Electronic Supplementary Information on

Solvent engineering to regulate the phase of copper zinc tin sulfide nanocrystals

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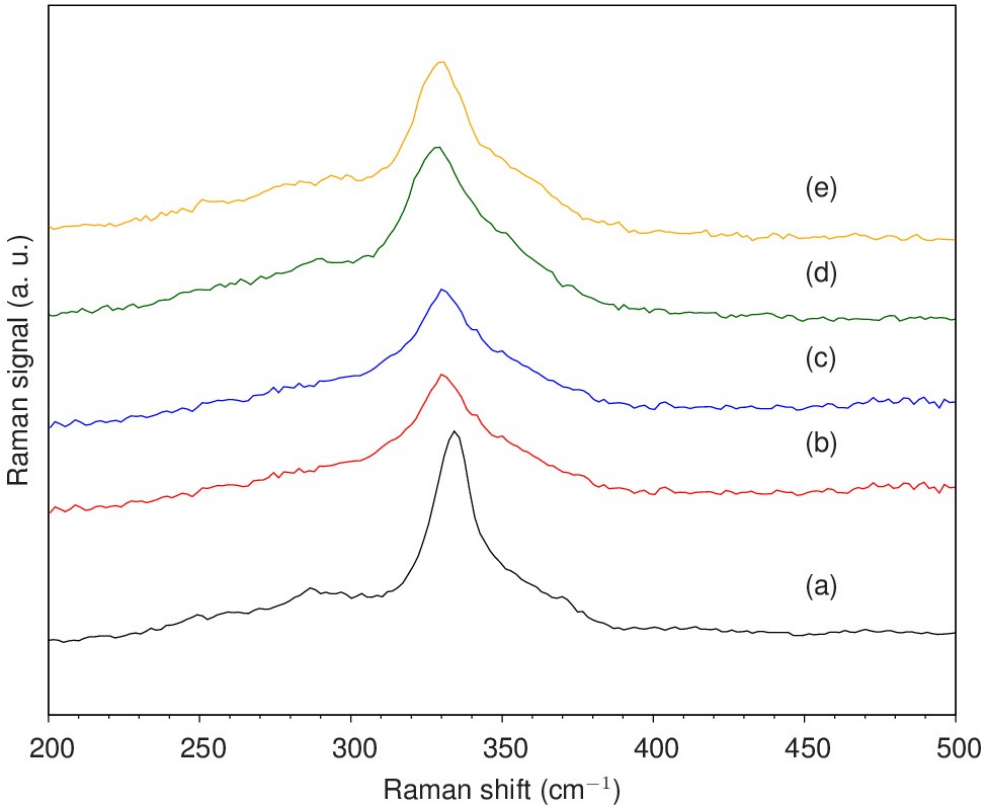

Fig. S1. Raman spectra of products fabricated with various EG:TETA solvent ratios, i.e. (a) 39:1, (b) 35:5, (c) 30:10, (d) 20:20, and (e) 5:35.

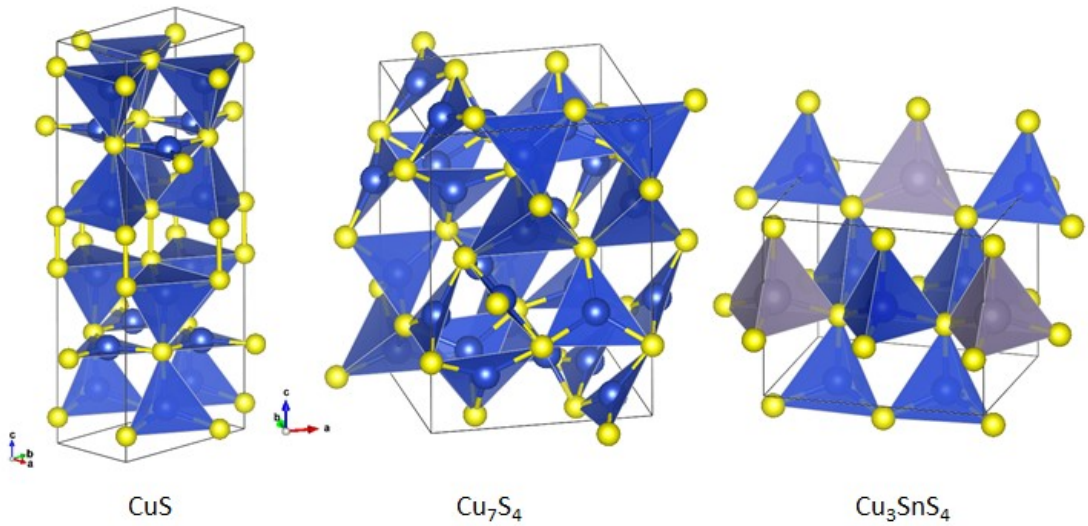

Fig. S2. Atomic structures of intermediate states of precipitates during synthesis. S atoms are yellow, Cu atoms are blue, Sn atoms are gray.

