Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

A salicylaldehyde benzoyl hydrazone based near-infrared probe for copper(II) and its bioimaging applications

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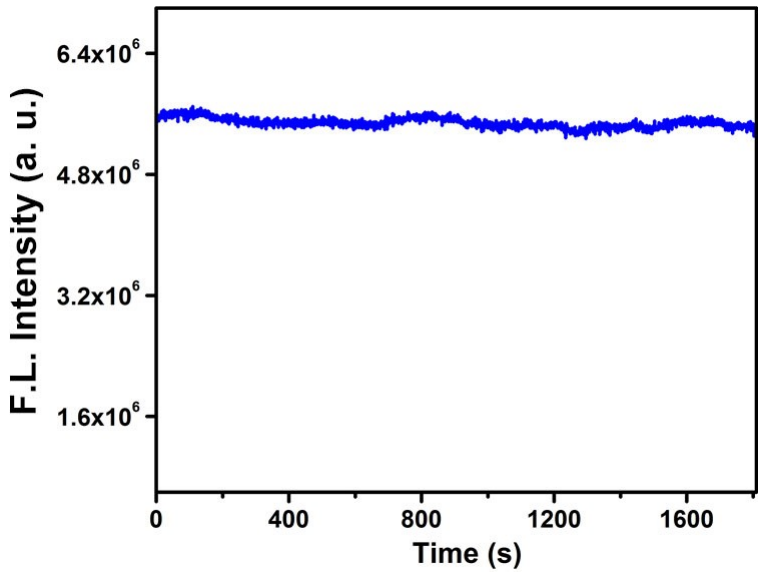


Figure S1 Time-dependent fluorescence spectra of CySBH (5 μM).

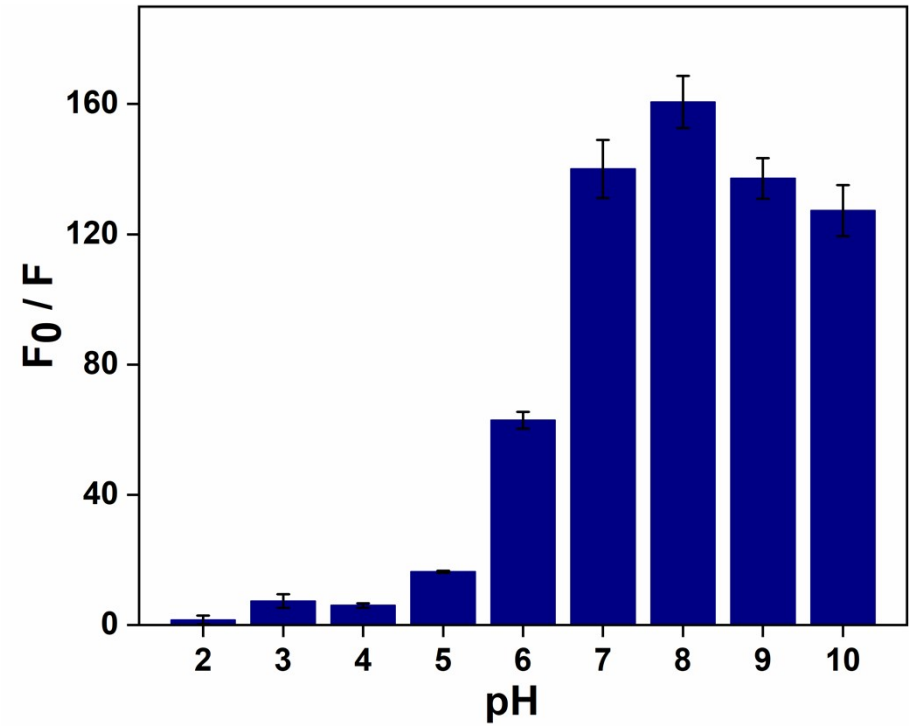


Figure S2 Effect of pH on the fluorescence intensities of CySBH. F_0 and F are the fluorescence intensities of CySBH in the absence and presence of Cu^{2+} in different pH, respectively.

