

Supporting Information

**Facile Formation of Hierarchical TiO₂-SnO₂
Nanocomposite Architecture for Efficient Dye-
Sensitized Solar Cells**

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Table S1. Calculated grain sizes of SnO₂ nanofibers and TiO₂ nanoflakes from XRD pattern based on Scherrer equation.

Sample	Growth Time (hrs)	Grain Size (nm)
SnO ₂ nanofibers	0	13.9
Hierarchical TiO ₂ nanoflakes on SnO ₂ nanofibers	3	14.7
	7	15.3
	15	19.5
	24	20.6

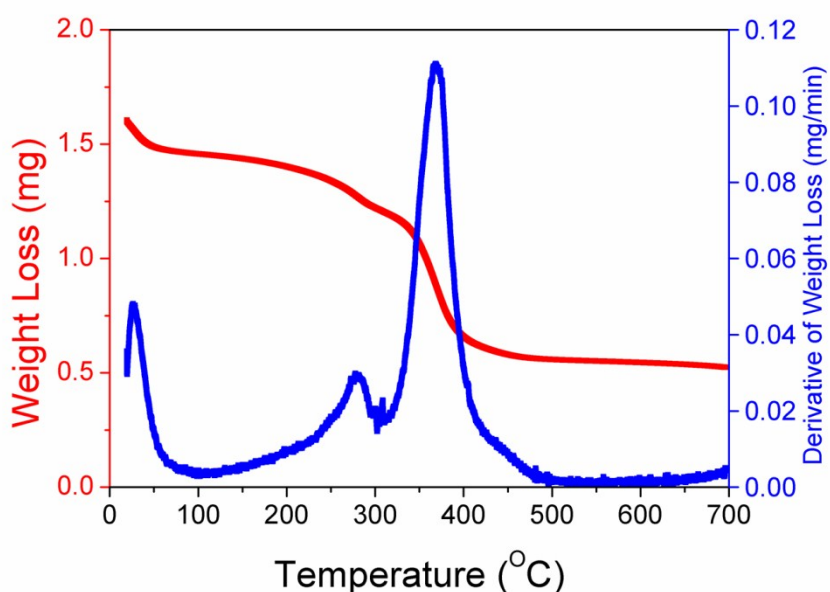


Figure S2. Thermogravimetric analysis (TGA) of electrospun SnO₂ nanofibers. The electrospun SnO₂ nanofibers were subsequently annealed at 500 °C to burn off all the organics compound and achieve good crystallinity.

