

Complementary Supporting Information's

Solution-processed bulk heterojunction solar cells with silyl end-capped sexithiophene

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Caption Figures

Fig. S1. Steady-state fluorescence spectra of **DH-6T** and **DSi-6T** in benzonitrile; $\lambda_{\text{ex}} = 415$ nm.

Fig. S2. DPV voltammograms of **DSi-6T**, **DH-6T** and PCBM in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

Fig. S3. CV of **DH-6T** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

Fig. S4. CV of **DSi-6T** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

Fig. S5. CV of **PCBM** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

Fig. S6. (upper) Nanosecond transient spectra of **DSi-6T** (0.05 mM) in deaerated benzonitrile; $\lambda_{\text{ex}} = 440$ nm. (lower) Decay-time profile of $^3\text{DSi-6T}^*$ at 710 nm.

Fig. S7. Nanosecond transient spectra of **DH-6T** (0.05 mM) in the presence of PCBM (0.1 mM) in deaerated benzonitrile; $\lambda_{\text{ex}} = 440$ nm. Inset: Decay-time profile of $^3\text{DH-6T}^*$ (700 nm), and rise-profile of DH-6T^{*+} (800 nm).

Fig. S8. Nanosecond transient spectra of **DH-6T** (0.05 mM) in the presence of PCBM (0.05 mM) in deaerated benzonitrile; $\lambda_{\text{ex}} = 440$ nm. Inset: Decay-time profile of $^3\text{DH-6T}^*$ (700 nm), and rise-profiles of DH-6T^{*+} (800 and 1500 nm) and $\text{PCBM}^{\cdot-}$ (1000 nm).

Fig. S9. Dependence of rate constant of the formation of DH-6T^{*+} at 800 nm on concentration of PCBM in deaerated benzonitrile. Inset: First-order plot.

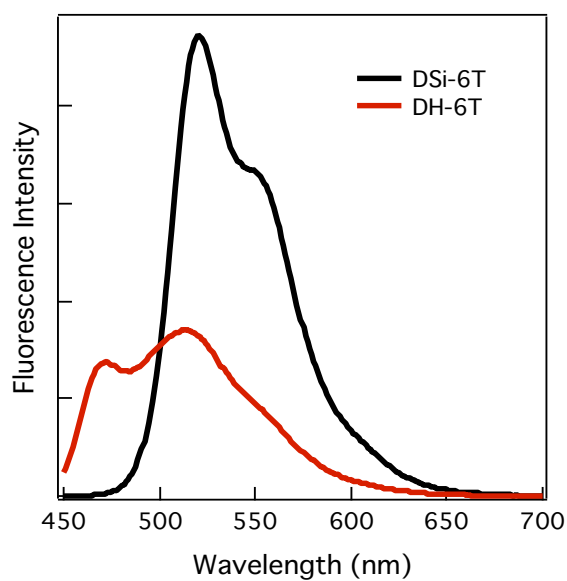


Fig. S1. Steady-state fluorescence spectra of **DH-6T** and **DSi-6T** in benzonitrile; $\lambda_{\text{ex}} = 415$ nm.

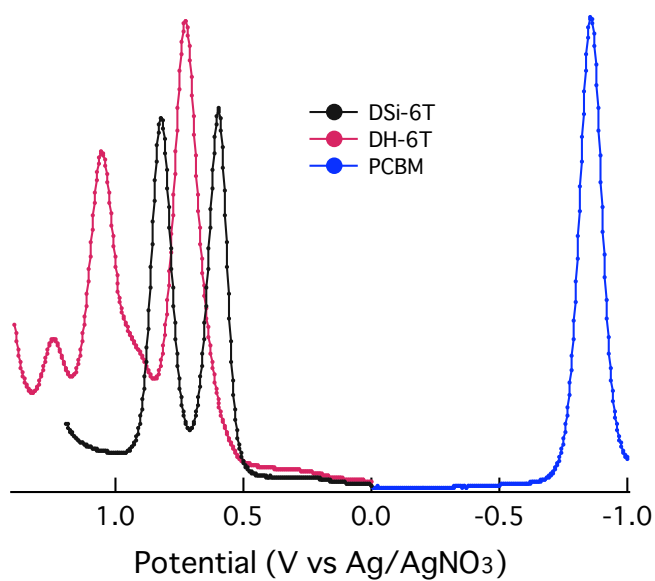


Fig. S2. DPV voltammograms of **DSi-6T**, **DH-6T** and **PCBM** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

