Supporting Information

Highly coplanar bis(thiazol-2-yl)-diketopyrrolopyrrole based donor-acceptor copolymers for ambipolar field effect transistors

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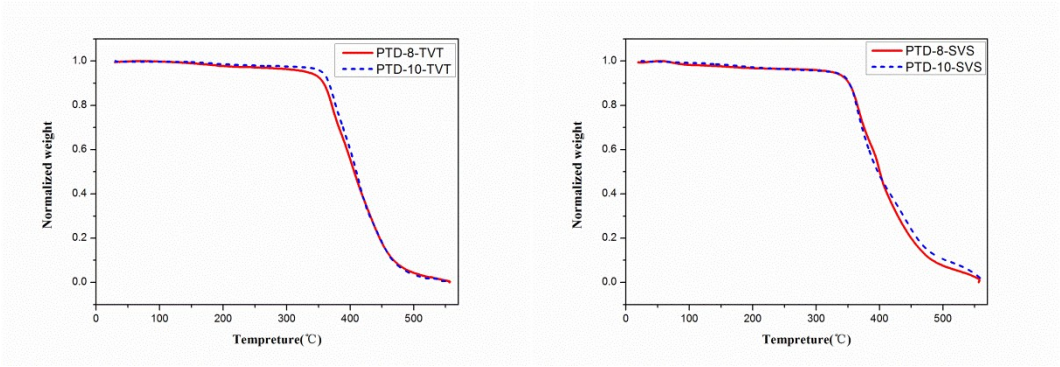


Figure S1. TGA curves of the TZDPP-based polymers.

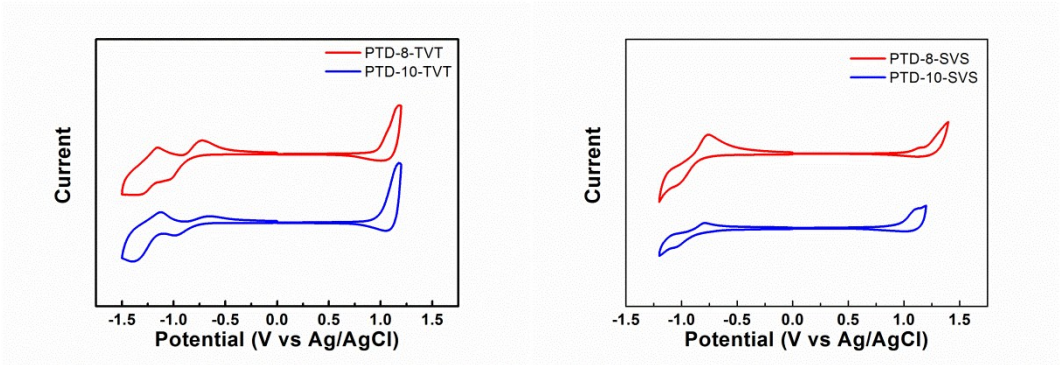


Figure S2. Cyclic voltammogram of polymer thin films.

