

## Supporting Information

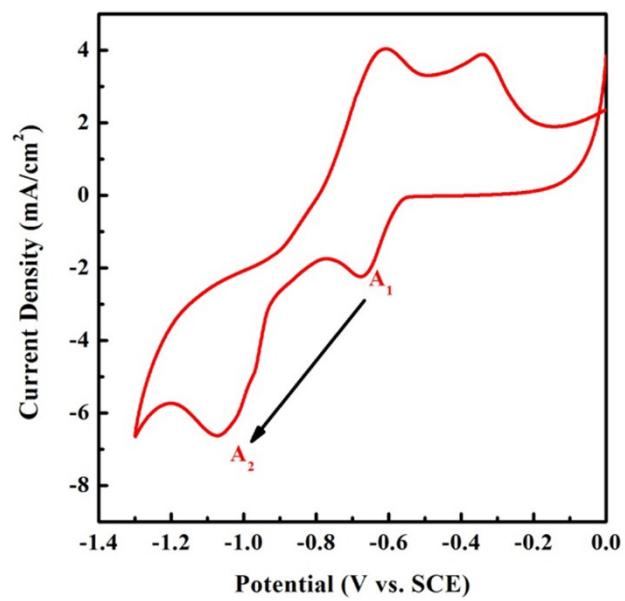
### **Construction of ZnO/Cu<sub>2</sub>SnS<sub>3</sub> nanorod arrays film for enhanced photoelectrochemical and photocatalytic activity**

Yuxiao Guo, Xingtian Yin\*, Yawei Yang and Wenxiu Que\*

*Electronic Materials Research Laboratory, International Center for Dielectric Research, Key*

*Laboratory of the Ministry of Education, School of Electronic & Information Engineering, Xi'an*

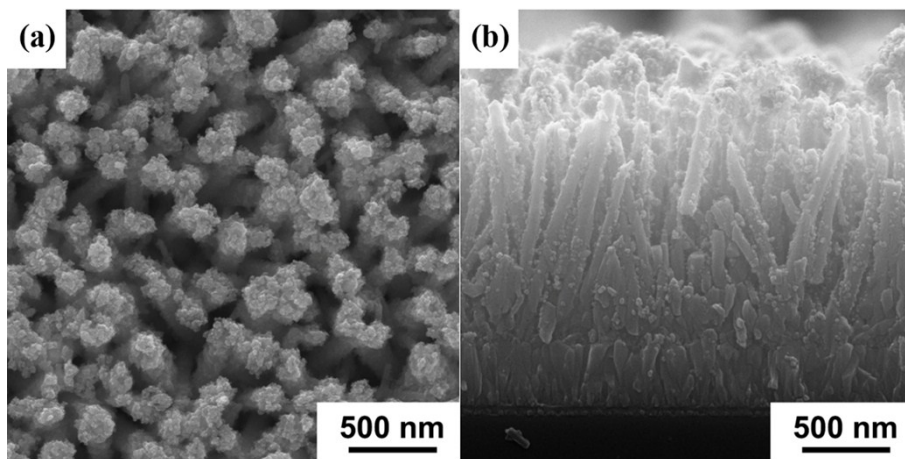
*Jiaotong University, Xi'an, Shaanxi 710049, P.R. China*



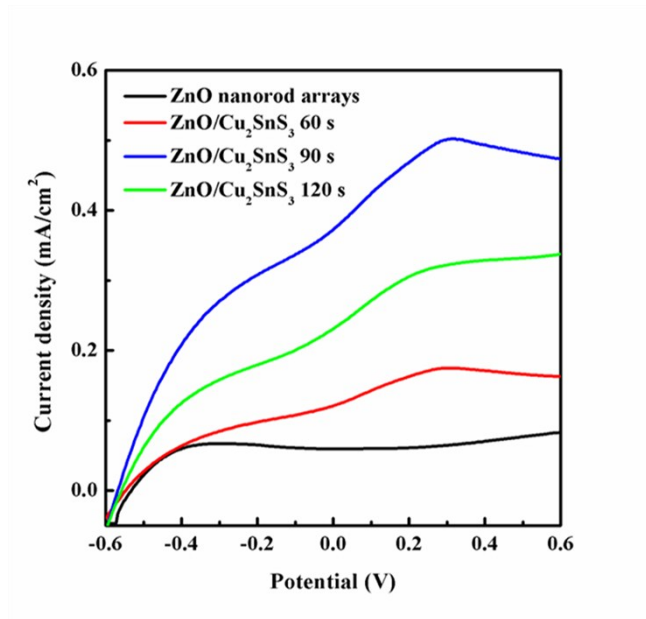
**Fig. S1** Cyclic voltammety curve of the  $\text{Cu}_2\text{SnS}_3$  deposition in aqueous solution.



**Fig. S2** Digital photos of the ZnO/Cu<sub>2</sub>SnS<sub>3</sub> nanorod arrays films with different deposition time of 0 s, 60 s, 90 s and 120 s.



**Fig. S3** FESEM images of the ZnO/Cu<sub>2</sub>SnS<sub>3</sub> nanorod arrays film with deposition time of 90 s after 1 round photo illumination.



**Fig. S4** Linear scanning voltammetry curves of the ZnO/Cu<sub>2</sub>SnS<sub>3</sub> nanorod arrays films with different deposition time. (~300 mW/cm<sup>2</sup>).