Electronic Supplementary Material (ESI) for RSC Advances.

Functionalization of Side Chain Terminal with Fused Aromatic Ring in Carbazole-Diketopyrrolopyrrole Based Conjugated Polymer for Improved Charge Transport Property

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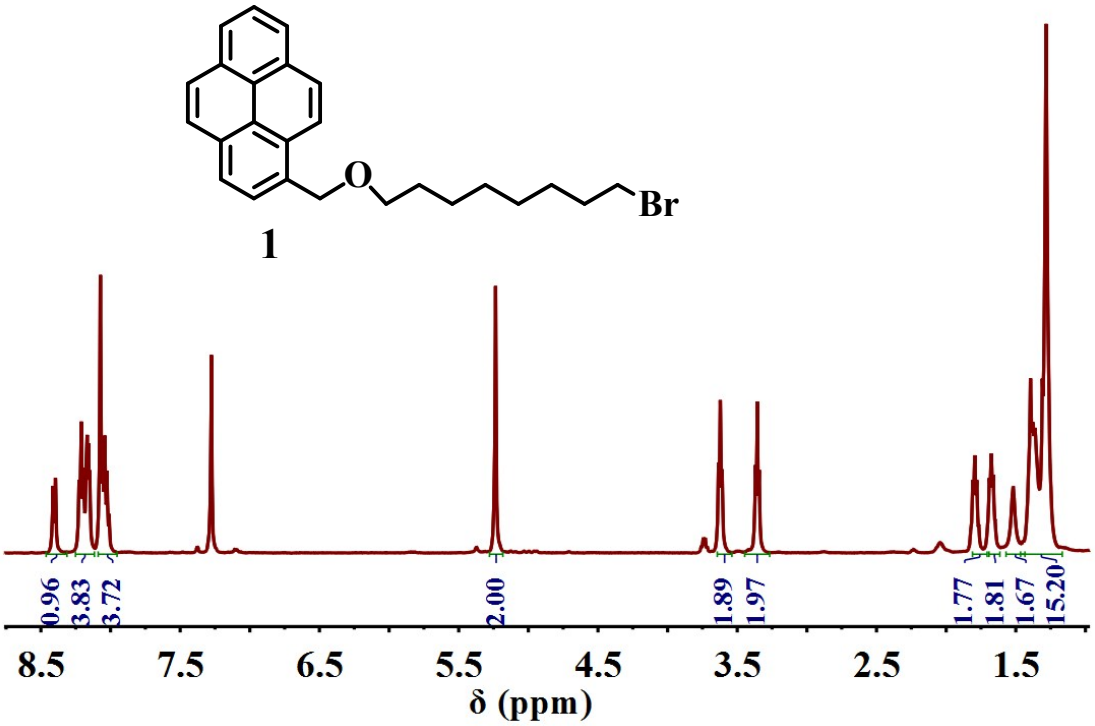