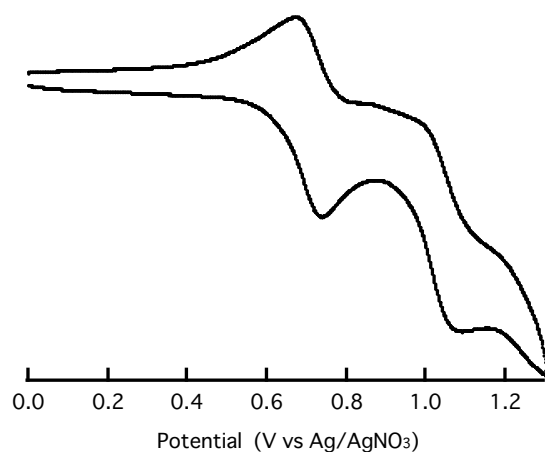


Fig. S3. CV of **DH-6T** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

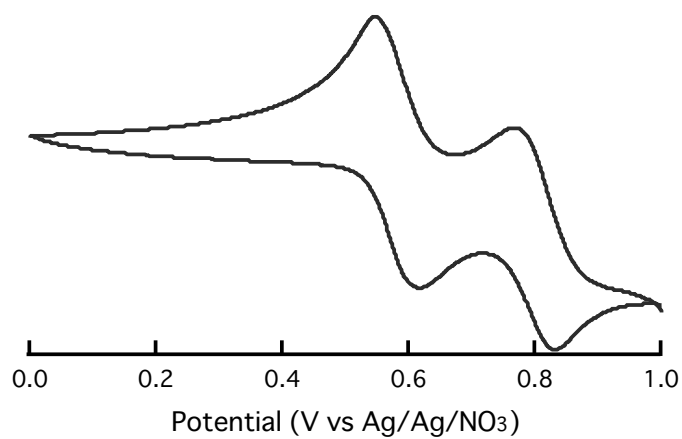


Fig. S4. CV of **DSi-6T** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

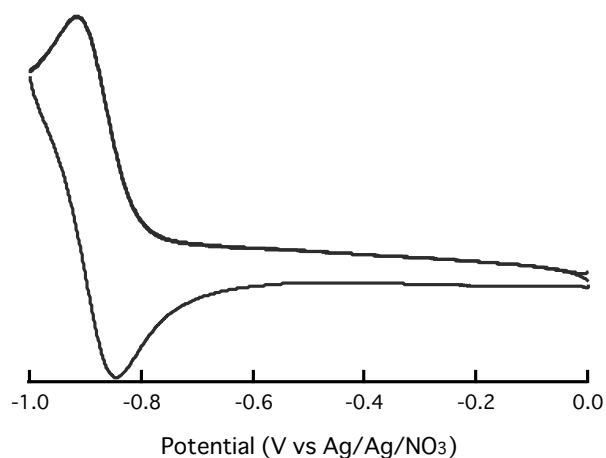


Fig. S5. CV of **PCBM** in deaerated benzonitrile. Scan rate = 50 mV s^{-1} .

