Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Electronic Supplementary Information for

A 2D Quantum Dot-Based Electrochemiluminescence Thin Film Sensor towards Reversible Temperature-Sensitive Response and Nitrite Detection

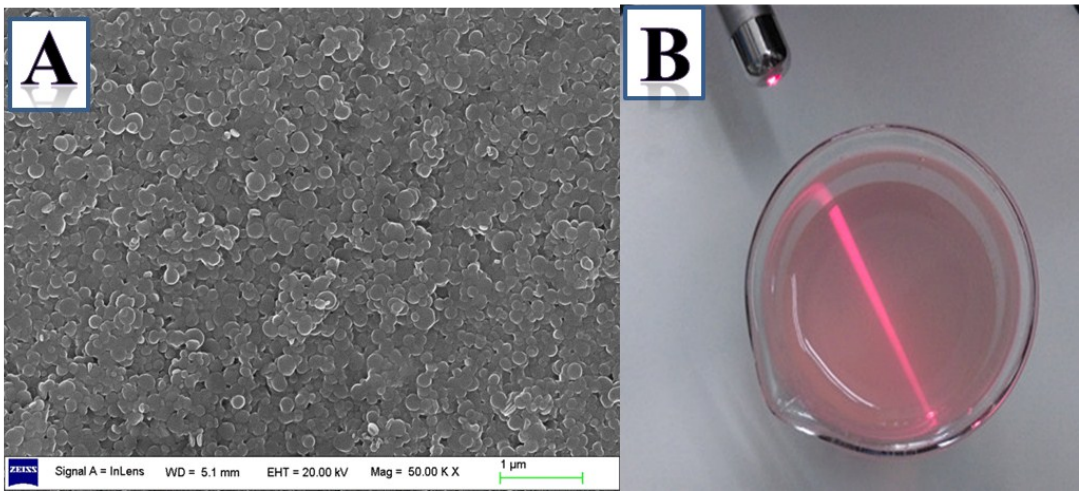

Fig. S1 (A) SEM image of the CoAl-NO_3 LDH nanoplatelets; (B) Photograph of a colloidal suspension of CoAl-LDH nanoplatelets.

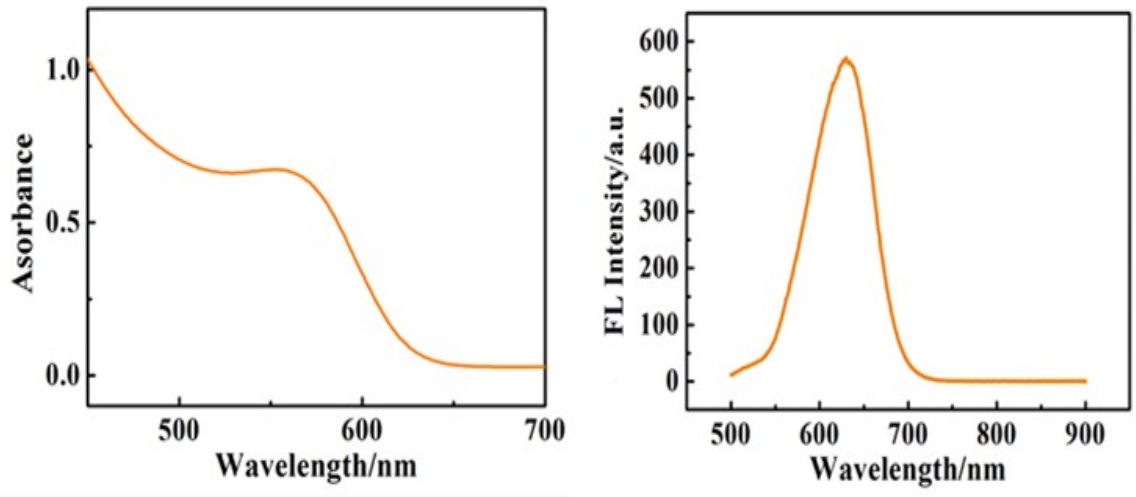

Fig. S2 UV–vis absorption and fluorescence spectra of MSA-modified CdTe QDs solution.

