

CdS or CdSe Decorated TiO₂ Nanotube Arrays from Spray Pyrolysis

Deposition: Use in Photoelectrochemical Cells

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Supporting Information

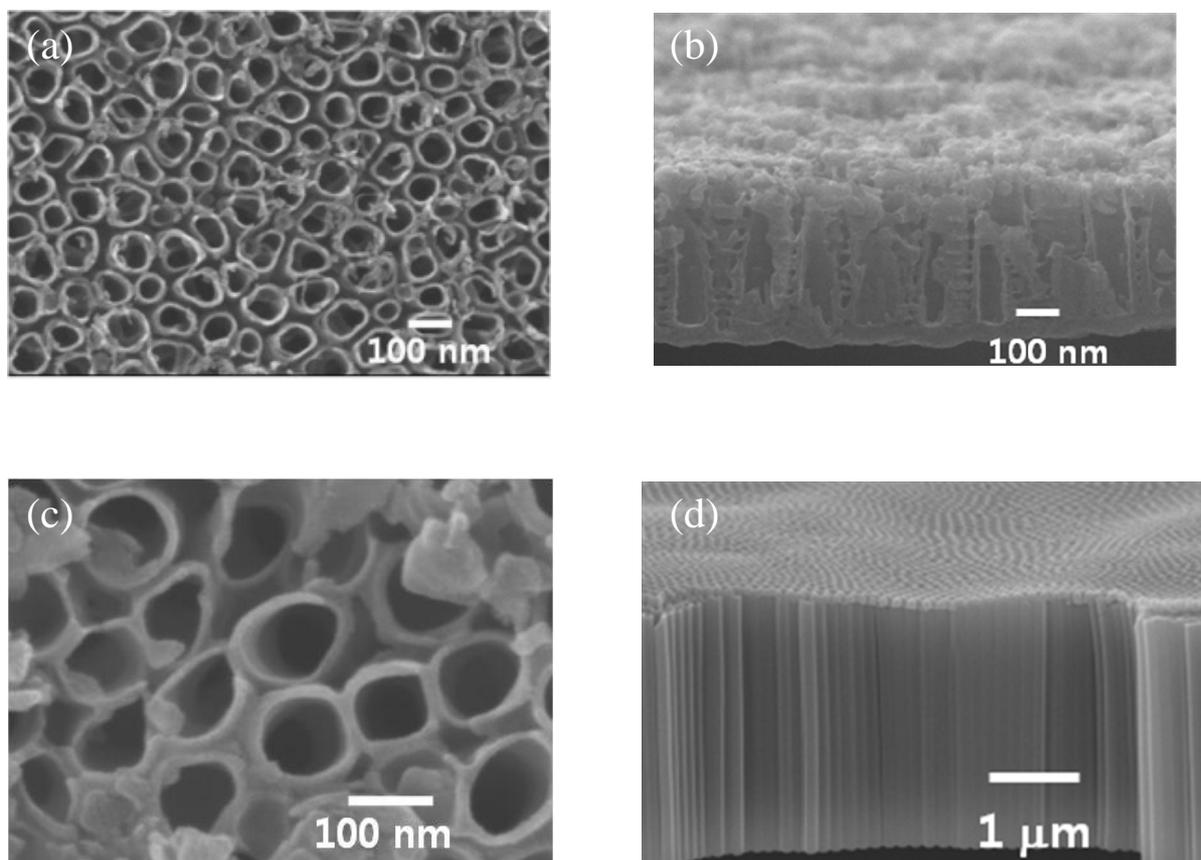


Figure S1. Top and side SEM images of 400 nm-length TiO₂ nanotube arrays (a,b) and 3 μm-length TiO₂ nanotube arrays (c,d).

