

Supplementary Data

Instruments

TEM images were recorded with a PHILIPS CM 300 UT High-Resolution Transmission Electron Microscope (300 kV acceleration voltage, 0.172 nm point resolution – Scherzer focus) equipped with a 2 camera system (TV System and CCD camera). Samples for TEM were prepared by casting one drop of the CdTe sample solution onto a standard formvar film on copper grid (230 meshes).

Energy disperse spectroscopy (EDS) data were obtained with PHILIPS CM 30 T/STEM Analytical Electron Microscope (300 kV acceleration voltage, 0.172 nm point resolution – Scherzer focus) equipped with a scanning unit (STEM), Oxford Instruments ISIS 300 EDX System).

Power X-ray diffraction (XRD) measurement was performed with a PHILIPS X'Pert Pro MPD Powder X-Ray Diffractometer (U = 40 kV, I = 35 mA, line focus $15^\circ < 2\theta < 50^\circ$, Cu K α (1.541 nm) radiation).

UV-Vis absorption spectra were taken with a PERKIN ELMER UV/VIS Spectrometer Lambda 2 (190 to 1100 nm, double beam).

Luminescence spectra data were obtained from a HORIBA FluoroMax®-3 (Fluorometer): all measurements were performed at 20.0 °C.

Confocal images were recorded with a LEICA TCS SP II Confocal Laser Scanning Microscope (CLSM) (excitation wavelength 405 nm and 488 nm).

Acknowledgements

The electron microscopy measurements were carried out in the Central Facility for High Resolution Electron Microscopy of Friedrich-Alexander University (FAU) Erlangen-Nürnberg, Germany. Confocal microscopy was carried out in the department of Molecular Plant Physiology, FAU Erlangen-Nürnberg, Germany. Powder pattern was measured at the Chair for Crystallography and Structural Physics, FAU Erlangen-Nürnberg, Germany.

Figures

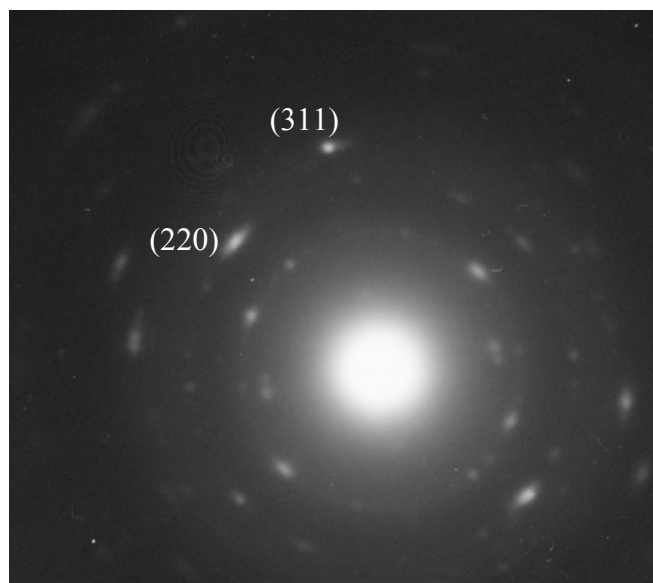


Fig. S1: SAED pattern of CdTe QR (8 h reaction time) showing cubic zinc blende crystal structure.

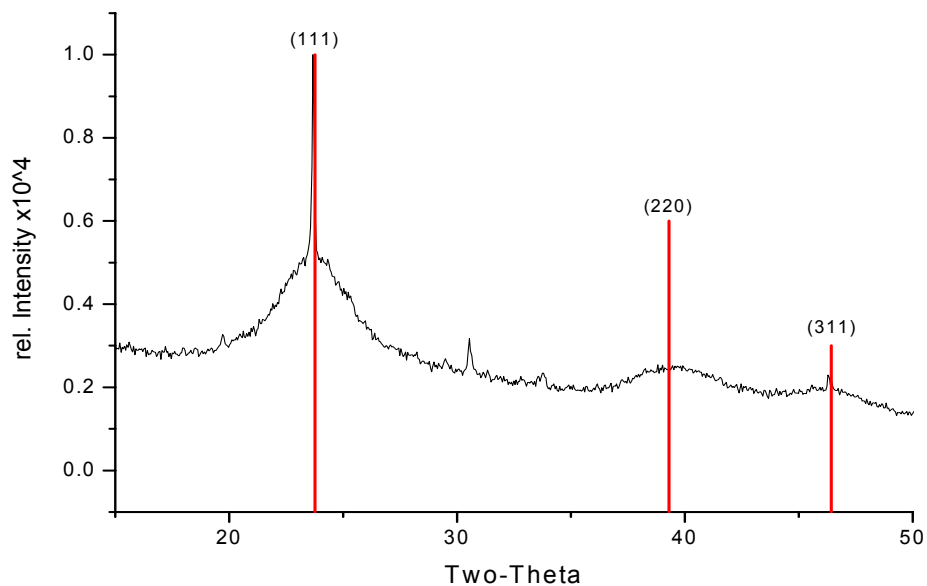


Fig. S2: Powder x-ray diffractogram of CdTe QR demonstrating their cubic zinc blende crystallinity. The line spectra (23.72° , 39.3° and 46.4°) indicates the bulk CdTe reflections with their relative intensities according to the PDF-Database.