

Electronic Supplementary Information

Chemical Epitaxy of CdSe on GaAs

Ofir Friedman, Dor Korn, Vladimir Ezersky and Yuval Golan*

*Department of Materials Engineering and Ilse Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev, Be'er-Sheva 8410501, Israel
 E-mail: ygolan@bgu.ac.il*

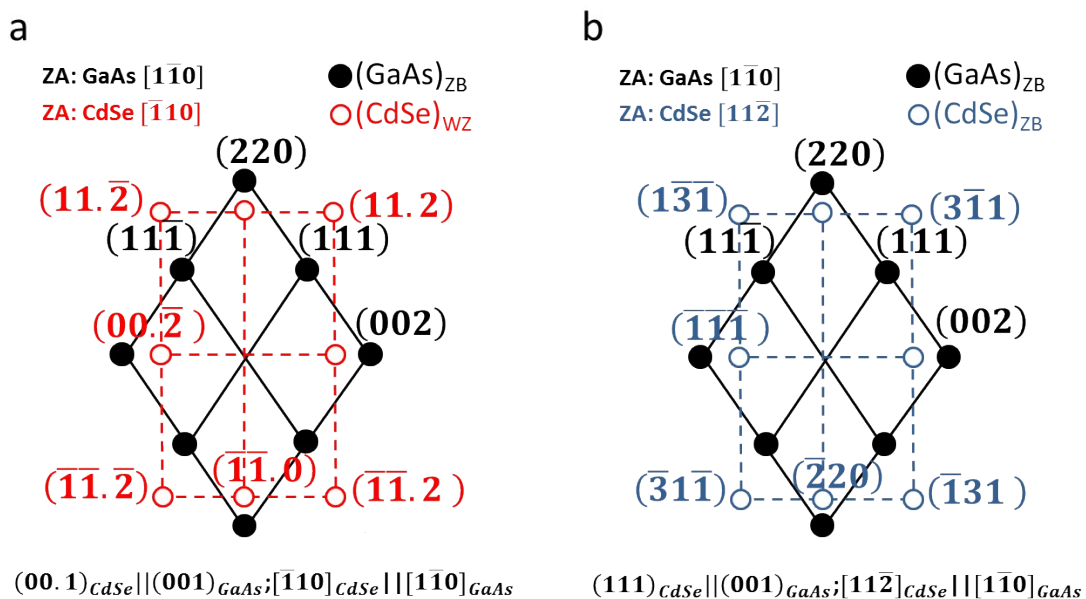


Fig. S1 ED pattern from a TEM cross-section specimen of a CdSe thin film chemically deposited on GaAs(100). The patterns represent GaAs in orientation of $(001);[\bar{1}\bar{1}0]$, alongside CdSe that can be solved in two different manners: (a) Indexing corresponding to hexagonal CdSe in orientation of $(00.1);[\bar{1}\bar{1}0]$, (b) Indexing corresponding to cubic CdSe in orientation of $(111);[11\bar{2}]$.

