

Supporting Information:

Figure S1 The X-ray diffractometry (XRD) spectroscopy of calcined TiO₂ films illustrated the hydrothermal synthetical TiO₂ nanoparticles is entire anatase, which was confirmed by the X-ray diffractometer with Cu K α radiation (Rigaku D/max-2500)

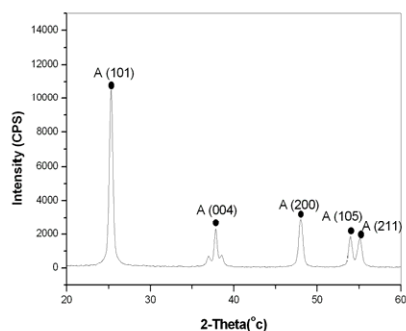


Figure S1

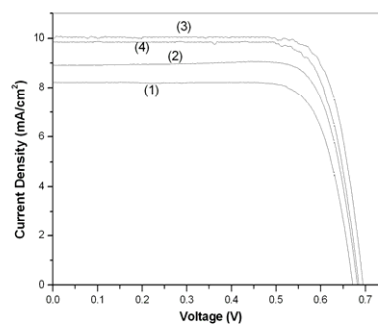


Figure S2

Figure S2 *I-V* characteristics of DSSCs with Electrolyte A and (1) Nano-structured Electrode 1. (2) Microtube-structured Electrode 2 containing microtube derived from thermal removal of PS nanowire with the diameter size of 200-400 nm. (3) Microtube-structured Electrode 3 containing microtube network with the diameter size of 500-800 nm. (e) Microtube-structured Electrode 4 containing microtube network with the diameter size of 800-1200 nm.

Table S1 Device performances of DSSCs with different electrodes and electrolytes.

Device	PS nanowire	J_{sc} (mA/cm ²)	V_{oc} (V)	ff	η
Electrode 1/Electrolyte A	no	8.22	0.672	76%	4.26%
Electrode 2/Electrolyte A	yes (12%) ^a	8.91	0.683	79%	4.85%
Electrode 3/Electrolyte A	yes (15%)	10.06	0.695	79%	5.53%
Electrode 4/Electrolyte A	yes (18%)	9.84	0.686	78%	5.26%
Electrode 1/Electrolyte B	no	8.26	0.736	70%	4.23%
Electrode 2/Electrolyte B	yes (12%)	8.62	0.746	73%	4.69%
Electrode 3/Electrolyte B	yes (15%)	10.56	0.746	70%	5.55%
Electrode 4/Electrolyte B	yes (18%)	9.1	0.741	75%	5.05%

^a The 12%, 15% and 18% are the concentration of PS/DMF solution used in electrospinning method. Electrode 2, 3 and 4 showed here are the TiO₂ electrodes with different sizes of microtube network. Electrode 1: Nano-structured Electrode 1; Electrode 2: TiO₂ electrode containing microtube network with the diameters of 200-400 nm; Electrode 3: TiO₂ electrode containing microtube network with the diameters of 500-800 nm; Electrode 4: TiO₂ electrode containing microtube network with the diameters of 800-1200 nm.