

## Supporting Information

### **A fluorescent probe for Cd<sup>2+</sup> detection based on aggregation-induced emission enhancement of aqueous Zn-Ag-In-S quantum dots**

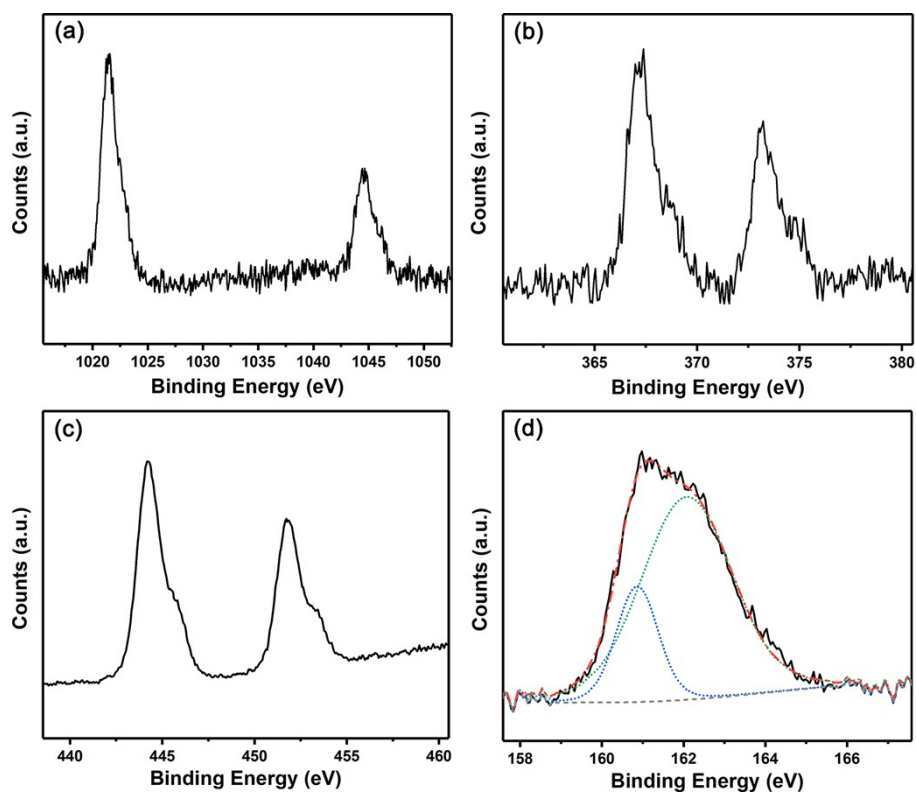
Chang Wei,<sup>a</sup> Xian Wei,<sup>a</sup> Zhe Hu,<sup>a</sup> Dan Yang,<sup>a</sup> Shiliang Mei,<sup>a</sup> Guilin Zhang,<sup>a</sup> Danlu Su,<sup>a</sup> Wanlu Zhang,<sup>\*a</sup> and Ruiqian Guo <sup>\*a, b</sup>

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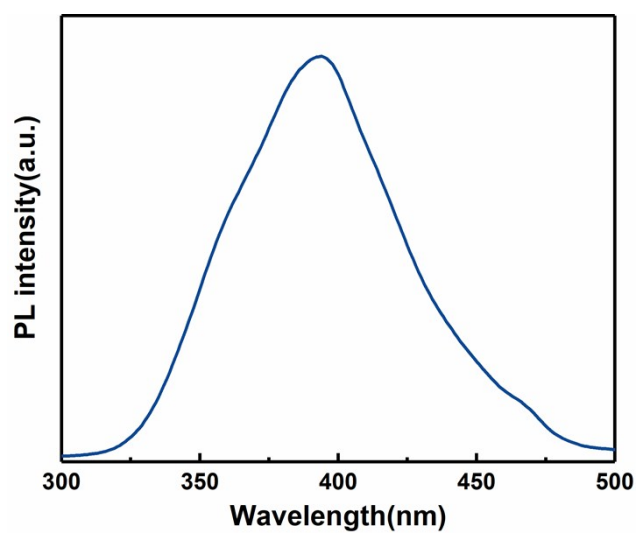
b. Institute of Future Lighting, Academy for Engineering and Technology, Fudan University, Shanghai, 200433, China.

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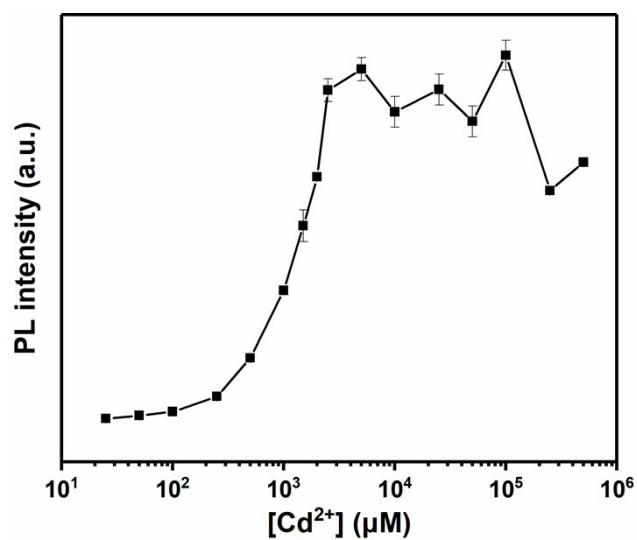
Email: fdwlzhang@fudan.edu.cn; rqguo@fudan.edu.cn.



