Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Surfactant-free Hydrothermal Synthesis of Cu_2ZnSnS_4 (CZTS) Nanocrystals and Photocatalytic Properties

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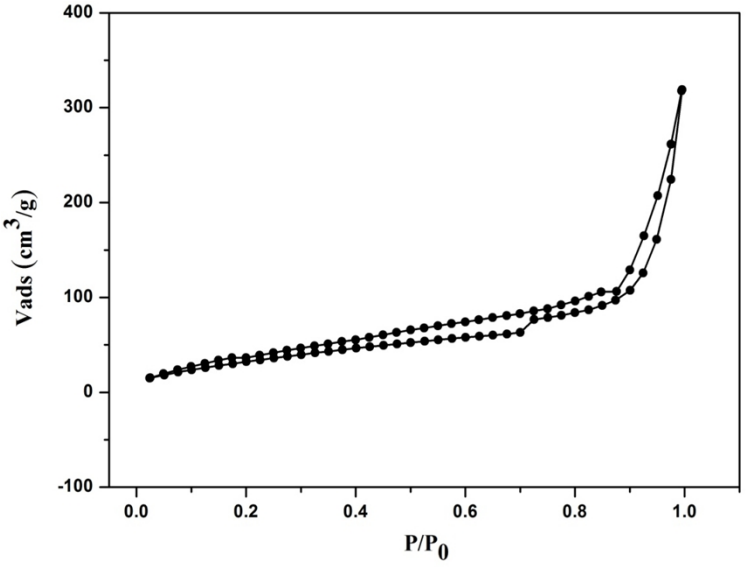

Fig. S1 Nitrogen adsorption-desorption isotherm of CZTS nanoparticles.

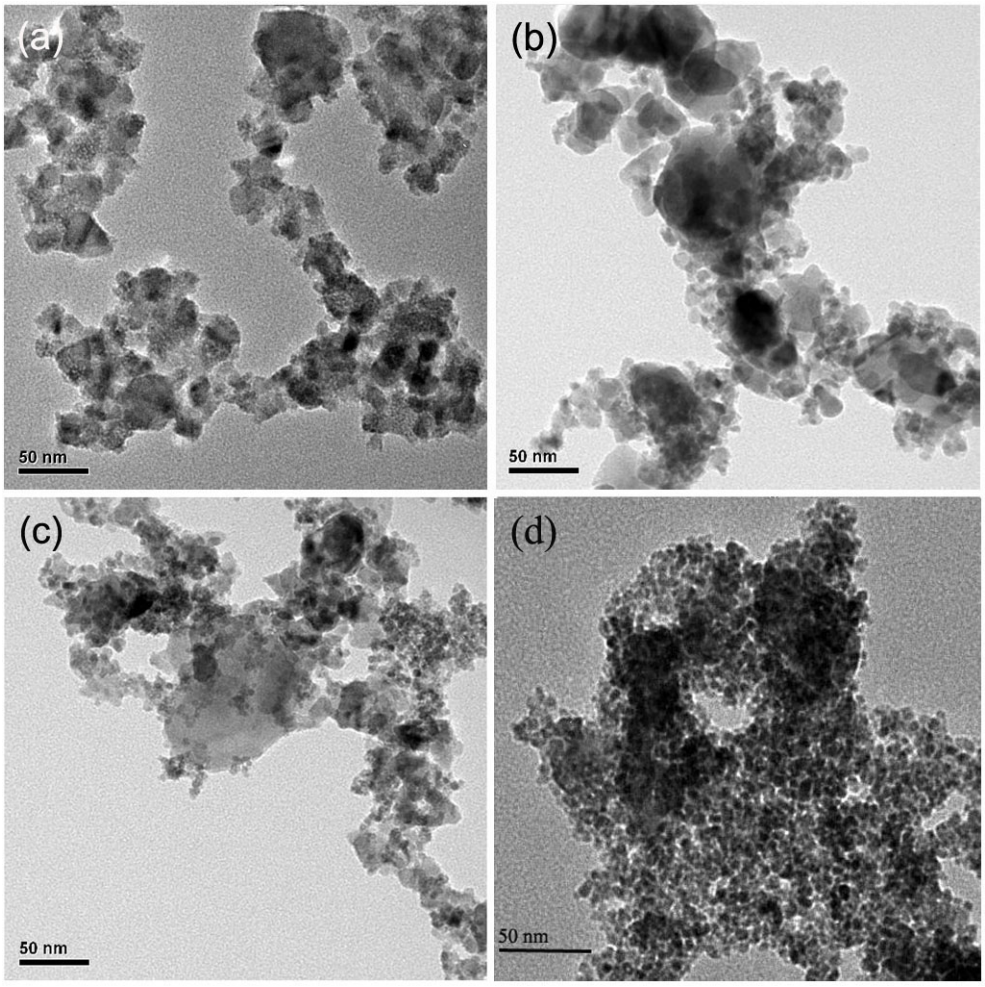

Fig. S2 TEM images of nanoparticles prepared (a) with the use of ammonia, (b) without the use of ammonia and NaOH, (c) with the use of NaOH, and (d) with the use of ammonia and half amount of TAA.

