

Supporting Information:

Efficient Light Harvesting and Charge Collection of Dye-Sensitized Solar Cells with (001) Faceted Single Crystalline Anatase Nanoparticles

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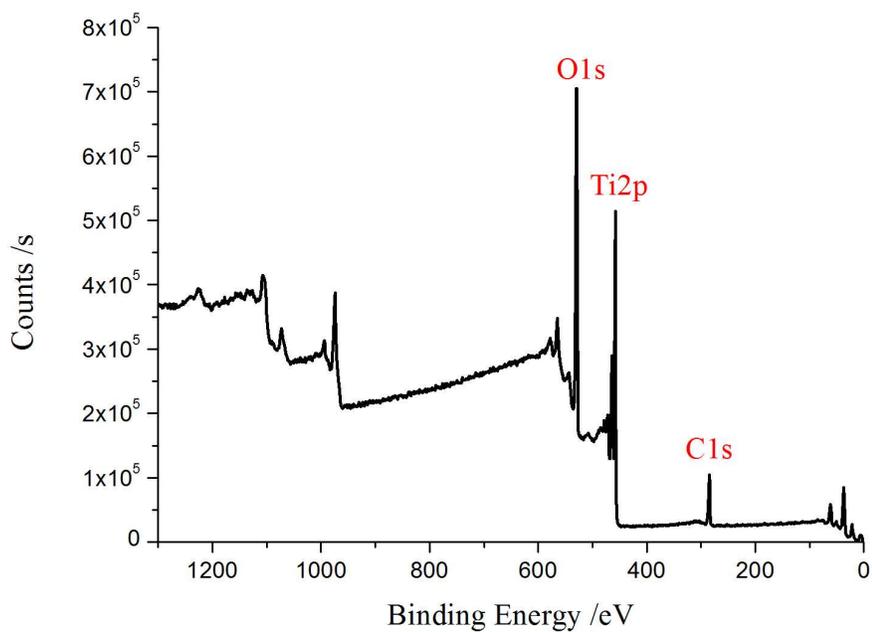


Figure S1 XPS spectrum of the as-synthesized TiO_2 single crystals

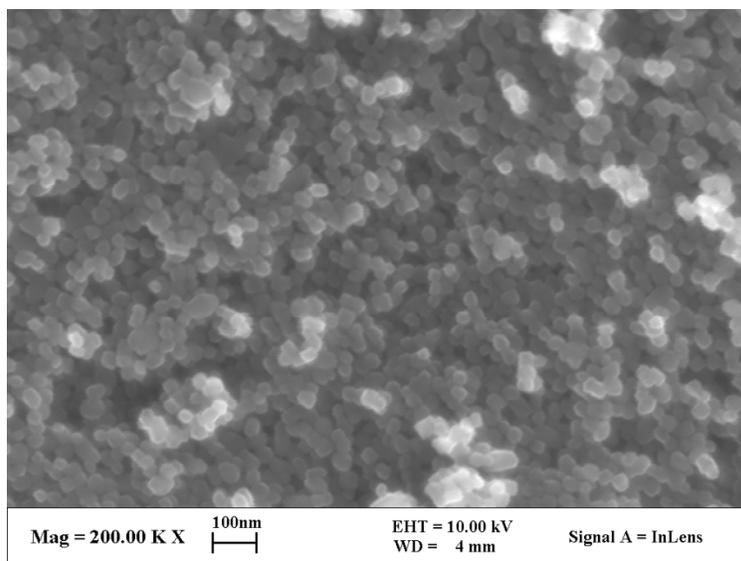


Figure S2 Representative SEM image of the TiO_2 single crystals after thermal annealing