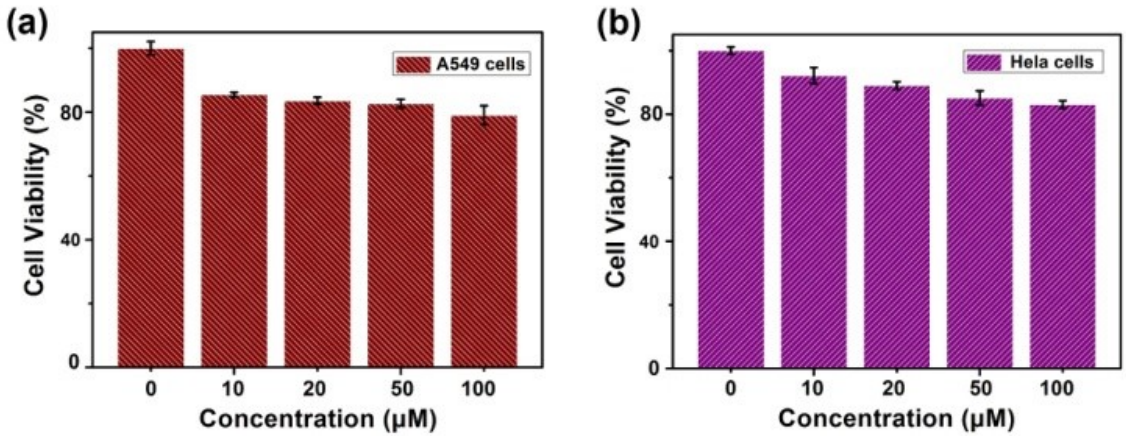


Figure S3 Cell viability of A 549 (a) and HeLa cells (b) incubated with different amounts of probe CySBH for 24 h.

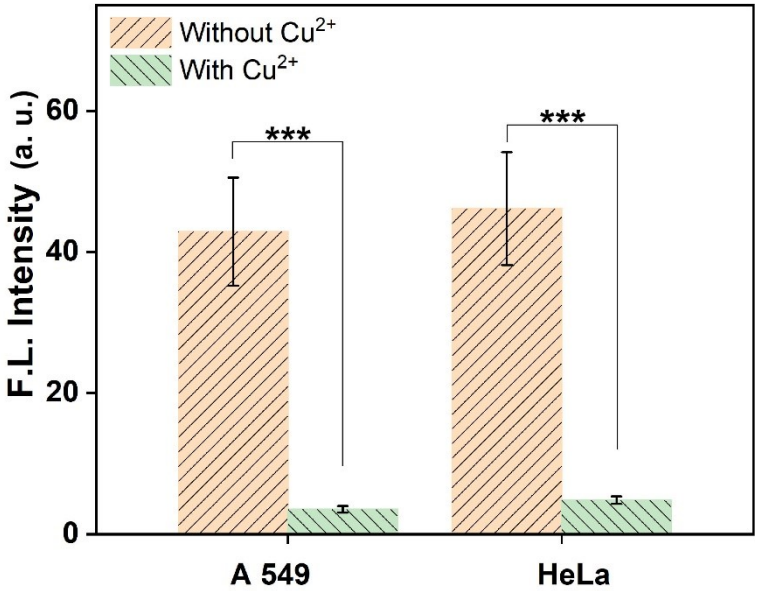


Figure S4 Fluorescence intensities analyses CySBH (5 μM) in A549 and HeLa cells incubated with (green bar) and without (yellow bar) Cu^{2+}. (*P < 0.05, **P < 0.01, and ***P <0.001).

