A new two-dimensional D-A copolymer based on 4, 8-bis(2'-ethylhexylthiophene)thieno[2,3-f]benzofuran for high performance polymer solar cells

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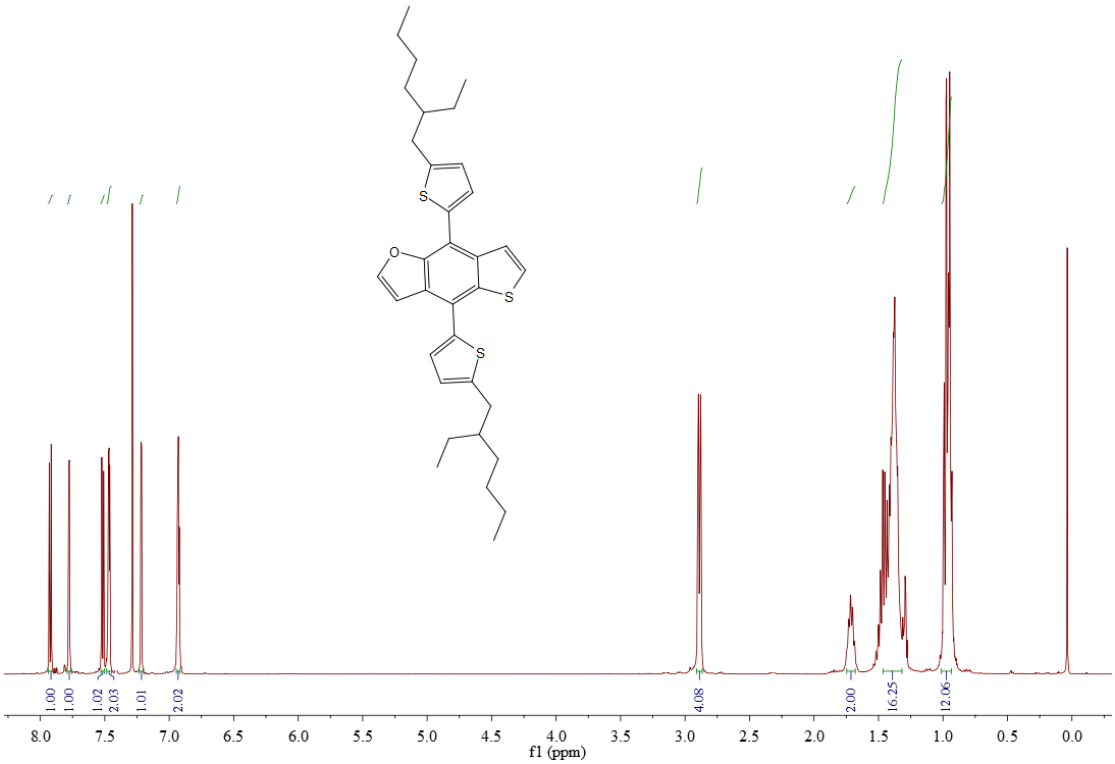

