



## Supporting Information

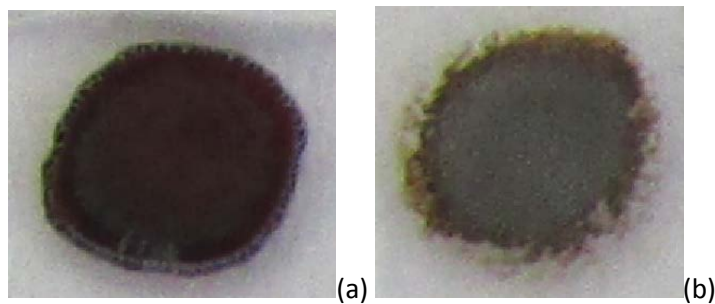
for

### **Raman study of flash-lamp annealed aqueous $\text{Cu}_2\text{ZnSnS}_4$ nanocrystals**

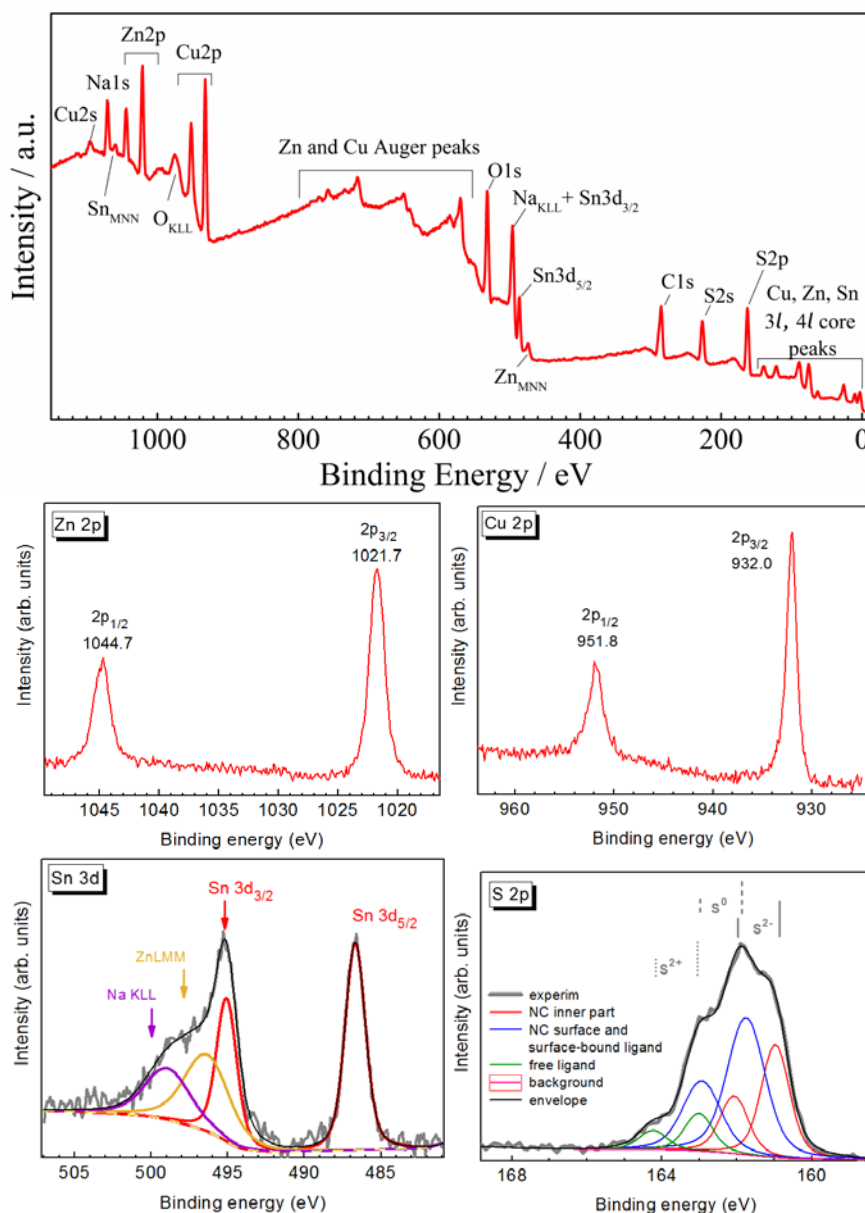
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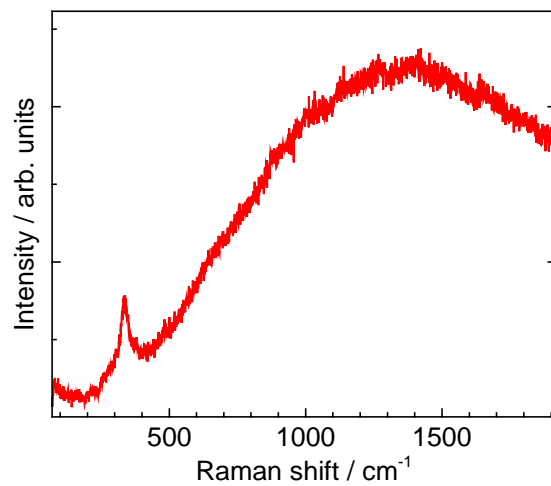
## Additional experimental data



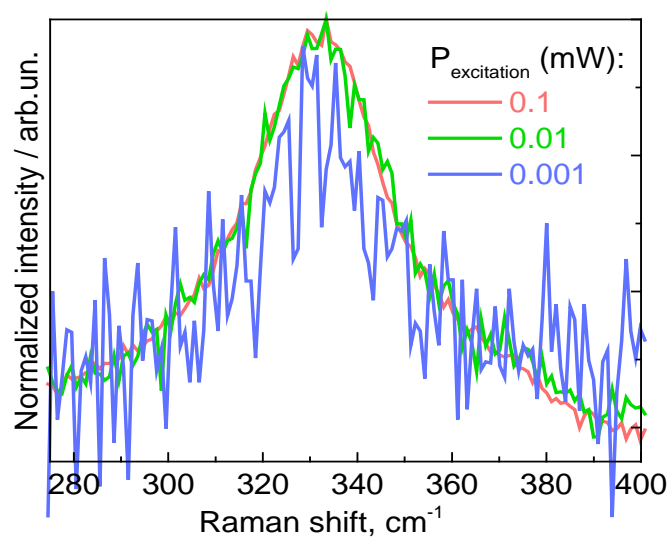
**Figure S1:** Optical images of the films obtained by drop-casting from ink0 (a) and ink1 (b).



**Figure S2:** A representative survey XPS spectrum of CZTS NCs ink1 (top) along with high-resolution core-level spectra of Cu 2p, Zn 2p, Sn 3d, and S 2p. Deconvolution of the spectra of Sn 3d and S 2p are also shown. The Zn 2p and Cu 2p are consisting of a single component corresponding to Zn<sup>2+</sup> and Cu<sup>+</sup>, respectively.



**Figure S3:** Representative raw Raman spectrum of the freshly prepared NCs in solution.



**Figure S4:** Representative raw Raman spectrum of the CZTS NC film measured at different powers of the 514.5 nm laser excitation.