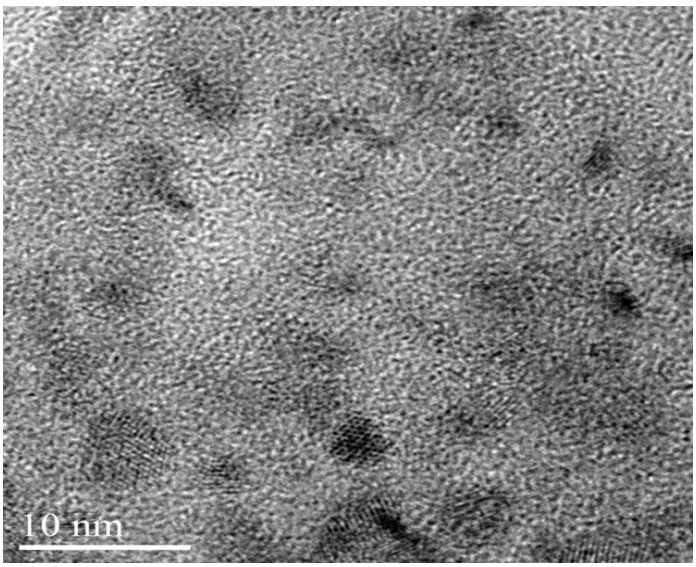

Fig.S3 HRTEM image of the CdTe QDs.

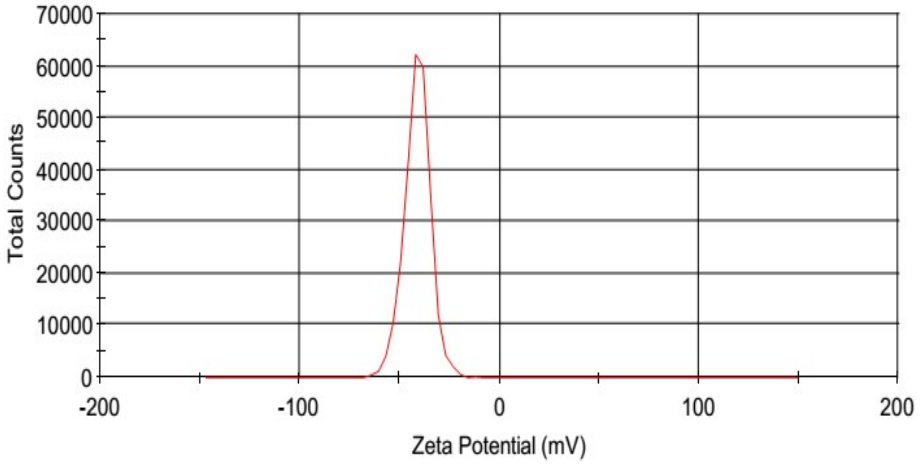

Fig. S4 The Zeta potential distribution of CeTe QDs

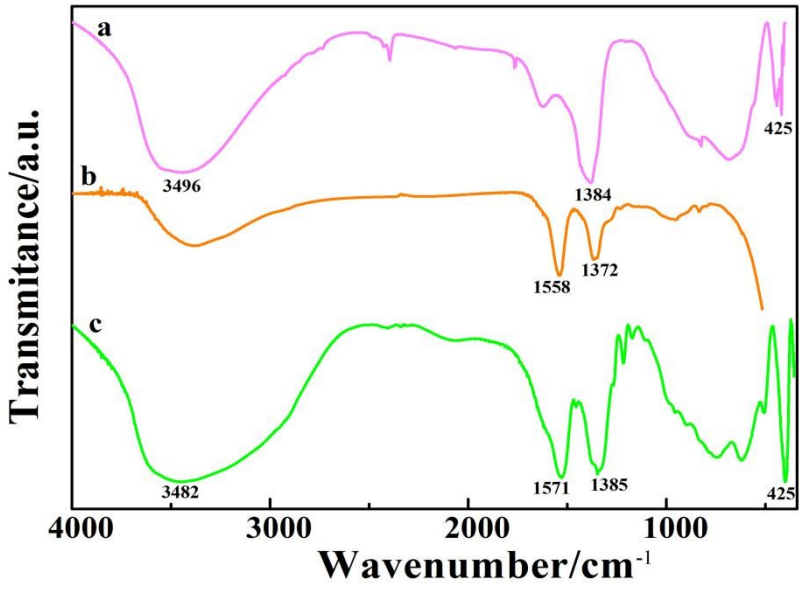

Fig. S5 FT-IR spectra of a) CoAl-LDH, b) CdTe QDs, c) $(CdTe\text{-}QDs/LDH)_{12}$ TF