Figure. S1 ^{1}H NMR spectrum of **compound 1** in $CDCl_3$

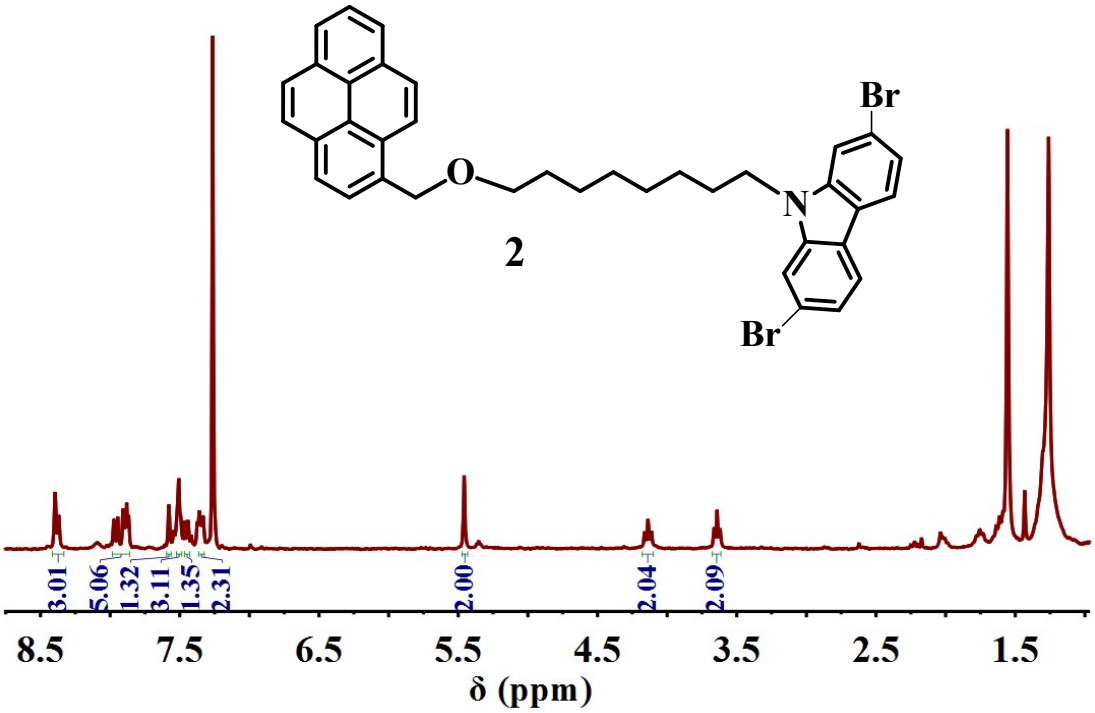

Figure. S2 ^{1}H NMR spectrum of **compound 2** in $CDCl_3$

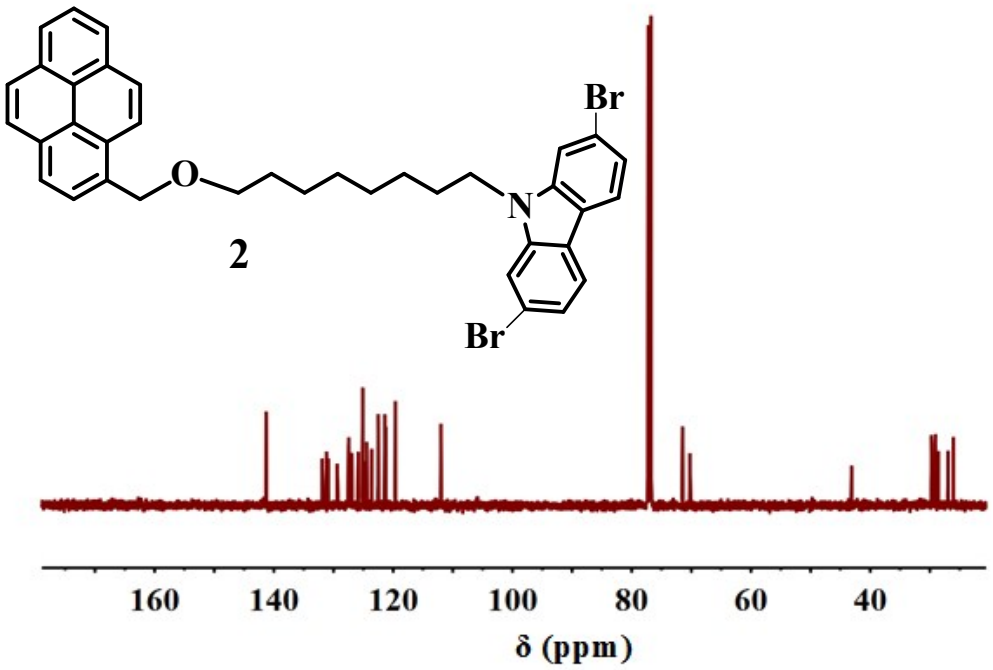

