Electronic Supplementary Information

Wet Chemical Route to Hierarchical TiO₂ Nanodendrite/Nanoparticle Composite Anodes for Dye-Sensitized Solar Cells

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Figure S1. SEM images of the ND arrays formed for various branch growth periods. (a) 0 h; (b) 1.5 h; (c) 2 h and (d) 2.5 h.
**Figure S2.** (a) Typical cross-sectional TEM image of an individual NW. (b) HRTEM image and (c) the corresponding SAED pattern of NW.
Figure S3. (a) TEM image of the TiO$_2$ ND/NP film. (b) HRTEM of the interfacial region of the trunk and branch in the ND/NP film denoted in (a). (c) and (d) Diffraction patterns taken from the portions of the branch (square A) and trunk (square B) in (b).
**Figure S4.** Suggested equivalent circuit of the DSSCs. $R_w (= r_w x L)$ is the electron transport resistance in the anode (L is the thickness of the anode), $R_k (= r_k / L)$ is the charge transfer resistance related to recombination of an electron at the interface, $C_\mu (= c_\mu x L)$ is the chemical capacitance, $R_s$ is a lumped series resistance for the transport resistance of FTO and all resistances out of the cell, $W$ is the impedance of diffusion of the redox species in the electrolyte, and $R_{Pt}$ and $C_{Pt}$ are the charge transfer resistance and the interfacial capacitance at the counter electrode/electrolyte interface, respectively.