

Supporting Information for

**Label-free and turn-on fluorescence sensor for sensitive and selective
detection for iodide using carbon dots/silver nanocomposites**

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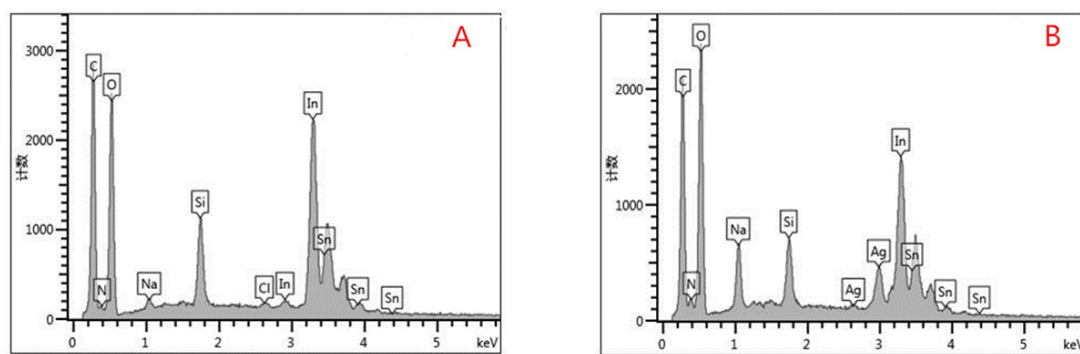


Figure S1 EDS of the Cdots (A) and Cdots/Ag nanocomposites (B).

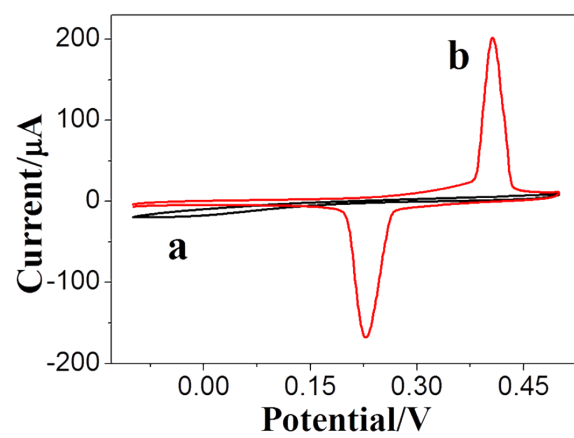


Figure S2 CV of the Cdots (a) and Cdots/Ag nanocomposites (b) modified ITO electrodes in 0.1 M PBS (pH 7.0).

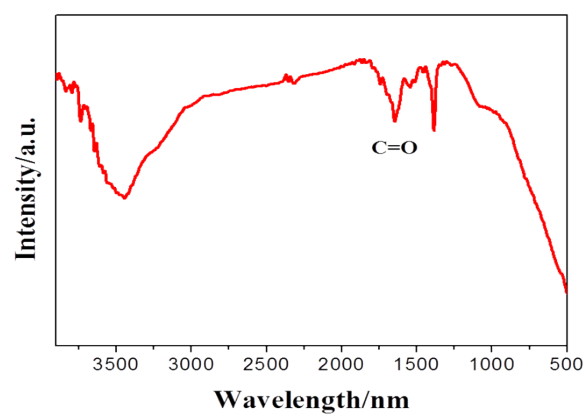


Figure S3 FT-IR spectrum of the Cdots.

Table S1 Comparison of the using material, linear range and detect limit for I⁻ ions different probes.

Method	Material	Linear range	Detect limit	Reference
Based on carbazole-containing conjugated copolymers	Organic	1-10.0 μ M	Not given	1
Based on fluorene oligomer	Organic	0.1-0.4 mM	0.1 mM	2
Based on oligopyrrole derivative	Organic	0.1-6 μ M	0.09 μ M	3
Based on phenanthrene	Organic	Not given	Not given	4
This method	Inorganic	0.05 -50 μ M	15.87 nM	

Table S2 Experimental results of iodide standard sample using the Cdots/Ag nanocomposites probe.

Number	Iodide standard sample(μM)	Fluorescent response ($\text{FL}-\text{FL}_0$)/ FL_0^*	Concentration detection (μM)
1	10.00	0.15	11.17
2	25.00	0.26	24.08
3	40.00	0.43	41.89

* The fluorescent intensities of the Cdots/Ag nanocomposites in the absence and presence of iodide ions are denoted by FL_0 and FL , respectively.

Reference

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- 4 M. Rae, A. Fedorov, and M. N. Berberan-Santos, *J. Chem. Phys.*, 2003, **119**, 2223-2231.