Figure. S3 ^{13}C NMR spectrum of **compound 2** in $CDCl_3$

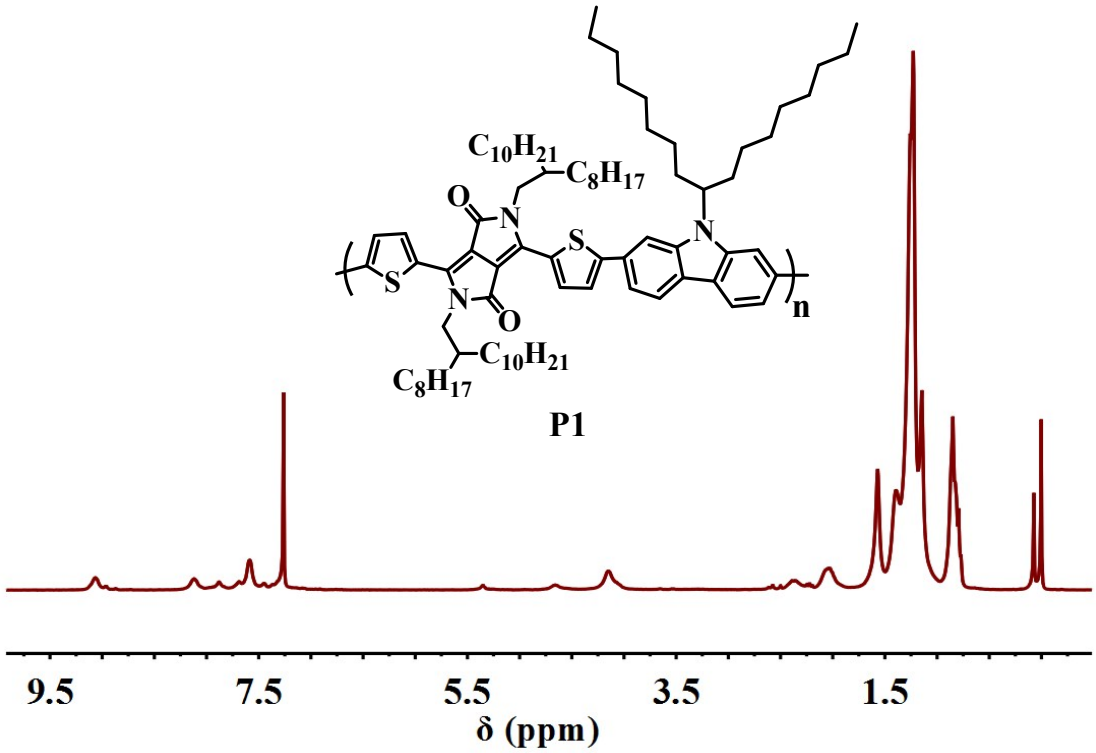

Figure. S4 ^{1}H NMR spectrum of **polymer P1** in $CDCl_3$

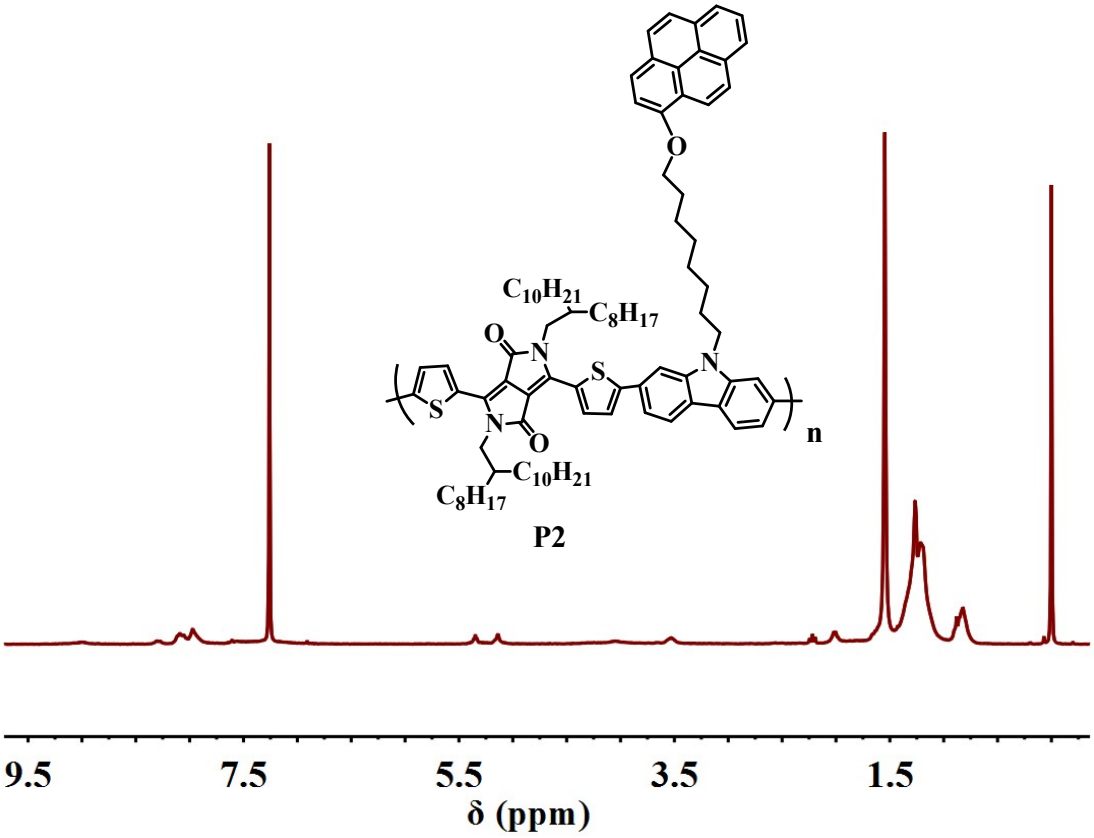

