

Electronic Supplementary Information

**CdS Sensitized TiO₂ Photoanodes for Quantum Dot-Sensitized Solar Cells
by Hydrothermal Assisted Chemical Bath Deposition And Post-annealing
Treatment**

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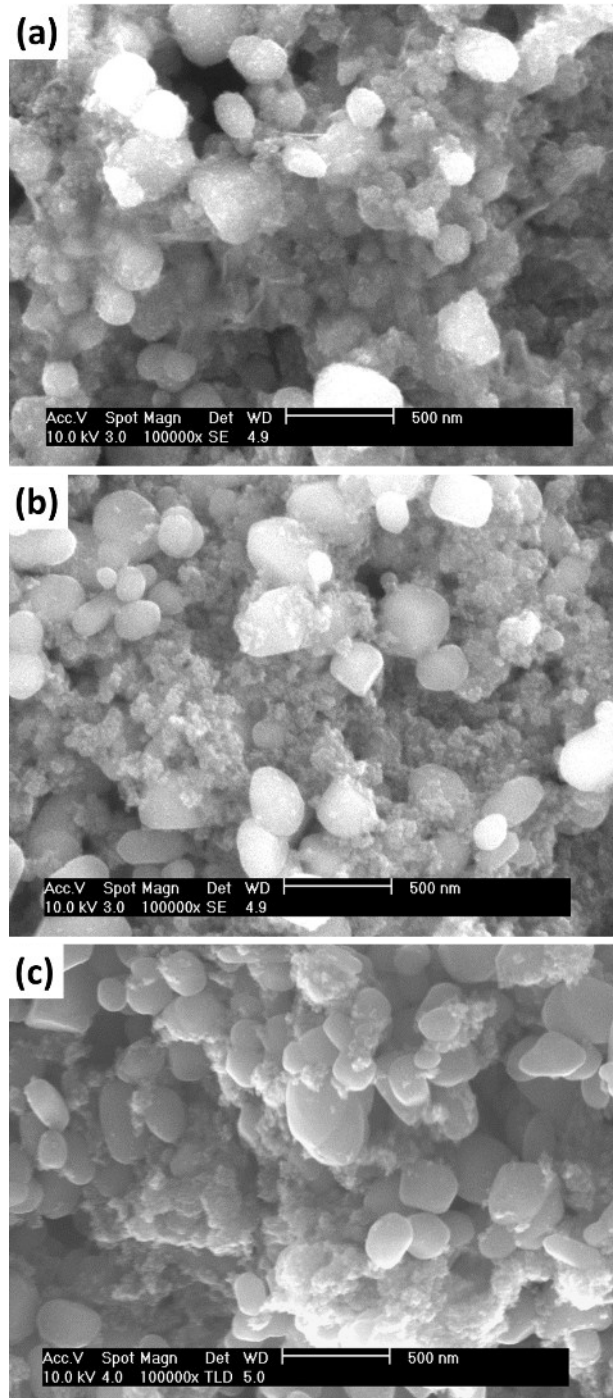


Fig. S1 SEM images of CdS-coated photoanodes annealed at the temperature of 300 °C (a), 400 °C (b) and 500 °C (c), denoted as Phtoanode 2, 3 and 5, respectively.

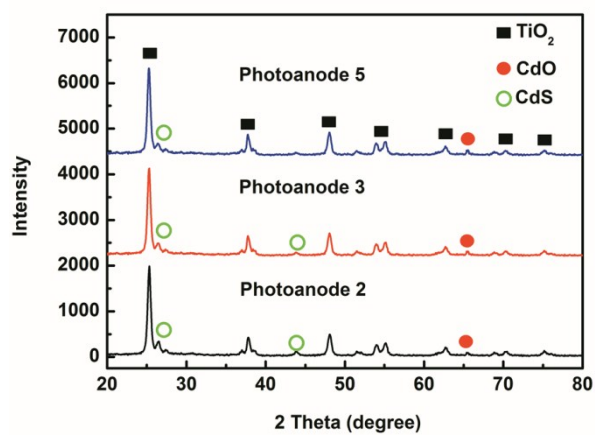


Fig. S2 XRD patterns of Photoanode 2, 3 and 5, respectively.