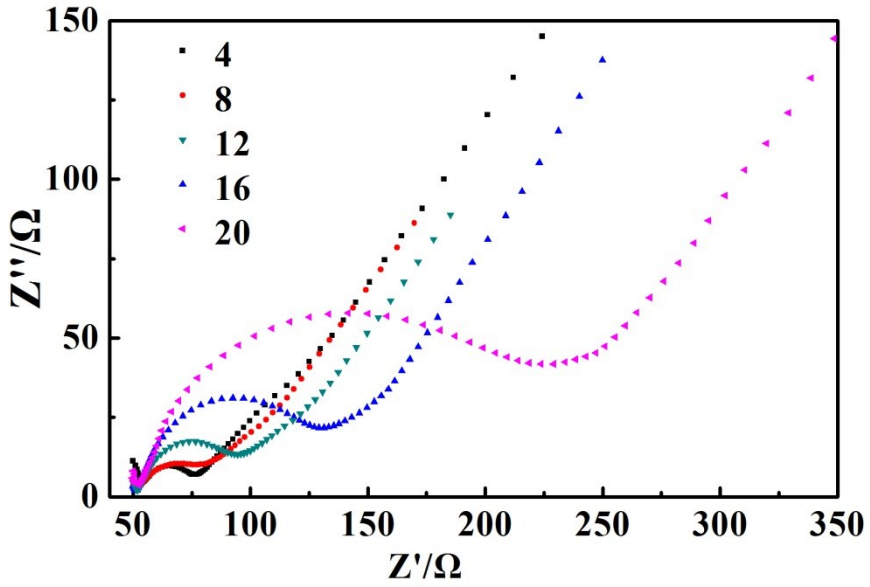

Fig. S6 Nyquist plots of EIS for the $(CoAl\text{-}LDH/CdTe\ QDs)_n$/ITO ($n$=4-20) in 5 mM $Fe(CN)_6^{4-/3-}$ solution.

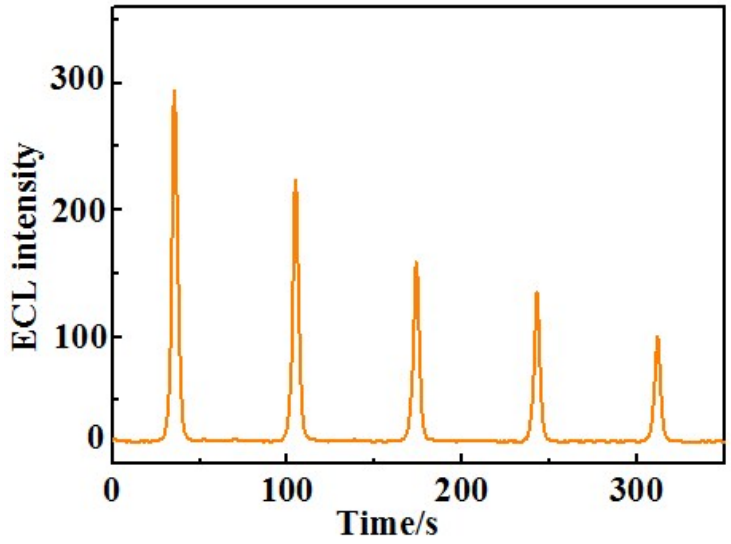

Fig. S7. ECL signal of drop-casted CdTe on ITO substrate

Table S1 Detection limit and linear range of different methods for the detection of nitrite

Technique	System	Linear range (μmol/L)	LOD (μmol/L)	Ref
Electrochemical	Polymer/carbon nanotubes	1-400	0.1	[42]
Fluorogenic sensor	Gold nanoparticles	2–50	2	[43]
Chemiluminescence	Fluorosurfactant-cappedgold nanoparticles	1-100	0.36	[44]
Electrochemical	Nano-Au/P3MT/GCE	1-1000	1.4	[45]
Chemiluminescence	Carbon dots	1-100	0.53	[46]
Flow injection	Phosphomolybdenum chemistry	0.72-16.7	0.45	[47]
Roman	SERS of 4-ABT on Au	5-25	5	[48]
ECL sensor	LDH/CdTe QDs	1-10000	0.719	This work