Electronic Supplementary Information (ESI) for

Non-trioctylphosphine and chemical aerosol flow Growth of high quality thiol-capped CdSe nanocrystals

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Gas flow (L/min)	Heat time (second)	Absorption peak(nm)	Size calculated (nm)
0.5	22.61	457	2.00
1	11.30	450	1.95
1.5	7.54	448	1.94
2	5.65	445	1.91
2.5	4.52	437	1.85
3	3.77	435	1.84

Table S1. The relationship between gas flow and nanocrystals size. The nanocrystals size was calculated according to the equation given by Peng X G *et.al.*[1]

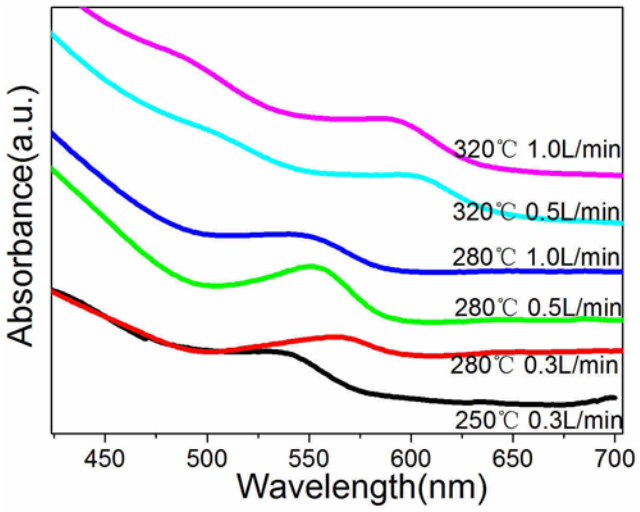

Fig. S1 The absorption spectra of oleic acid capped CdSe QDs with different temperatures and flow rates.

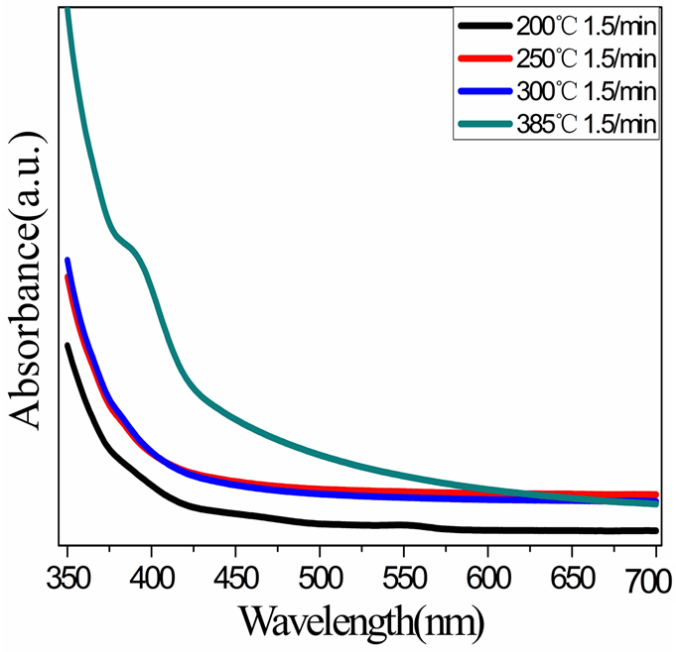

Fig. S2 The absorption spectra when only $Cd(OA)_2$ and DDT were added.

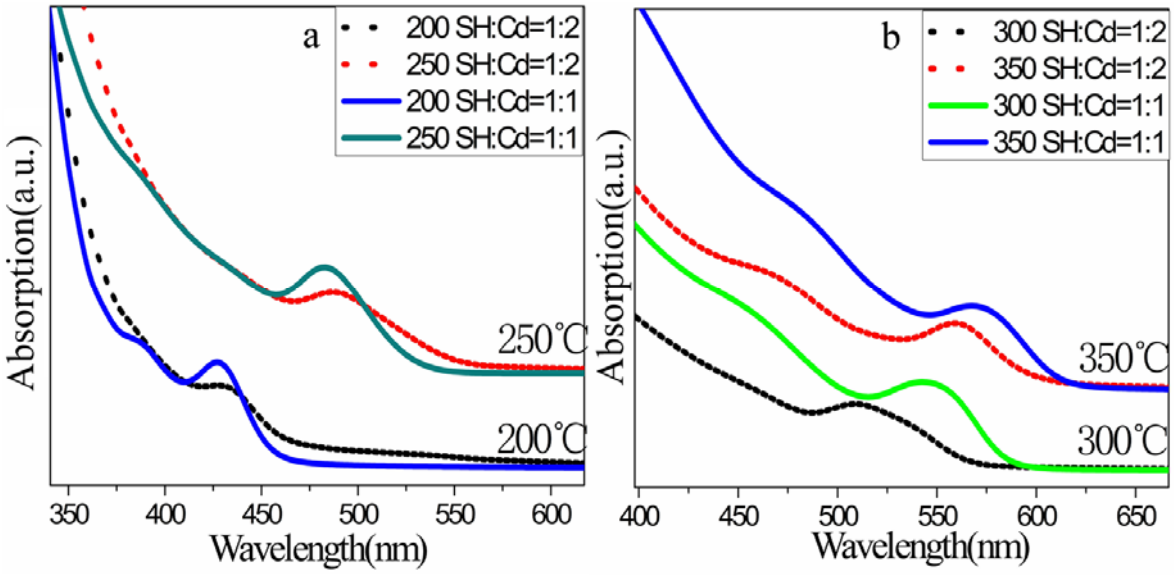

Fig. S3 (a) The absorption spectra of CdSe synthesized at 200 ^{o}C and 250 ^{o}C. (b) The absorption spectra of CdSe synthesized at 300 ^{o}C and 350 ^{o}C.

Reference:

1. Yu, W. W.; Qu, L.; Guo, W.; Peng, X., Experimental Determination of the Extinction Coefficient of CdTe, CdSe, and CdS Nanocrystals. *Chem. Mater.* **2003,** *15*, 2854-2860.