

Supporting Information

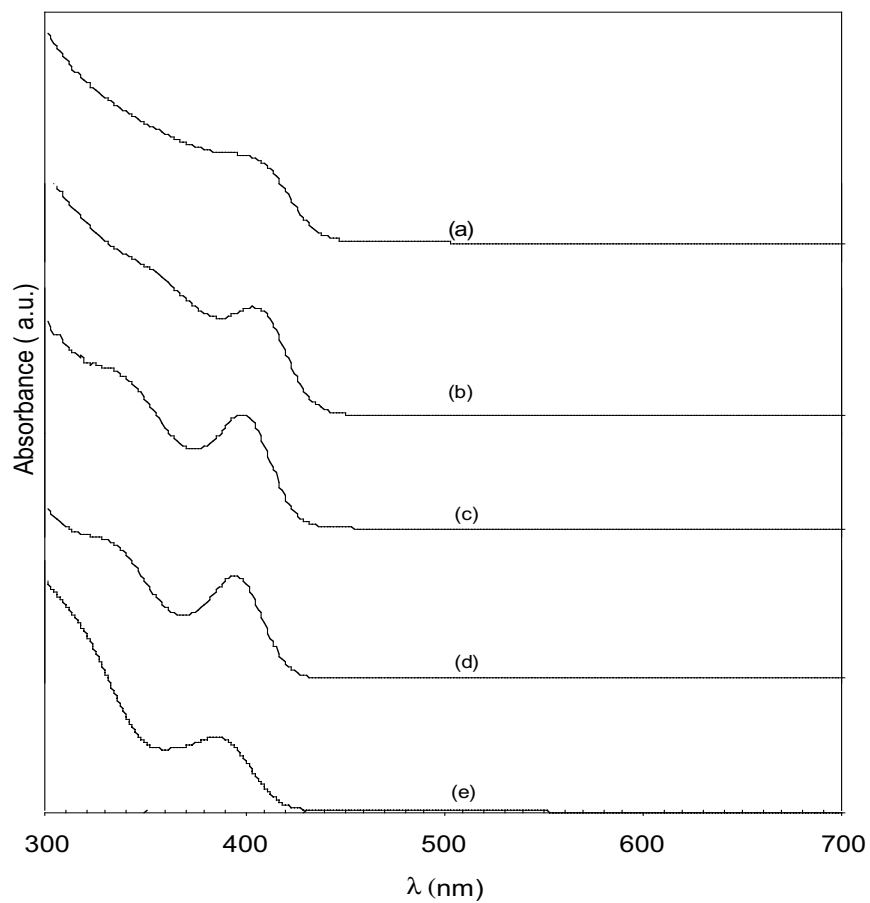


Figure S1 Comparison of the absorption spectra for Q-CdS in DMF pre (a) and post (b-e) size selection: (a) “as prepared” particles and (b)-(e) size selected fractions (I-IV). As expected the absorption peak is blue-shifted as particle size decreases from (a)-(e).

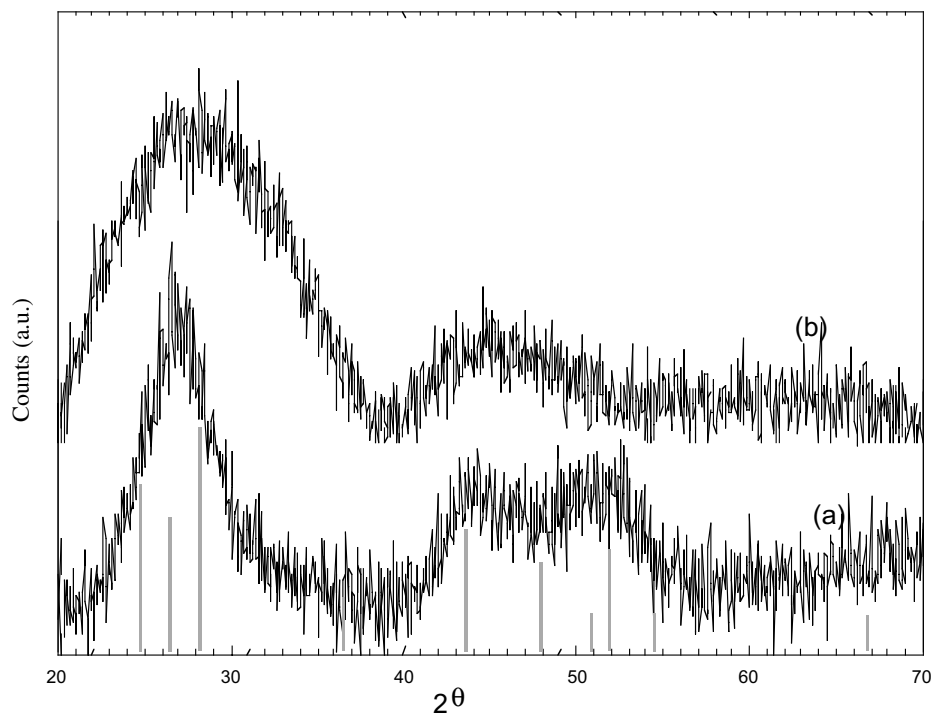


Figure S2 Comparison of the X-ray diffractograms recorded for (a) “as prepared” and (b) size selected fraction IV. Diffractograms fitted well to that predicted for a hexagonal structure and the vertical bars indicate the 2θ values calculated from JCPDS file 06-0314.

