Electronic Supplementary Information

Tuning Emission and Stokes Shift of CdS Quantum Dots via Copper and Indium Co-doping

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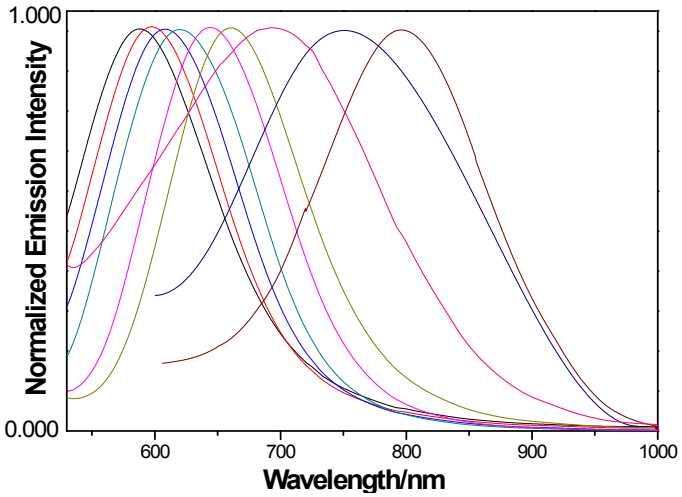

Fig. S1. The evolution of PL spectra during the synthesis of CuIn doped CdS QDs with D-concentration as 10%.

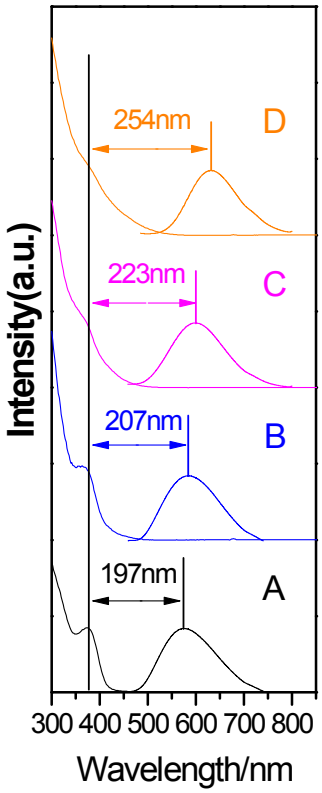

Fig. S2. The PL and absorption spectra of different doping concentrations (A 2.5%, B 6.5%, C 10%, D 20%) with similar same absorption positions.

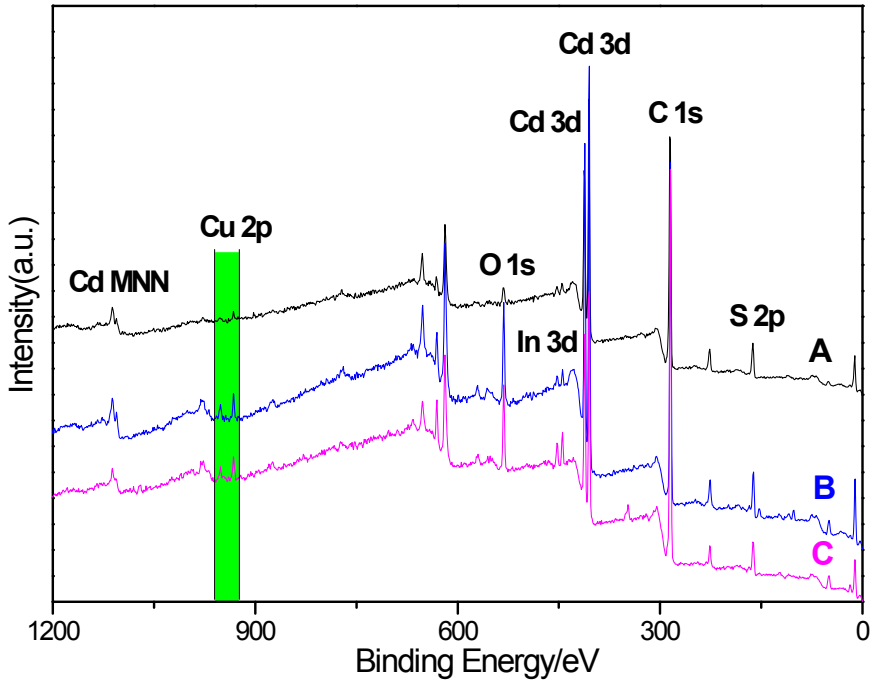

Fig. S3. X-ray photoelectron spectra of an overview spectrum recorded at an excitation energy 1253.6 ev with different doping concentrations of CdS QDs: A 2.5%, B 10%, C 20%.