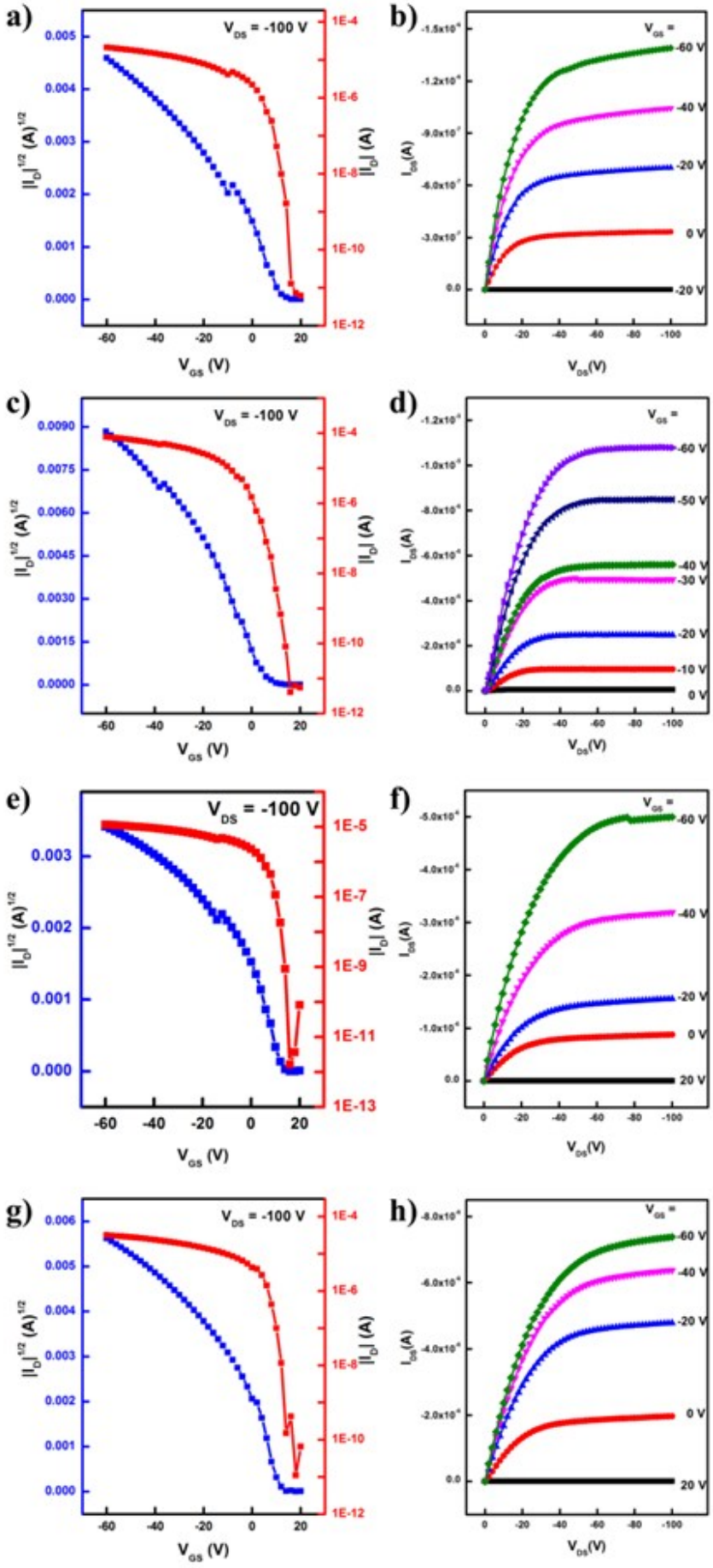

a)
V_DS = -100 V
|I_D|^1/2 (A)^1/2
|I_D| (A)
V_GS (V)
b)
V_GS =
-60 V
-40 V
-20 V
0 V
-20 V
I_DS(A)
V_DS(V)
c)
V_DS = -100 V
|I_D|^1/2 (A)^1/2
|I_D| (A)
V_GS (V)
d)
V_GS =
-60 V
-50 V
-40 V
-30 V
-20 V
-10 V
0 V
I_DS(A)
V_DS(V)
e)
V_DS = -100 V
|I_D|^1/2 (A)^1/2
|I_D| (A)
V_GS (V)
f)
V_GS =
-60 V
-40 V
-20 V
0 V
20 V
I_DS(A)
V_DS(V)
g)
V_DS = -100 V
|I_D|^1/2 (A)^1/2
|I_D| (A)
V_GS (V)
h)
V_GS =
-60 V
-40 V
-20 V
0 V
20 V
I_DS(A)
V_DS(V)

Figure S3. Typical transfer (left) and output (right) curves of BGBC PFET devices based on a) PTD-8-TVT; c) PTD-10-TVT; e) PTD-8-SVS; g) PTD-10-SVS thin films.

Table S1. The properties of PFET devices with BGBC configurations

Polymer	μ ($cm^2\ V^{-1}\ s^{-1}$)		I_{on}/I_{off}
	average	max	
PTD-8-TVT	0.046	0.049	10^6–10^7
PTD-10-TVT	0.32	0.39	10^6–10^9
PTD-8-SVS	0.12	0.13	10^6–10^7
PTD-10-SVS	0.34	0.38	10^6–10^7