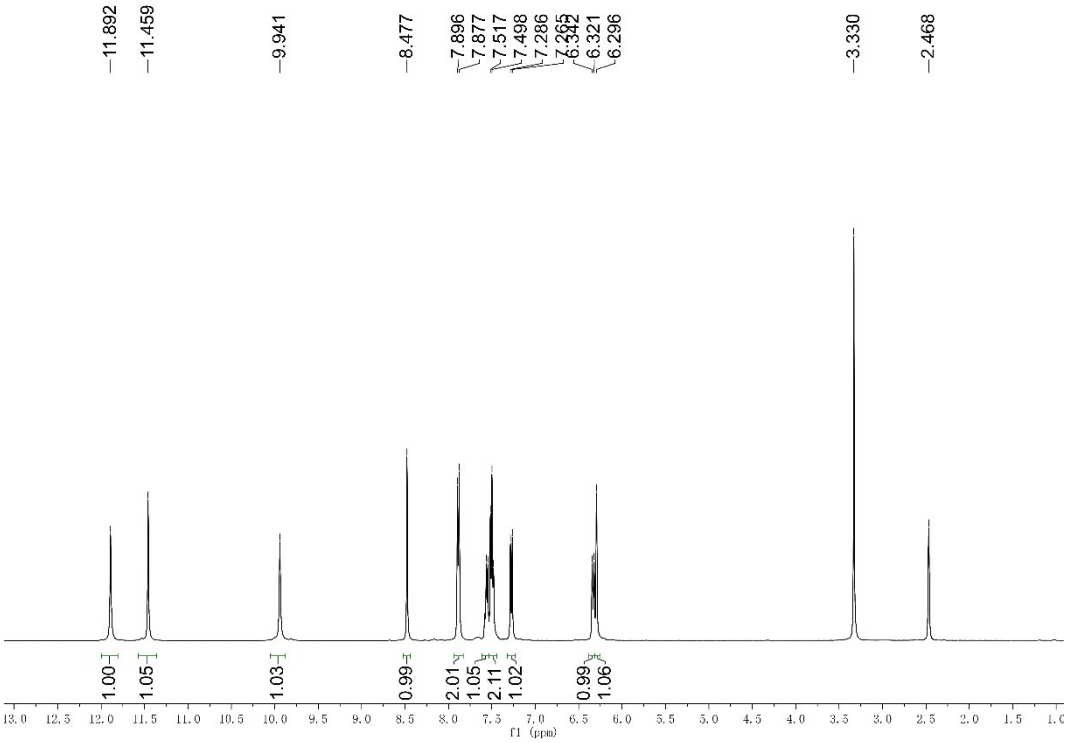


Figure S5 ^{1}H NMR spectrum of compound **4**.

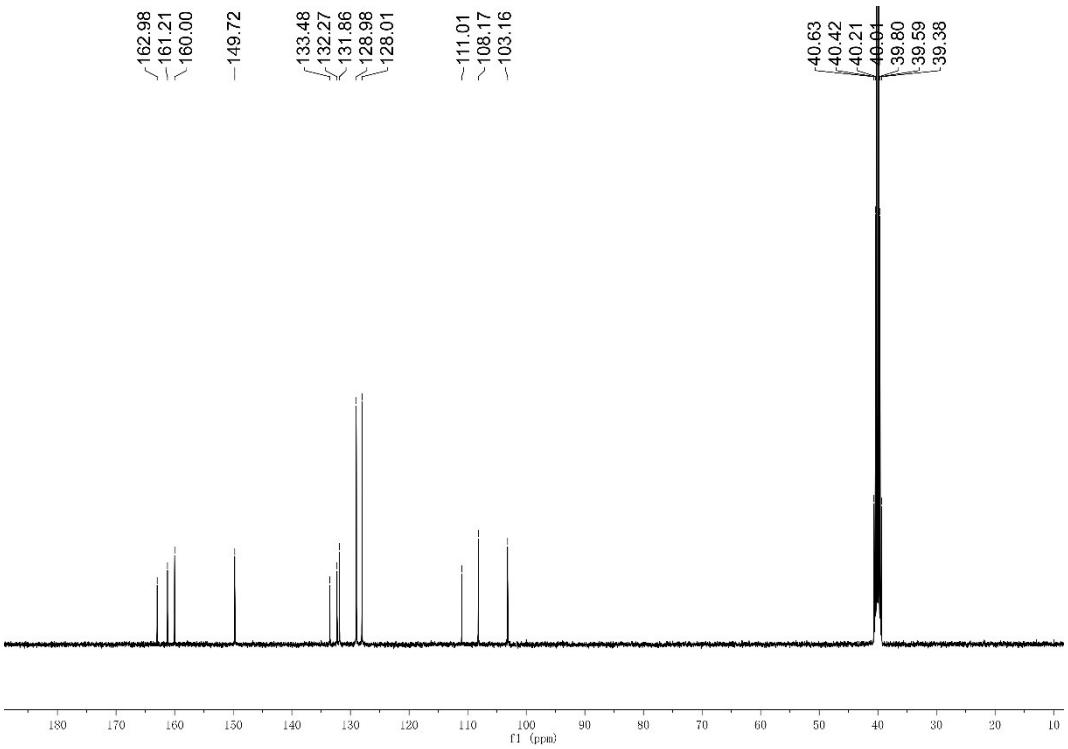


Figure S6 ^{13}C NMR spectrum of compound **4**.