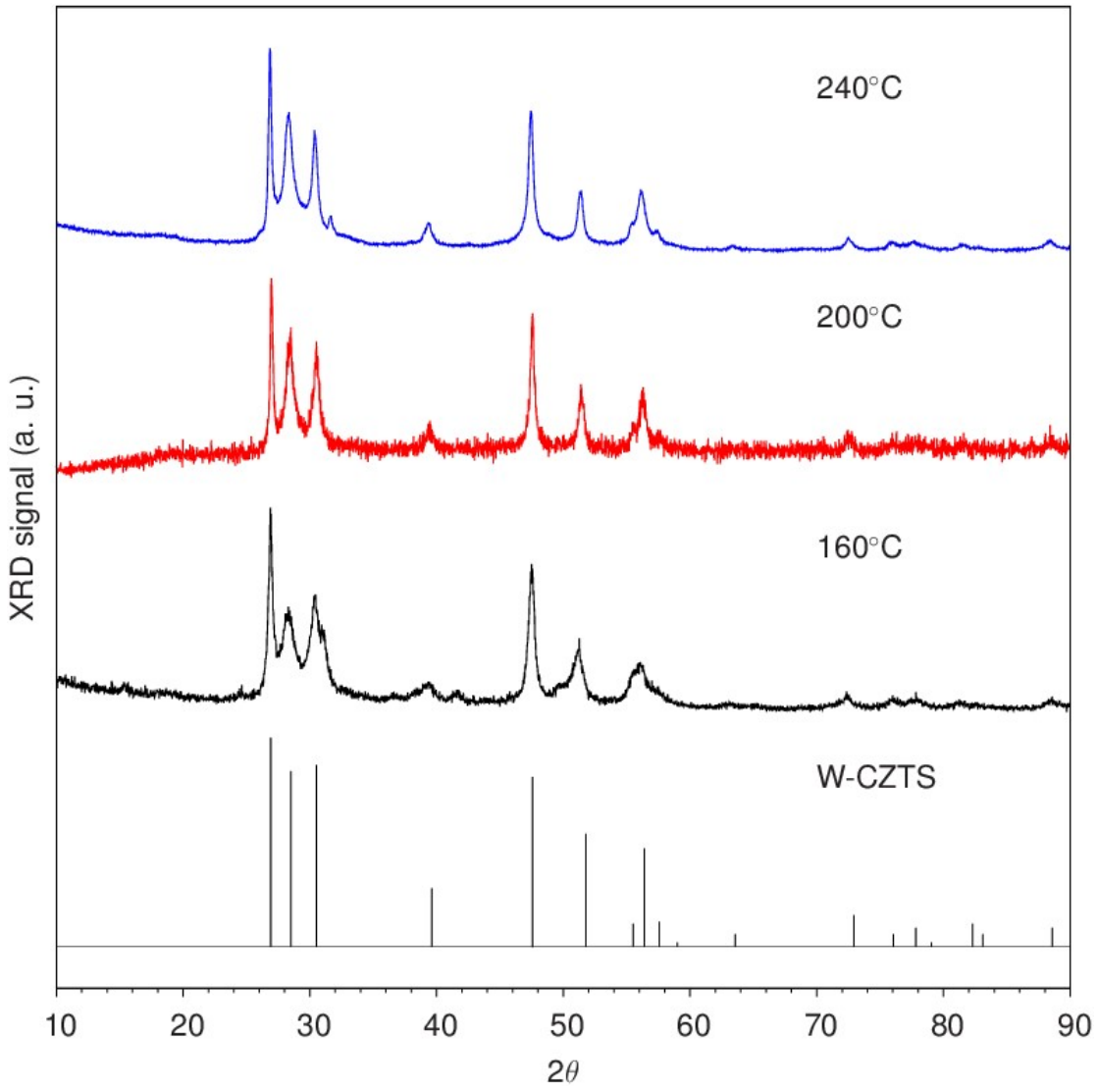

Fig. S3. XRD patterns of products synthesized at various temperatures at the 2nd heating stage. The ratio of EG:TETA was 20:20.