Figure. S5 ^{1}H NMR spectrum of **polymer P2** in $CDCl_3$

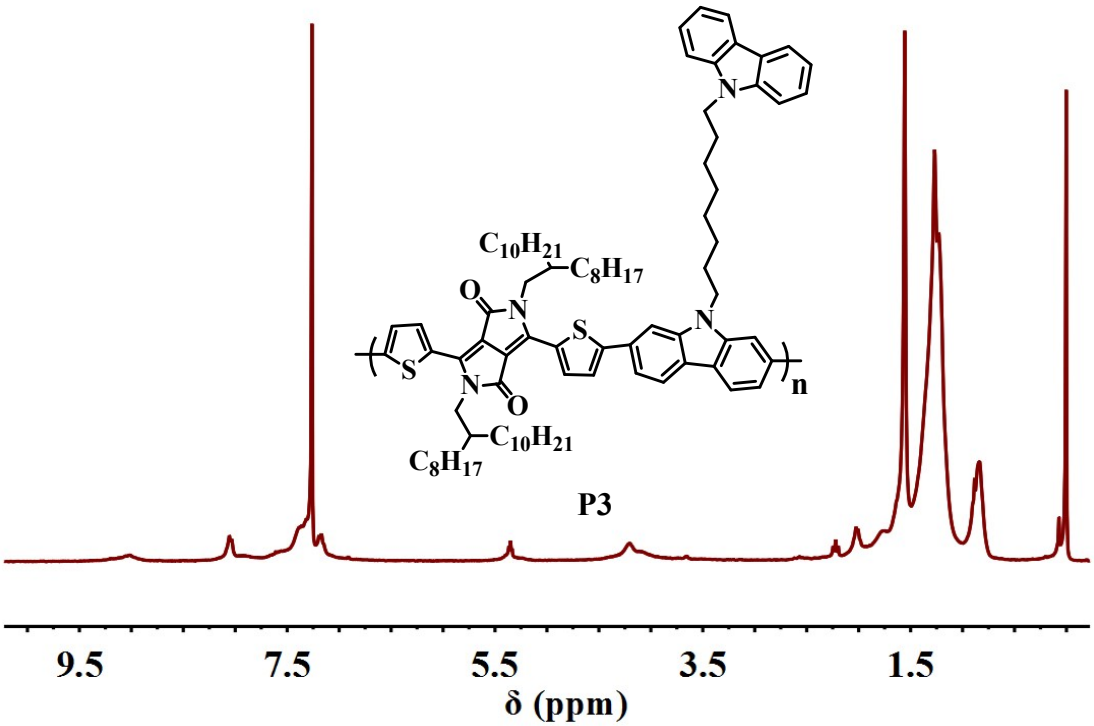

Figure. S6 ^{1}H NMR spectrum of **polymer P3** in $CDCl_3$