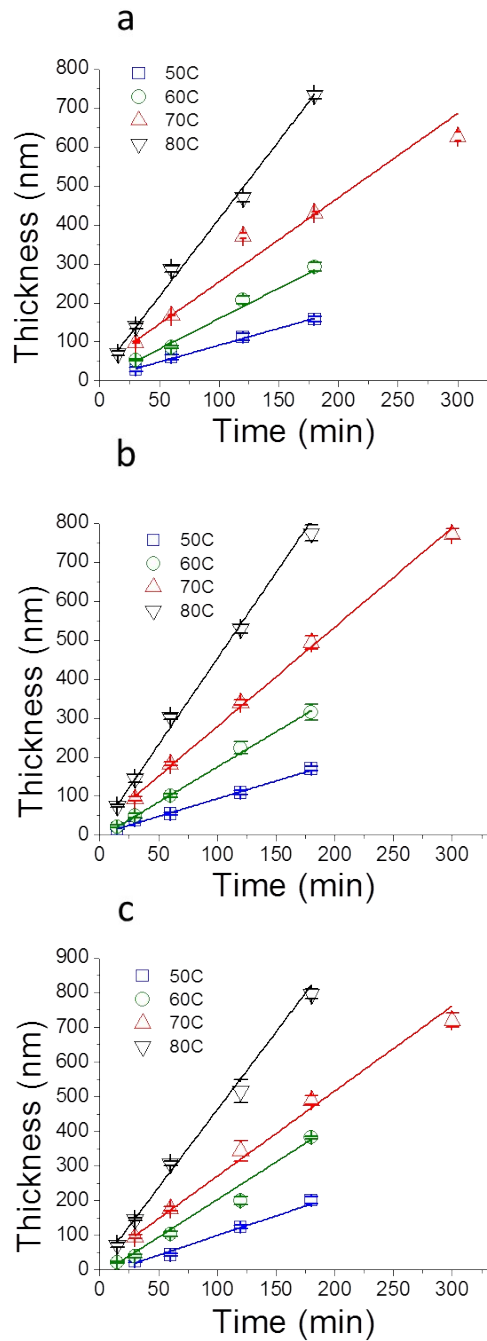


Fig. S2 Determination of growth rate: Thickness obtained from cross section HR-SEM micrographs as a function of time at a temperature range of 50-80°C. . R^2 ranged from 0.966 to 0.997. (a) CdSe on GaAs(100). (b) CdSe on GaAs(111)A. (c) CdSe on GaAs(111)B.

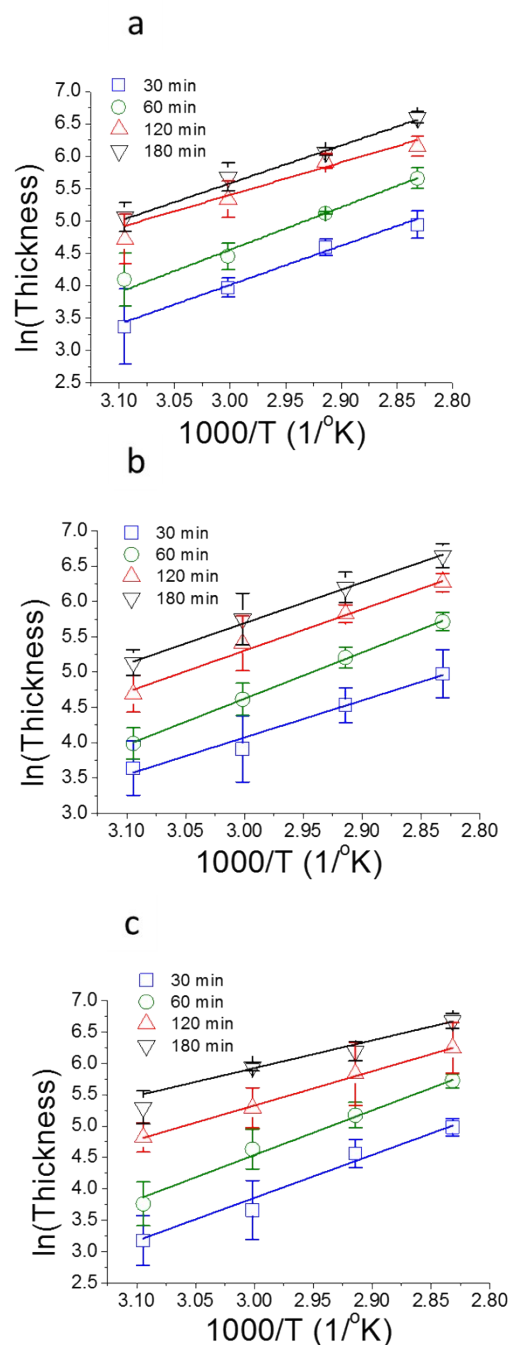


Fig. S3 Arrhenius plots for deposition time range of 30-180 min. R^2 ranged from 0.884 to 0.998 (a) CdSe deposited on GaAs(100). (b) CdSe deposited on GaAs(111)A. (c) CdSe deposited on GaAs(111)B.