

Supporting Information

**Exciton Migration and Charge Transfer in Chemically Linked P3HT-TiO<sub>2</sub> Nanorod  
Composite**

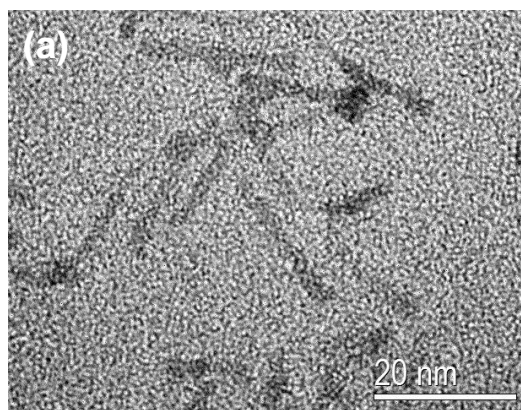
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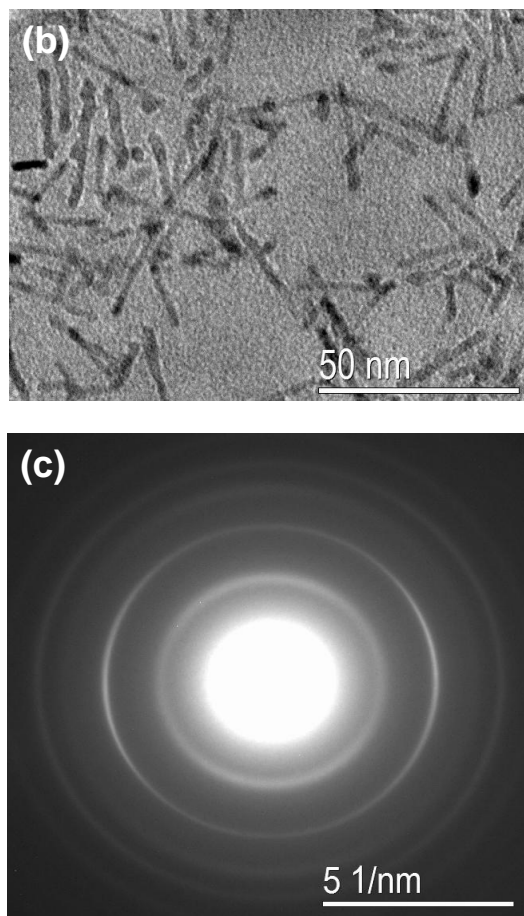
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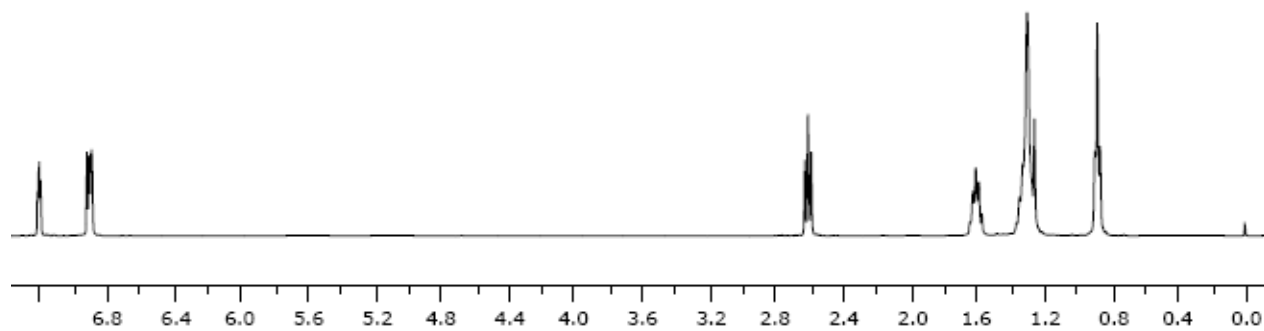
**Figure S1.** The transmission electron microscopy (TEM) images of anatase TiO<sub>2</sub> nanorods (a) scale bar 20 nm; (b) scale bar 50 nm; (c) selected-area electron diffraction (SAED) pattern. Selected-area electron diffraction (SAED) pattern, in which the d spacing values of these ring patterns are 3.57 Å, 2.37 Å, 1.91 Å, 1.68 Å and 1.47 Å from the inner to outside. They are indexed for (101), (004), (200), (211) or (105), (204) of the TiO<sub>2</sub> anatase phase.