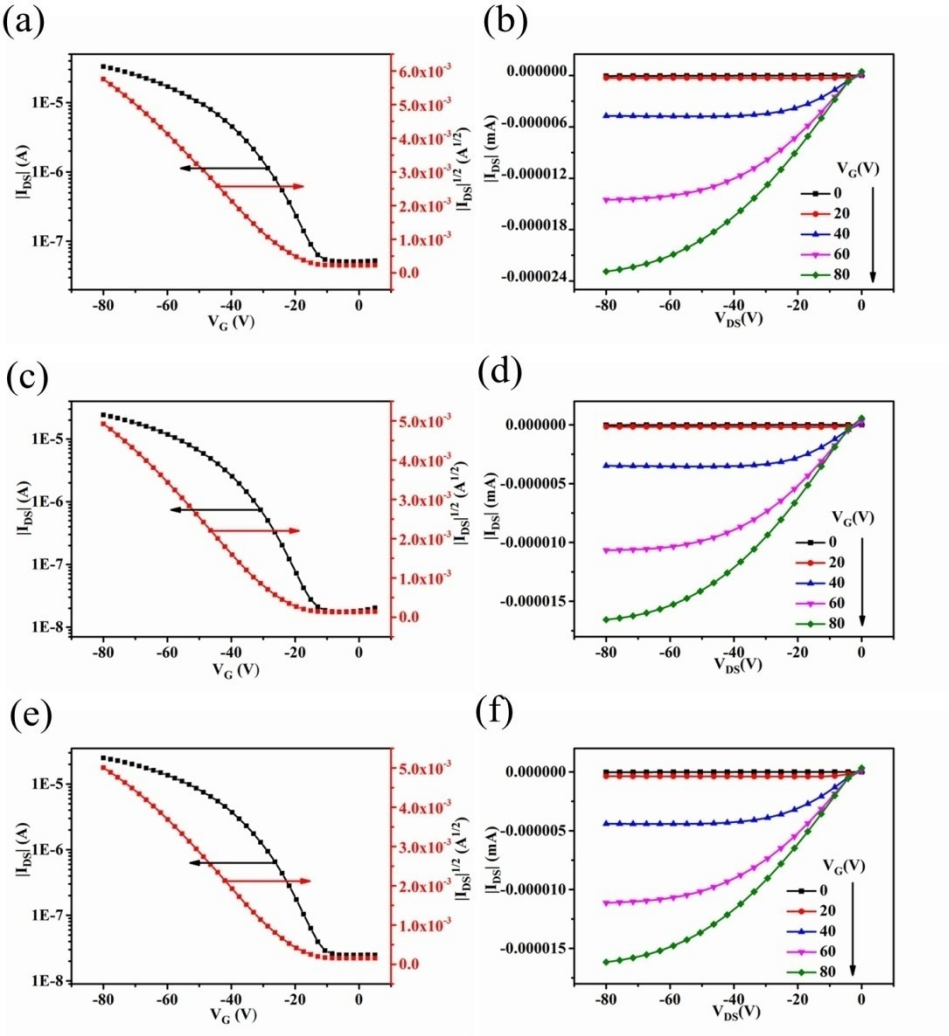

Figure S7. Transfer(left) and output(right) characteristics of OFET devices based on **polymer P1** under annealing temperature 120˚C (a, b), 180°C (c, d), and 210˚C(e, f)