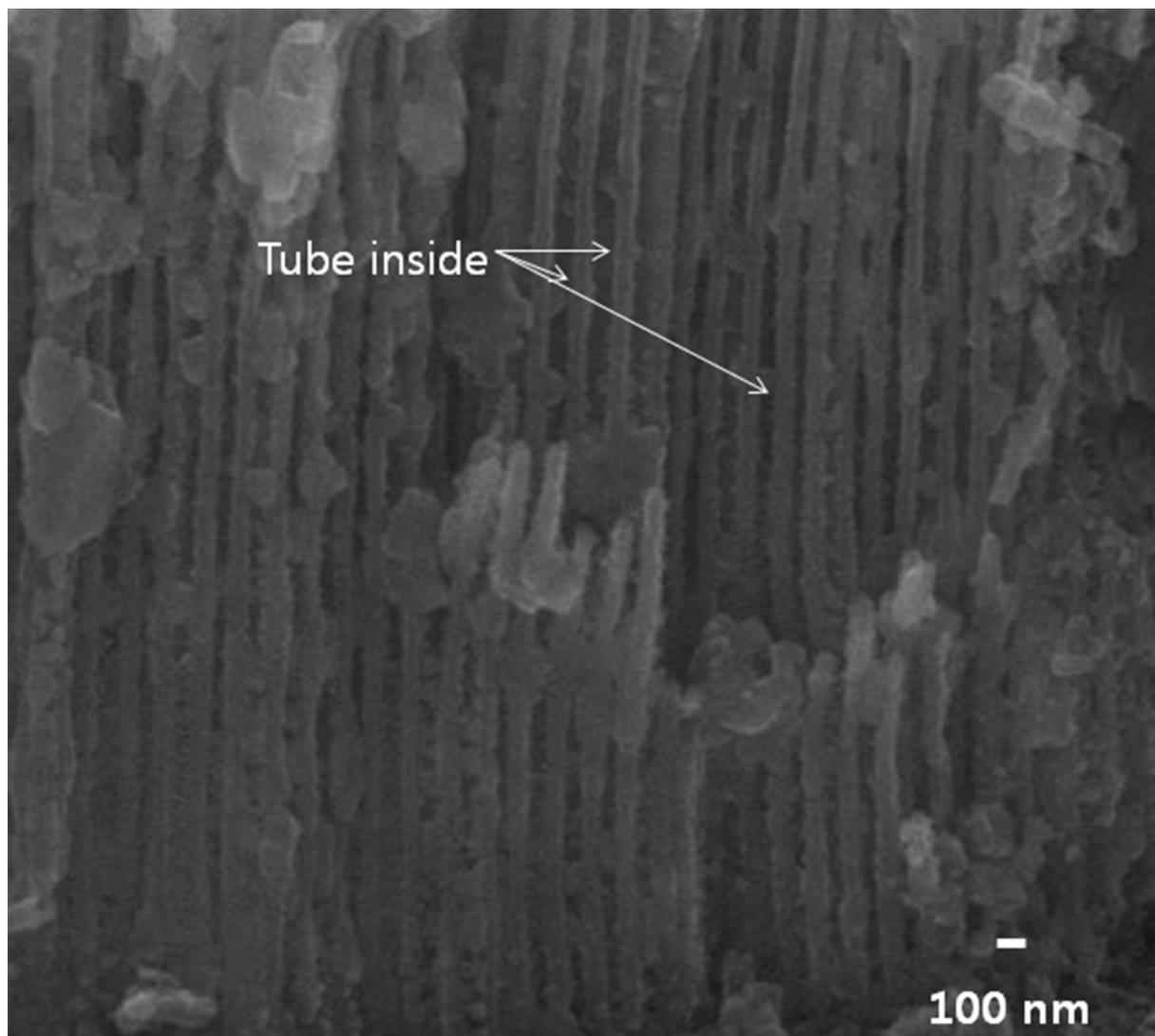
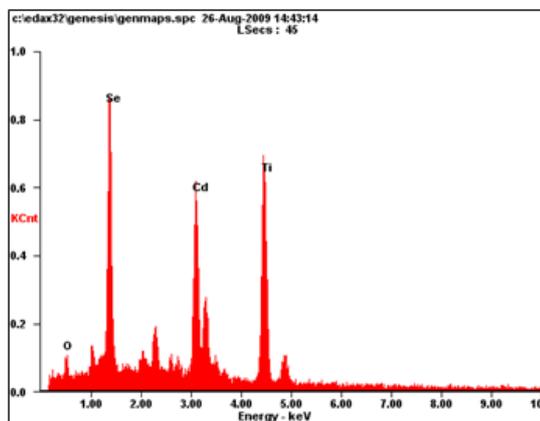
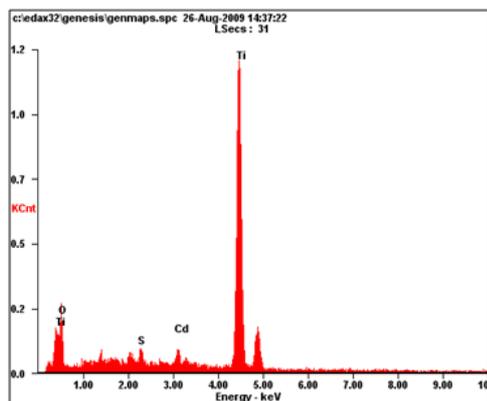


Figure S2. Close up view of figure of Fig. 2(f).



<i>Element</i>	<i>Wt%</i>	<i>At%</i>
<i>OK</i>	04.65	17.88
<i>SeL</i>	28.87	22.47
<i>CdL</i>	34.84	19.06
<i>TiK</i>	31.64	40.60
<i>Matrix</i>	Correction	ZAF



<i>Element</i>	<i>Wt%</i>	<i>At%</i>
<i>OK</i>	18.30	40.70
<i>SK</i>	01.41	01.57
<i>CdL</i>	04.45	01.41
<i>TiK</i>	75.83	56.32
<i>Matrix</i>	Correction	ZAF

Figure S3. EDX spectra of the CdS or CdSe decorated nanotube arrays.