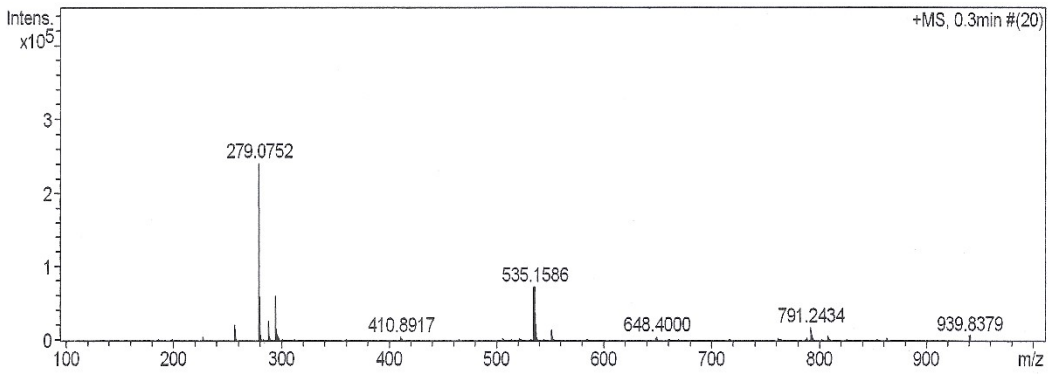


Figure S7 HR-ESIMS spectrum of compound **4**.

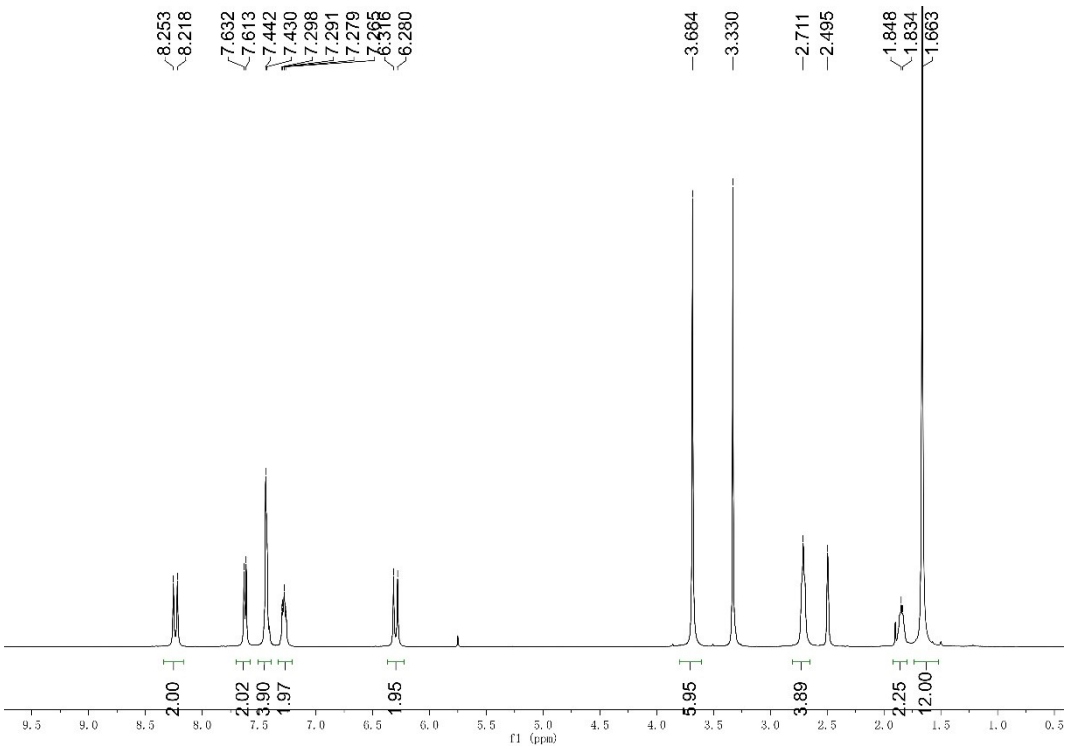


Figure S8 ^{1}H NMR spectrum of compound **IR**.