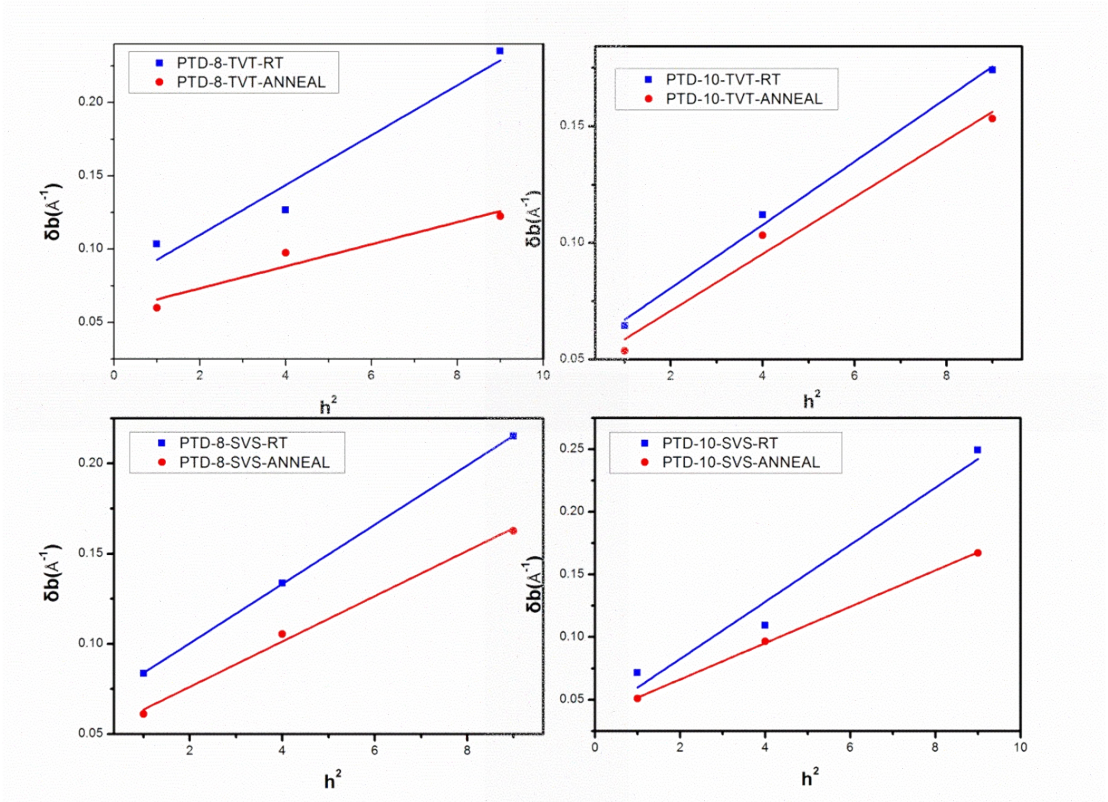
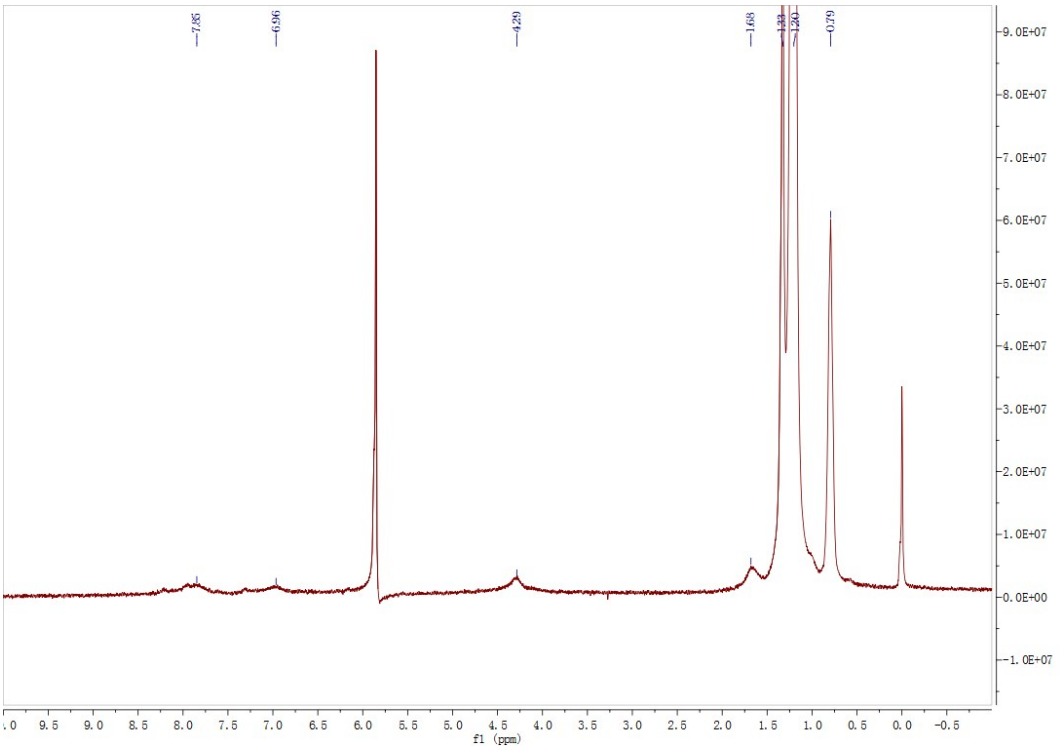


