Supporting Information

Solution-processed Cu$_2$ZnSnS$_4$ absorbers prepared by appropriate inclusion and removal of thiourea for thin film solar cells

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**Figure S1.** Component depth profile of a sulphurized CZTS thin film pre-annealed at 350°C by Auger Electron Spectroscopy (AES)

**Figure S2.** Raman spectra of a sulphurized CZTS thin film pre-annealed at 350°C in a range of 200–2100 nm by using 632.8-nm-wavelength He-Ne laser and as a light source.
Figure S3. External Quantum Efficiency (EQE) curve of a CZTS thin film solar cell pre-annealed at 350°C.