Supporting Information

Modulation of Charge Carrier Mobility by Side-Chain Engineering of Bi(thienylenevinylene)thiophene Containing PPE-PPVs

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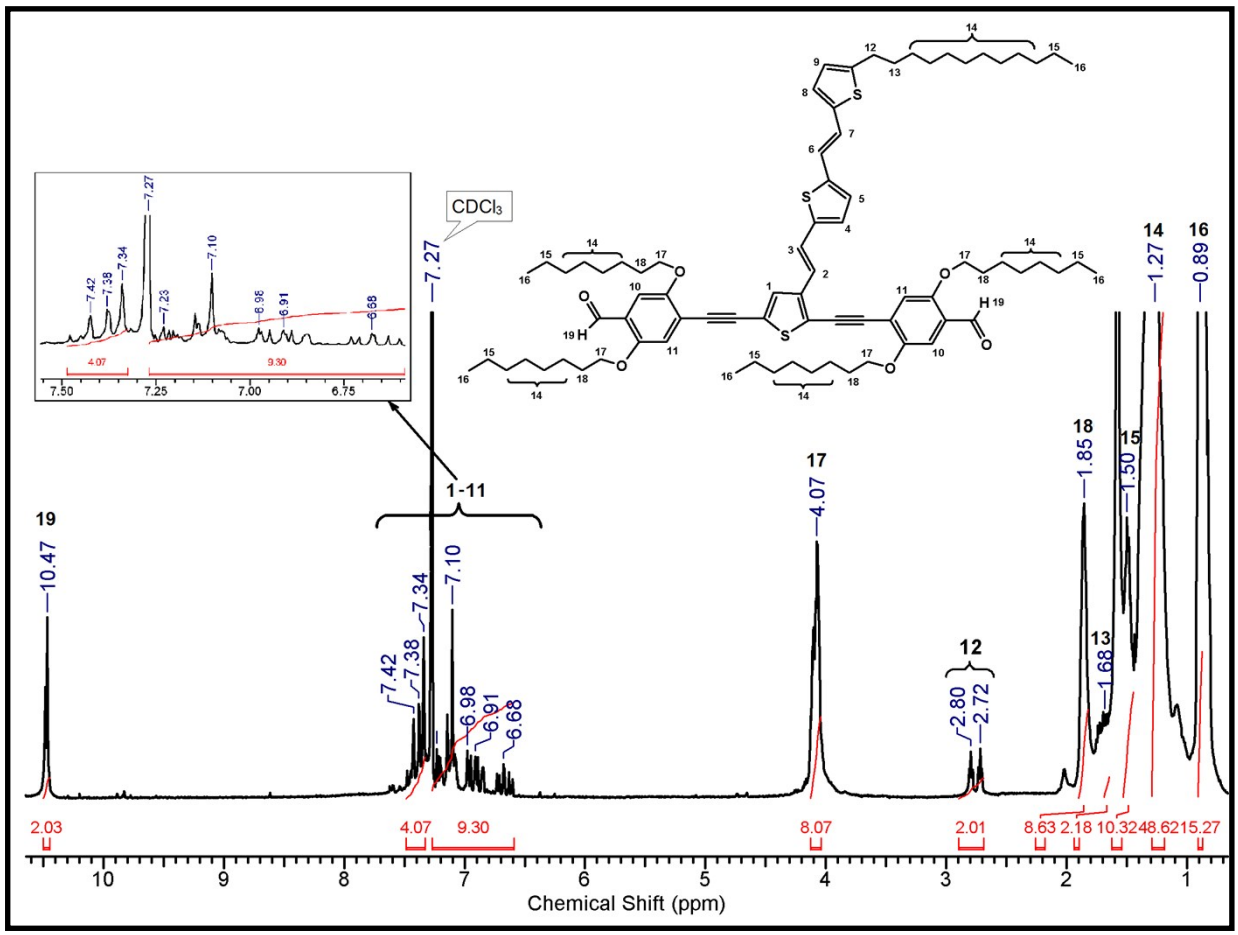

Figure S1. ^{1}H-NMR ($CDCl_3$, 500 MHz) spectrum of dialdehyde **3a**. Inset shows expanded aromatic region.

