

Supplementary Information for:

**Electron transfer kinetics in water splitting dye-sensitized solar cells
based on core-shell oxide electrodes**

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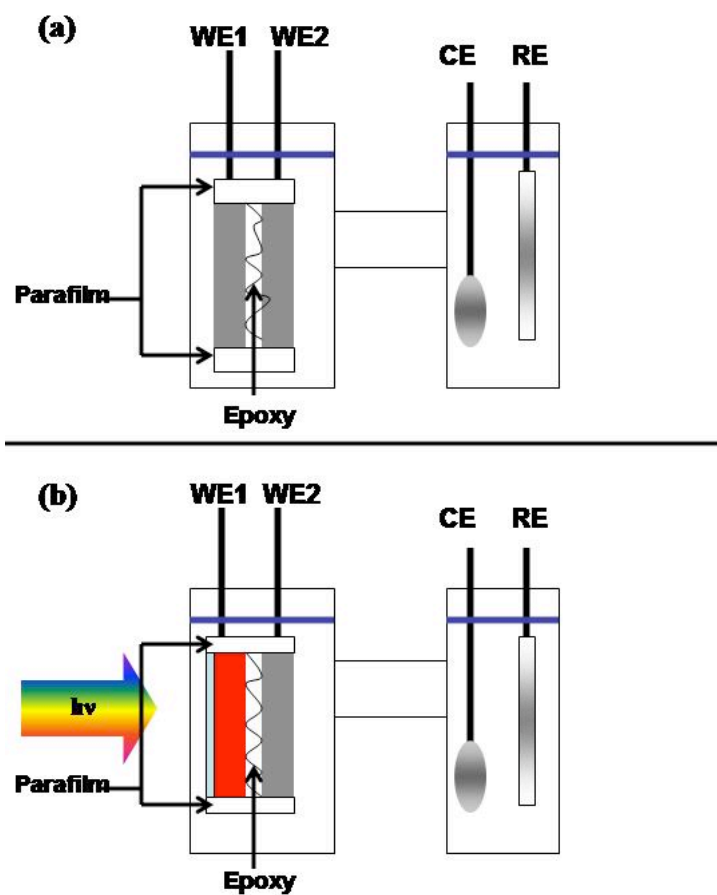


Fig. S1. Experimental setup for amperometric detection of photoelectrochemically generated oxygen. (a) Calibration of the collection efficiency using Pt generator (WE1) and collector electrodes (WE2). The cell was purged with Ar for 20-30 min. prior to calibration and testing. The counterelectrode (CE) and reference electrode (RE) were Pt mesh and Ag/AgCl, respectively. (b) Test configuration using a dye sensitized TiO₂ or core-shell oxide/TiO₂ photoanode on FTO glass.

Supplementary Material (ESI) for Faraday Discussions
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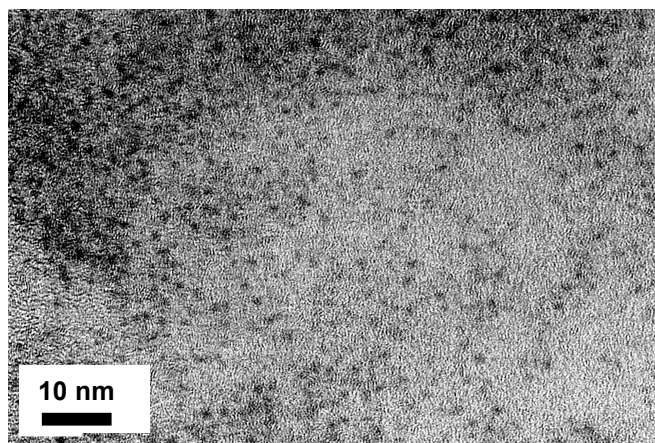


Fig. S2. HRTEM image of iridium oxide nanoparticles capped with sensitizer **1**.

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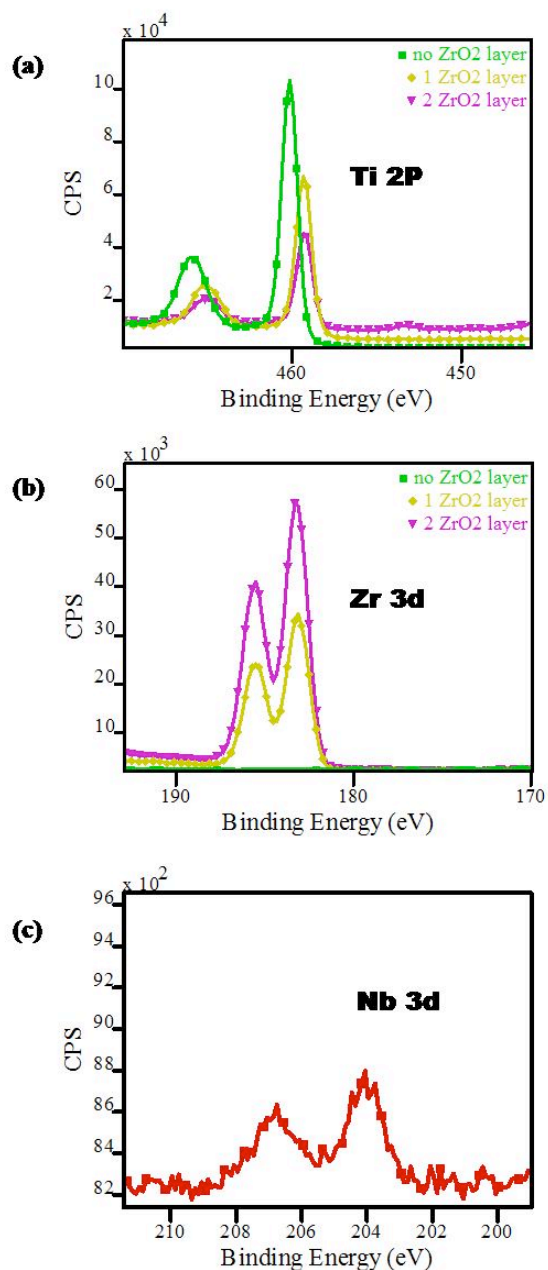


Fig. S3. X-ray photoelectron spectra (XPS) of TiO_2 and core-shell $\text{TiO}_2/\text{ZrO}_2$ and $\text{TiO}_2/\text{Nb}_2\text{O}_5$ oxide films. The sample was prepared for XPS by mechanically scraping the oxide film off the electrode surface.