Supporting Information

Three-Dimensional Self-Branching Anatase TiO$_2$ Nanorods:
Morphology Control, Growth Mechanism and Dye-Sensitized Solar Cells Application

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Fig. S1 SEM images of the as-obtained products prepared for 24 h with different weight ratios of F127/TBAH: (a) 1.0, (b) 1.1, and (c) 1.4. Inset: their XRD patterns. Scale bars: 200 nm. The percentages of rutile and anatase were calculated using the method outlined by Spurr and Myers (R. A. Spurr, H. Myers, Anal. Chem. 1957, 29, 760).
Fig. S2 (a) TEM image of the as-obtained products prepared for 8 h with 0.9 of the weight ratios of F127/TBAH. (b) HRTEM image of branch-main rod interface marked by the red dashed circle in a). (c and d) magnified images from the red and white rectangle-enclosed areas in (b), respectively. The red ellipses in (c) and white ellipse in (d) represent the defects.

Fig. S3 Nitrogen adsorption-desorption isotherm curves (a) and Barret-Joyner-Halenda (BJH) pore size distribution plot (b) of self-branching TiO₂ obtained with the reaction time of 12 and 24 h and P25 TiO₂.