Electronic Supplementary Material (ESI) for RSC Advances.


# Enhanced photoluminescence stability of CdS nanocrystals through a zinc acetate reagent†

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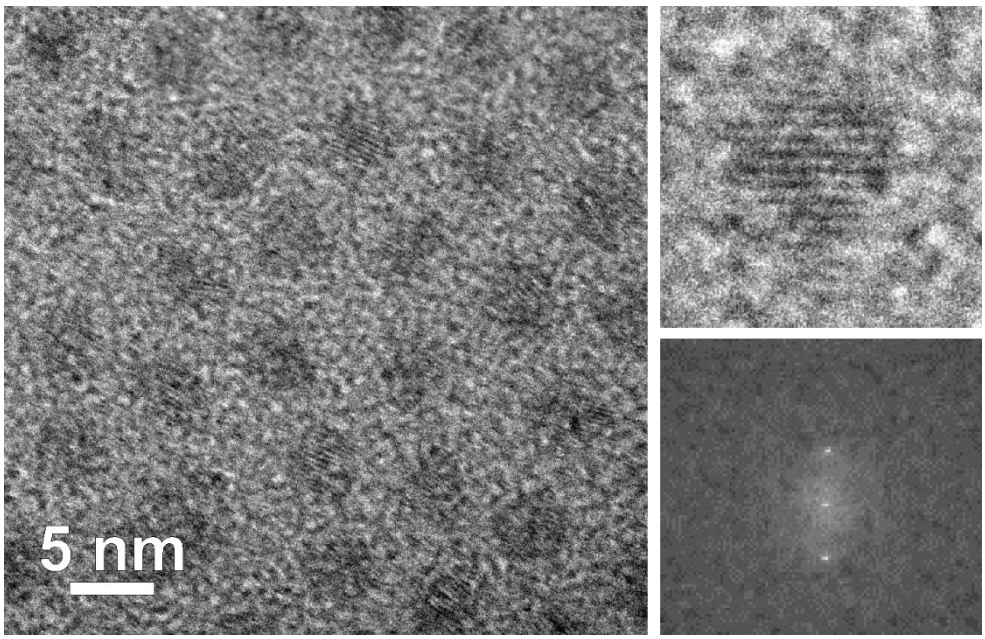


**Fig. S1.** HR-TEM images and electron diffraction of CdS:Zn NCs (0.2 mmol of Zn precursor).

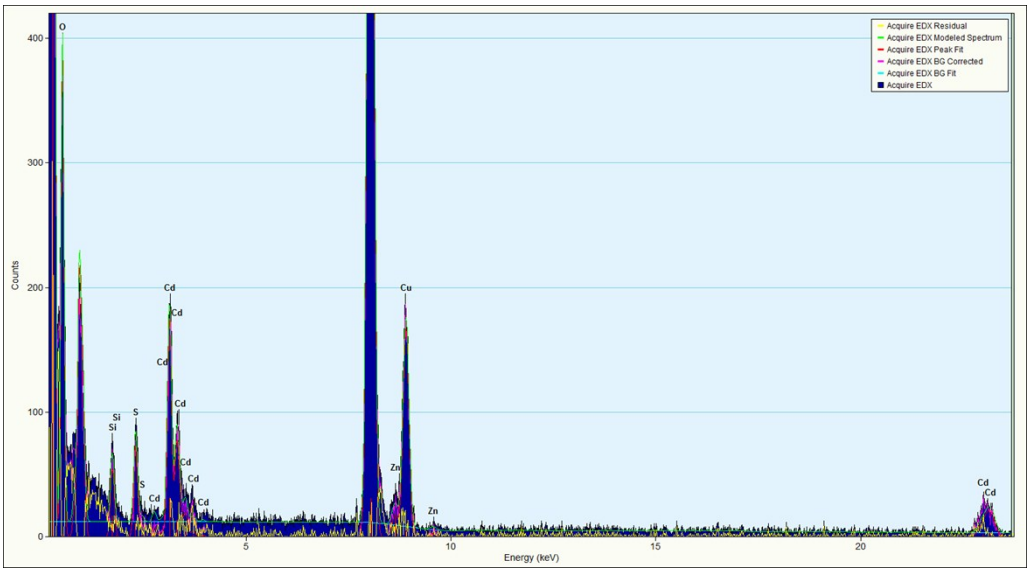


**Fig. S2.** EDX of CdS:Zn synthesized with 0.2 mmol of $Zn(OAc)_2$.

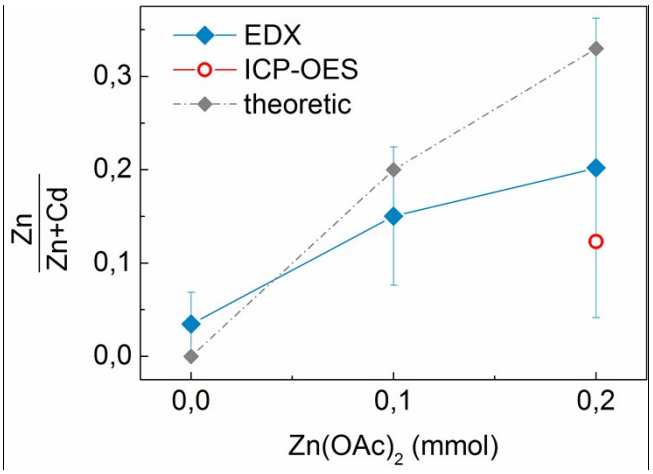


**Fig. S3.** Molar ratio of zinc to total cations of CdS:Zn nanocrystals determined from EDX spectra and ICP-OES in a function of $Zn(OAc)_2$ dose.

