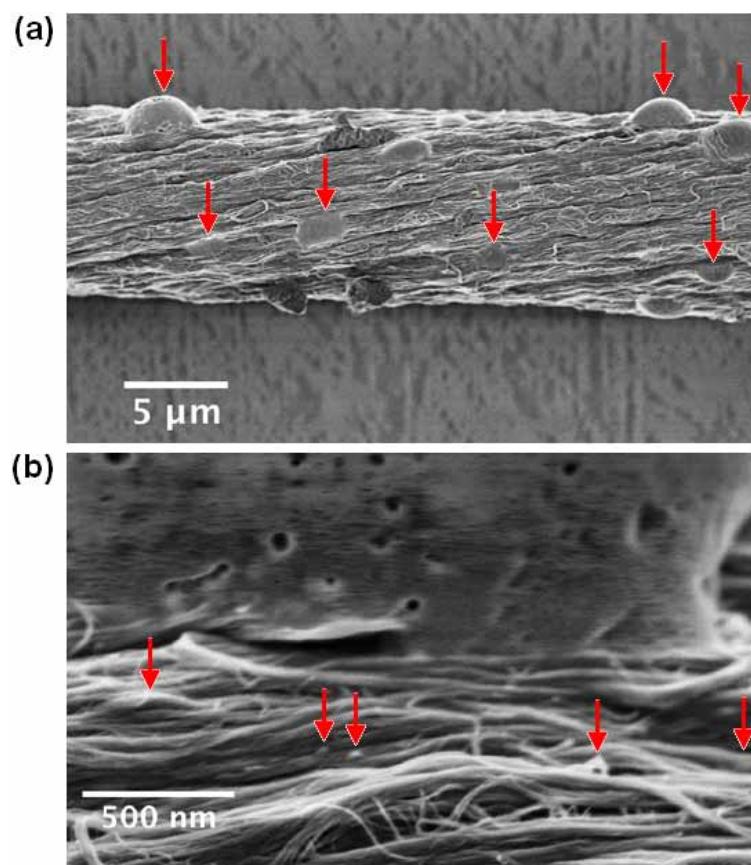
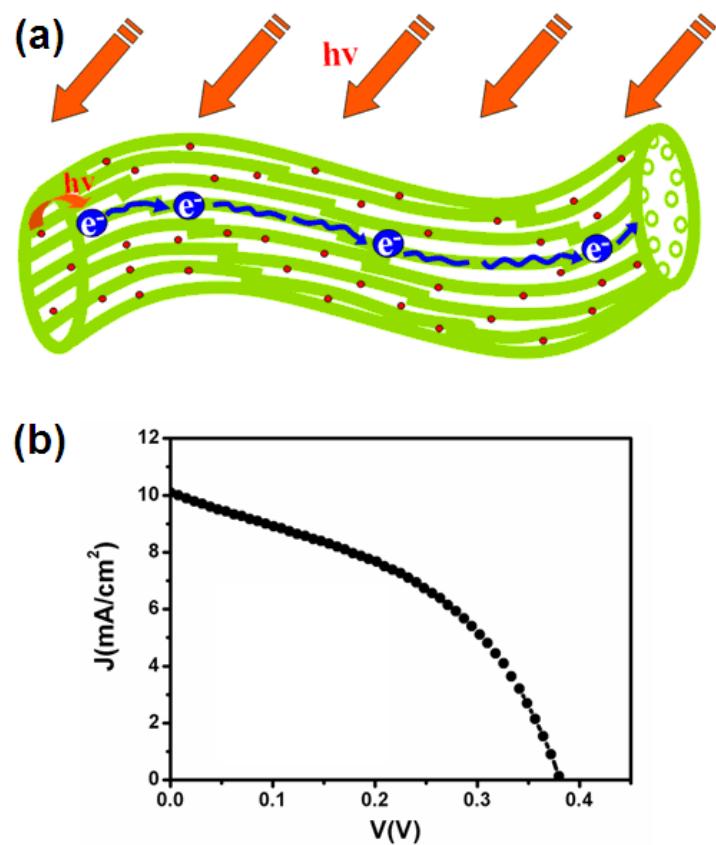


## Supporting Information



**Figure S1.** Typical scanning electron microscopy images of PAA molecules aggregated on the outer surfaces of the CNTs at (a) low magnification and (b) high magnification. The monomer concentration and crosslinking degree in the precursor solution are 13.05 mol/L and 0.12%, respectively.



**Figure S2.** A dye-sensitized solar cell based on the CNT composite fiber. (a) Schematic diagram of the production and transportation of photoelectrons in a CNT composite fiber. The top yellow arrow represents the sunlight. The lime tubes, red dots, and blue spheres correspond to the CNTs, organic components, and photoelectrons, respectively. (b)  $J$ - $V$  curve of a solar cell under simulated 100  $\text{mW}/\text{cm}^2$  illumination.