

Electronic Supplementary Information

Achieving Deep-Red-to-Near-Infrared Emissions in Sn-doped Cu-In-S/ZnS Quantum Dots for Red-Enhanced White LEDs and Near-Infrared LEDs

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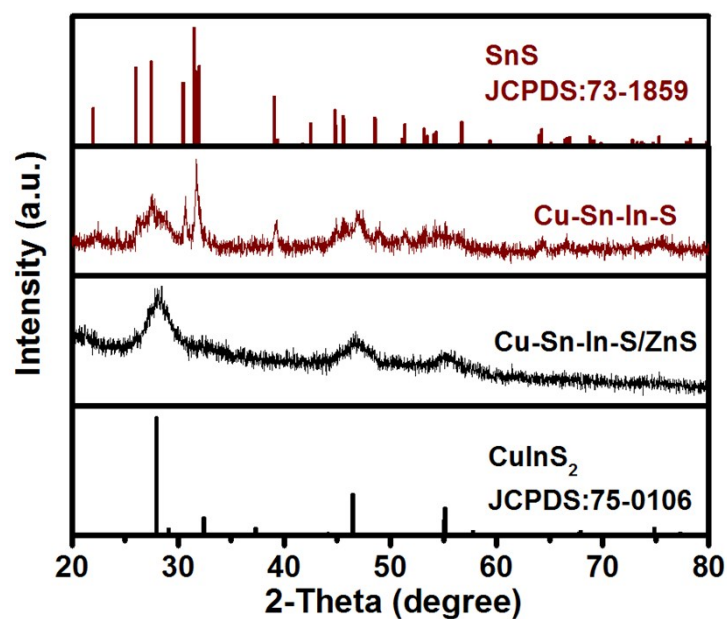


Figure S1. XRD patterns of Cu-Sn-In-S and Cu-Sn-In-S/ZnS QDs doped with 0.3 mmol Sn.

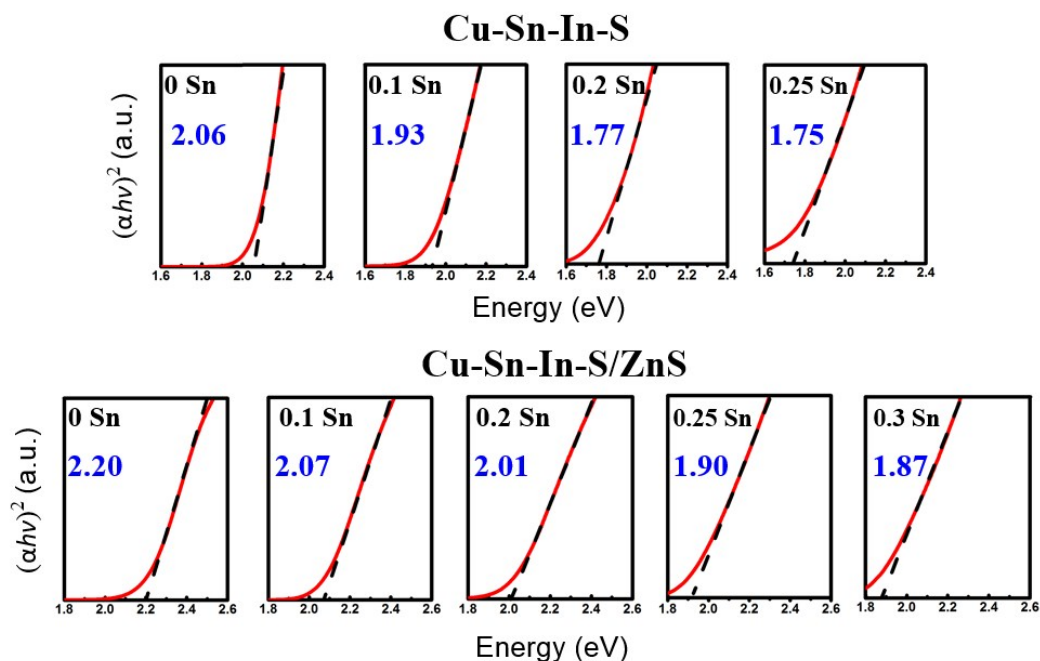


Fig S2. Band gaps of Cu-Sn-In-S and Cu-Sn-In-S/ZnS QDs with different amounts of Sn, derived from UV-visible absorption spectra.

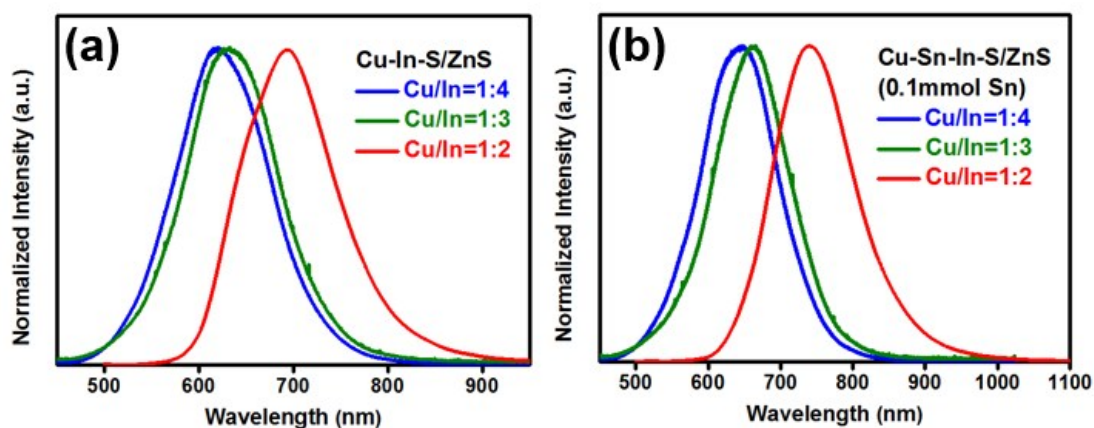


Fig S3. Normalized PL spectra of (a) Cu-In-S/ZnS and (b) Cu-Sn-In-S/ZnS QDs (0.1 mmol Sn) with different Cu/In molar ratios of 1/2, 1/3, and 1/4. The samples were excited at 365 nm for the PL emission spectrum measurements.