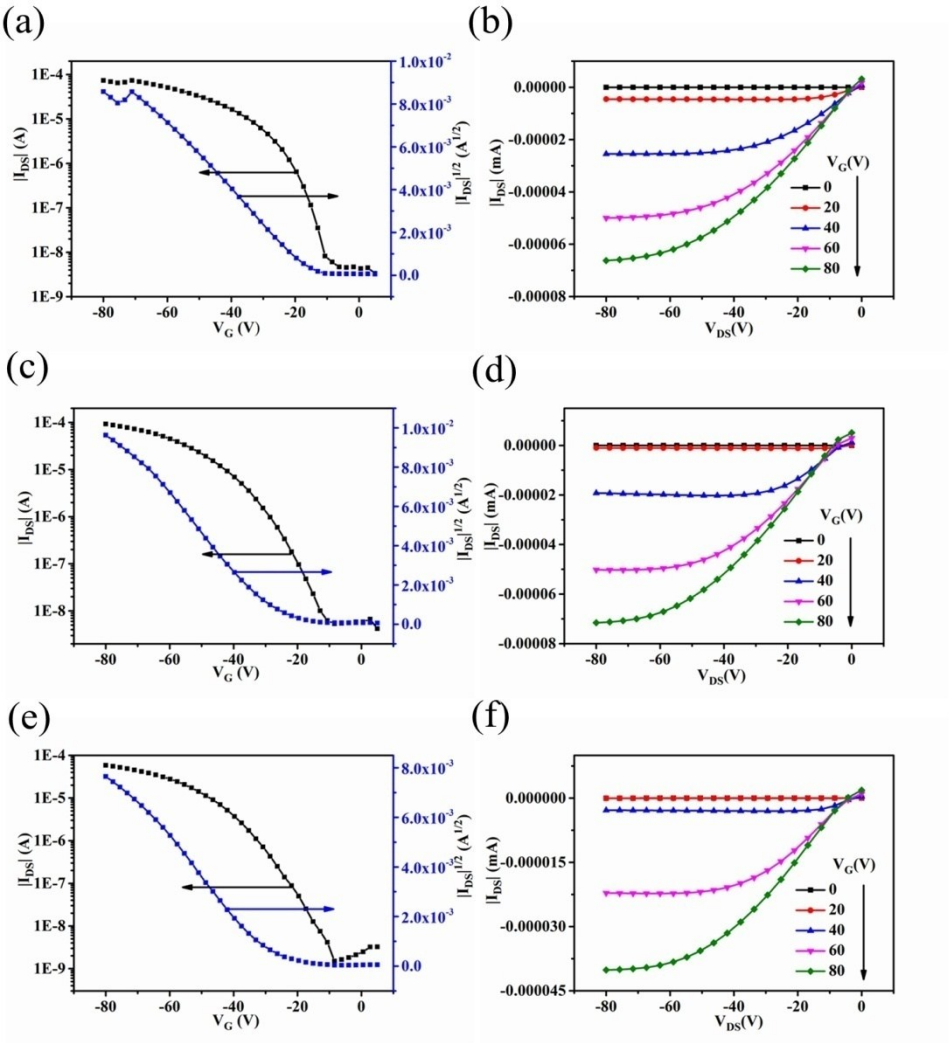

Figure S8. Transfer(left) and output(right) characteristics of OFET devices based on **polymer P2** under annealing temperature 120˚C (a, b), 150°C (c, d), and 210˚C(e, f)

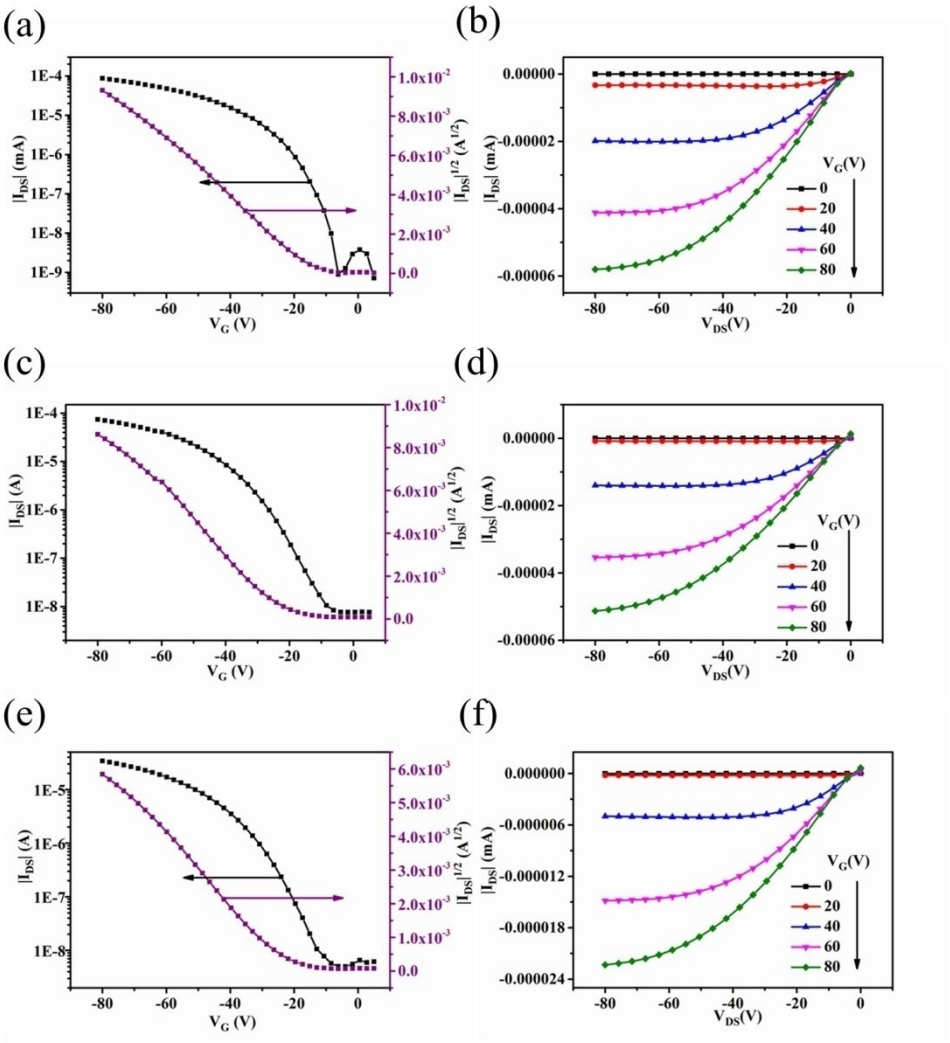

Figure S9. Transfer(left) and output(right) characteristics of OFET devices based on **polymer P3** under annealing temperature 120˚C (a, b), 150°C (c, d), and 210˚C(e, f)