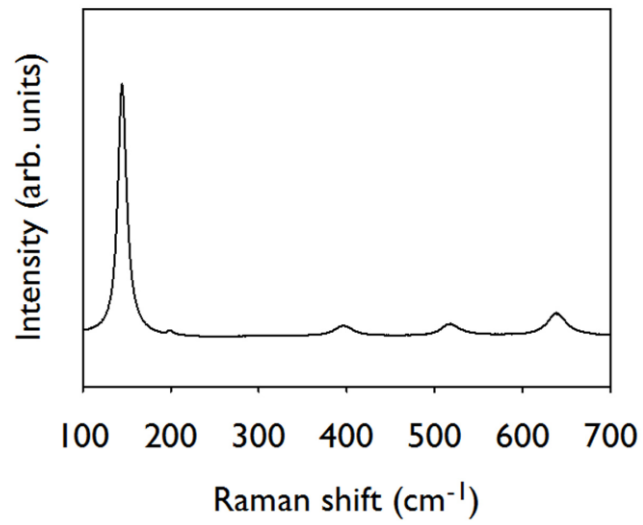


Electronic Supplementary Material (ESI) for Nanoscale.

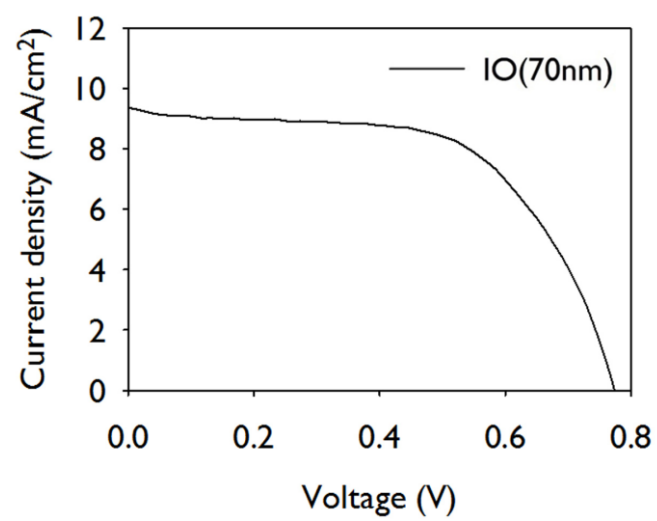
Monolithic multiscale bilayer inverse opal electrodes for dye-  
sensitized solar cell applications

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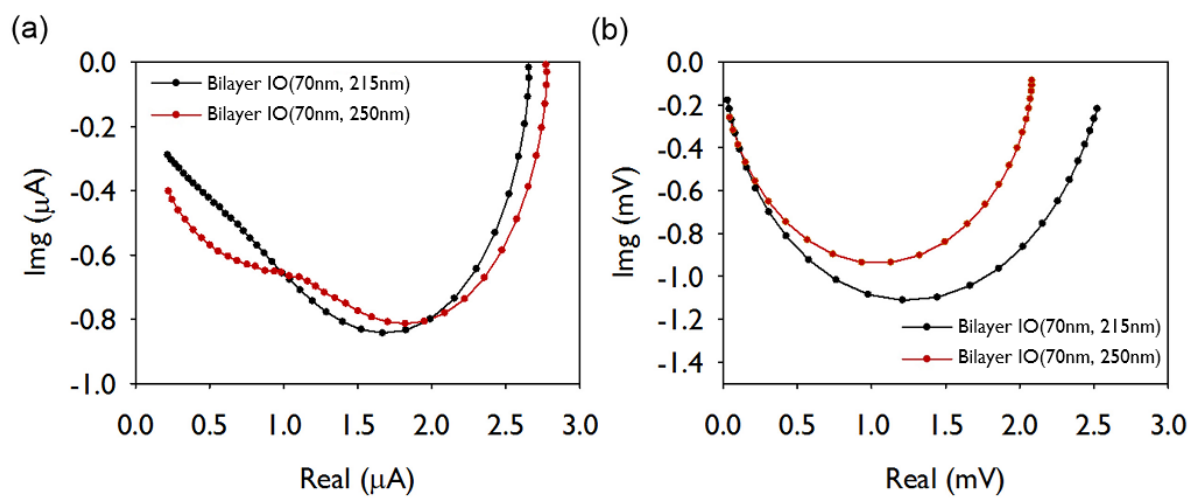
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**Fig. S1** Raman spectrum of the bilayer TiO<sub>2</sub> IO film. The peaks at 144 cm<sup>-1</sup>, 197 cm<sup>-1</sup>, and 633 cm<sup>-1</sup> correspond to the E<sub>g</sub> modes, the peak at 88 cm<sup>-1</sup> corresponds to the B<sub>1g</sub> mode, and the peak at 514 cm<sup>-1</sup> corresponds to a doublet of the A<sub>1g</sub> and B<sub>1g</sub> modes of the anatase phase of TiO<sub>2</sub>.



**Fig. S2** *J-V* curves of DSSCs comprising single TiO<sub>2</sub> IO film.



**Fig. S3** (a) Intensity-modulated photocurrent and (b) intensity-modulated photovoltage responses of DSCs based on bilayer IO TiO<sub>2</sub> electrodes.