Supporting Information

Facile and Reproducible Synthesis of Red-Emitting CdSe Nanocrystals in Amine with Long-Term Fixation in Particle Size and Size Distribution

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Synthesis of CdSe nanocrystals by injecting Se precursor into reaction media containing Cd precursor. Se stock solution in TOP (2.1 M) and Cd stock solution (0.3 M) are the same as used in the manuscript. All experimental manipulations are identical to those reported in the manuscript. 2.0 mL of ODE and 1.0 mL of Cd stock solution were loaded in a 50-mL three-neck round-bottom flask, and the mixture was heated ~90 °C and degassed under a vacuum of 10 Pa for 20 min. The reaction vessel was then filled with argon, and its temperature was increased to 300 °C with stirring. 0.15 mL of Se stock solution together with 3.0 mL of oleylamine loaded in a syringe was then injected (in less than 0.2 seconds) into the reaction flask. The temperature was then set at 280 °C for the subsequent growth and annealing of nanocrystals. Aliquots of the sample were taken at different time intervals and injected into cold toluene to terminate the growth of nanocrystals immediately for the use to record their optical spectra.

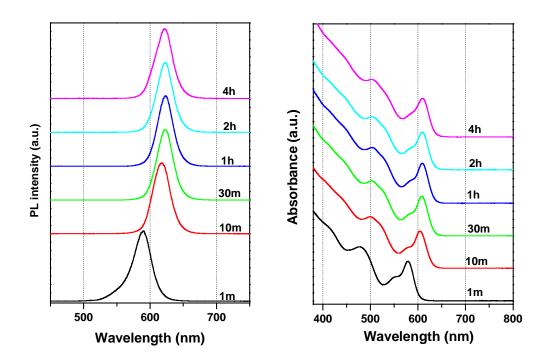


Figure 1S. Temporal evolution of normalized PL spectra (left, λ_{ex} = 360 nm) and UV-vis spectra (right) of CdSe nanocrystal samples synthesized in oleylamine and ODE media via the injection of Se precursor into the reaction media containing Cd precursor and grown at 280 °C