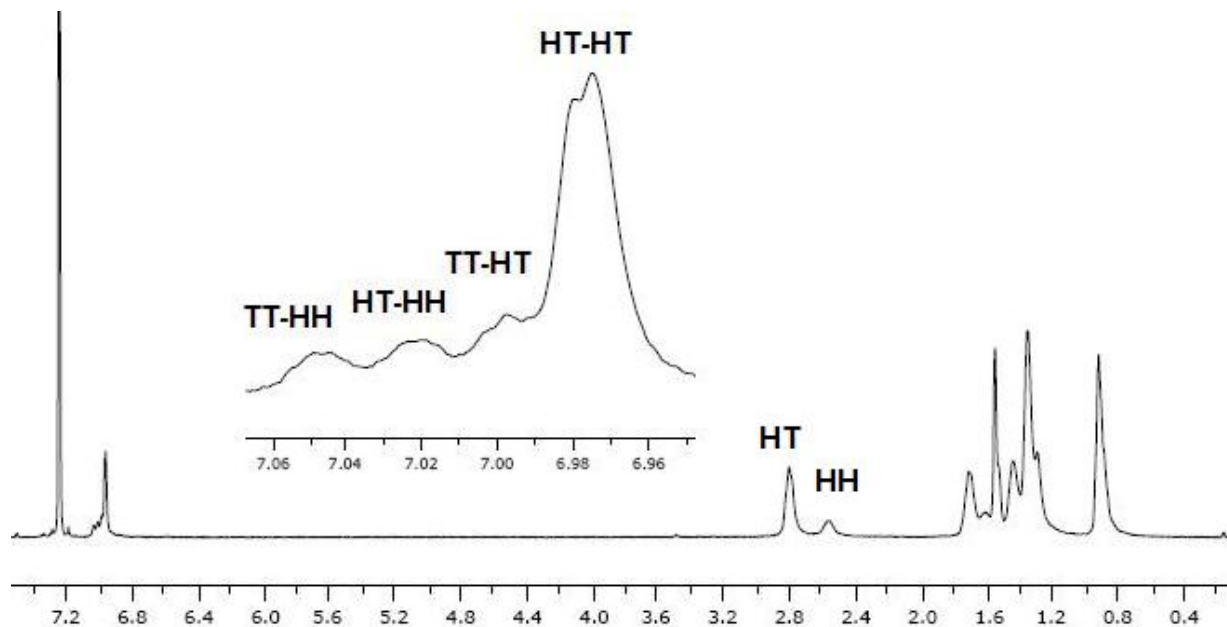


**Figure S2.**  $^1\text{H}$  NMR spectrum (in  $\text{CDCl}_3$ ) of 3-hexylthiophene and regiorandom P3HT prepared in  $\text{CHCl}_3$  solution.

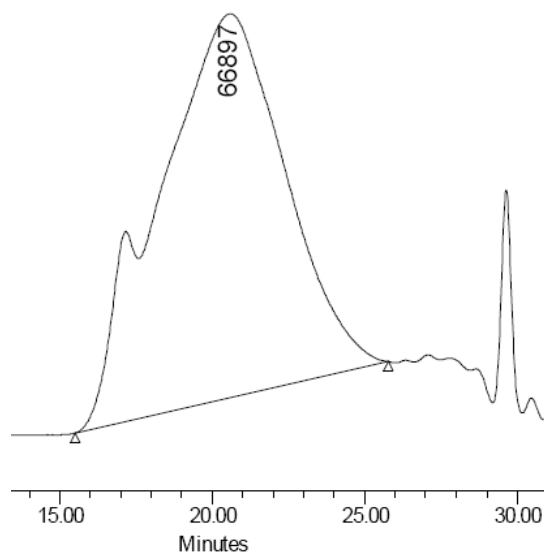
(a) 3-hexylthiophene



(b) P3HT



**Figure S3.** Gel permeation chromatography (GPC) analysis of P3HT formed in the FeCl<sub>3</sub> chemical oxidized method. (Regiorandom P3HT, M<sub>n</sub>=55156, PDI=3.22).



**Figure S4.** The thermogravimetric analysis (TGA) of pristine P3HT (dark) and P3HT-Si-nr-TiO<sub>2</sub> composite (blue). Due to the inclusion of nr-TiO<sub>2</sub> in the chemically linked samples, the weight loss is much lower than that of the pristine P3HT.

