Supplementary Information

A pyridine-flanked diketopyrrolopyrrole (DPP)-based donor-acceptor polymer showing high mobility in ambipolar and n-channel organic thin film transistors

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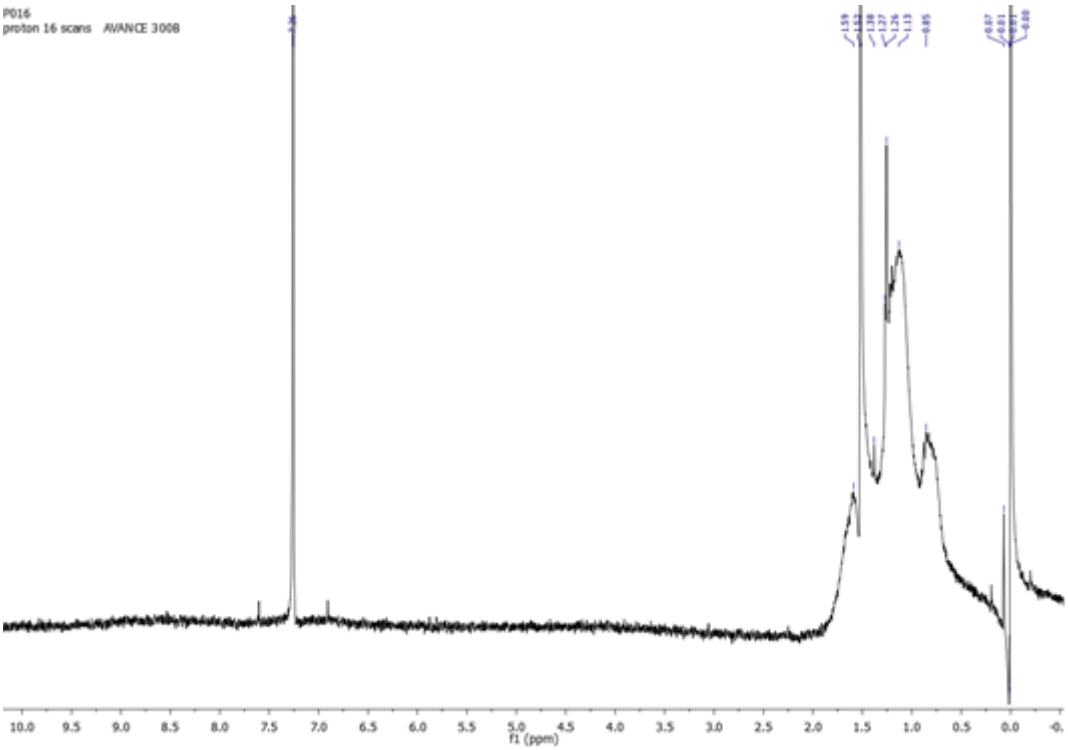

Figure S1. The 300 MHz ^{1}H NMR spectrum of PDBPyTT in $CDCl_3$.

