Efficient polymer solar cells based on a new benzo[1,2-b:4,5-b']dithiophene derivative with fluorinated alkoxyphenyl side chain

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Fig. S1. TGA plot of PBDTPF-DTBT with a heating rate of 10 °C min⁻¹ under inert atmosphere.

Fig. S2  (a) Transfer ($V_{DS} = -60$ V) and (b) output characteristics for a typical PBDTPF-DTBT-based OTFT device.
Fig. S3 $J$-$V$ curves of vertical diode with the device structure of ITO/PEDOT:PSS/PBEDTPF-DTBT/Au

Fig. S4 $J$-$V$ curves of devices with different ratio of PBTPD-PF-DTBT: PC$_{71}$BM.
Fig. S5 (a) $^1$H NMR and (b) $^{13}$C NMR spectra of M1.