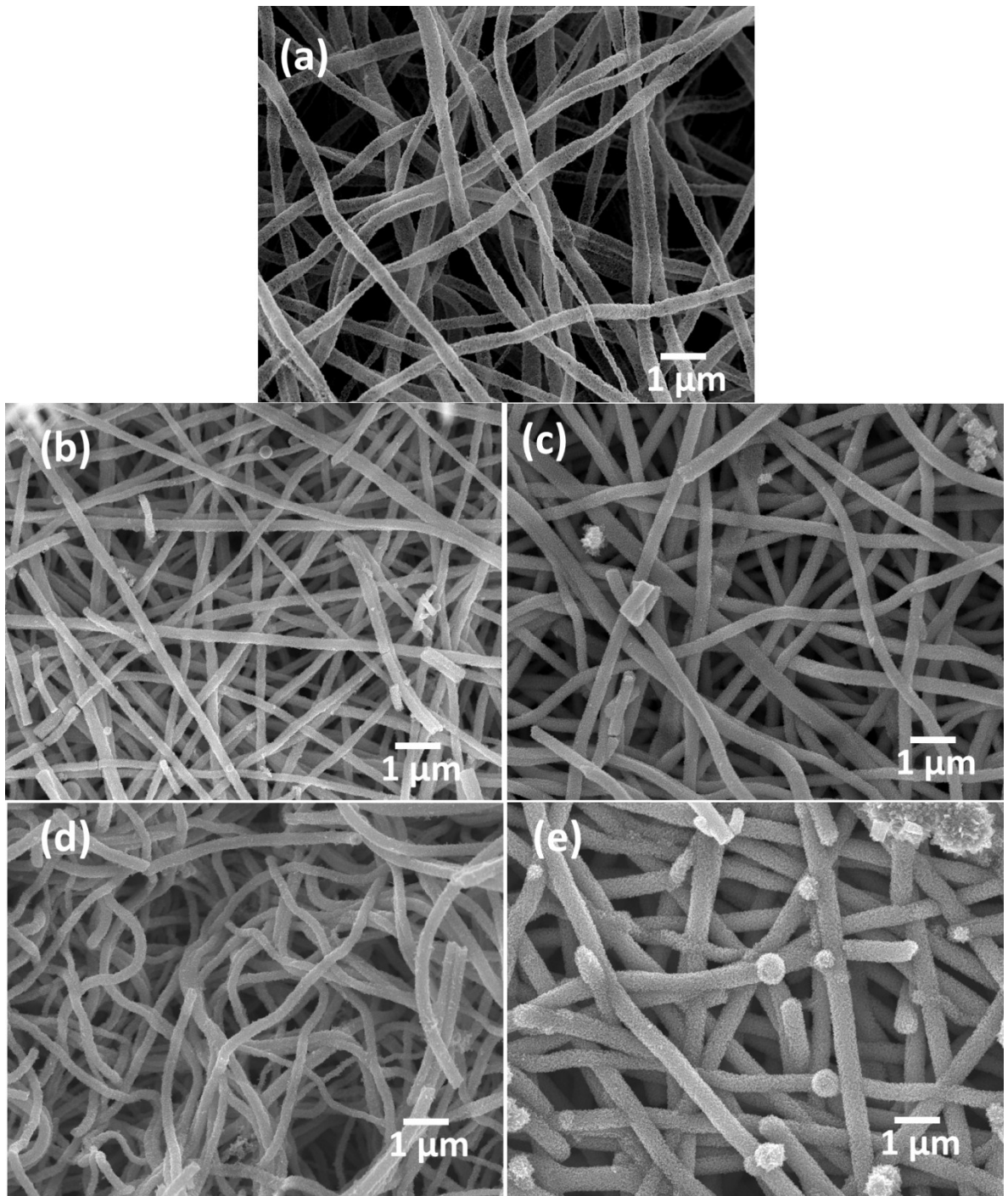


Figure S3. SEM images of hierarchical $\text{TiO}_2\text{-SnO}_2$ composite nanostructures after hydrothermally grown at different durations: (a) Pristine SnO_2 nanofibers; (b) 3 hrs; (c) 7 hrs; (d) 15 hrs; (e) 24 hrs. The length of these hierarchical nano-architectures maintain at several tens of micrometers after hydrothermal growth.

