Electronic Supplementary Material (ESI) for RSC Advances

Controlled transformation of aqueous CdTe quantum dots→Te-rich CdTe nanorods→second CdTe QDs

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Electronic supplementary information

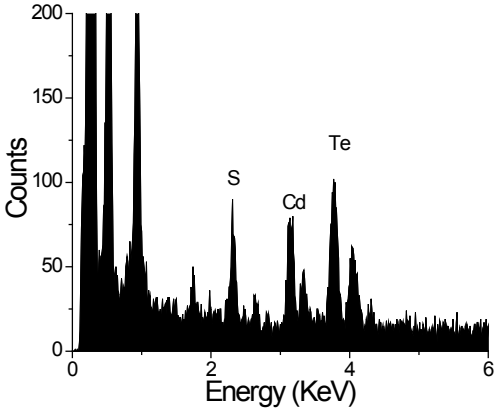

Fig. S1 The EDX spectrum of the resulting nanocrystals obtained in the presence of 5 mM of *L*-cysteine (Fig. 2B). In this case, the molar ratio of Cd/Te/S is 1:1.75:1. This result indicates that the introduction of *L*-cysteine causes a part transformation of CdTe to Te, i.e., CdTe QDs to Te-rich CdTe QDs which subsequently assemble into Te-rich CdTe NRs via oriented attachment.

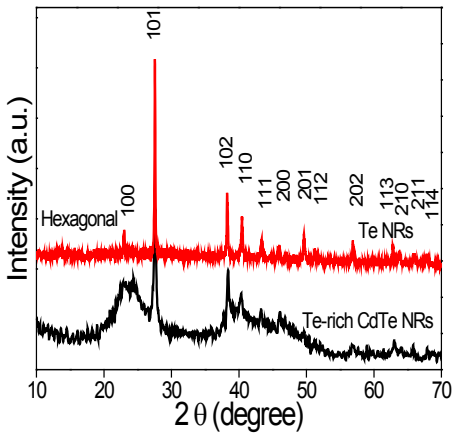

Fig. S2 The typical XRD patterns of Te-rich CdTe nanorods and Te nanorods (the results on Te nanorods from TEM analyses were shown in Fig. S3). The positions of the new narrow peaks in the XRD pattern of the nanorods match with those of hexagonal tellurium well.

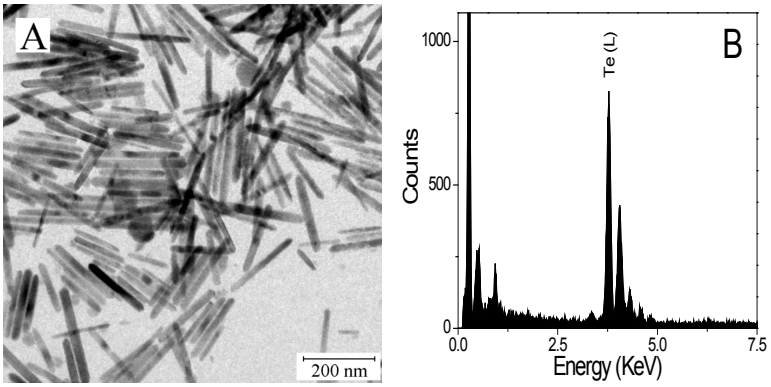

Fig. S3 The typical TEM image and the corresponding EDX spectrum of Te nanorods prepared in the presence of ethylenediaminetetraacetic acid disodium salt (EDTA).

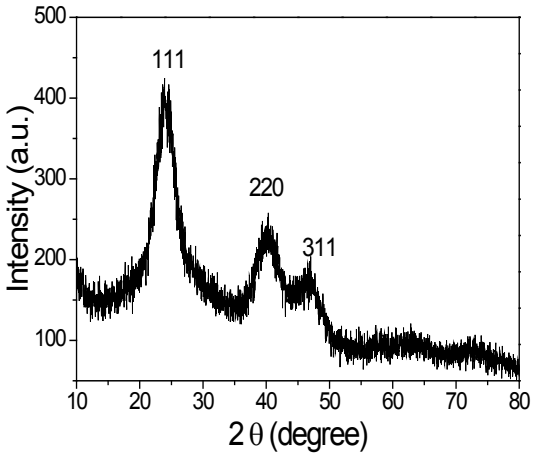

Fig. S4 The typical XRD pattern of the as-prepared second CdTe QDs. All of the three diffraction peaks can be readily indexed to cubic CdTe.

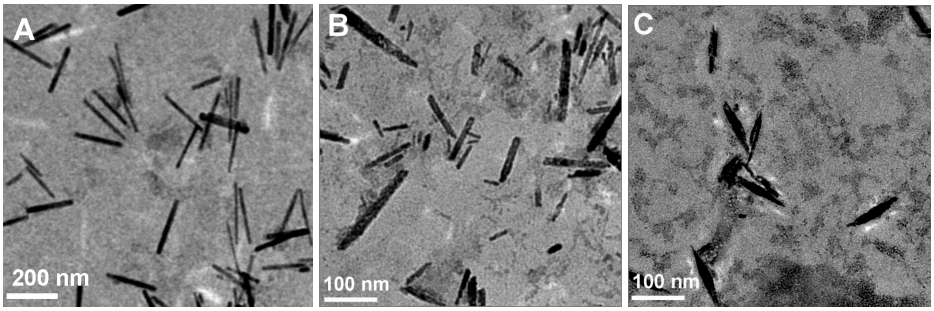

Fig. S5 TEM images of the dispersions prepared at different time after the addition of TGA (room temperature): (A), 0 min; (B), 60; (C), 180.