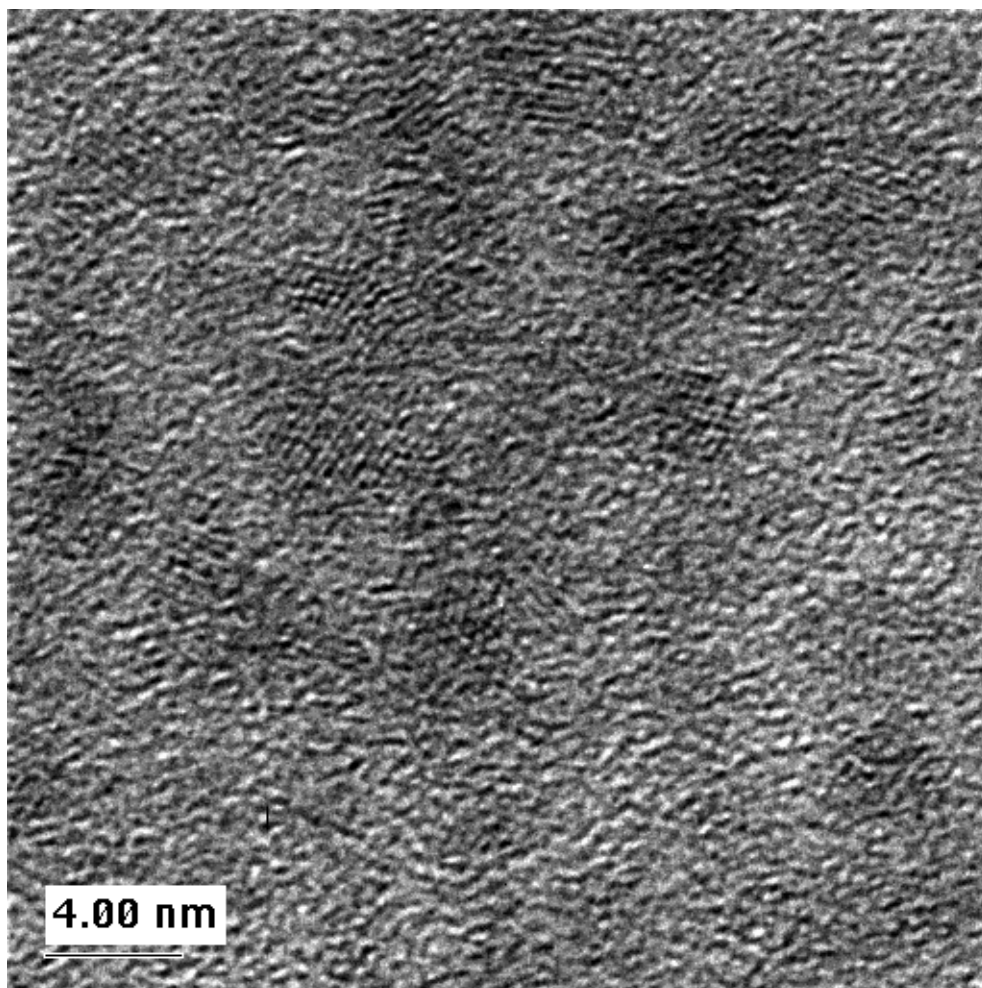


Figure S3 TEM image of fraction **IV**. A DMF solution containing the particles was drop-cast onto a 50 nm carbon film and dried in air overnight before imaging with Jeol 2010 (LaB₆) at 200 keV. This image was recorded at a slight underfocus using a 512X512 pixel CCD camera.

Representative publications on QDL

- ^{S1} Ingram, R. S.; Hostetler, M. J.; Murray, R. W.; Schaaff, T. G.; Khoury, J.; Whetten, R. L.; Bigioni, T. P.; Guthrie, D. K.; First, P. N. *J. Am. Chem. Soc.* **1997**, *119*, 9279.
- ^{S2} Hostetler, M. J.; Wingate, J. E.; Zhong, C.-J.; Harris, J. E.; Vachet, R. W.; Clark, M. R.; Londono, J. D.; Green, S. J.; Stokes, J. J.; Wignall, G. D.; Glish, G. L.; Porter, M. D.; Evans, N. D.; Murray, R. W. *Langmuir* **1998**, *14*, 17.
- ^{S3} Chen, S.; Murray, R. W.; Feldberg, S. W. *J. Phys. Chem. B* **1998**, *102*, 9898.
- ^{S4} Chen, S.; Murray, R. W. *J. Phys. Chem. B* **1999**, *103*, 9996.
- ^{S5} Pietron, J. J.; Hicks, J. F.; Murray, R. W. *J. Am. Chem. Soc.* **1999**, *121*, 5565.
- ^{S6} Hicks, J. F.; Templeton, A. C.; Chen, S.; Sheran, K. M.; Jasti, R.; Murray, R. W.; Debord, J.; Schaaff, T. G.; Whetten, R. L. *Anal. Chem.* **1999**, *71*, 3703.