

Supporting Information:

Structural characterisation of the nano crystalline thin films was carried out by analysis of the Glancing Incidence X-ray diffraction (GIXRD) pattern using a PANalytical X'pert PRO MRD system with Cu K α 1 radiation ($\lambda = 1.54056 \text{ \AA}$) for thin film (10 nm) and a Bruker axS D8 advance diffractometer with Cu K α 1 radiation ($\lambda = 1.54056 \text{ \AA}$) for the bulk CdTe powder. Fig.1 shows the XRD pattern for the ultra-thin films of CdTe along with the XRD pattern obtained for the bulk CdTe powder.

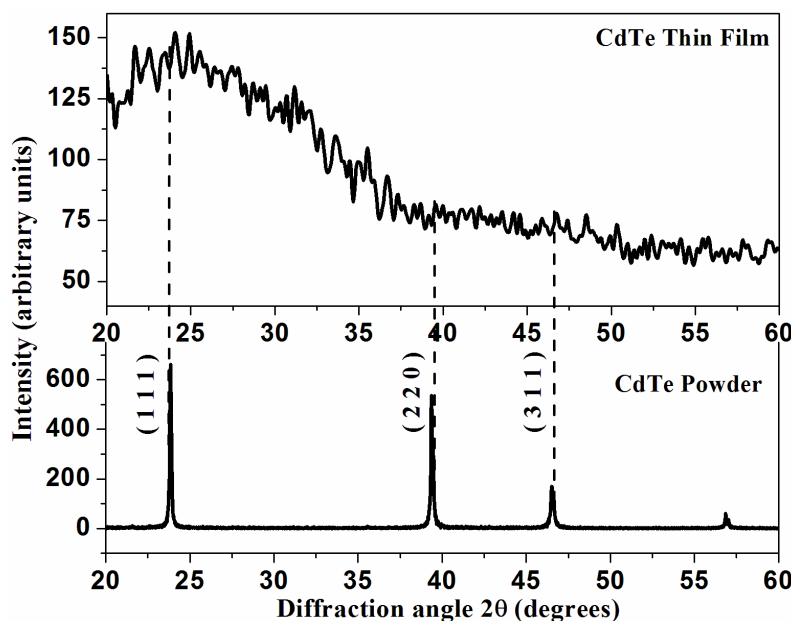


Fig.1: XRD spectra for ultra-thin film of CdTe along with the bulk CdTe powder.

The intensity of the peaks in the diffraction pattern of CdTe film was found to be very weak. These peaks were indexed according to the JCPDS data (No.15-0770) of cubic structure of CdTe. XRD peaks in the pattern, fig. 1 at 23.84° , 39.37° and 46.51° correspond to the crystal planes (1 1 1), (2 2 0) and (3 1 1), respectively.