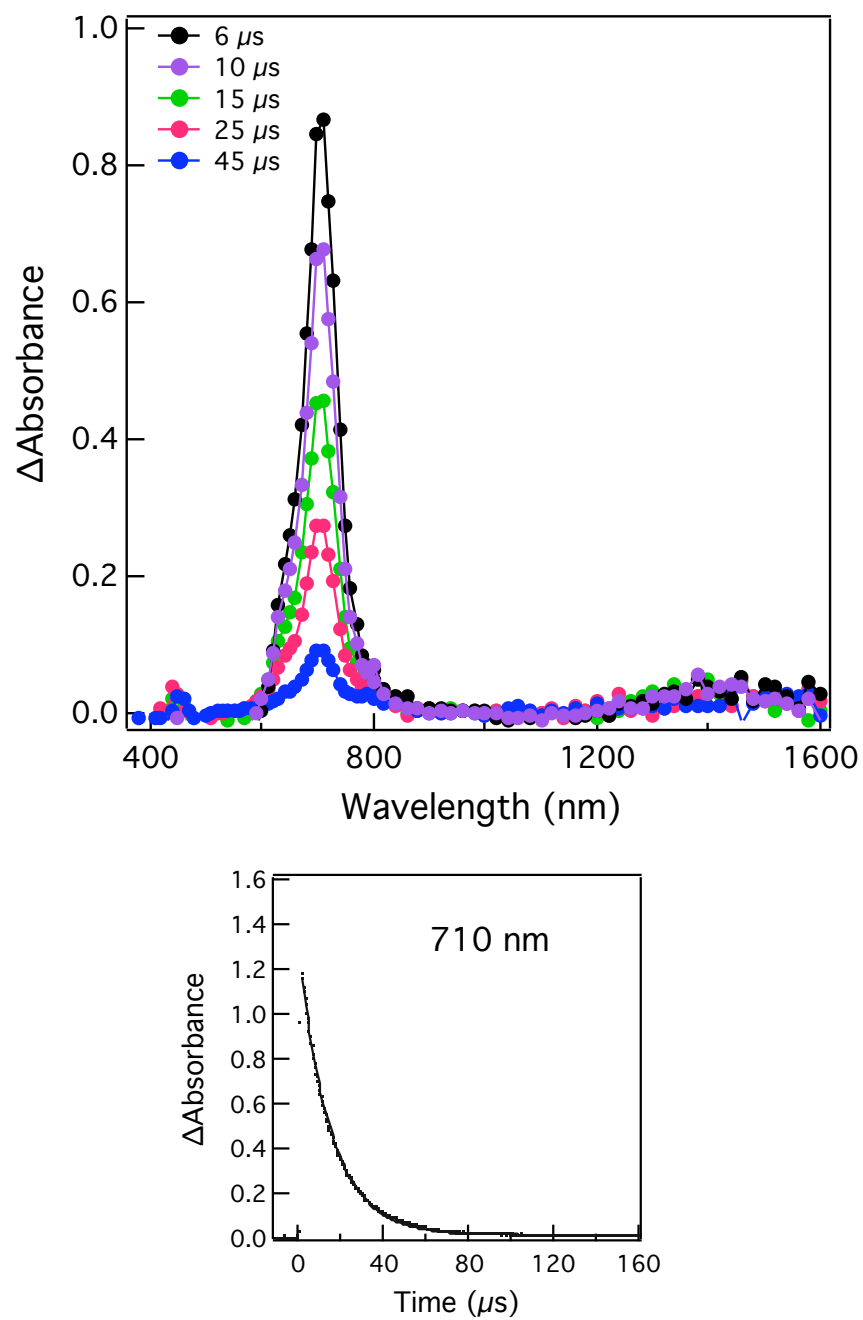


Fig. S6. (upper) Nanosecond transient spectra of **DSi-6T** (0.05 mM) in deaerated benzonitrile; λ_{ex} = 440 nm. (lower) Decay-time profile of 3 **DSi-6T*** at 710 nm.