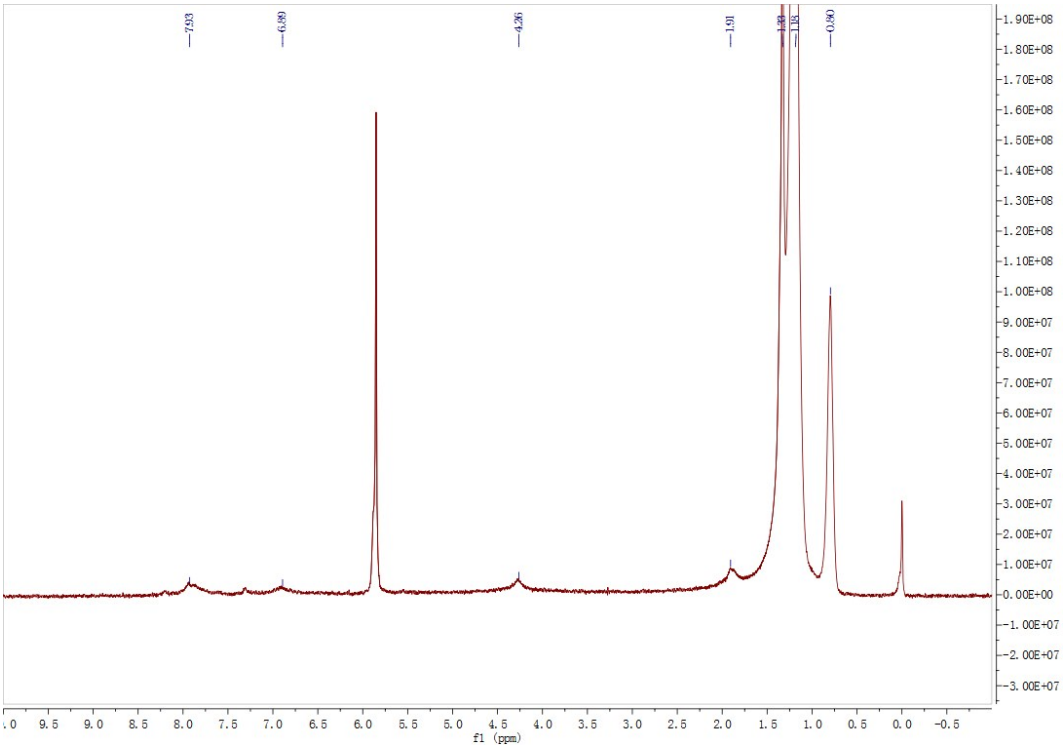
Figure S4. δb-h2 plots extracted from the 2D GIXD analysis of the polymer thin films.

^{1}H NMR spectra:

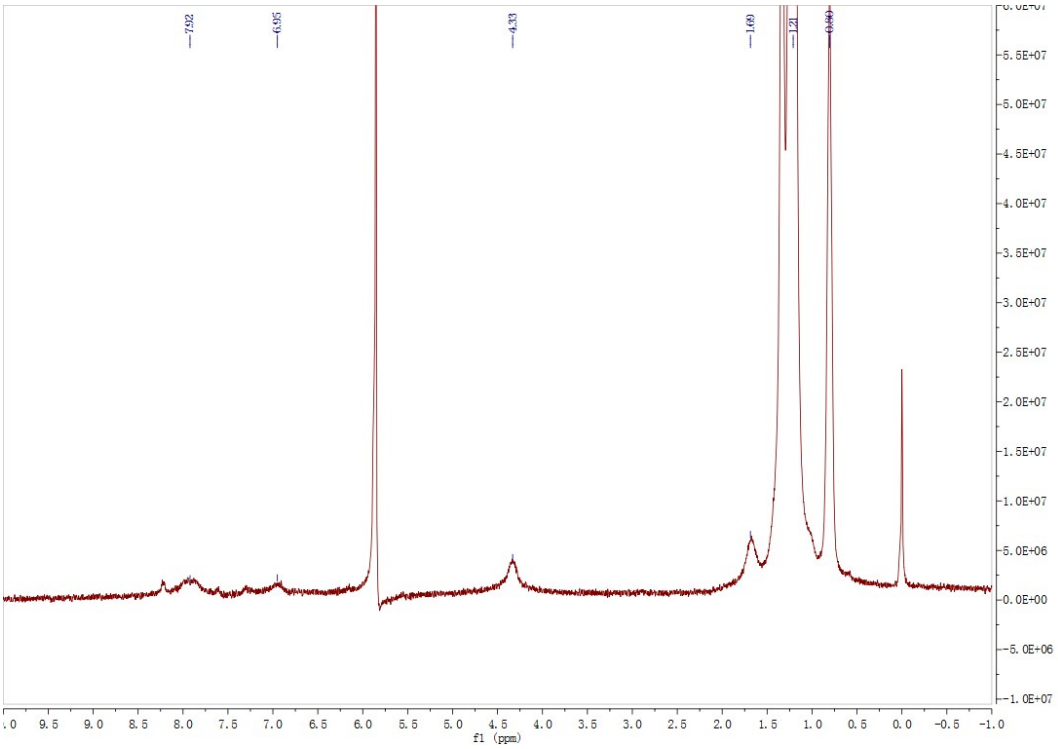
PTD-8-TVT:



PTD-10-TVT:



PTD-8-SVS:



PTD-10-SVS: