

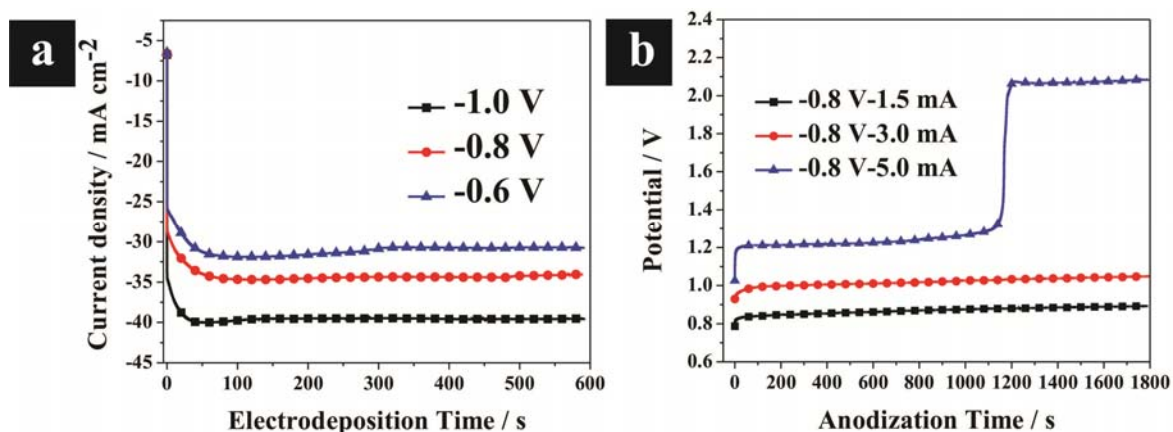
## Supporting Information

### Highly Stable Copper Oxide Composite as an Effective Photocathode for Water Splitting via a Facile Electrochemical Synthesis Strategy

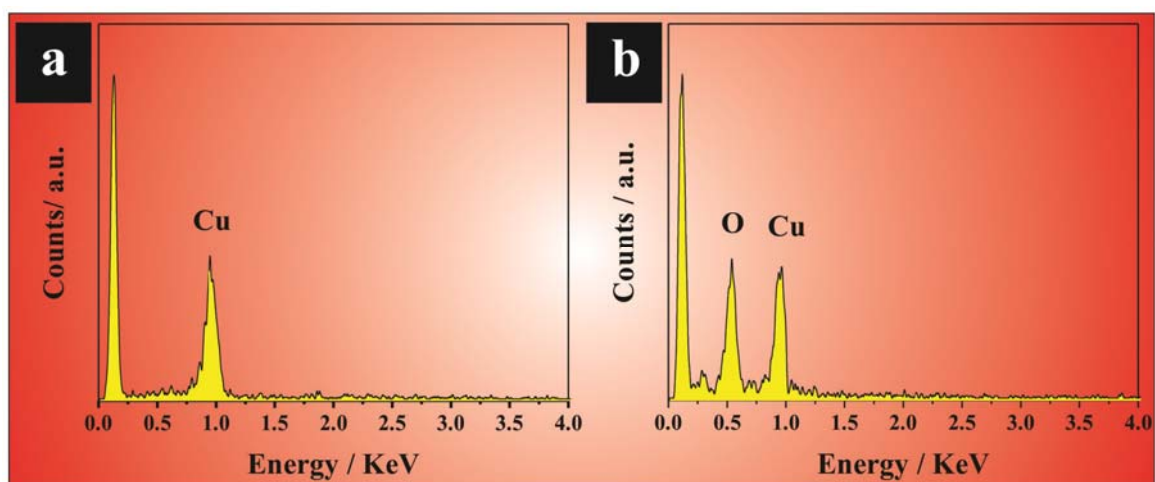
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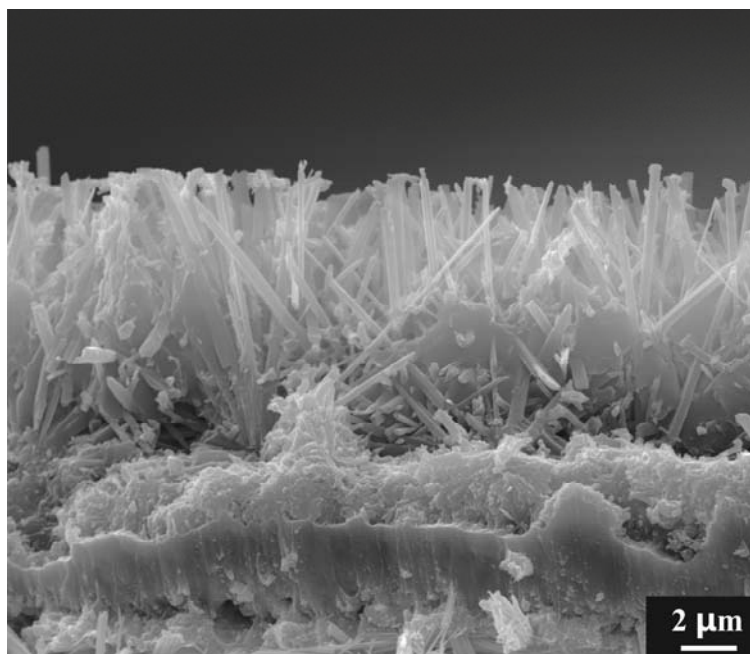
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**Fig. S1.** The typical electrochemical curves of (a) electrodeposition of Cu at different potentials and (b) anodization of Cu-0.8 at different current density.



**Fig. S2.** EDS spectra of (a) Cu-1.0; and (b) Cu-1.0/Cu<sub>2</sub>O/Cu(OH)<sub>2</sub>



**Fig. S3.** SEM cross-sectional view of Cu-1.0/Cu<sub>2</sub>O/Cu(OH)<sub>2</sub> samples.