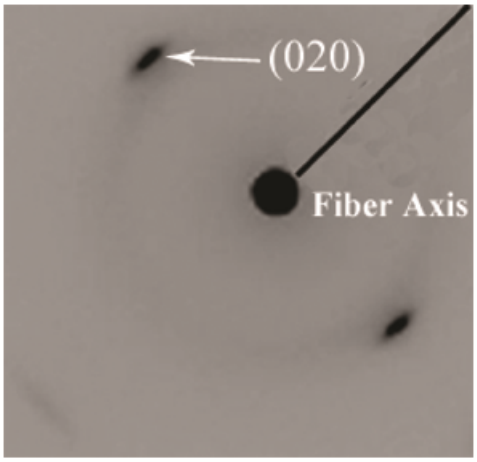
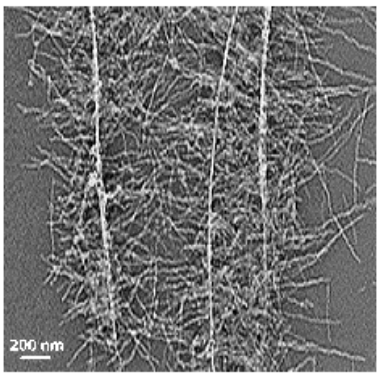
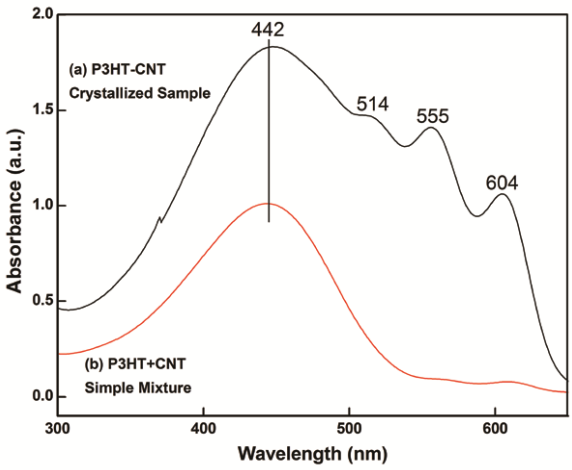
Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.



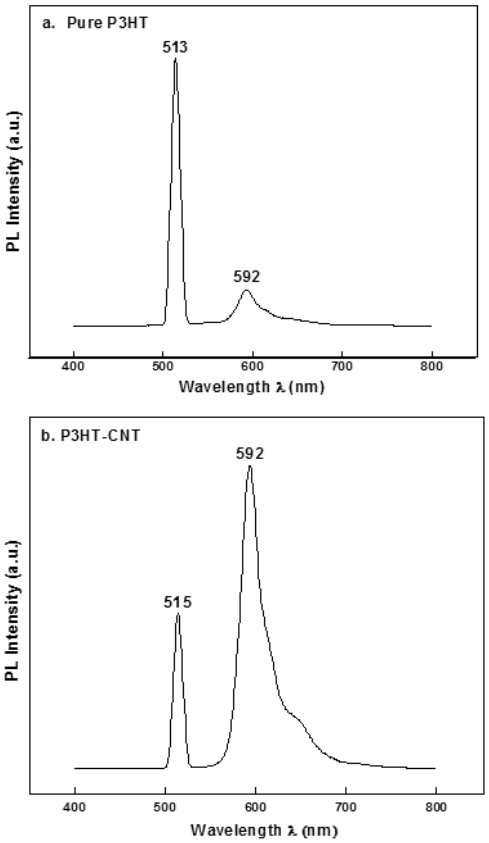
Supplementary Figure S1. Electron diffraction pattern of oriented poly(3hexylthiophene) on carbon nanotubes.



Supplementary Figure S2. Low magnification electron micrograph of p3ht crystallized on cnts as nanofibers.



Supplementary Figure S3. A relative comparison of (a) optical spectra of p3ht crystallized on cnts for 3 h, and (b) a simple mixture of p3ht + cnt. The optical spectra of the simple mixture of p3ht and cnts shows a broad band of p3ht at 442 nm. On the other hand, during crystallization, p3ht chains interacts with cnts such that there is a small shift toward the higher wavelength. This is envisaged to lead to uncoiling of isolated p3ht chains with consequent increase in the conjugation chain length.



Supplementary Figure S4. The photoluminescence spectra of pure p3ht and p3ht crystallized on cnts crystallized for 30 min. the pl spectra of pure p3ht exhibits a high intensity emission maximum at 513 nm and low intensity peak at 592 nm. On the other hand, the pl spectra of the hybrid p3ht-cnt exhibits a relatively low intensity peak at 515 nm and a high intensity 592 nm peak. This is due to the photoluminescence quenching and lower degree of phase separation of p3ht after crystallization on cnts.