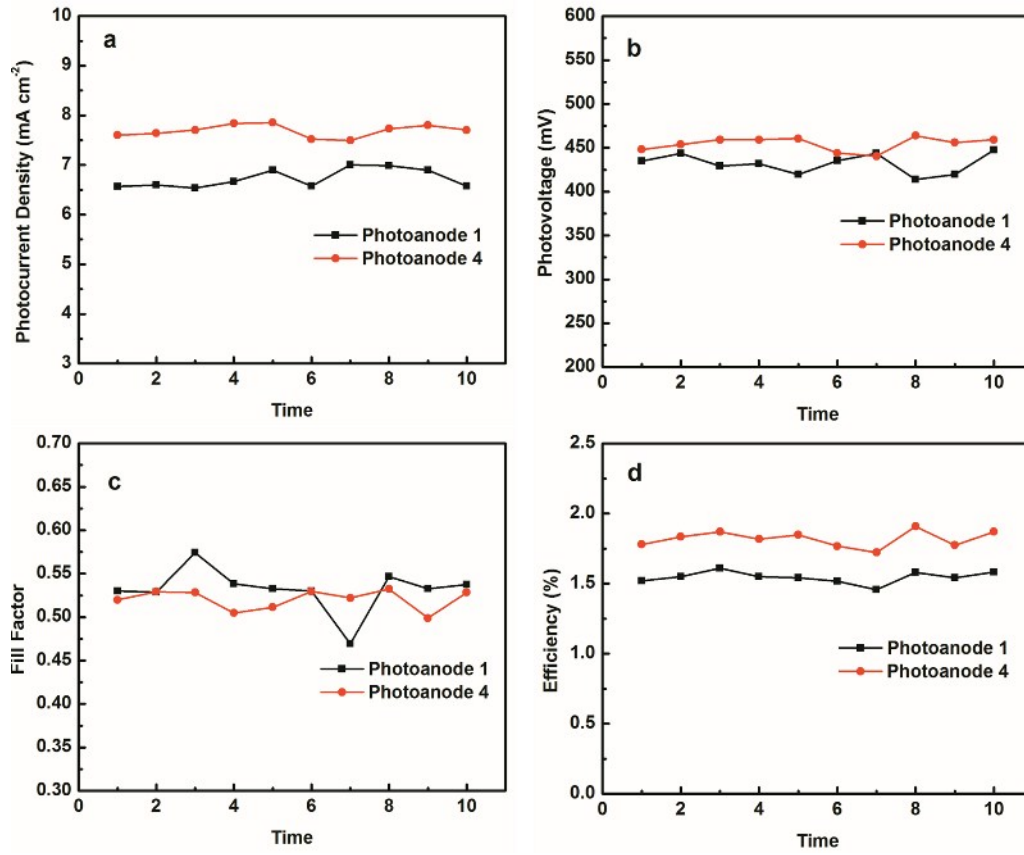


Fig. S3 The statistical results of J_{SC} (a), V_{OC} (b), FF (c) and η (d) towards Photoanode 1 and Photoanode 4 for 10 times, respectively. The fabrication and test conditions are the same for each time.

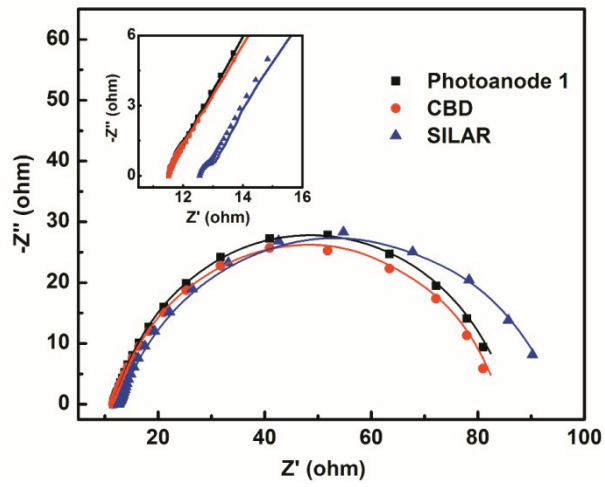


Fig. S4 Nyquist plots of the cells measured at zero bias potential in dark condition based on photoanodes with different fabrication methods, the inset shows the abscissa expanded in the high frequency ranges. The scattered points are experimental data and the solid lines are the fitting curves.

Table S1 Parameters of the EIS fitting data in in QDSCs with different photoanodes by using the electrical equivalent circuit model in Fig. 7a.

Sample	R_S (Ω)	R_{CT} ($\Omega \cdot \text{cm}^2$)	R_{REC} ($\Omega \cdot \text{cm}^2$)
Photoanode 1	11.5	2.18	74.0
Photoanode 2	13.4	1.84	88.6
Photoanode 3	13.4	2.07	92.6
Photoanode 4	13.4	1.38	96.3
Photoanode 5	13.2	2.05	62.3
CBD	10.8	1.89	69.6
SILAR	12.4	1.65	78.4