Figure S9 ^{13}C NMR spectrum of compound **IR**.

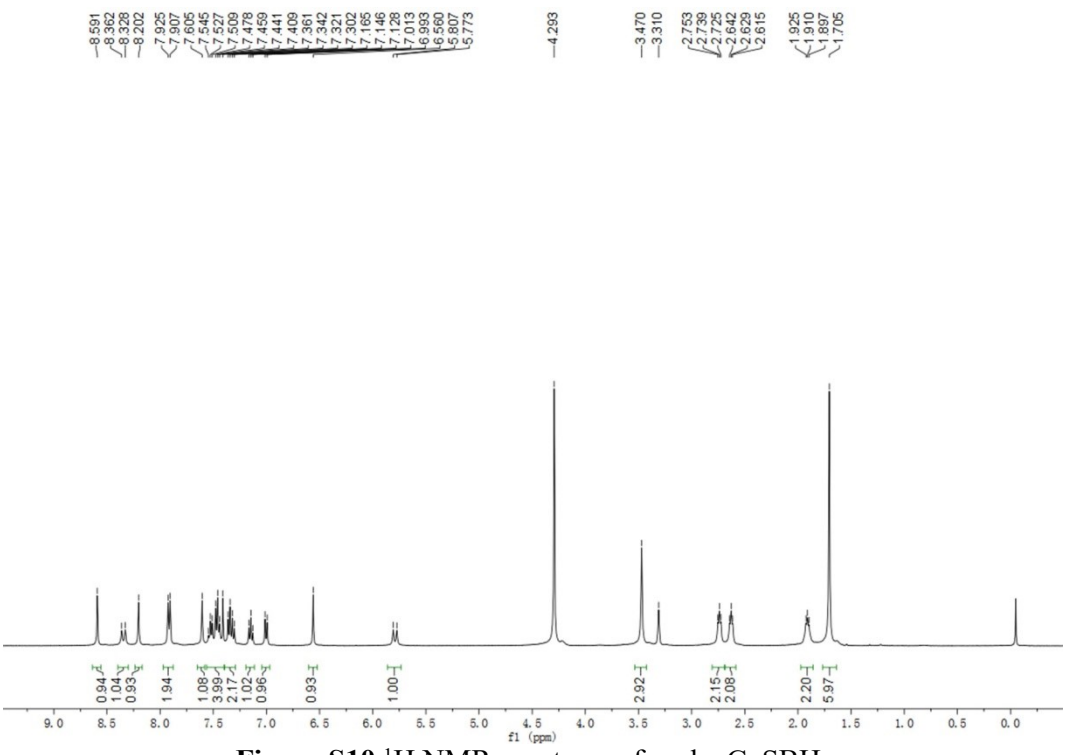


Figure S10 ^{1}H NMR spectrum of probe CySBH.

