Design of "Turn-on" Colorimetric Sensor for AChE inhibitor on the stability of Metal-Organic Frameworks

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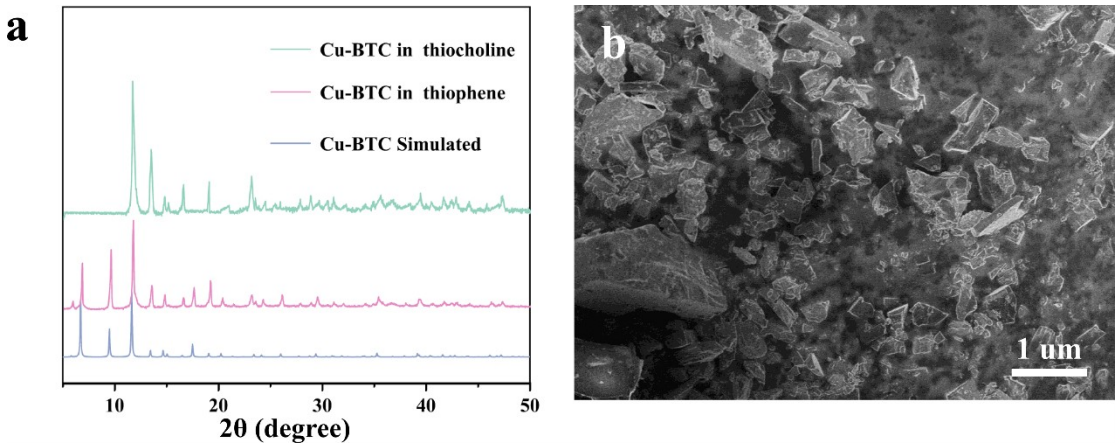

Fig. S1. (a) PXRD patterns after incubation with thiocholine and thiophene. (b) SEM image of Cu-BTC after incubation with thiocholine.

Table S1. Sensing performance comparison between the biosensors in this work and some reported sensors for AChE inhibitors.

Biosensor	Analyte	Linear range	Detection limit	Reference
colorimetric	galanthamine	25 nM-25 μM	4.8 nM	1
fluorometric	carbaryl	0.05–50 μM	0.8 nM	2
colorimetric	carbaryl	0.05–50 μM	1.6 nM	2
chemiluminescence	tacrine	0- 0.78 μM	21.9 nM	3
fluorometric	fenitrothion	0.1 - 500 ng/mL	0.037 ng/mL	4
colorimetric	huperzine A	5–500 nM	4.17 nM	5
colorimetric	paraoxon	0–30 ng mL^{-1}	1.07 ng/mL	6
colorimetric	clorpyrifos	10^{-11}-10^{-4}M	8.95 pM	this work

Table S2. Recovery tests of clorpyrifos detection in apple samples.

Samples	Added (pM)	Found (pM)	Recovery (%)	RSD (%)
1	100.00	109.81	109.81	2.05
2	500.00	504.22	100.85	2.32
3	5000.00	5089.10	101.78	1.90
4	100000.00	100749.21	100.75	1.77
5	1000000.00	988299.62	98.83	2.57

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