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## **Electronic Supplementary Information**

Harnessing and storing visible light using a heterojunction of  $WO_3$  and CdS for

sunlight-free catalysis

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Fig. S1. EDX elemental mapping of  $CdS/WO_3$  bilayer (cross-sectional view) in Figure 1. a: Cd, b: S, c: O, and d: W.



Fig. S2. Light-chopped linear sweep voltammograms of CdS and  $WO_3$  electrodes in 0.1 M sodium sulfate (0.1 M) solution.



Fig. S3 Nyqust plots of (a) CdS, (b) WO<sub>3</sub> and (c) CdS-WO<sub>3</sub>. The EIS measurements were performed at 0 V vs. SCE in the dark (before illumination; black), under illumination ( $\lambda > 420$  nm, red), and in the dark after 5h-illumination process (green), respectively. The electrodes were immersed in 0.1 M Na<sub>2</sub>SO<sub>4</sub>.