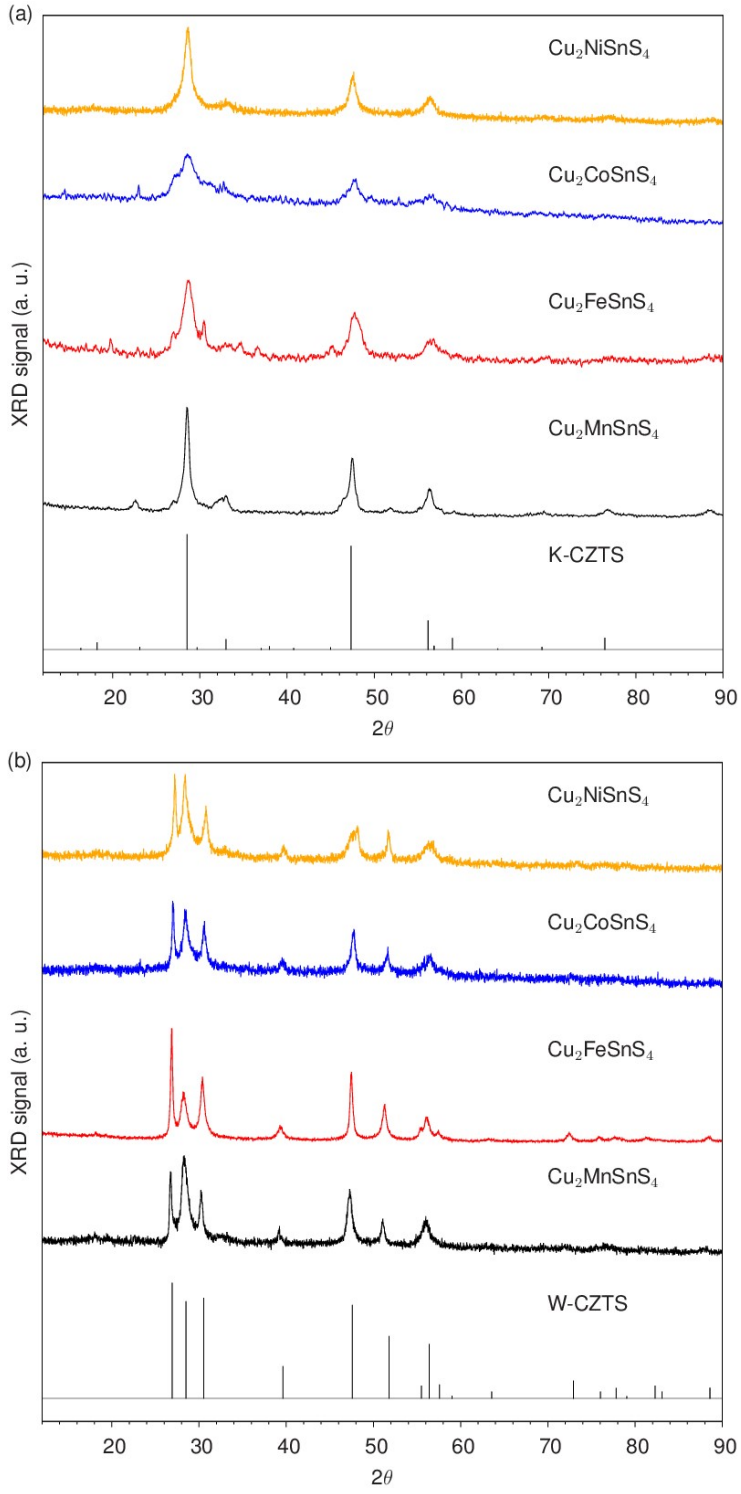

Fig. S4. XRD patterns of products fabricated with 2-stage heating process by substituting Zn with Mn, Co, and Ni using a mixed solvent with EG:TETA ratios of 39:1 (a) and 20:20 (b). The Mn, Fe, Co, and Ni sources are $Mn(Ac)_2{\cdot}2H_2O$, $FeCl_3$, $Co(Ac)_2{\cdot}4H_2O$, and $Ni(Ac)_2{\cdot}4H_2O$, respectively.

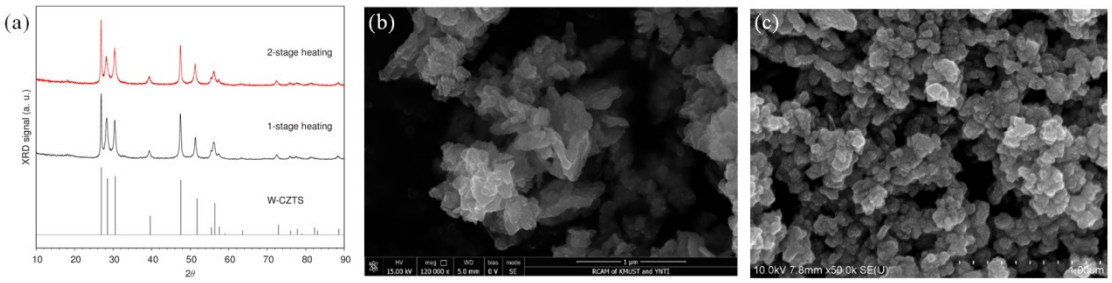

Fig. S5. (a) XRD patterns and (b)-(c) SEM images of products synthesized with 1-stage and 2-stage heating processes, respectively. The EG:TETA ratio is 20:20.