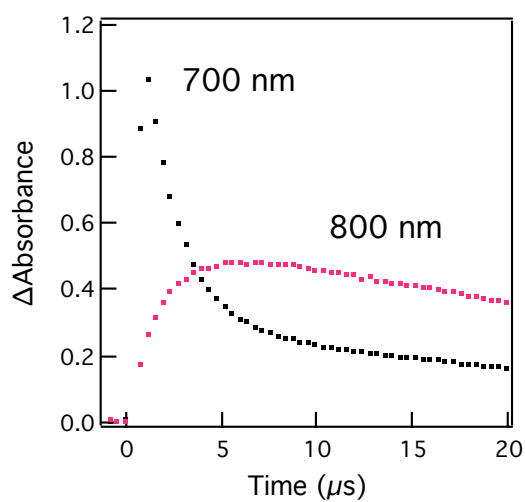
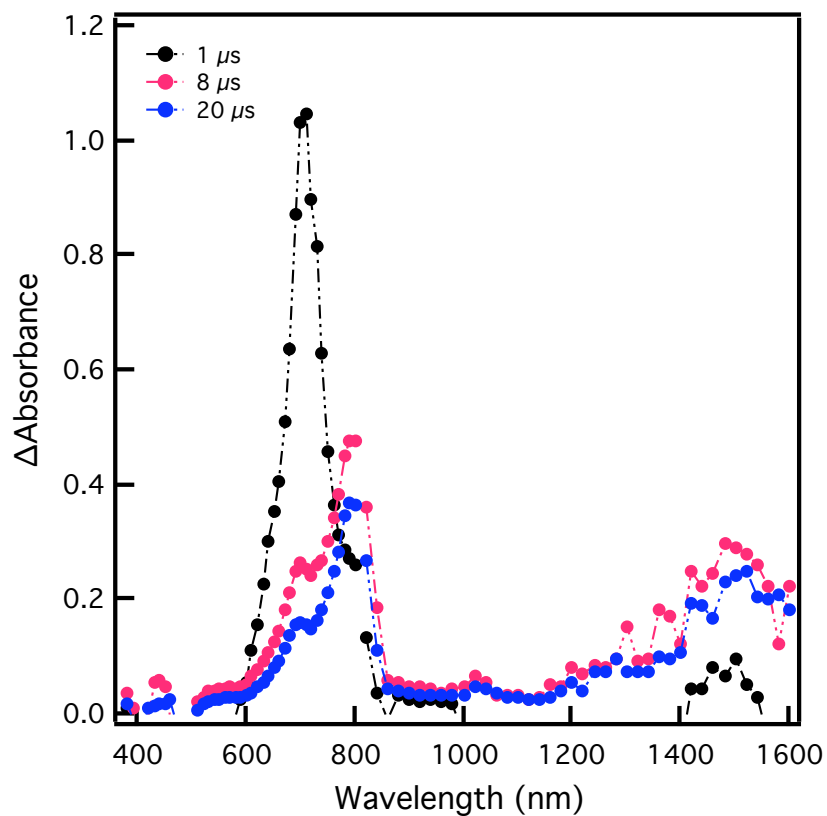


Fig. S7. Nanosecond transient spectra of **DH-6T** (0.05 mM) in the presence of PCBM (0.1 mM) in deaerated benzonitrile; $\lambda_{\text{ex}} = 440$ nm. Inset: Decay-time profile of $^3\text{DH-6T}^*$ (700 nm), and rise-profile of DH-6T^{++} (800 nm).