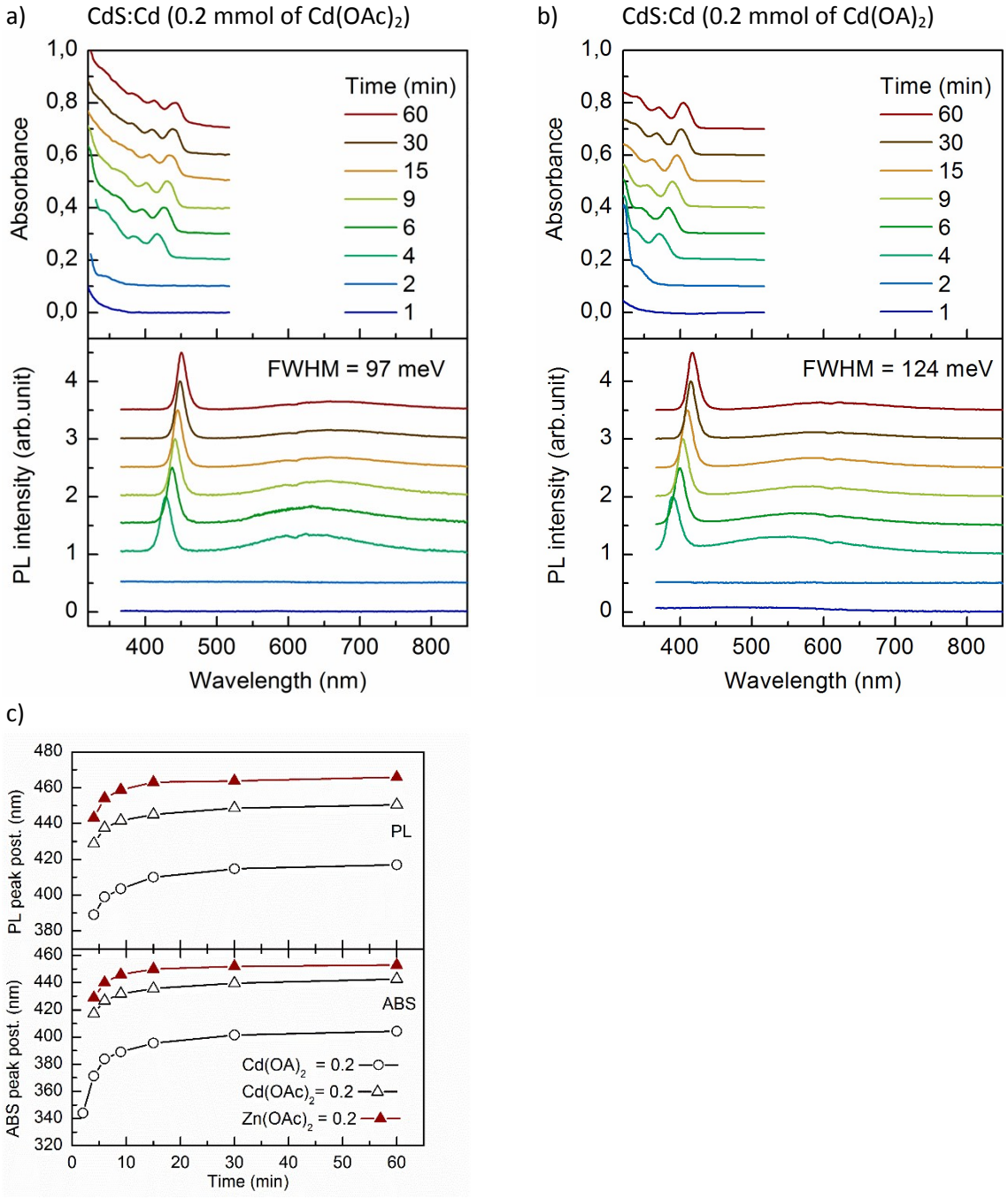


**Fig. S4.** ABS and PL spectra of CdS NCs synthesized with (a) 0.2 mmol $Cd(OAc)_2$ and (b) 0.2 mmol $Cd(OA)_2$. (c) Positions of the first exciton transition of above samples determined from ABS and PL spectra in a function of synthesis time compared to results of CdS NCs with 0.2 mmol $Zn(OAc)_2$ addition.

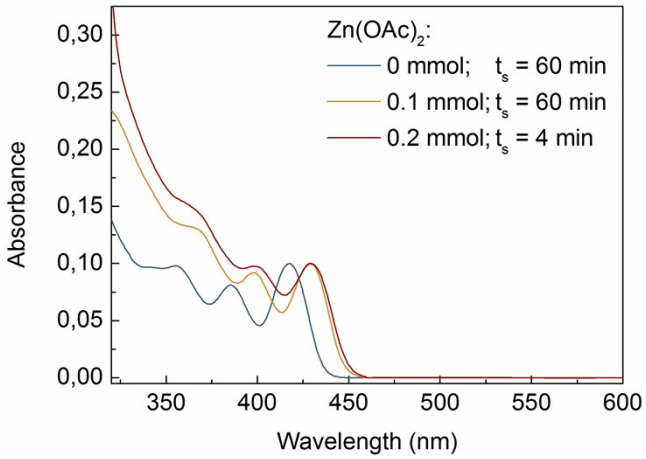


**Fig. S5.** ABS spectra of selected NCs samples having similar size. A decrease of ABS bands separation due to increase of $Zn(OAc)_2$ concentration is visible.