

Electronic Supplementary Information (ESI) for

Preparation of Sn-doped CuAlS₂ films with an intermediate band and wide-spectrum solar response

Chenguang Guo,^a Chongyin Yang,^a Yian Xie,^a Ping Chen,^a Mingsheng Qin,^a Rongtie Huang,^c

Fuqiang Huang*^{ab}

a. CAS Key Laboratory of Materials for Energy Conversion, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai 200050, P. R. China;

b. State Key Laboratory of Rare Earth Materials Chemistry and Applications, College of Chemistry and Molecular Engineering, Peking University, Beijing 100871, China;

c. Department of Physics, Shanghai University, Shanghai 200444, P. R. China.

Corresponding author: huangfq@mail.sic.ac.cn

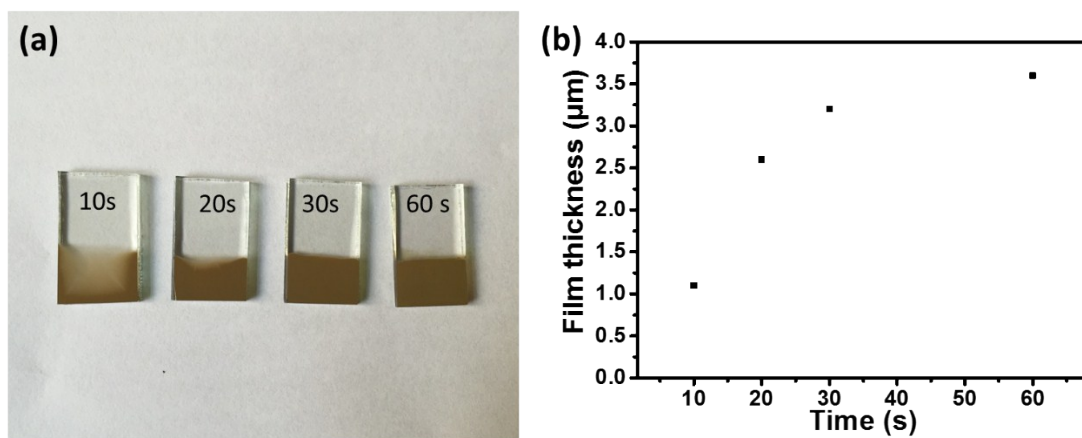


Figure S1. (a) Sn-doped CuAlS₂ films with different EPD time; (b) The influence of EPD time on the film thickness

