Electronic Supplementary Material (ESI) for RSC Advances.

Vertically aligned ZnO/ZnTe core/shell heterostructure on AZO substrate for improved photovoltaic performance

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Supporting Information

1. XPS spectra of the ZnO nanorods, ZnTe nanocrystals alone and the ZnO/ZnTe heterostructure.

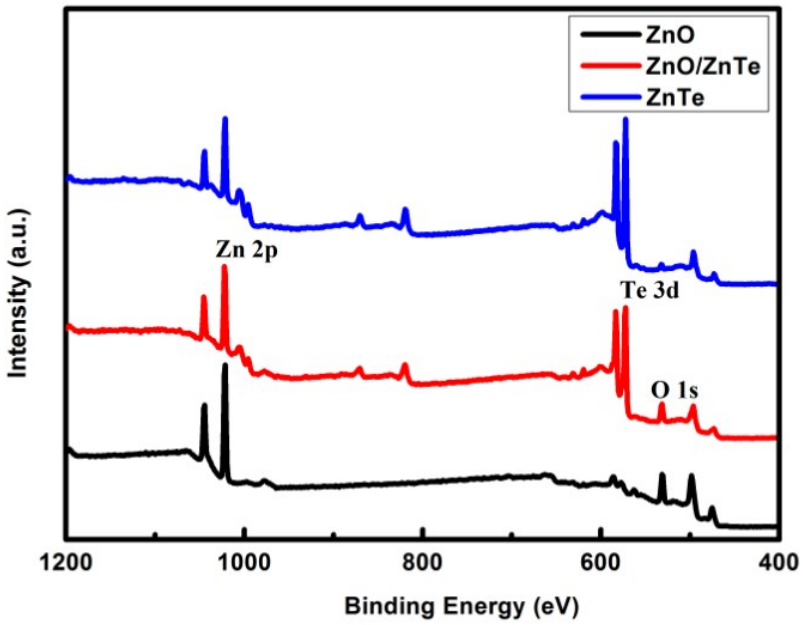

Fig. S1 XPS spectra of the ZnO nanorods, ZnTe nanocrystals alone and the ZnO/ZnTe heterostructure.

2. Measurements for band structure of ZnO

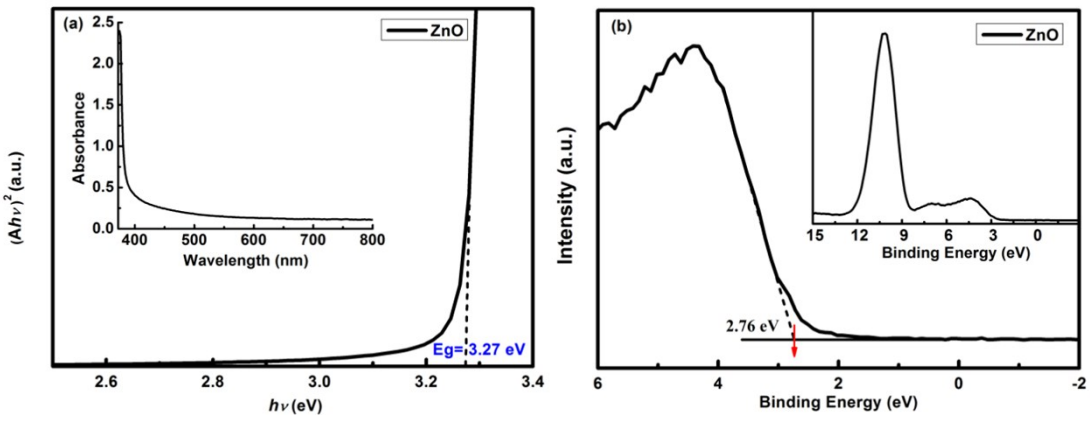

Fig. S2 (a) The dependence of $(Ahv)^2$ against photon energy (hv) for ZnO nanorods using linear extrapolation for the proposed direct forbidden transition. The absorption spectrum is shown in the inset. (b) XPS valence spectra and the linear interpolations of the leading edge of ZnO nanorods. The inset shows the spectra in wide scan.

3. Absorption spectra

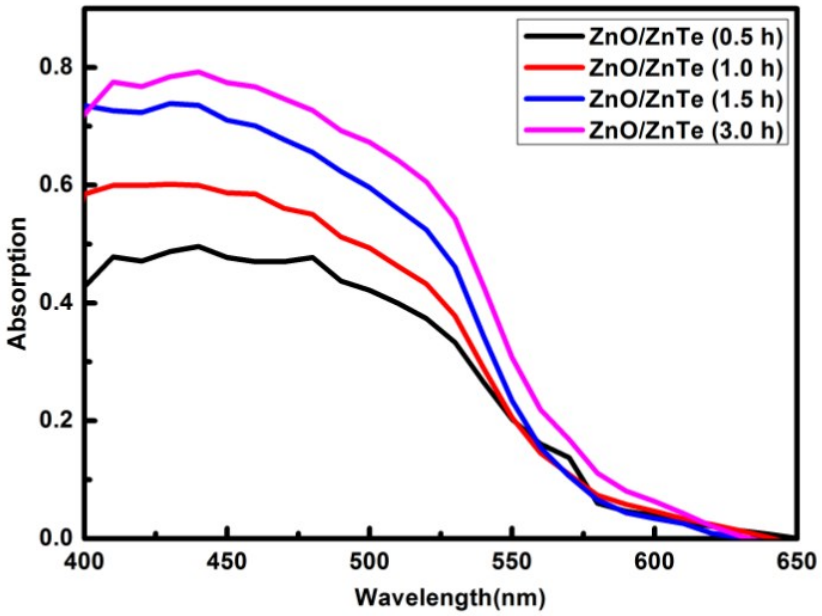

Fig. S3 Absorption spectra of ZnO/ZnTe heterostructures with different growth time.