

Supporting Information

Pendant Group Effects on the Optical and Electrical Properties of Carbazole-Diketopyrrolopyrrole Copolymers

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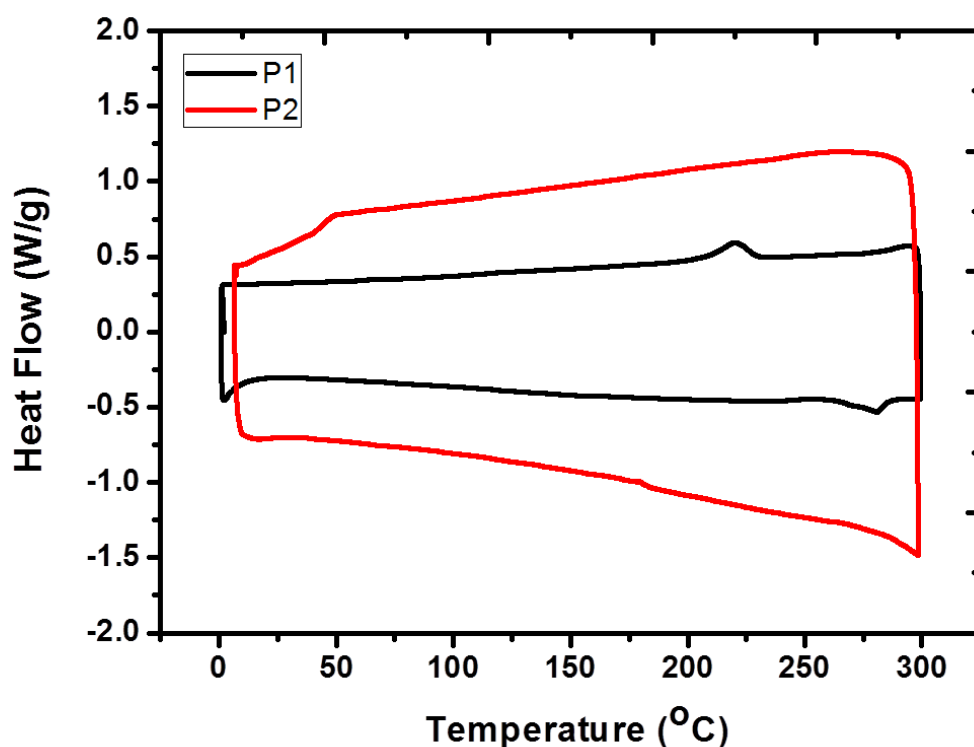


Figure S1. Differential Scanning Calorimetry (DSC) traces of **P1** and **P2**.