Figure S1 [1]HNMR of compound 4

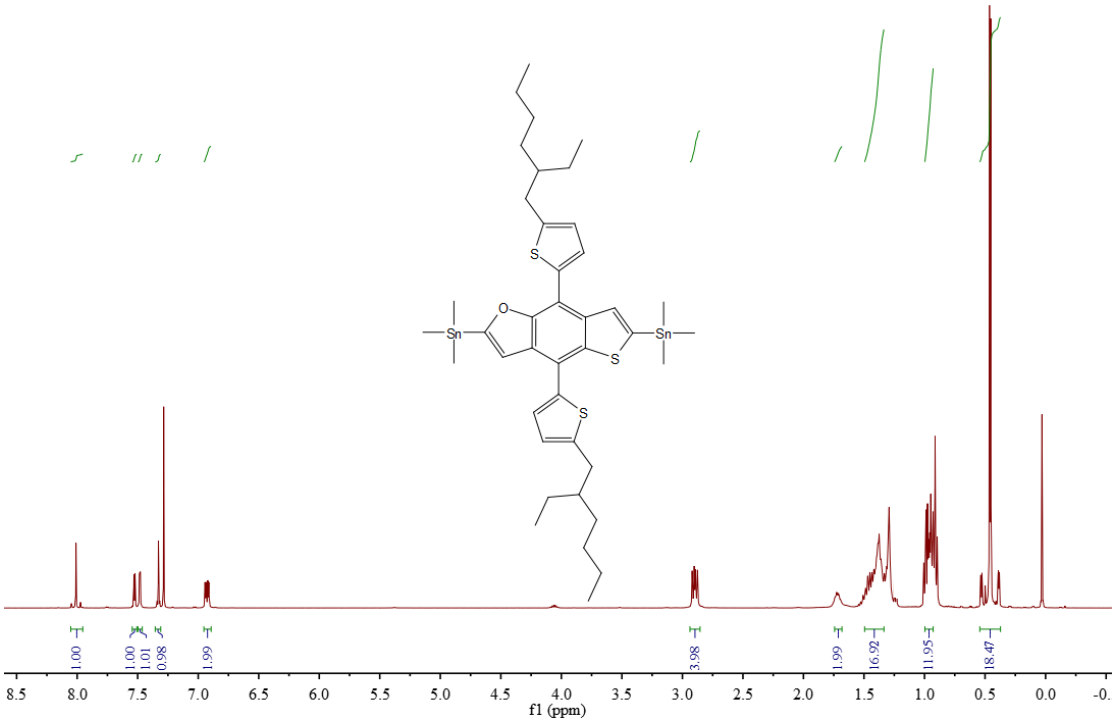

Figure S2 [1]HNMR of monomer M1

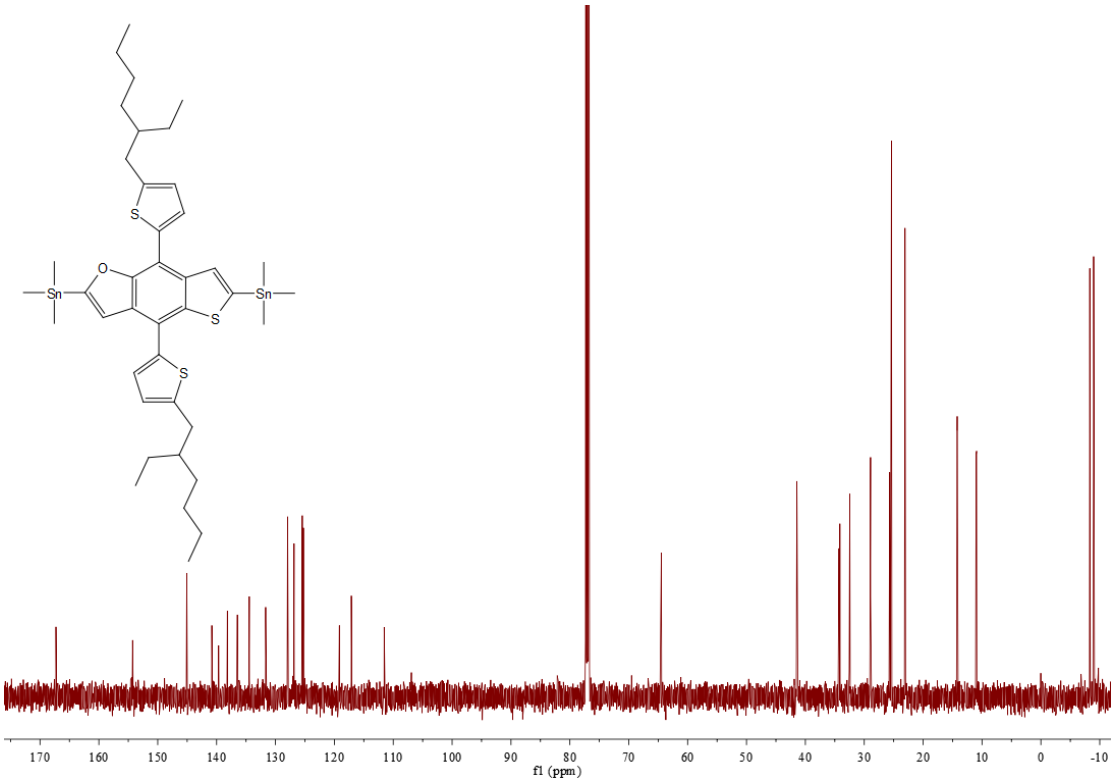

Figure S3 ^{13}C NMR of monomer M1

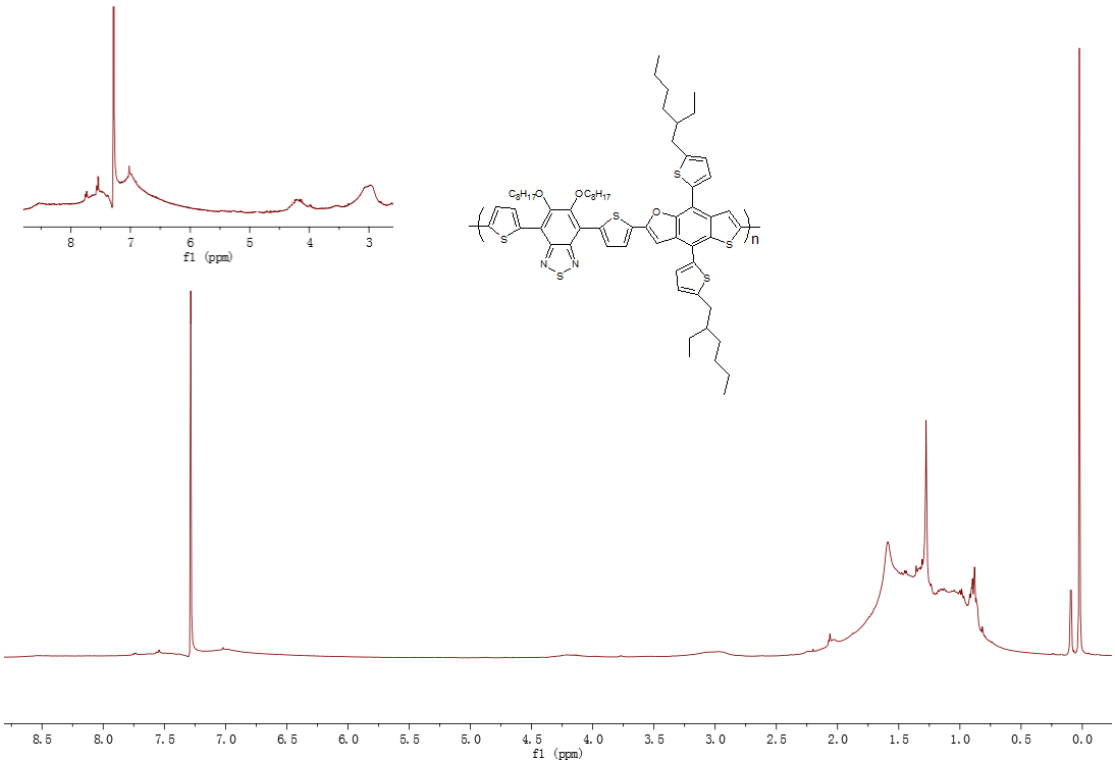

Figure S4 ^{1}HNMR of PTBFTDTBT

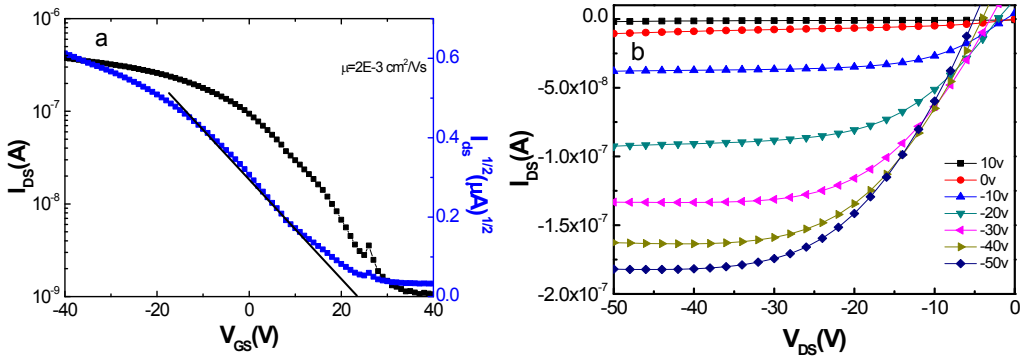

