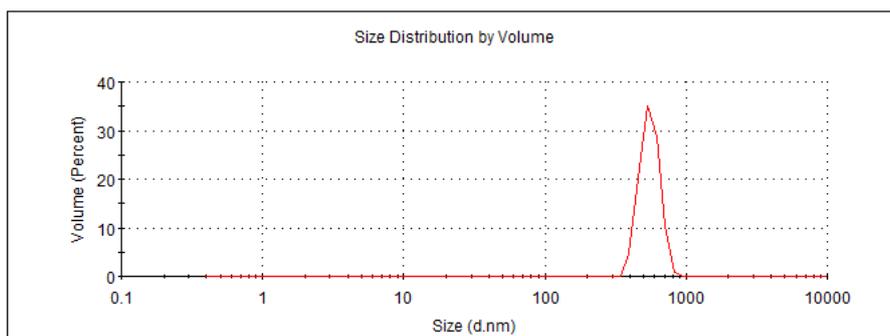
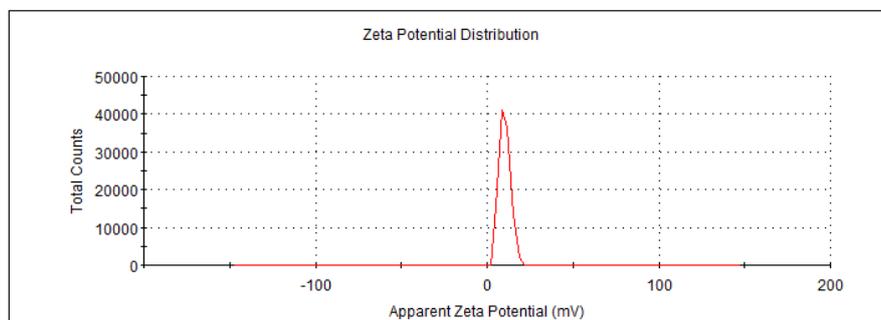


Fig. S1 The dynamic light scattering analysis of Tb-MOF in the absence (a) and presence (b) of H_2O_2 .

a

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): 10.3	Peak 1: 10.3	100.0	3.12
Zeta Deviation (mV): 3.12	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.0348	Peak 3: 0.00	0.0	0.00

Result quality : **Good**



b

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): 8.08	Peak 1: 8.36	98.7	3.19
Zeta Deviation (mV): 4.01	Peak 2: -13.3	1.3	2.38e-7
Conductivity (mS/cm): 0.0295	Peak 3: 0.00	0.0	0.00

Result quality : **Good**

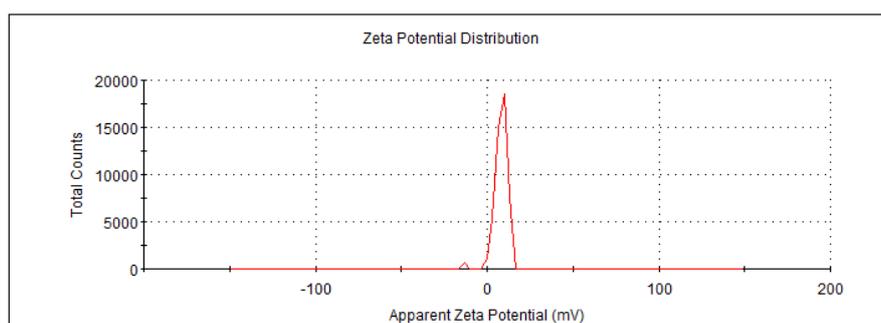


Fig. S2 Zeta potential of Tb-MOF in the absence (a) and presence (b) of H₂O₂.

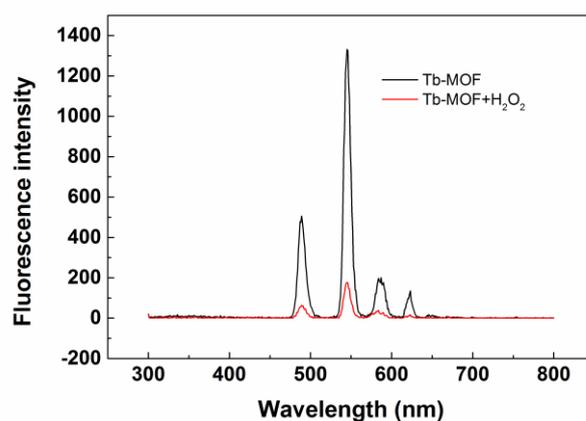


Fig. S3 Fluorescence spectra of Tb-MOF (line a) in the presence of H₂O₂ (line b). The excitation wavelength is 290 nm.