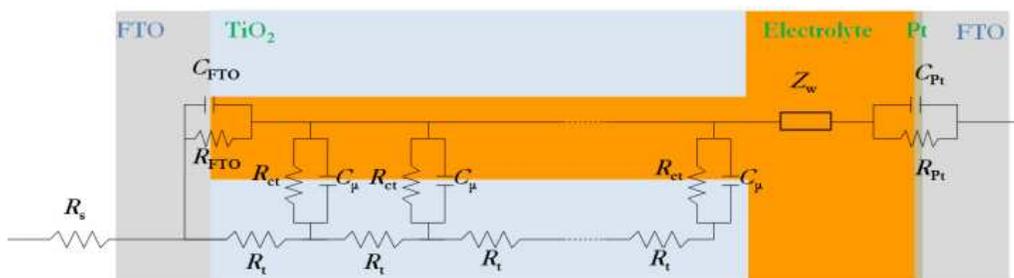


Figure S3 Transmission line model used to fit the impedance experimental data of DSCs. R_{ct} , R_{Pt} , and R_{FTO} : charge-transfer resistance at the dyed TiO_2 /electrolyte, the electrolyte/Pt interface, and the uncovered layer of FTO/electrolyte interface, respectively; C_{μ} , C_{Pt} , and C_{FTO} : the chemical capacitance at the dyed TiO_2 /electrolyte, the electrolyte/Pt interface, and the uncovered layer of FTO/electrolyte interface, respectively; R_t is the transport resistance of the electrons in the TiO_2 film; Z_w is the Warburg element showing the Nernst diffusion of I_3^- in the electrolyte; R_s is the series resistance, including the sheet resistance of the FTO glass and the contact resistance of the cells.

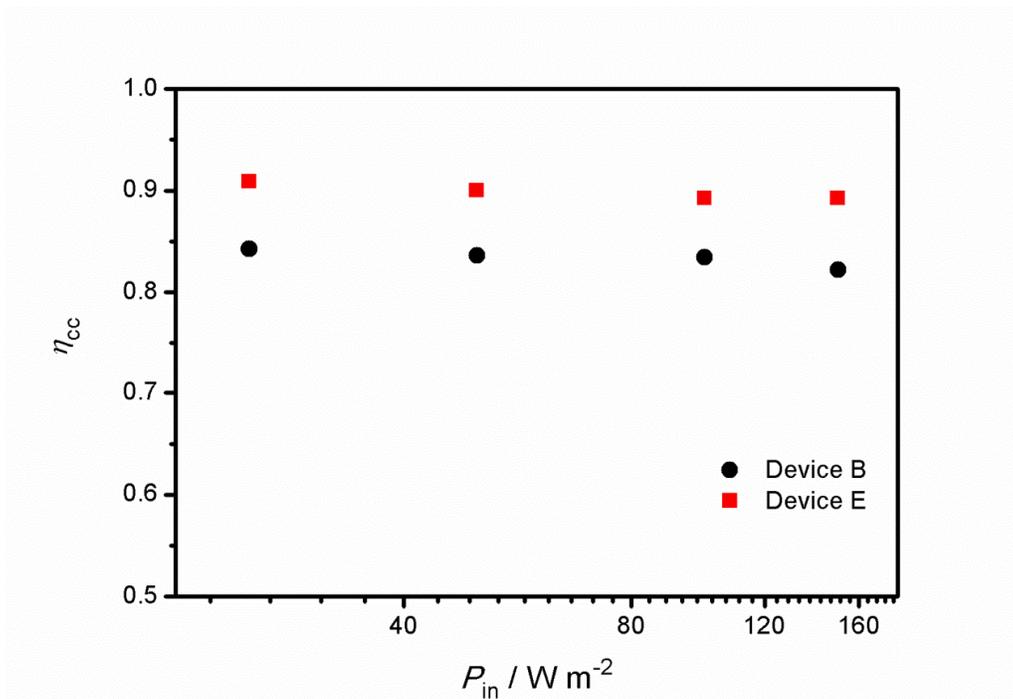


Figure S4 Derived charge collection efficiency against incident light intensities of device B and device E from IMPS/IMVS analysis.