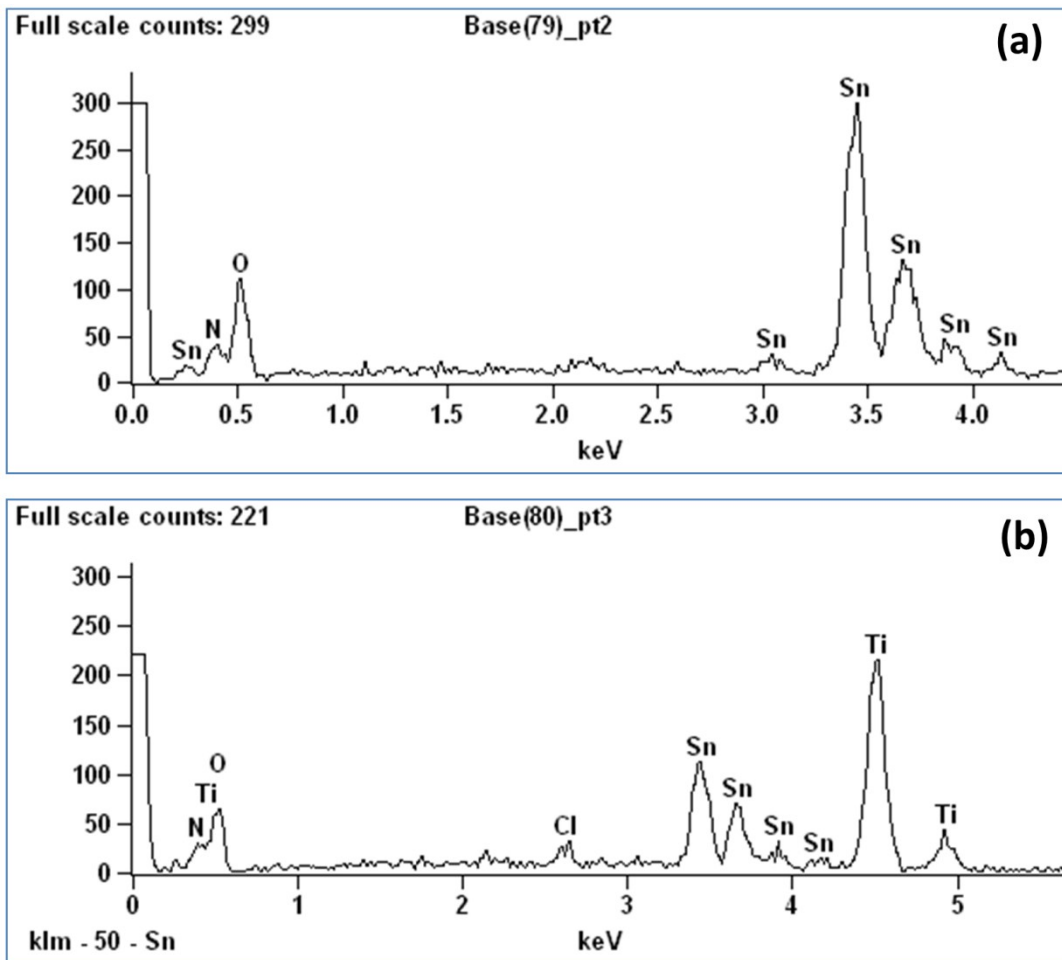


Figure S4. EDX results of (a) pristine SnO₂ nanofibers after annealing; (b) hierarchical TiO₂-SnO₂ nanostructures. The Ti element presents after the formation of hierarchical TiO₂-SnO₂ nanostructures

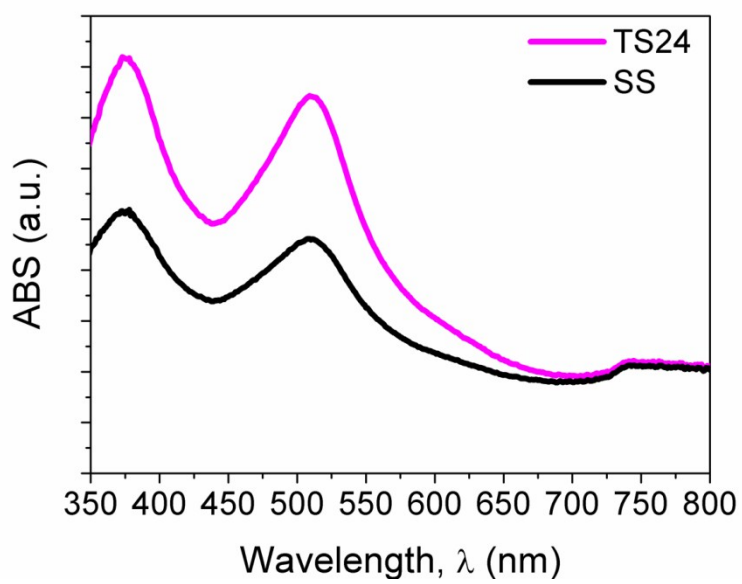


Figure S5. UV-Vis spectra of desorbed dye from the photoelectrode. Higher absorbance for hierarchical $\text{TiO}_2\text{-SnO}_2$ nanostructures film corresponding to higher dye-loading.