

Fig. S1 X-Ray Energy Dispersive Spectrometer (EDS) spectra and elemental composition of Cu_3SbS_4 film prepared by various precursor ratio of 2:1, 2.3:1, 2.5:1 and 3:1.

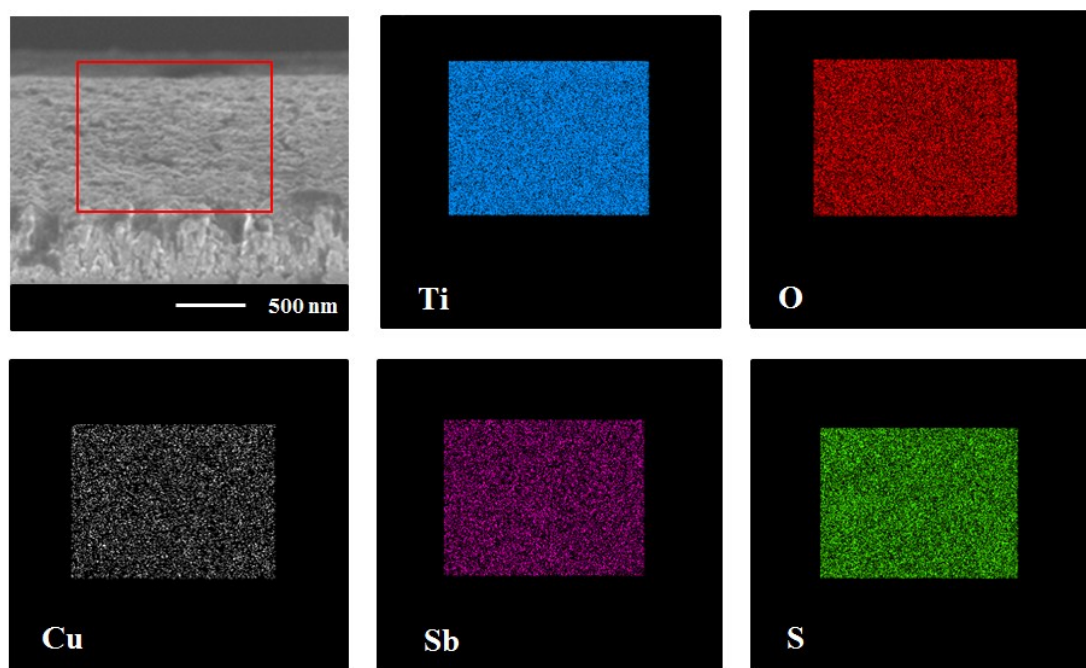


Fig. S2 X-Ray Energy Dispersive Spectrometer (EDS) mapping images of cross sectional Cu_3SbS_4 film prepared as a precursor ratio of 2.5:1 and heat treatment in H_2S at 300°C .

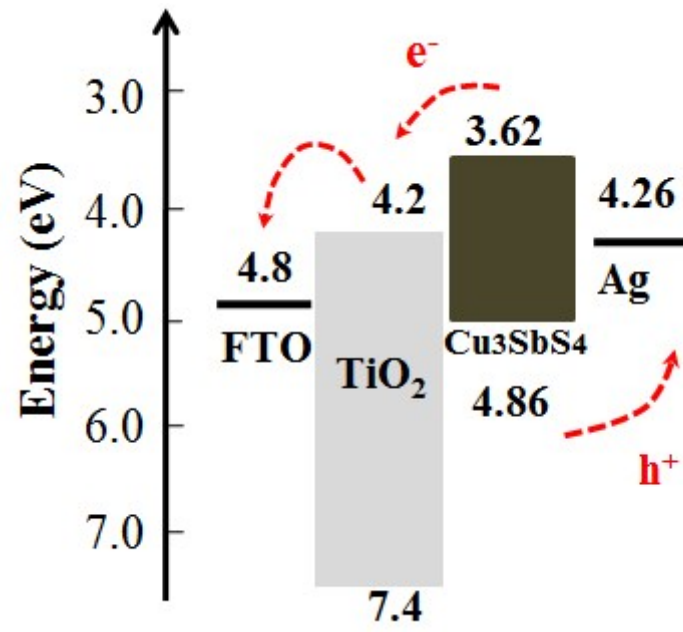


Fig. S3 The band alignment diagrams of TiO₂/Cu₃SbS₄ film