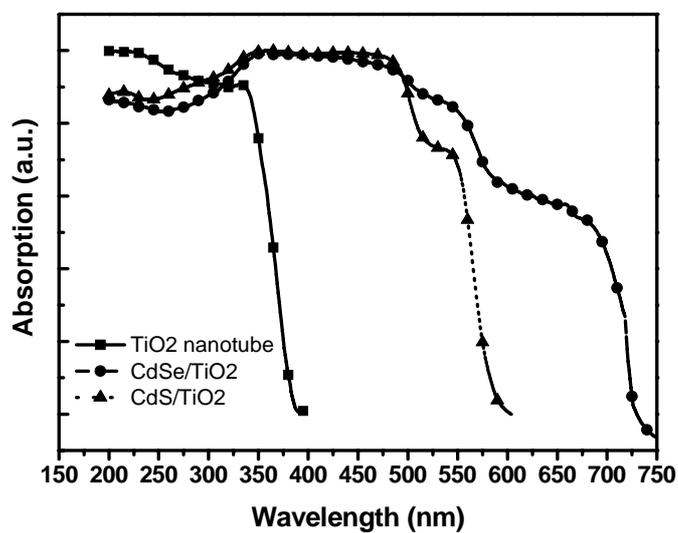


Figure S4. UV-vis absorption spectra of the TiO₂ nanotube arrays and CdS or CdSe decorated nanotube arrays.

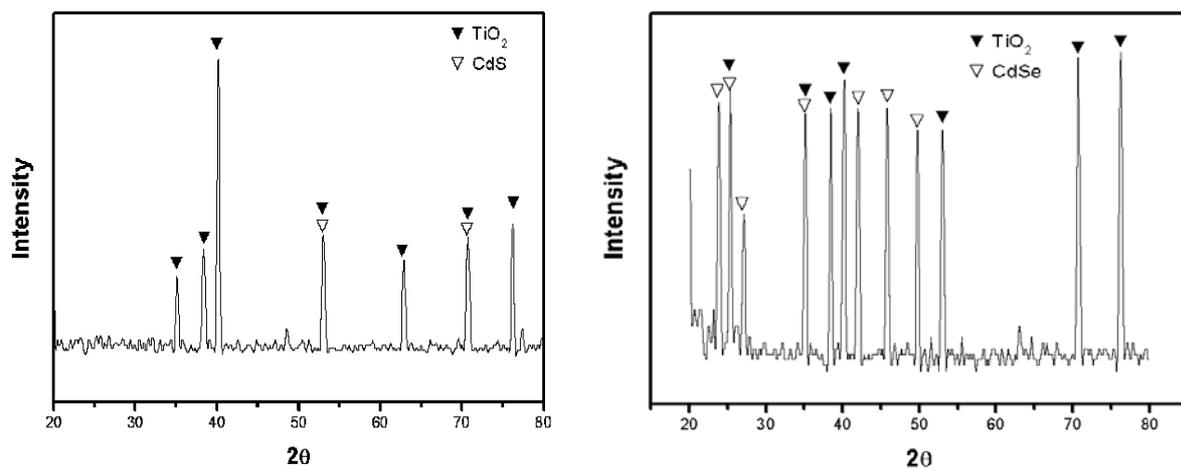


Figure S5. XRD pattern of CdS or CdSe decorated nanotube arrays.

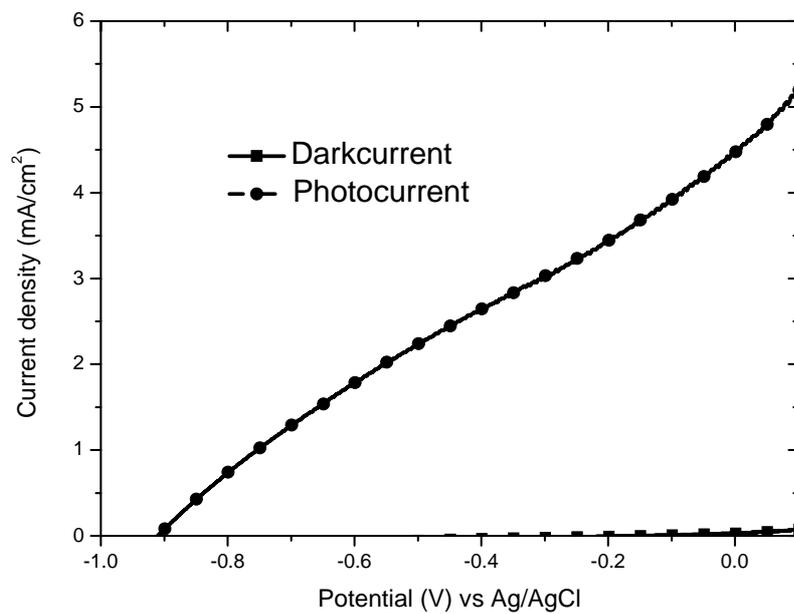


Figure S6. Photocurrent versus potential of the PEC with CdSe deposited Ti-foil substrate.

Hydrogen evolution:

At a certain bias (photoanode at -0.6 V vs. Ag/AgCl.), small gas bubbles were seen evolving from both the surface of the working and counter Pt plate. The evolved gases were collected and H₂ evolution was confirmed by gas chromatography.