Electronic Supplementary Material (ESI) for New Journal of Chemistry

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Supporting information

Highly sensitive fluorescent determination of sulfide using BSA-capped CdS quantum dots

Weidan Na, Xiaotong Liu, Tianyu Hu and Xingguang Su*

Department of Analytical Chemistry, College of Chemistry, Jilin University, Changchun, 130012, China

*Corresponding author, Tel.: +86-431-85168352, E-mail address: suxg@jlu.edu.cn

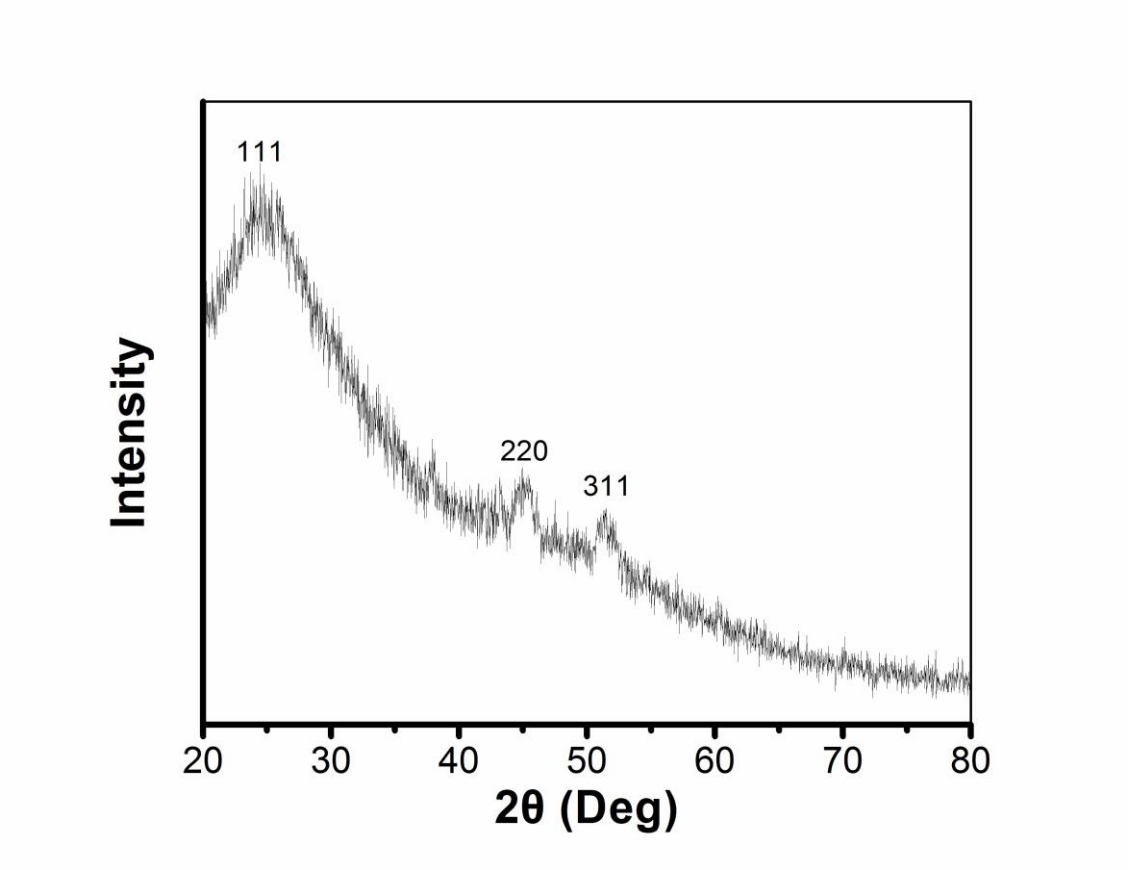

Fig S1. The XRD pattern of BSA-CdS QDs.