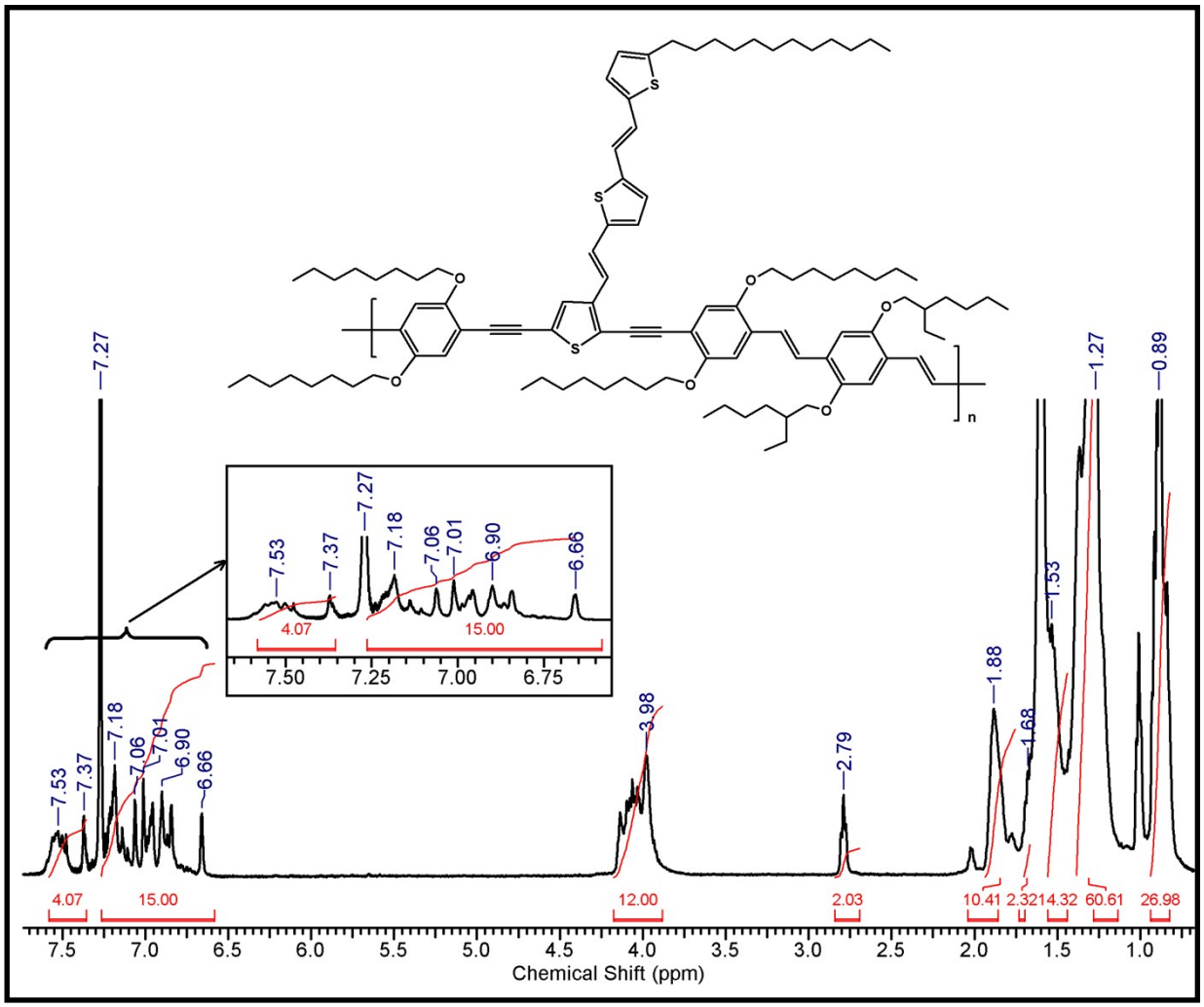

Figure S2. ^{1}H-NMR ($CDCl_3$, 500 MHz) spectrum of polymer **BTE-PV*ab***. Inset shows expanded aromatic region.

