<SUPPORTING INFORMATION>

## Superior Photoelectrodes for Solid-state Dye-sensitized Solar Cells Using Amphiphilic TiO<sub>2</sub>

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## **Supporting Information Material**



**Figure S1.** TEM images of amorphous titania prepared by hydrothermal synthesis at (A) 80  $^{\circ}$ C for 16 h and (B) 160  $^{\circ}$  for 48 h.



Figure S2. (A) Schematic illustration of ss-DSSC fabrication. (B) SEM image of  $TiO_2$ -NP-based photoelectrode. (C) SEM image of  $TiO_2$ -NS-based photoelectrode (laminated).



**Figure S3.** (A) Representative electrical equivalent circuit of DSSCs. (B) Ideal ESI plot of a DSSC with the real parts of the impedances  $R_0$ ,  $R_1$ ,  $R_2$ , and  $R_3$ .



**Figure S4.** *J-V* characteristics of the ss-DSSC-P25 under the conditions of simulated global AM 1.5 solar radiation at 100 mW·cm<sup>-2</sup>.