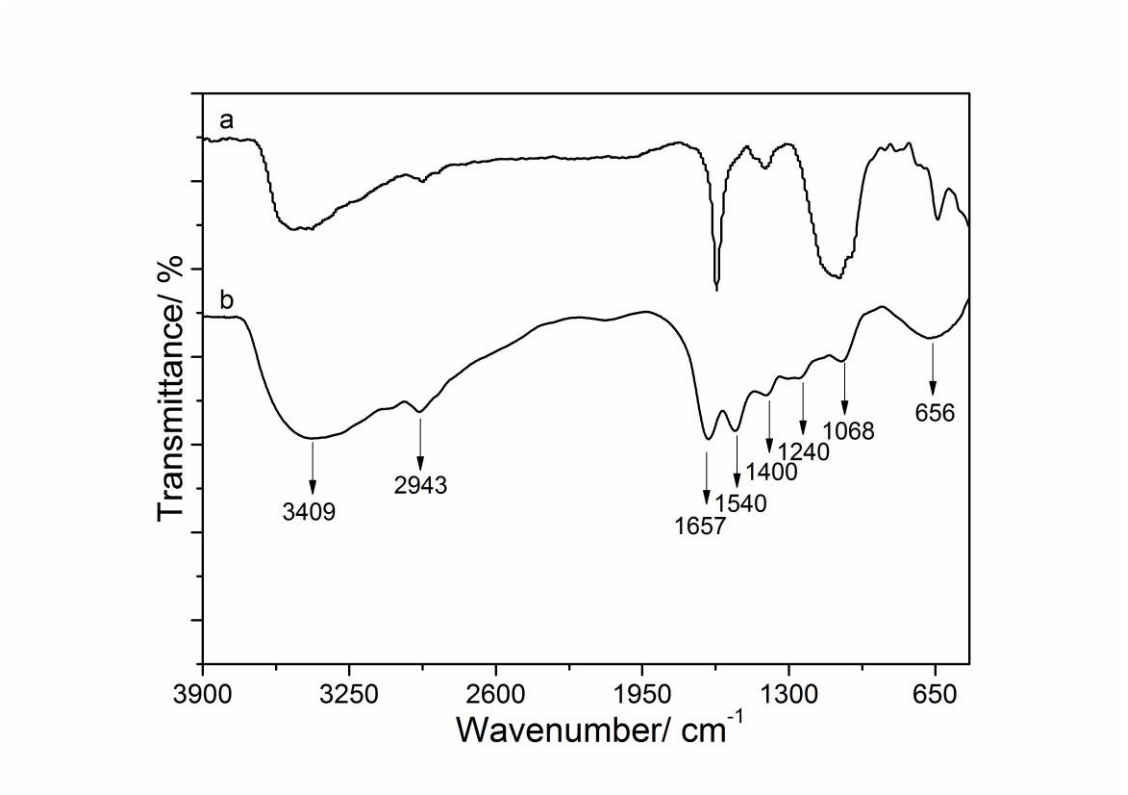

Fig S2. The FT-IR spectra of the uncapped CdS precipitation (curve a) and BSA-CdS QDs (curve b).

Table S1 Comparison of different methods for the detection of sulfide anions

Method	Linear range (μmol L^{-1})	LOD (μmol L^{-1})	Ref
Conjugated polymer-based fluorescent chemosensors	2-55	0.5	32
Cu@Au Nanoparticle-Based Colorimetric sensor	0-10	0.3	33
Mn^{2+}-doped ZnS quantum dots	2.5-38	0.15	34
Anthracene-Functionalized Cyclam–Cu(II) Complex	0-100	3.9	35
DNA templated copper nanoparticles as fluorescent probes	0.2-2 2-20	0.08	36
BSA-CdS QDs	0.16-4.8	0.05	this work

Table S2 Results of S^{2-} determination in real water samples

Samples	Added (μmol/L)	MB method Founded (μmol/L)	Our method Founded (μmol/L)	Recovery (%)	RSD (n=3) (%)
Lake water	0.00	0.45±0.01	0.47±0.01	—	3.7
	1.00	1.50±0.02	1.51±0.02	104	2.3
	2.00	2.43±0.03	2.46±0.02	100	3.4