Electronic Supplementary Information (ESI)

Growth, Detachment, and Transfer of Highly-ordered TiO₂ Nanotube Arrays: Use in Dye-sensitized Solar Cells

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Experimental

The prepared TiO₂ nanotube films (depend on cell size) were transferred onto FTO glass and two drops of 100 mM Ti-isoprosoxide in 2-propanol were subsequently applied onto the TiO₂ films to form interconnections between the FTO glass and the TiO₂ film (for this step, a little pressure increase the contact force between the FTO glass and the TiO₂ film during solvent evaporation).
Figure S1. Photographic image of freestanding membrane after thermal annealing.
Figure S2. Photographic image of freestanding membrane (~ 35μm tube length) stuck to the FTO glass (before thermal annealing).
Figure S3. Photographic and microscope images of freestanding membrane (~ 35μm tube length) stuck to the FTO glass (after thermal annealing).
Figure S4. Photographic and microscope images of dye coated freestanding membrane (~35μm tube length) stuck to the FTO glass.
Figure S5. Photographic image of the final DSSC (before and after adding an electrolyte).
Figure S6. Photographic image of the final DSSC (~8μm tube length).
Figure S7. IPCE of a final DSSC (~ 8μm tube length). Because the cell area is smaller than the beam size ( > 0.2 cm²) of IPCE measurement equipment it is impossible to calculate absolute IPCE(%) values.