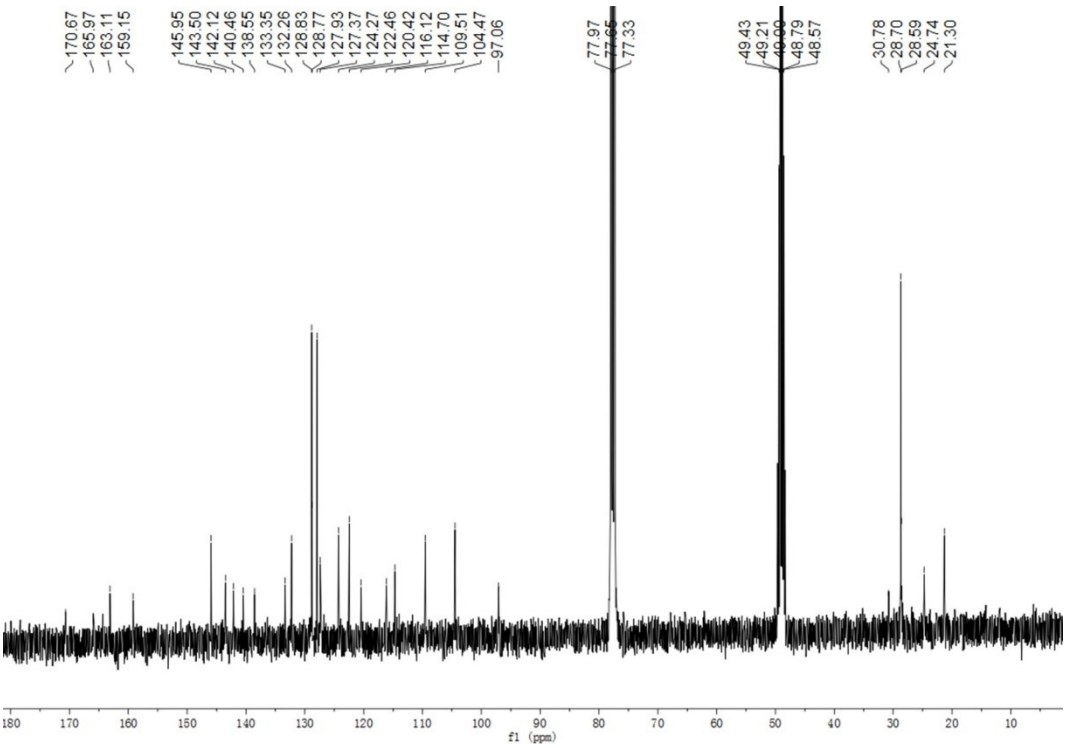


Figure S11 ^{13}C NMR spectrum of probe CySBH.