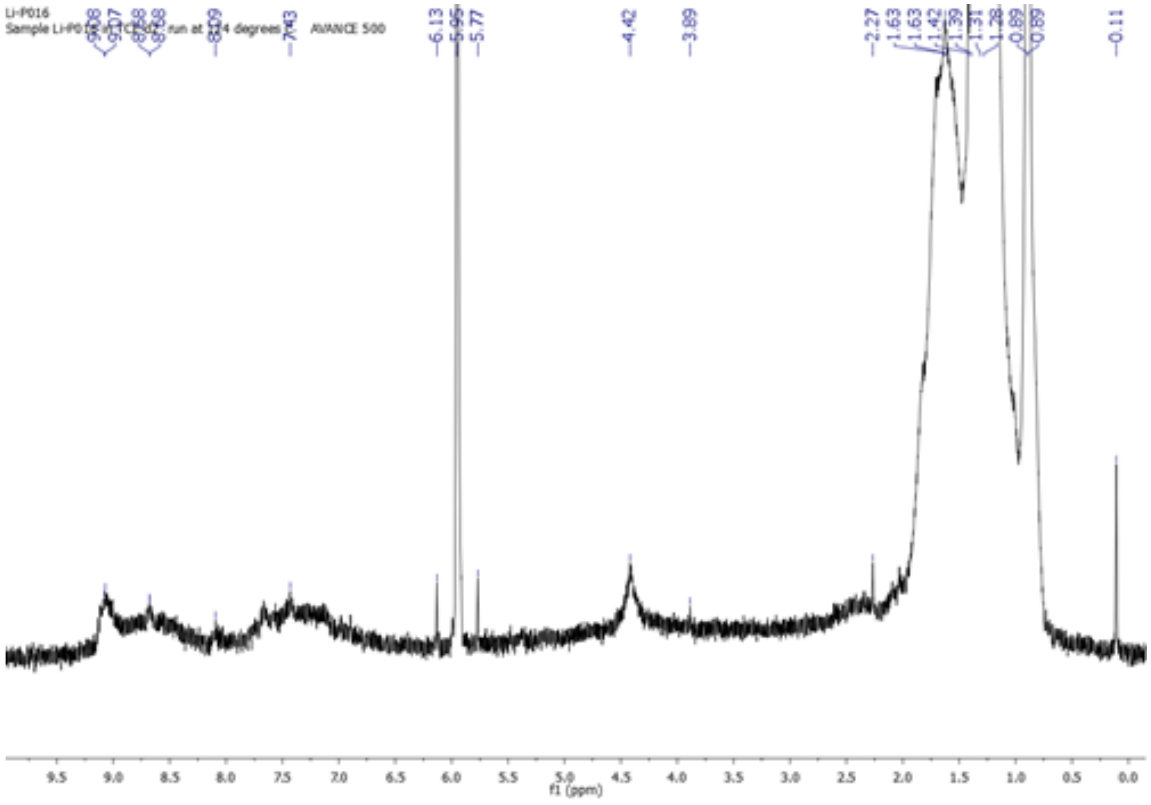

Figure S2. 500MHz ^{1}HNMR spectrum of PDBPyTT in 1,1,2,2-tetrachloroethane-d_2 at 125 °C.

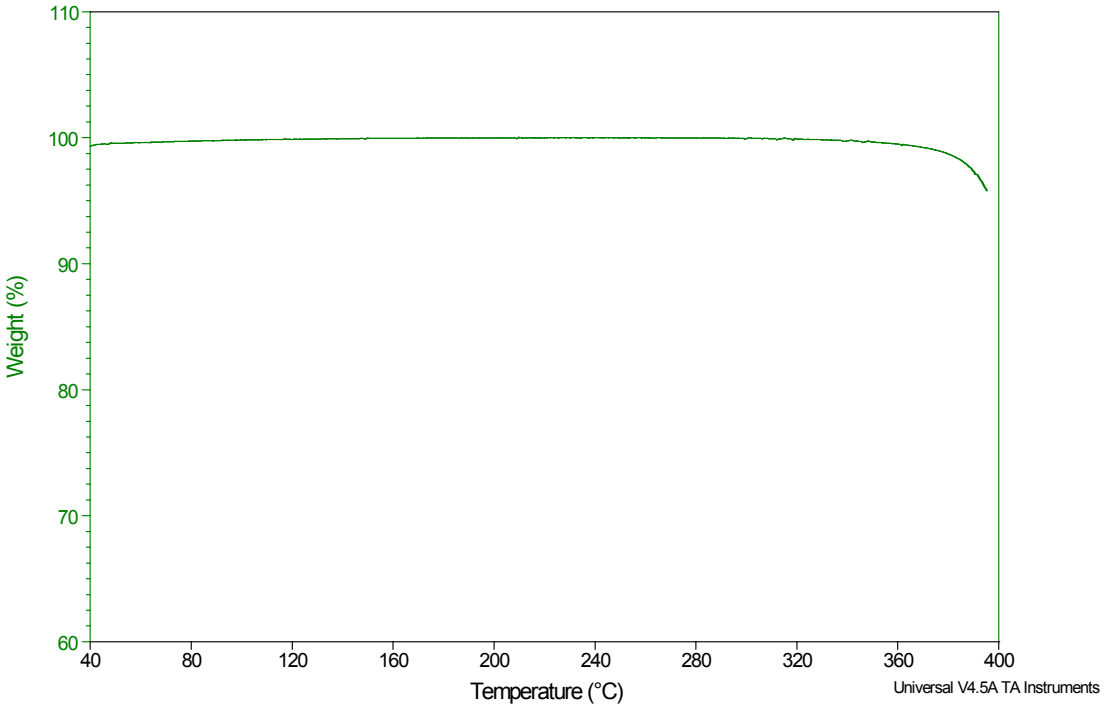

Figure S3. Thermogravimetric analysis (TGA) curves of PDBPyTT at a heating rate of 10 °C min^{-1} under N_2.

