Supporting Information for

Precise Mono-Cu^{+} Ion Doping Enhanced Electrogenerated chemiluminescence from Cd-In-S Supertetrahedral Chalcogenide Nanocluster for Dopamine Detection

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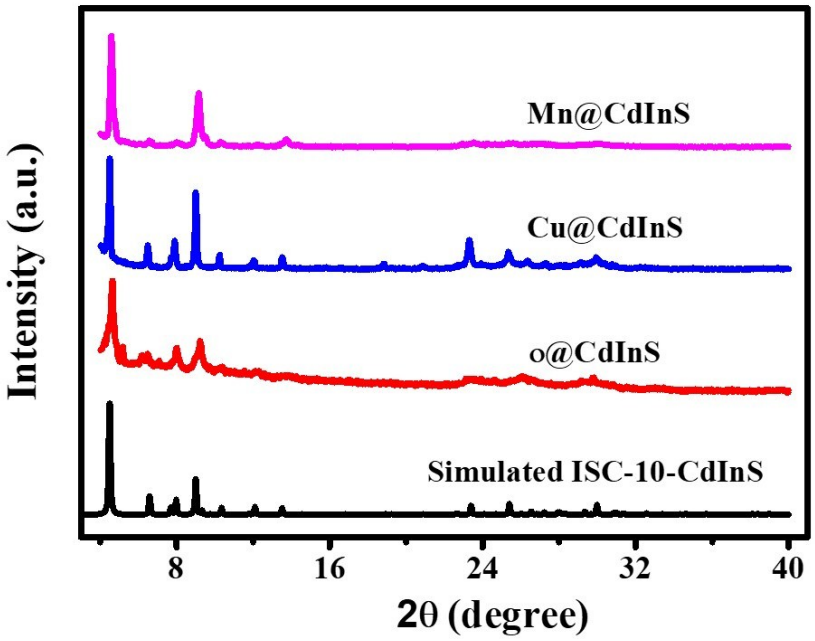

Fig. S1 The the single crystal X-ray diffraction (XRD) patterns of ○@CdInS, Cu@CdInS and Mn@CdInS.

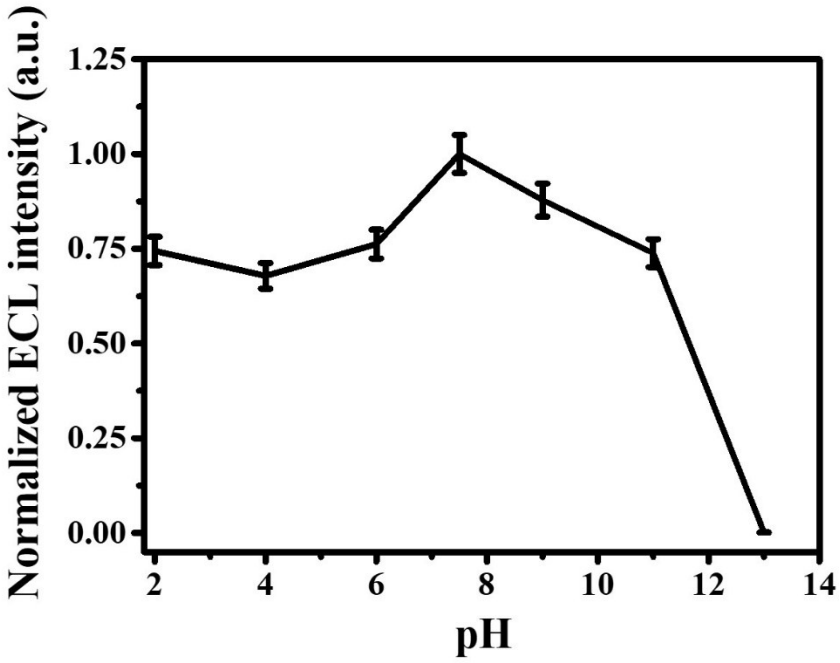

Fig. S2 The effect of pH on ECL intensity of Mn@CdInS NCs modified GCE in 0.1 M PBS in air.