Figure S5 (a) Transfer characteristics of the PTBFTDTBT OFET measured at V_{ds}=-50 V. (b) Output characteristics with V_{DS} varying from 10 V to -50 V in steps of 10 V deposited on OTS modified SiO_2.

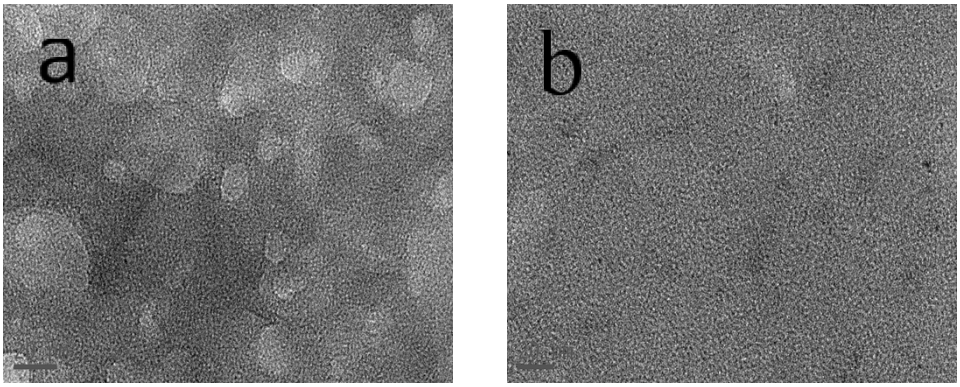

Figure S6 TEM images of PTBFTDTBT/PC_{71}BM blend fims prepared by ODCB. (a) 1:1 D/A ratio; (b) 1:2 D/A ratio. Scale bar: 20 nm.