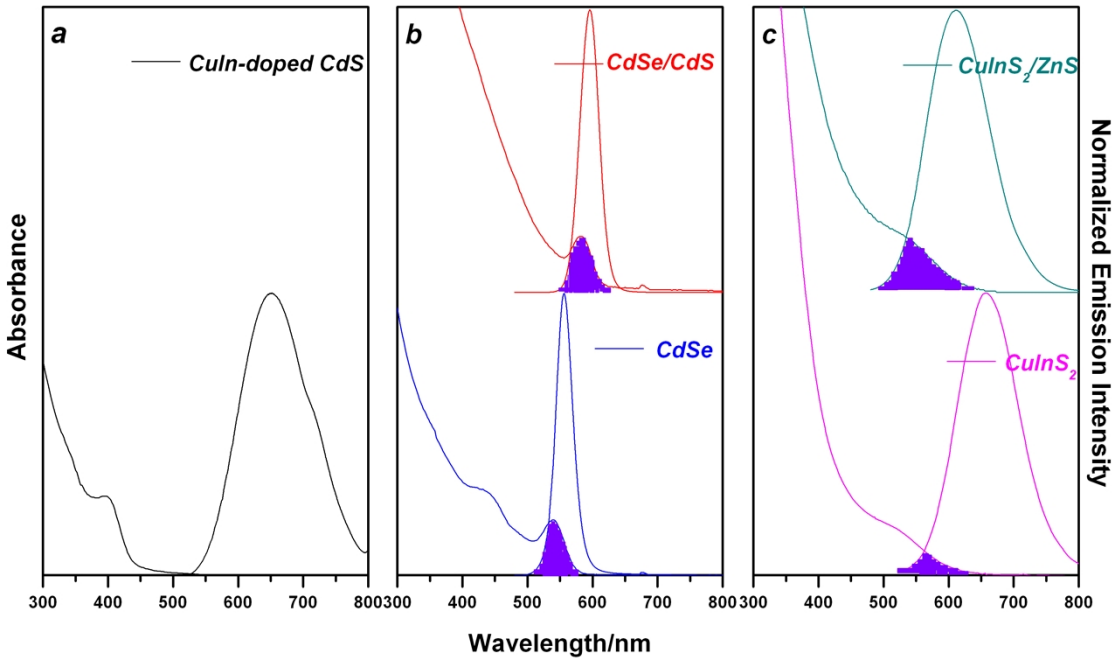

Fig. S4. The emission and absorption spectra of (a) CuIn-doped CdS QDs, (b) CdSe/CdS and CdSe QDs, (c) $CuInS_2$/ZnS and $CuInS_2$ QDs. The tinctorial area is the overlap of emission spectrum and absorption spectrum.

Table S1. The molar ratio of M/Cd with different D-concentration at different reaction time(M=Cu, In).

D-concentration	Molar ratio (M/Cd)	10min	20min	30min	50min
2.5%	Cu/Cd	0.09	0.07	0.04	0.03
	In/Cd	0.06	0.04	0.02	0.02
6.5%	Cu/Cd	0.06	0.08	0.07	0.06
	In/Cd	0.05	0.06	0.05	0.04
10%	Cu/Cd	0.09	0.07	0.08	0.08
	In/Cd	0.07	0.04	0.05	0.04
20%	Cu/Cd	0.22	0.18	0.21	0.20
	In/Cd	0.17	0.13	0.18	0.17
45%	Cu/Cd	0.38	0.37	0.41	0.39
	In/Cd	0.33	0.36	0.35	0.32