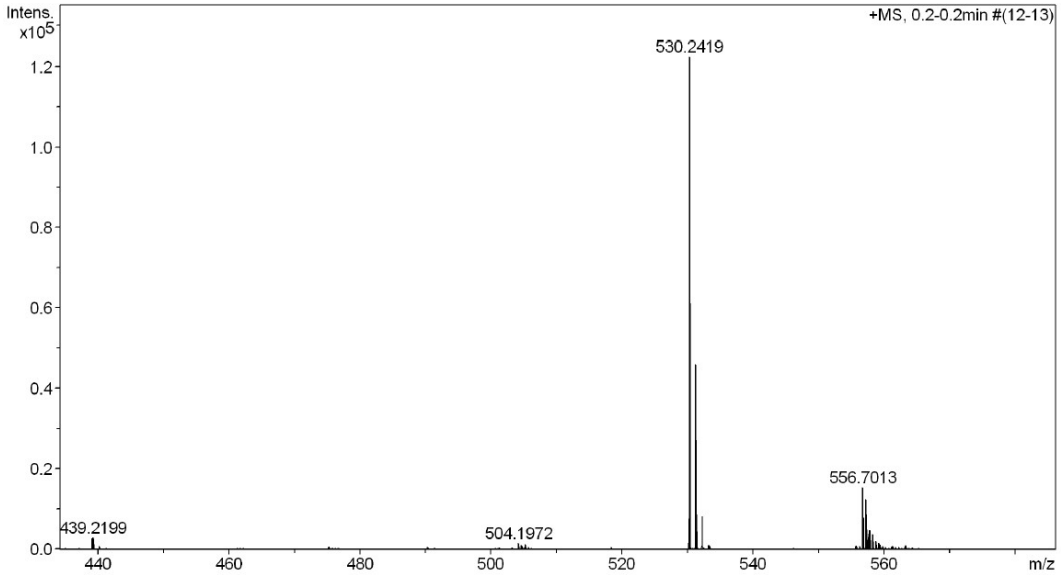
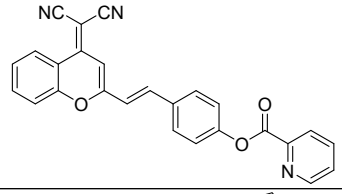
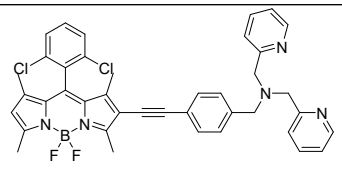
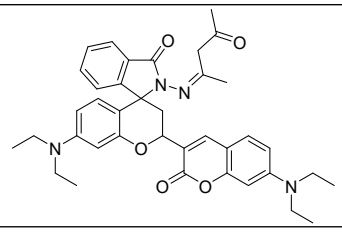
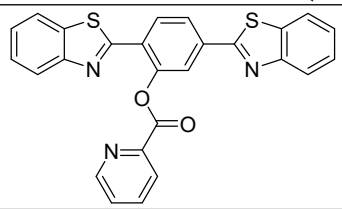
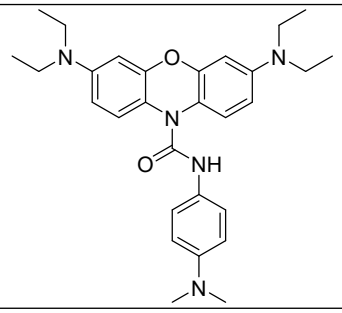
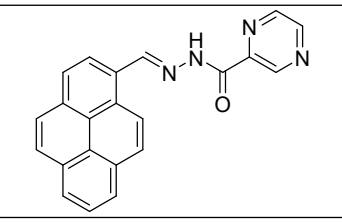
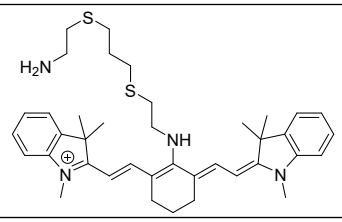
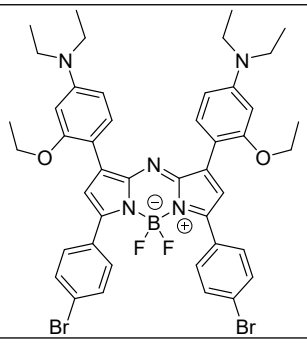
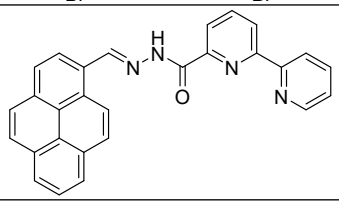
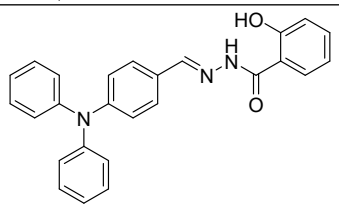
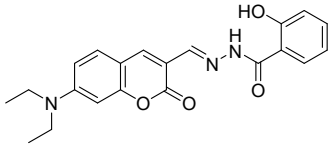
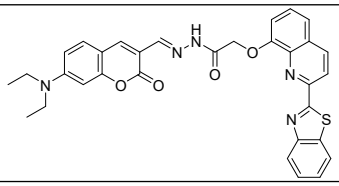
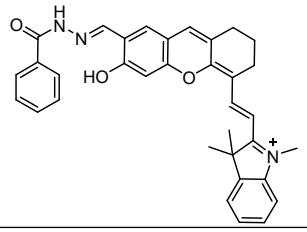


Figure S12 HR-ESIMS spectrum of probe CySBH.

Table S1 Comparison of CySBH with some relevant reported copper(II) probe.

Probe	$\lambda_{ex}/\lambda_{em}$ (nm)	LOD (nM)	Selectivity cations	Time	Ref.
	560/700	25.4	11	20 min	1 (2021)
	542/589	100	12	NA	2 (2021)
	650/696	200	16	NA	3 (2020)
	350/523	19.7	13	20 min	4 (2020)
	656/669	1.93	13	40 s	5 (2020)
	365/460	157	20	20 min	6 (2020)
	647/718	47	16	NA	7 (2020)

	663/749	350	12	NA	8 (2020)
	365/466	660	11	NA	9 (2020)
	370/476	NA	13	100 s	10 (2020)
	460/519	NA	13	50 s	10 (2020)
	449/505	60	14	NA	11 (2020)
	711/744	28.4	17	1.8 s	This work

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