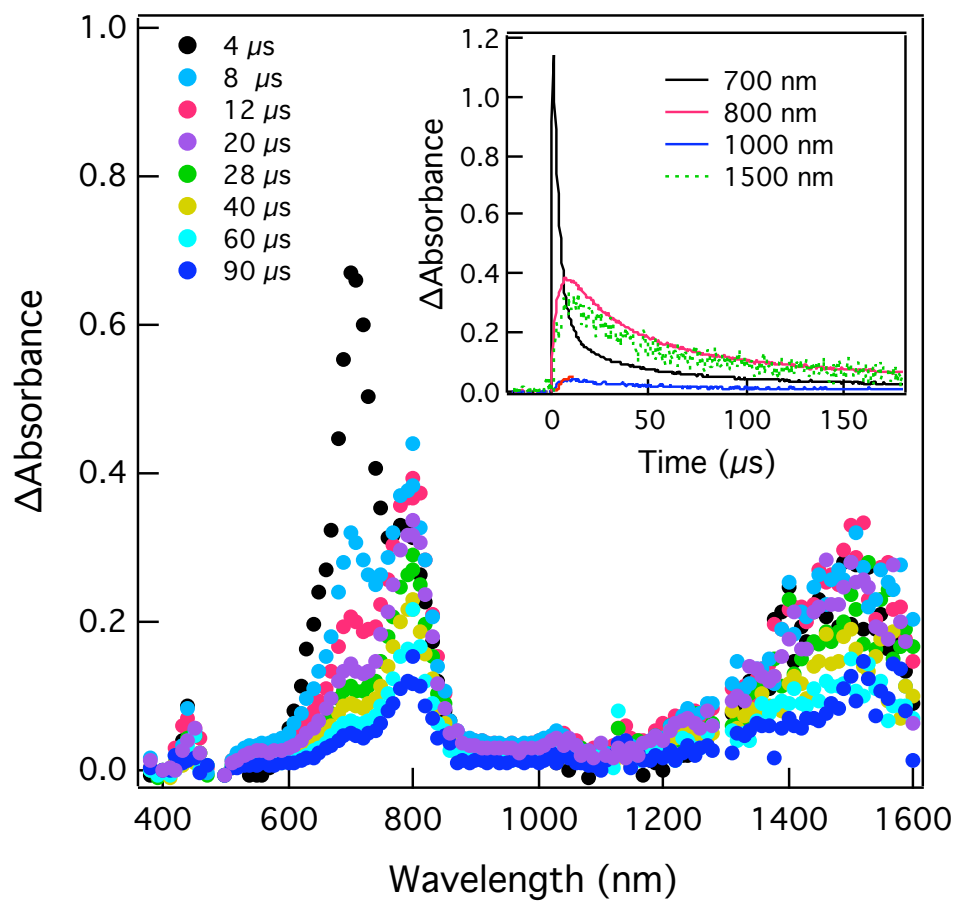


Fig. S8. Nanosecond transient spectra of **DH-6T** (0.05 mM) in the presence of PCBM (0.05 mM) in deaerated benzonitrile; $\lambda_{\text{ex}} = 440$ nm. Inset: Decay-time profile of $^3\text{DH-6T}^*$ (700 nm), and rise-profiles of DH-6T^{++} (800 and 1500 nm) and PCBM^- (1000 nm).

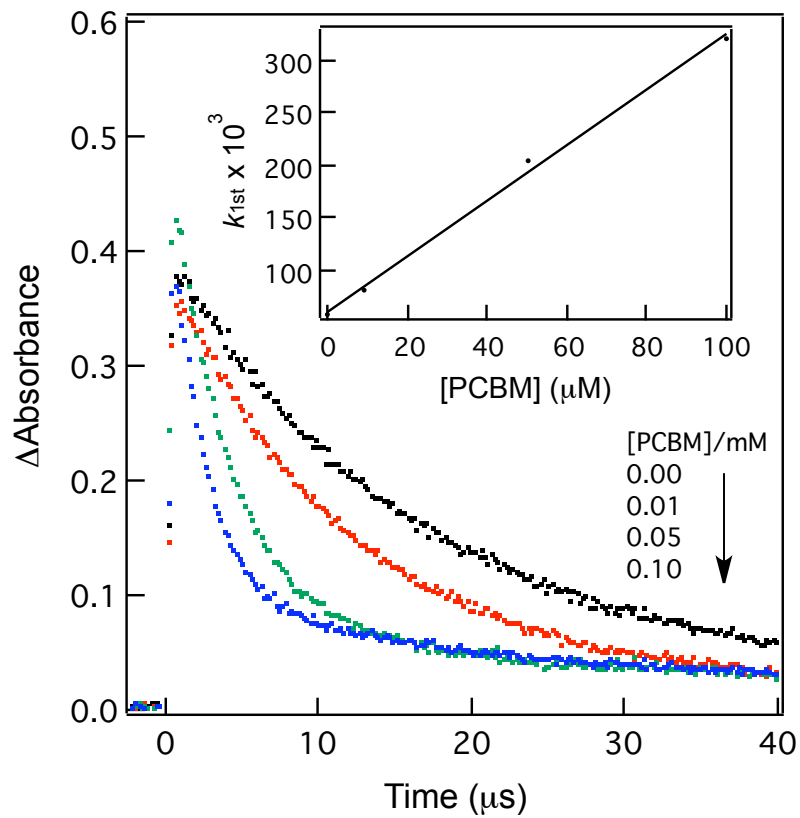


Fig. S9. Dependence of rate constant of the formation of DH-6T^{++} at 800 nm on concentration of PCBM in deaerated benzonitrile. Inset: First-order plot.