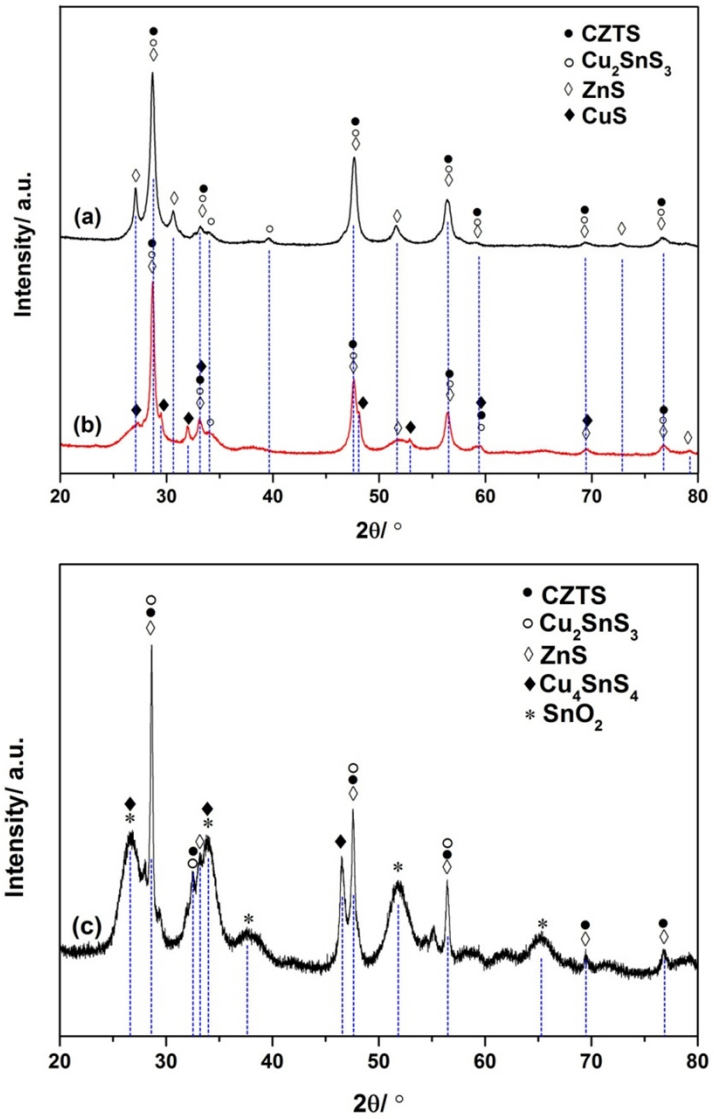

Fig. S3 XRD patterns of nanoparticles prepared (a) without the use of ammonia and NaOH, (b) with the use of NaOH, and (c) with the use of ammonia and half amount of TAA.

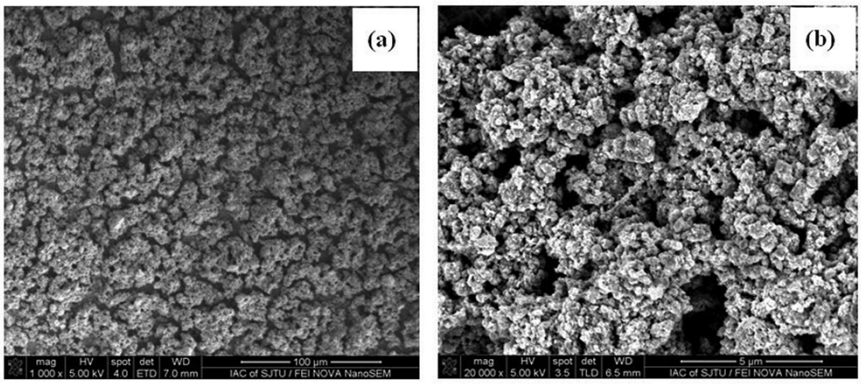

Fig. S4 SEM images of the thin film prepared by doctor blade method based on the paste of the nanoparticles: (a) low magnification; (b) high magnification.