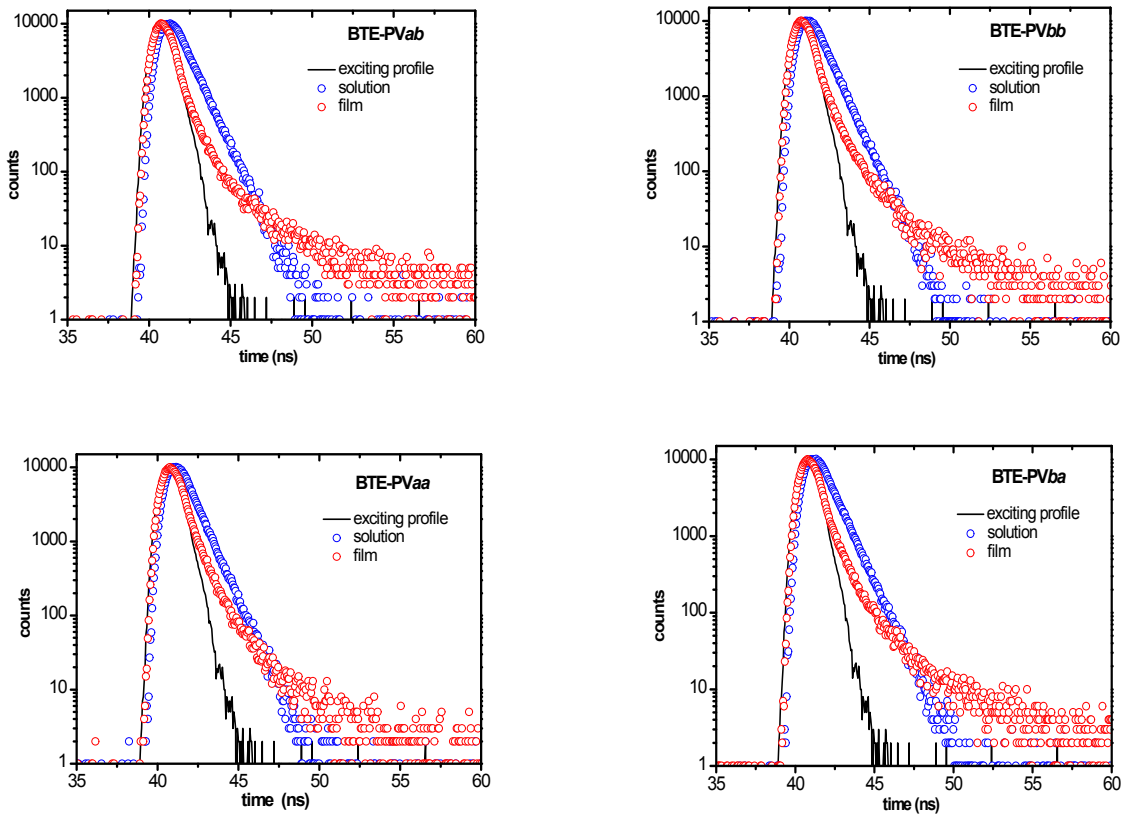

Figure S3. Luminescence decay curves in dilute chloroform solution and thin film.

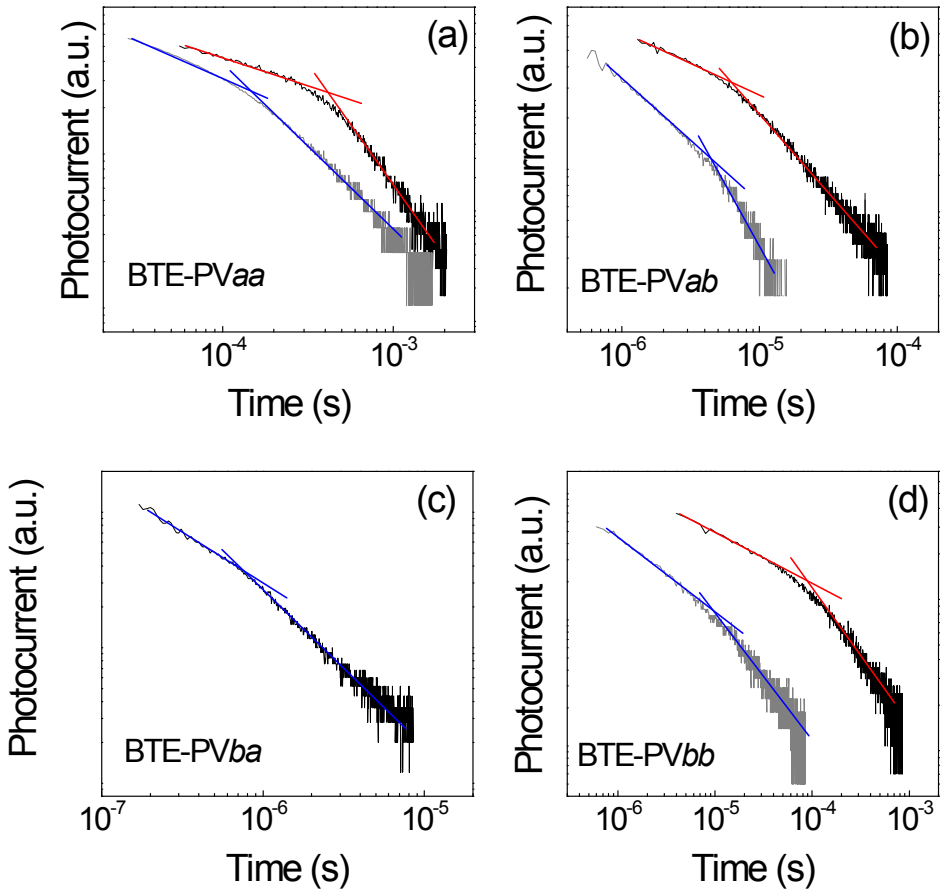

Figure S4. Typical TOF signals for positive (black lines) and negative charge carriers (gray lines) in log-log scales: **BTE-PV*aa*** (a); **BTE-PV*ab*** (b); **BTE-PV*ba**** (c); **BTE-PV*bb*** (d). Applied electric field of about 8×10^4 V cm^{-1}. Red and blue lines illustrate the method for determining the transit time of charge carriers, that is at the intersection of the asymptotes to the two portions with different slopes of the photocurrent signals.

***** The photocurrent signal for negative carriers was not detected, presumably because of very short transit times of electrons for this polymer.