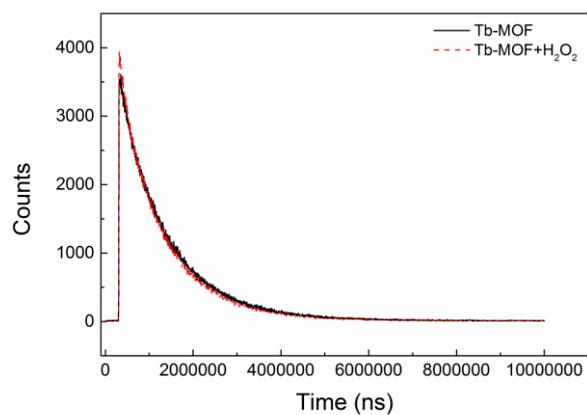


Fig. S4 Fluorescence decay curves of Tb-MOF in the presence of H_2O_2

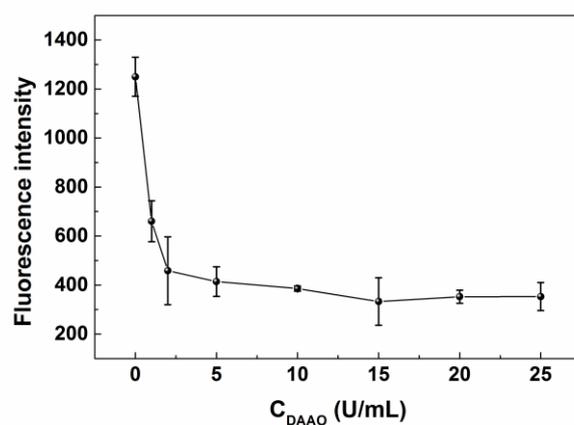


Fig. S5 Optimization of concentration of DAAO. The concentration of D-Ala and Tb-MOF used was $100\ \mu M$. And $1\ mg/mL$, respectively.

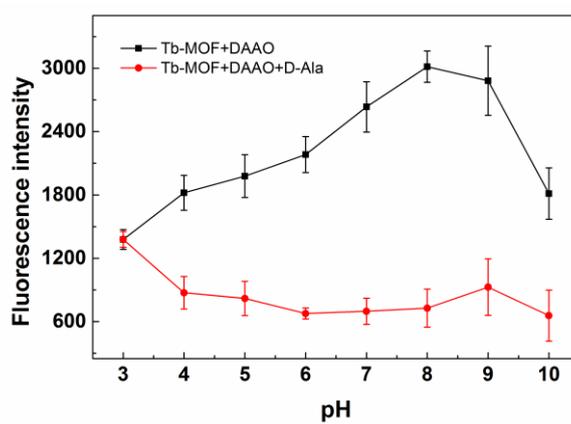


Fig. S6 Optimization of pH value. The concentration of D-Ala and Tb-MOF used was $100\ \mu M$. And $1\ mg/mL$, respectively

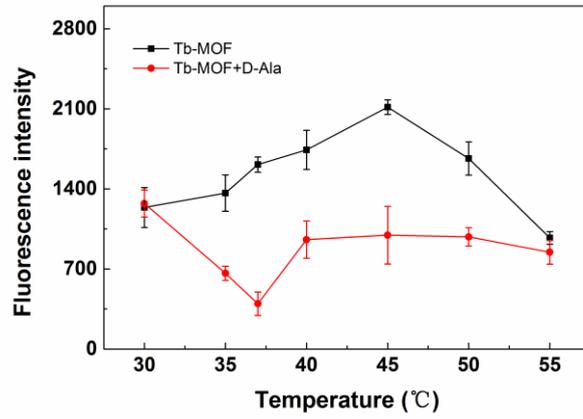


Fig. S7 Optimization of temperature. The concentration of D-Ala and Tb-MOF used was 100 μ M.
And 1 mg/mL, respectively

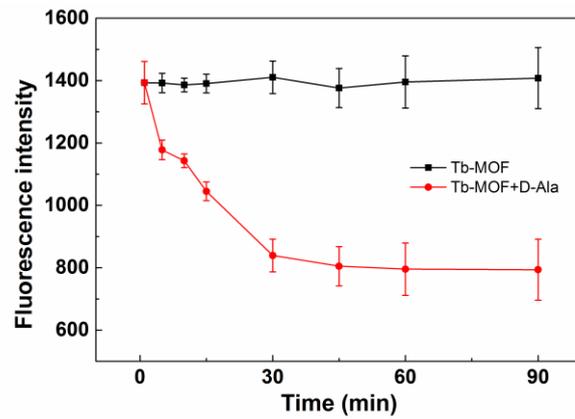


Fig. S8 Optimization of reaction time. The concentration of D-Ala and Tb-MOF used was 100 μ M.
And 1 mg/mL, respectively