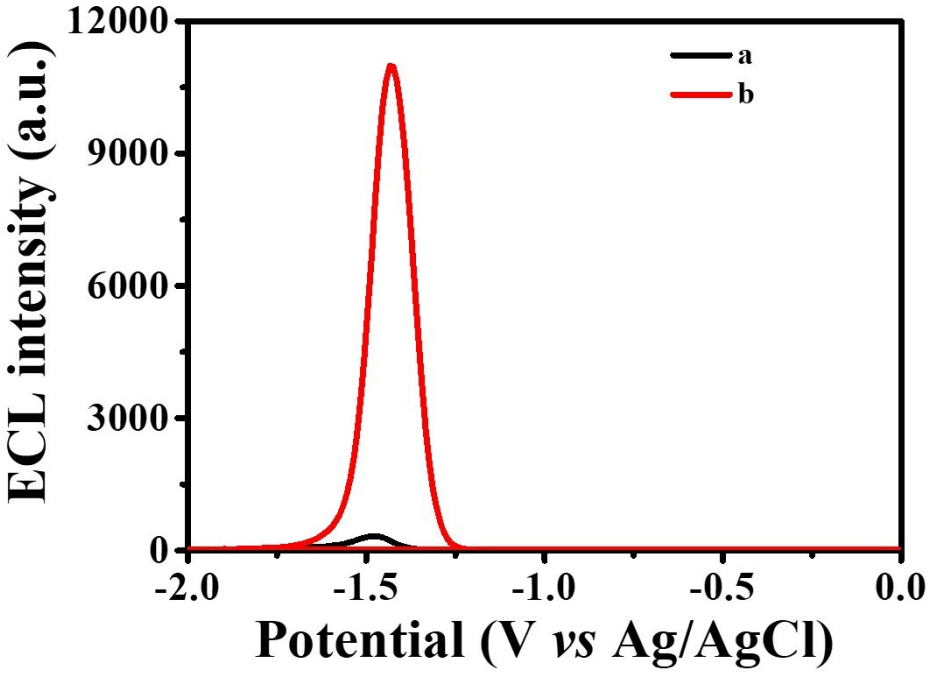

Fig. S3 The ECL-potential curves of Cu@CdInS NCs modified GCE in 0.1 M PBS (a) and it with 1 mM dopamine (b) in air. Scan rate is 100 mV/s, the photomultiplier tube (PMT) was biased at 750 V.