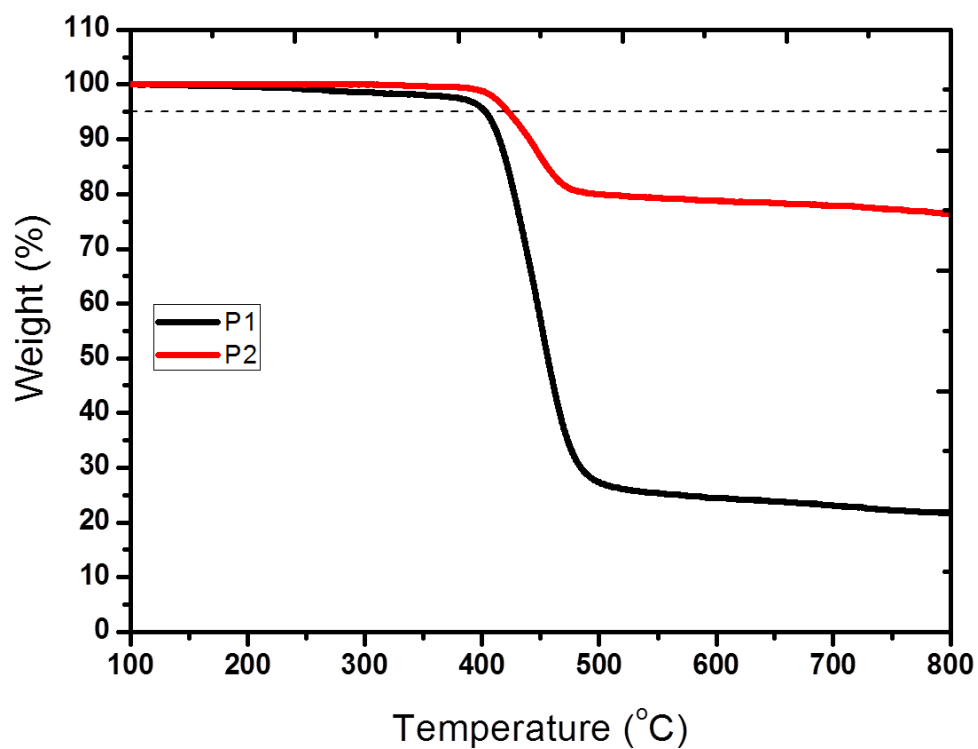
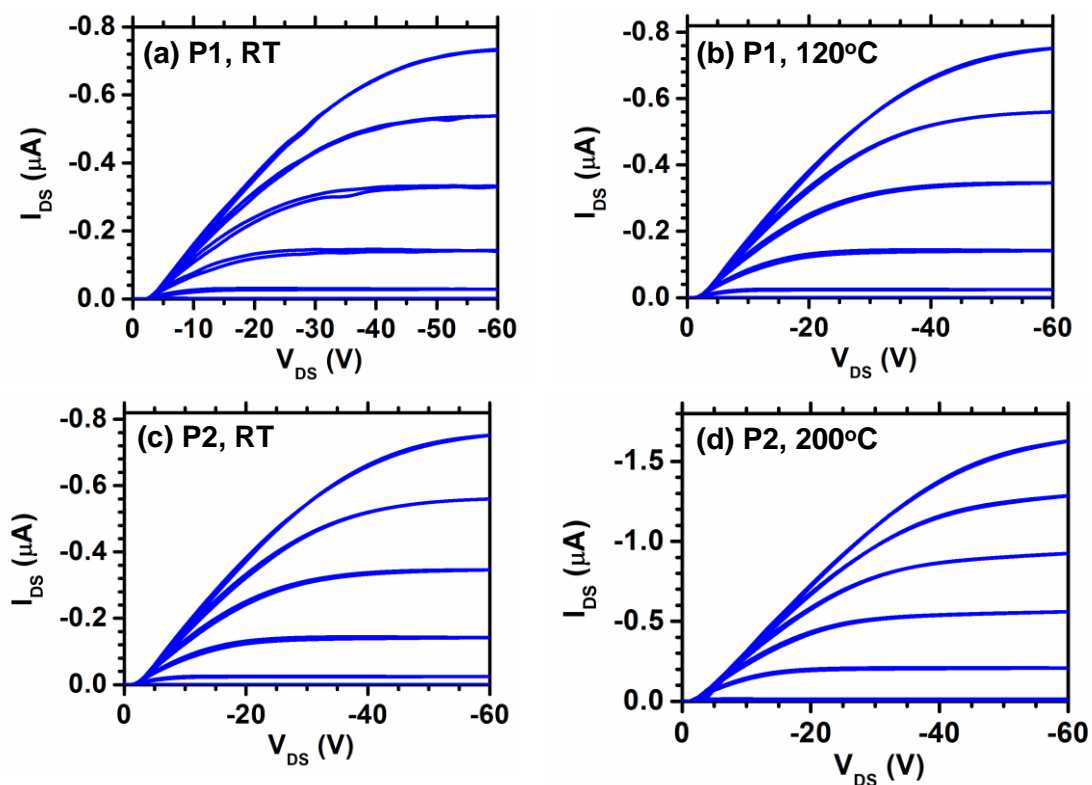


Figure S2. Thermogravimetric Analysis (TGA) of P1 and P2.



