Supporting Information

Exciton Migration and Charge Transfer in Chemically Linked P3HT-TiO$_2$ Nanorod Composite

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Figure S1. The transmission electron microscopy (TEM) images of anatase TiO$_2$ 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$_2$ anatase phase.
Figure S2. $^1$H NMR spectrum (in CDCl$_3$) of 3-hexylthiophene and regiorandom P3HT prepared in CHCl$_3$ solution.

(a) 3-hexylthiophene
Figure S3. Gel permeation chromatography (GPC) analysis of P3HT formed in the FeCl$_3$ chemical oxidized method. (Regiorandom P3HT, Mn=55156, PDI=3.22).
Figure S4. The thermogravimetric analysis (TGA) of pristine P3HT (dark) and P3HT-Si-nr-TiO$_2$ composite (blue). Due to the inclusion of nr-TiO$_2$ in the chemically linked samples, the weight loss is much lower than that of the pristine P3HT.