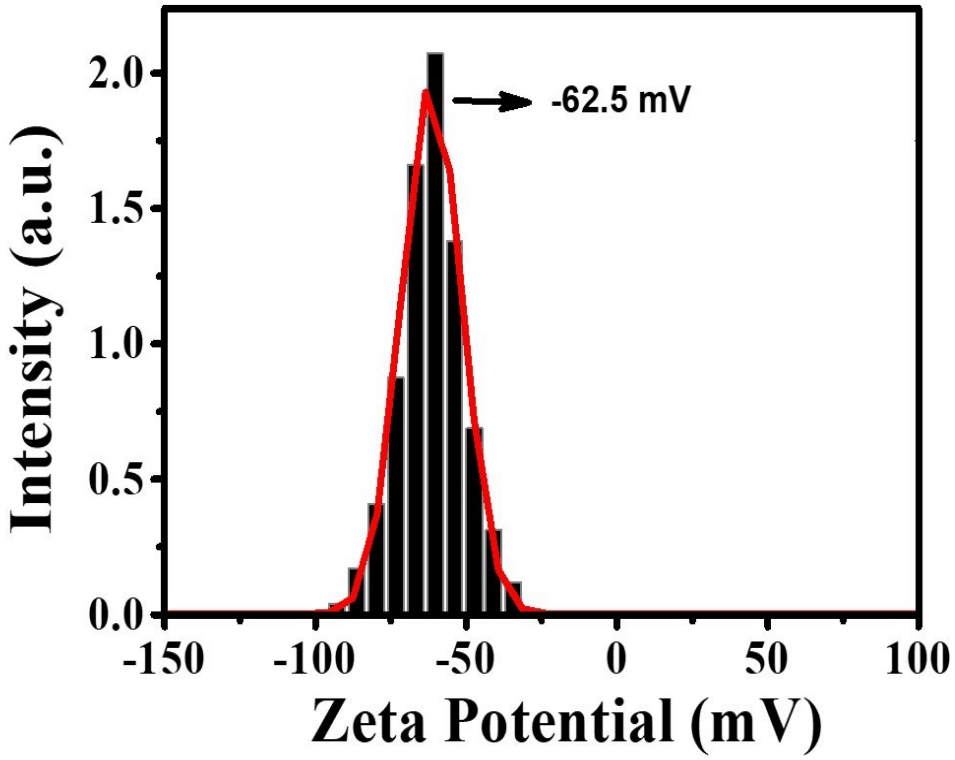

Fig. S4 The Zeta-potential distributions of Cu@CdInS NCs in ultrapure water.

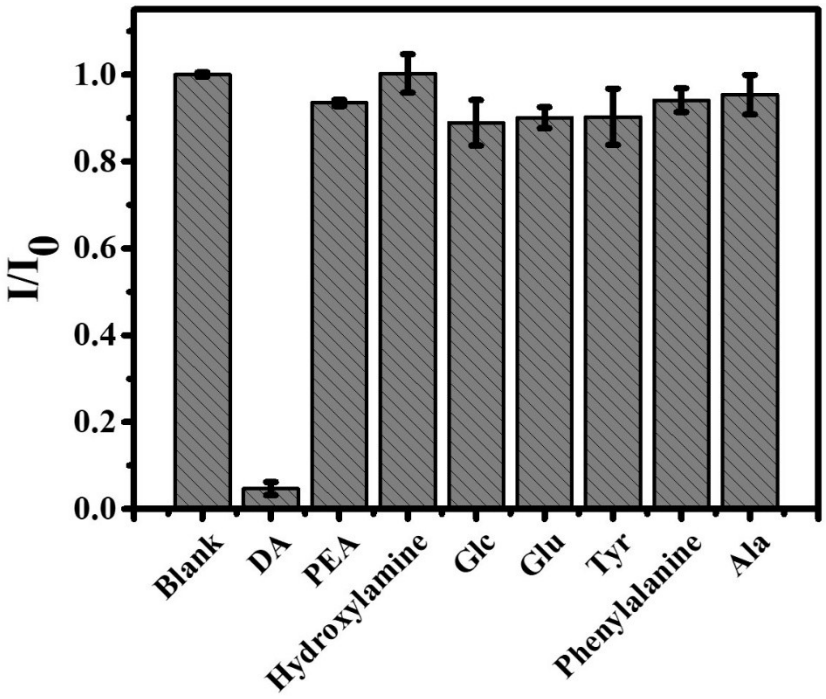

Fig. S5 The ECL response of Cu@CdInS NCs in different solution. I_0 is ECL intensity in 0.1 M PBS in air, I are ECL intensities in 0.1 M PBS containing dopamine (DA), phenylethylamine (PEA), Hydroxylamine, Glucose (Glc), Glutamic acid (Glu), tyrosine (Tyr), phenylalanine and Alanine (Ala) with the same concentration of 500 μM respectively.

Table S1 The comparison of dopamine detection with label-free base on ECL of nanomaterials.

Probe	Linear range (μM)	Limit of detection (μM)	References
Ag_2Se quantum dot	0.5-19	0.1	1
BSA-AuNC/ITO	2.5-47.5	2.5	2
CdSe quantum dot	0.5-700	0.5	3
CdSeTe/ZnS core−shell QDs	3.7-450	-	4
Met-AuNCs	0.1-4	0.032	5
Cu@CdInS NCs	0.5-100	0.335	This work

Refrence

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