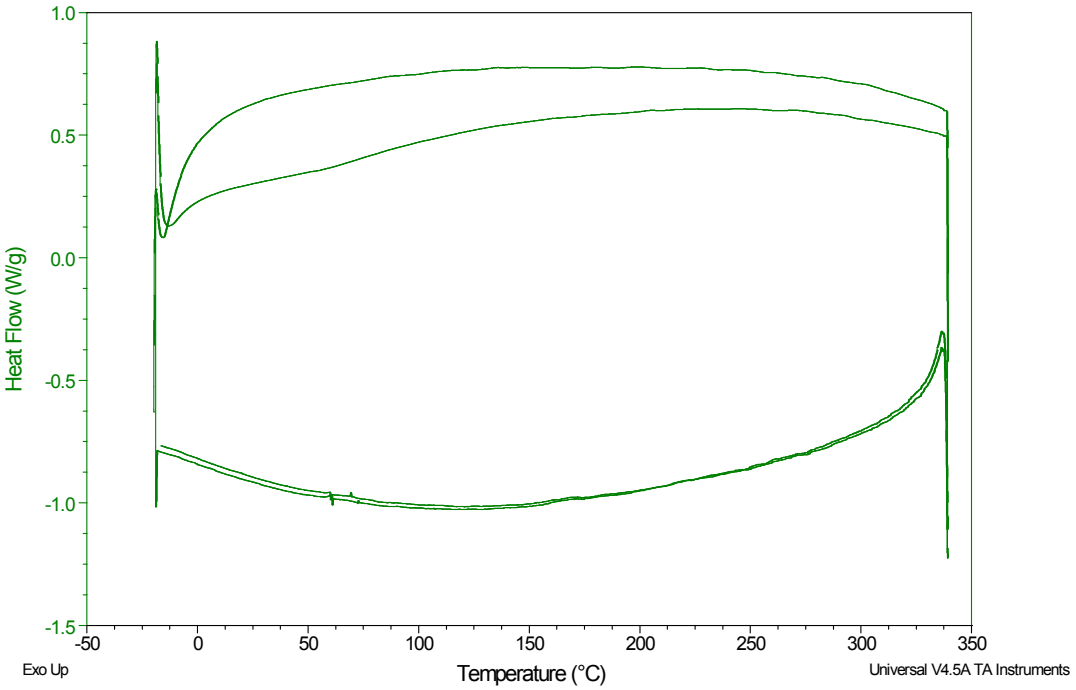

Figure S4. Differential scanning calorimetry (DSC) curves of PDBPyTT at a heating rate of 10 °C min^{-1} under nitrogen.

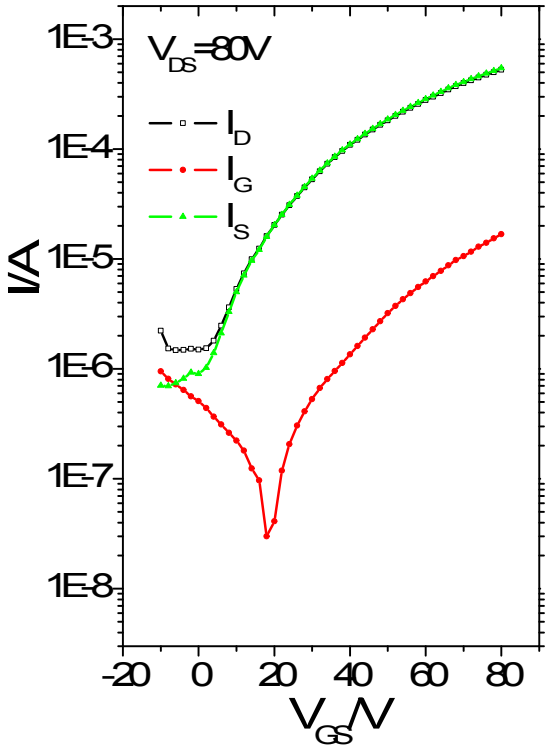

Figure S5. Transfer curves of the OTFT device shown in Figure 2 (right) in the main text. I_G, I_D, and I_S) and absolute gate, drain, and source currents measured in a three-electrode system, where I_D is equivalent to I_{DS} in Figure 2.

Table S1. OTFT performance of PDBPyTT thin films in bottom-gate, bottom-contact (BGBC) devices.

$T_{annl.}$ [a] °C	BGBC			
	μ_h,[b] $cm^2V^{-1}s^{-1}$		I_{on}/I_{off} [c]	V_{TH} V
	$\mu_{h\ max}$ [d]	$\mu_{h\ ave}$		
150	0.023	0.019 (±0.0029)	~10^3	-21
200	0.054	0.044 (±0.011)	~10^4	-6

[a] Annealing temperature; [b] Hole mobility measured at V_{DS} = -100 V; [c] Current on to off ratio; [d] The maximum mobility of the OTFT devices;