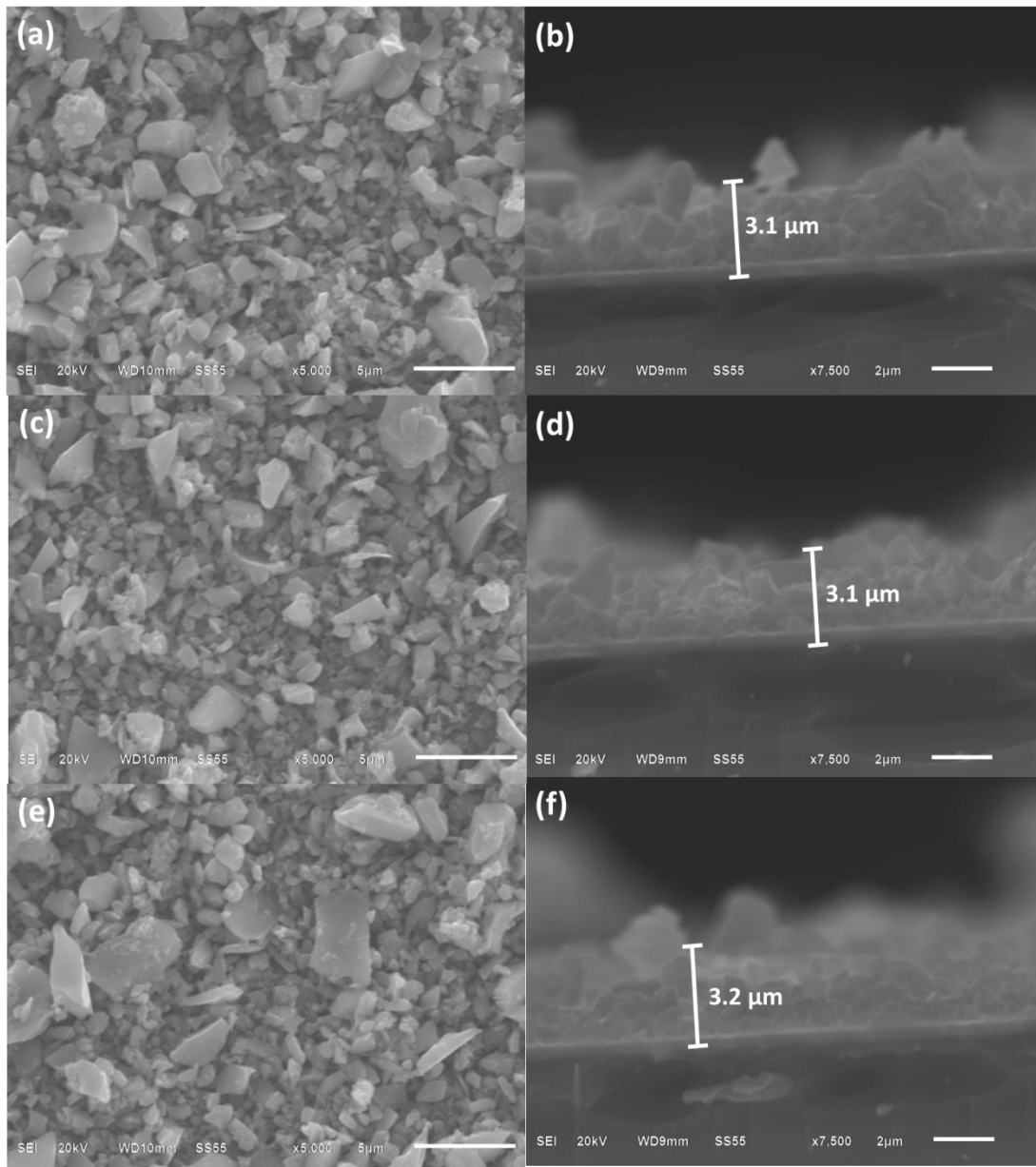


Figure S2. (a) Top view SEM image of CuAlS₂ film; (b) Side view SEM image of CuAlS₂ film; (c) Top view SEM image of CuAl_{0.98}Sn_{0.02}S₂ film; (d) Side view SEM image of CuAl_{0.98}Sn_{0.02}S₂ film; (e) Top view SEM image of CuAl_{0.96}Sn_{0.04}S₂ film; (f) Side view SEM image of CuAl_{0.96}Sn_{0.04}S₂ film.

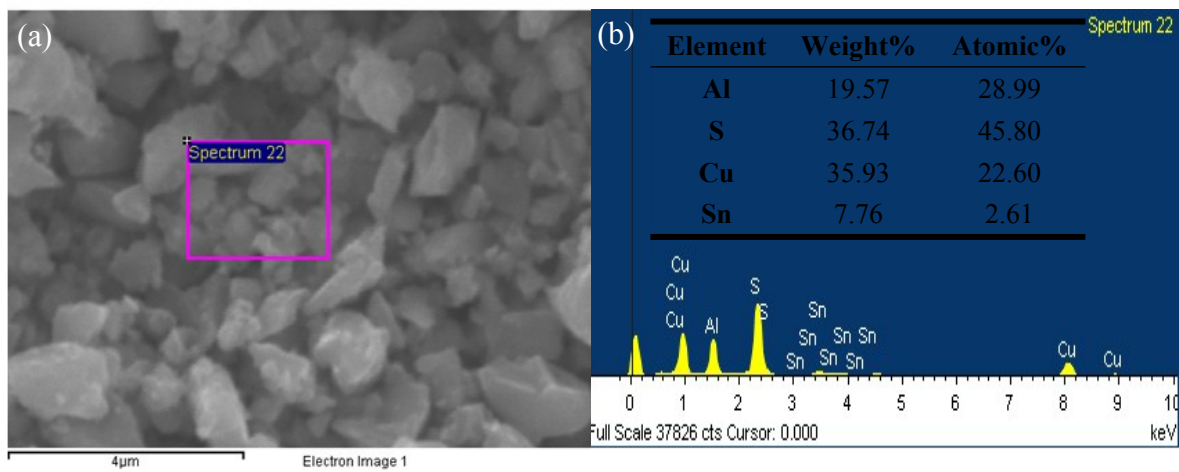


Figure S3. EDS spectrum and element analysis result of $\text{CuAl}_{0.96}\text{Sn}_{0.04}\text{S}_2$ films.