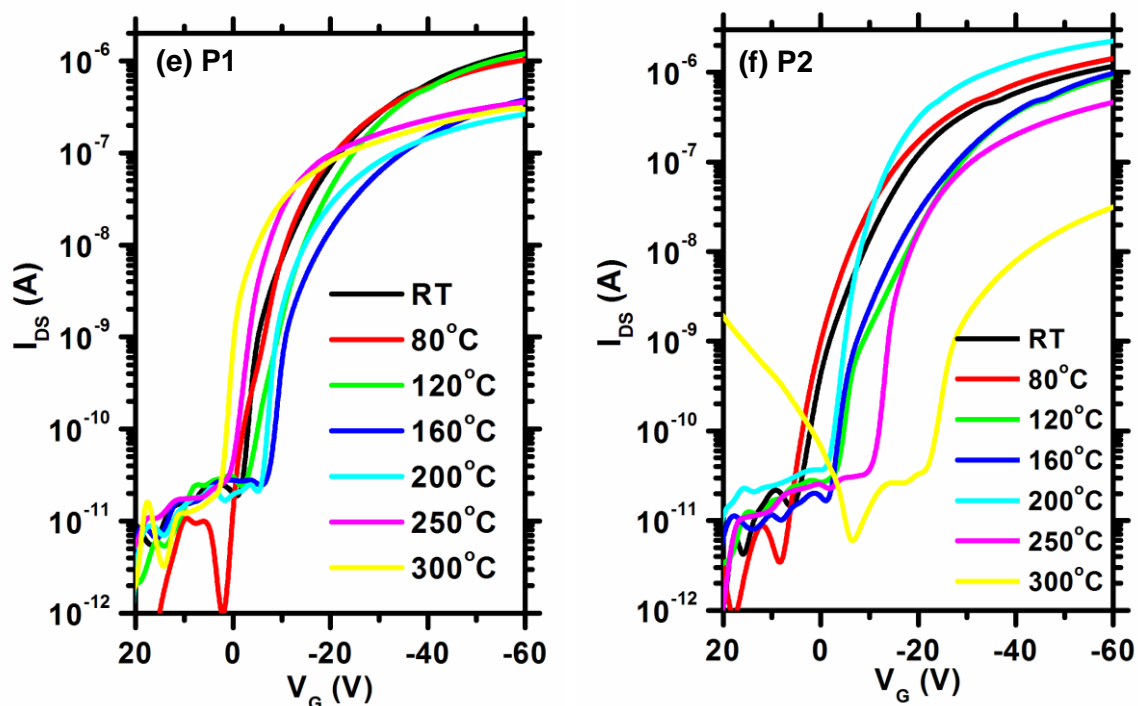


Figure S3. Output curves of **P1** FETs (a) at room temperature and (b) annealed at 120°C and **P2** FETs (c) at room temperature and (d) annealed at 200°C. Transfer curves of (e) **P1** and (f) **P2** FETs as a function of annealing temperature.

Table 1. Summary of device performance of **P1** and **P2** FETs with various annealing temperatures.

Annealing Temp. (°C)	P1			P2		
	μ (cm ² /V·s)	V_{th} (V)	I_{on}/I_{off}	μ (cm ² /V·s)	V_{th} (V)	I_{on}/I_{off}
RT	1.3×10^{-3}	-6.7	1.6×10^7	1.6×10^{-3}	-6	2.6×10^6
80	1.2×10^{-3}	-8.5	1.0×10^7	1.6×10^{-3}	-3	2.9×10^6
120	1.7×10^{-3}	-11	6.8×10^5	1.6×10^{-3}	-16	3.5×10^5
160	4.3×10^{-4}	-9	3.9×10^5	1.4×10^{-3}	-14	6.0×10^5
200	3.9×10^{-4}	-6	5.7×10^6	4.4×10^{-3}	-6	7.5×10^5
250	8.6×10^{-4}	-1	1.7×10^5	7.4×10^{-4}	-12	1.6×10^6
300	5.0×10^{-4}	-1	1.2×10^6	5.3×10^{-5}	-20	1.1×10^5

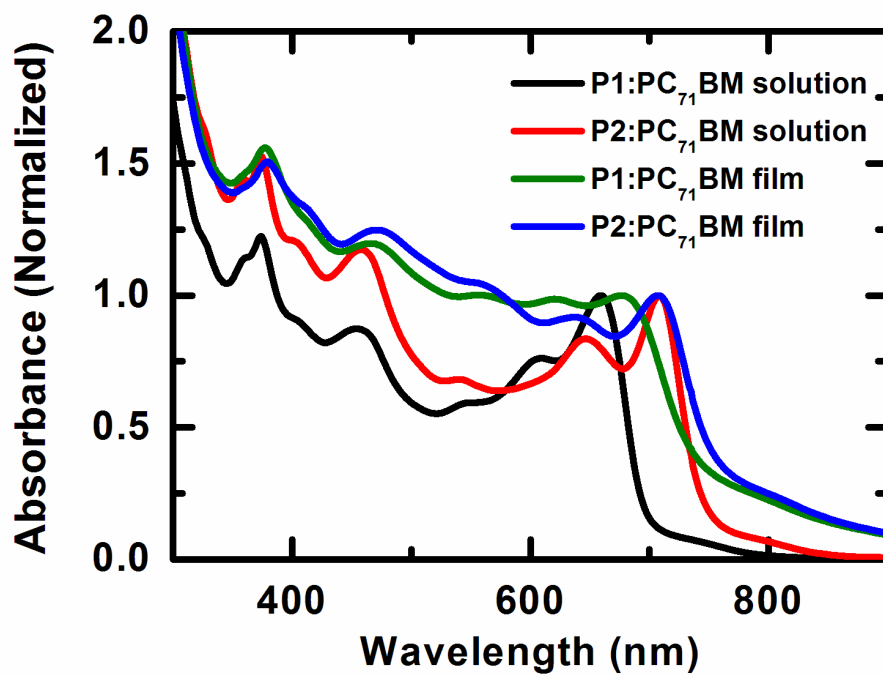


Figure S4. UV-Vis absorption spectra of **P1:PC₇₁BM** and **P2:PC₇₁BM** in solution and film.