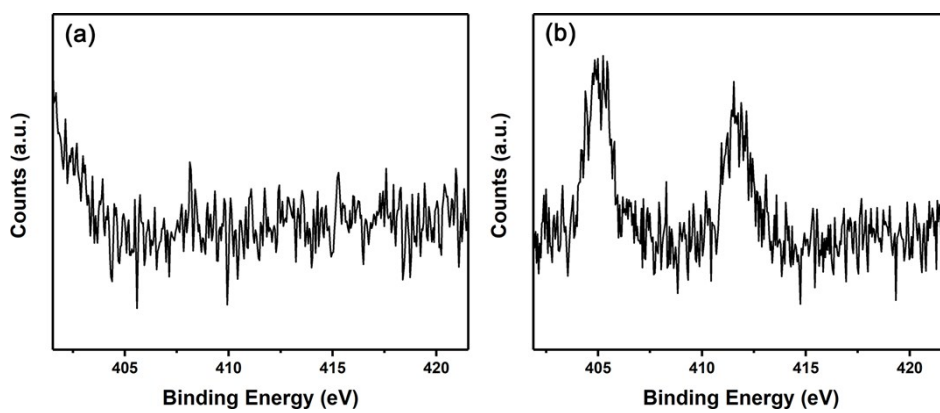
**Fig. S1** XPS spectra of (a) Zn 2p, (b) Ag 3d, (c) In 3d, (d) S 2p of ZAIS QDs.



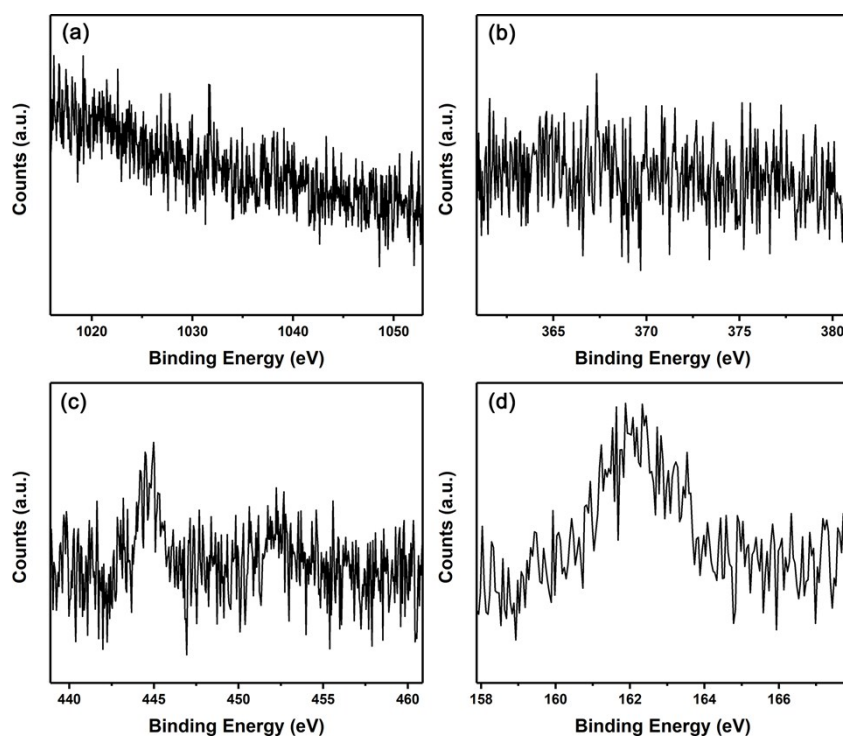
**Fig. S2** Excitation spectrum of ZAIS QDs (monitored at emission wavelength of 525 nm).



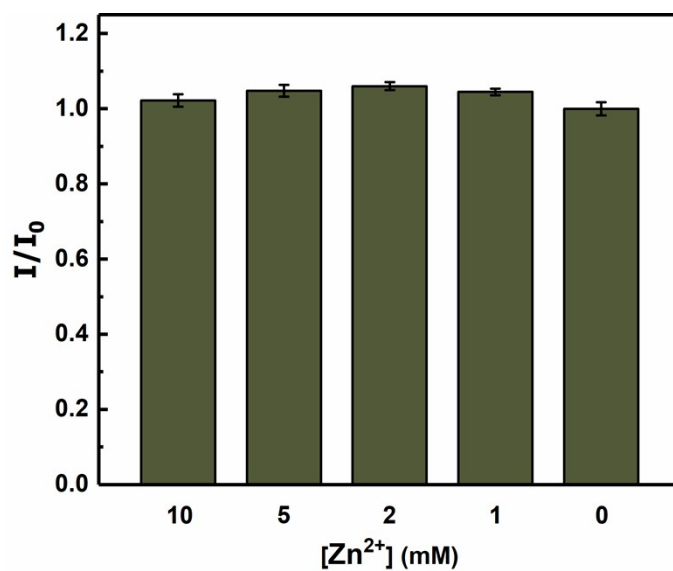
**Fig. S3** PL intensity of ZAIS QDs with Cd<sup>2+</sup> of different concentrations added (from 25 μM to 500 mM). The x-axis is logarithmic.



**Fig. S4** XPS spectra of Cd 3d (a) before adding Cd<sup>2+</sup> (b) after adding Cd<sup>2+</sup> of 2 mM.



**Fig. S5** XPS spectra of (a) Zn 2p, (b) Ag 3d, (c) In 3d, (d) S 2p of ZAIS QDs after adding  $\text{Cd}^{2+}$  of 2 mM.



**Fig. S6** Effect of  $\text{Zn}^{2+}$  of different concentrations on the PL response of ZAIS QDs.