

Electronic Supplementary Information

Ratiometric detection of Cu²⁺ in water and drinks using Tb (III)-functionalized UiO-66-type metal-organic frameworks

Piaotong Liu, Rusi Hao, Wenliang Sun*, Junhui Li

College of Chemical Engineering, Qinghai University, Xining 810016, China

*Corresponding author.

E-mail address: sunwl3@hotmail.com (W. Sun)

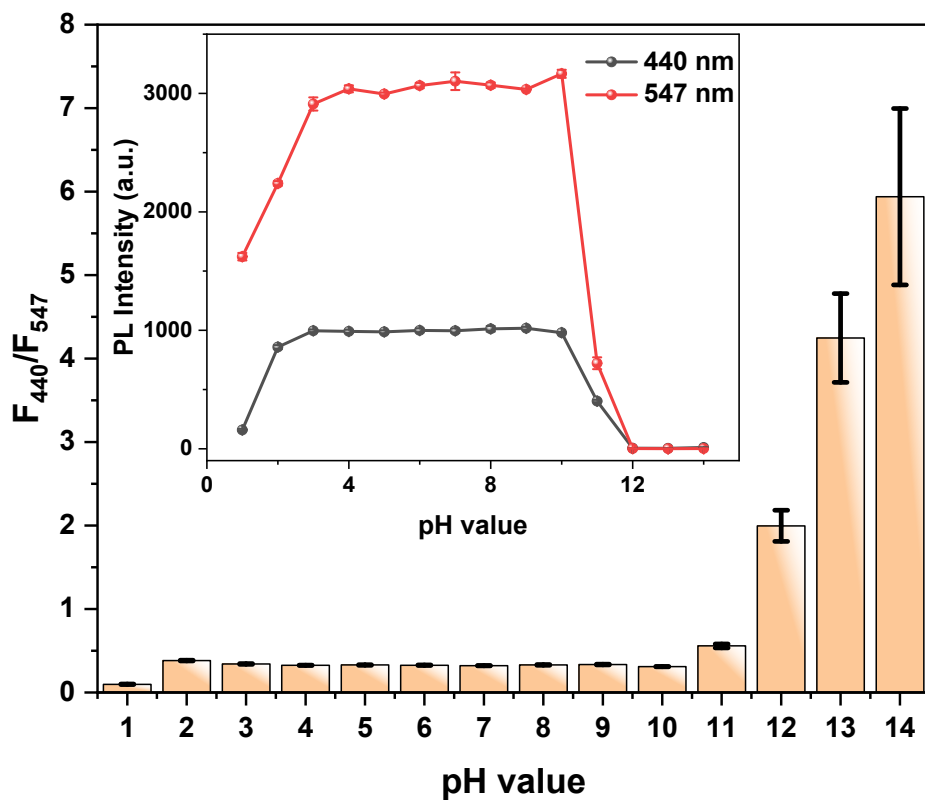


Fig. S1 Effect of pH on the fluorescence intensity ratio (F_{440}/F_{547}) of Tb-UiO-66-DPA.

The inset shows the corresponding fluorescence intensity at 440 nm and 547 nm under different pH values, respectively

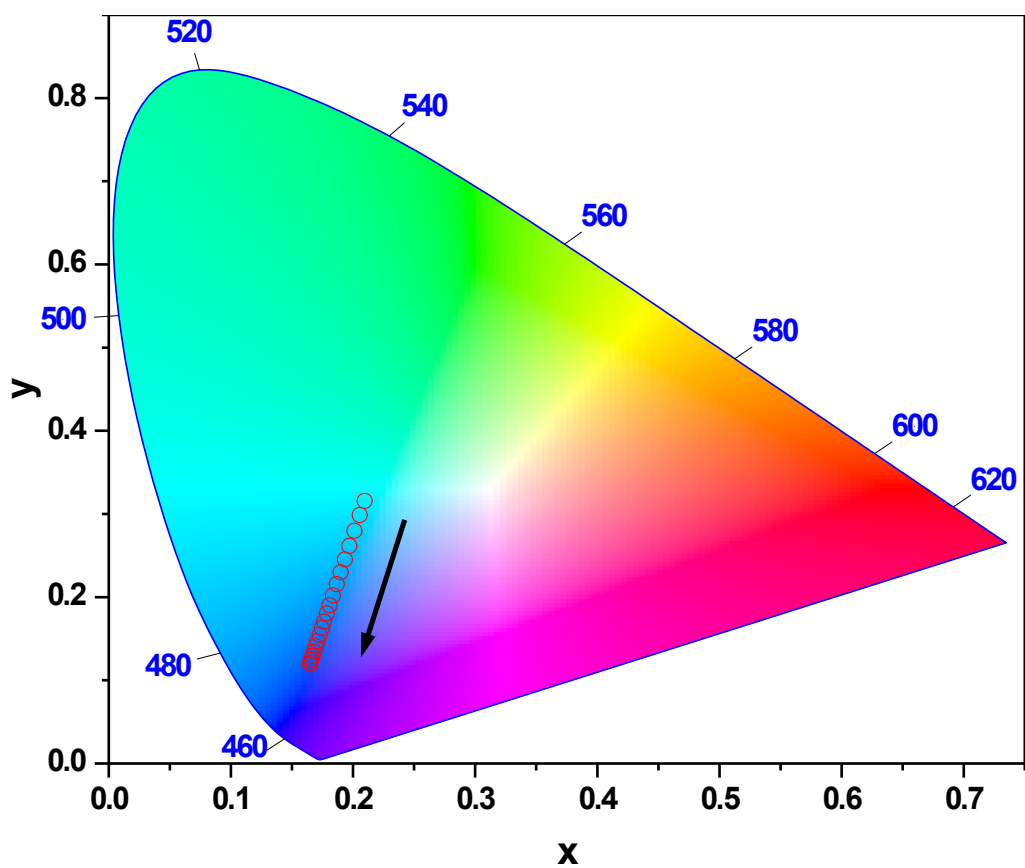


Fig. S2 CIE chromaticity coordinates of Tb-UiO-66-DPA with 0-10 μM Cu^{2+} under excitation at 290 nm.

Table S1. Comparison of detection performance of proposed Cu²⁺ ions fluorescence sensor with others reported in the literatures.

Probe	Linear range	LOD	References
Ti ₃ C ₂ MXene QDs	2-100 μM	2 μM	1
Hybrid CDs-CdTe QDs	0-100 nM	0.36 nM	2
MOF/CdTe QDs	4.0-40.0 ng·mL ⁻¹	0.26 ng·mL ⁻¹	3
GSH-Au NCs@ZIF-8	0-5 μM	0.016 μM	4
AuNCs/PQD@SiO ₂	0–25 μM, 25–160 μM	3 μM	5
BSA -AuNCs	0.5–30 μM	0.1465 μM	6
Nano porous organic cages	0.1–2 μM	8 nM	7
SPNs-Eu	2-50 μM	0.29 μM	8
Tb-UiO-66-DPA	0.5–3 μM	113 nM	this work

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