Electronic Supplementary Material (ESI) for RSC Advances.

Thiophene-*S*,*S*-dioxidized indophenine (IDTO) based donor-acceptor polymers for n-channel organic thin film transistors

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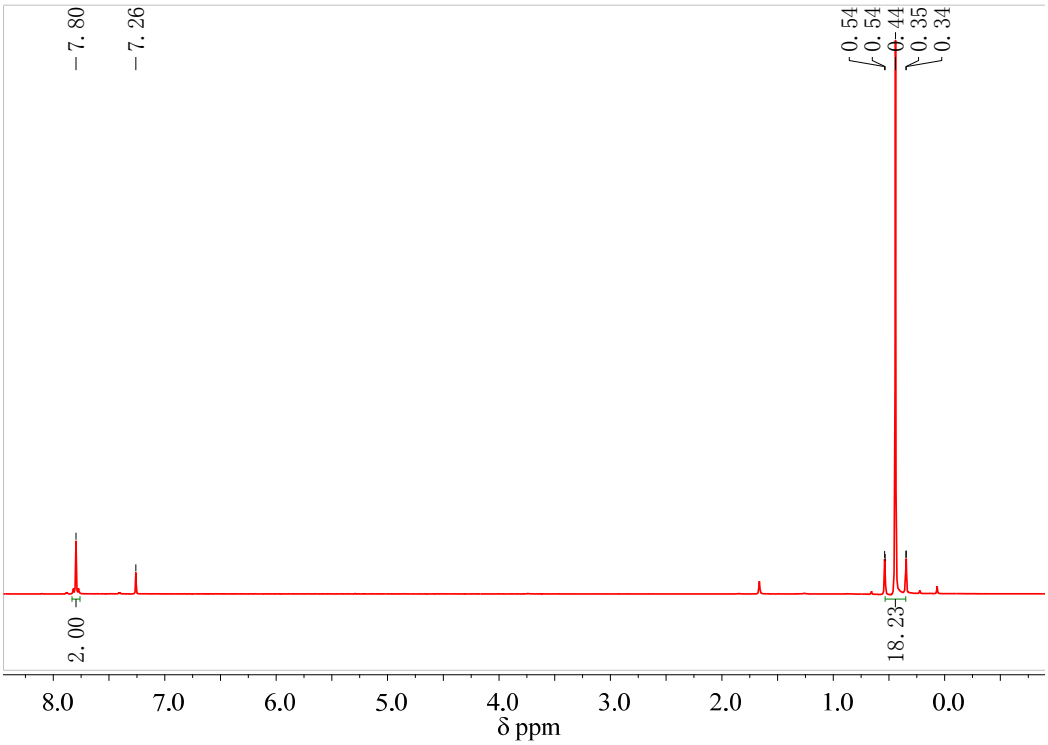

Figure S1. ^{1}H-NMR spectra of 5,5'-bis(trimethylstannyl)-2,2'-bithiazole (BTz) measured in $CDCl_3$.

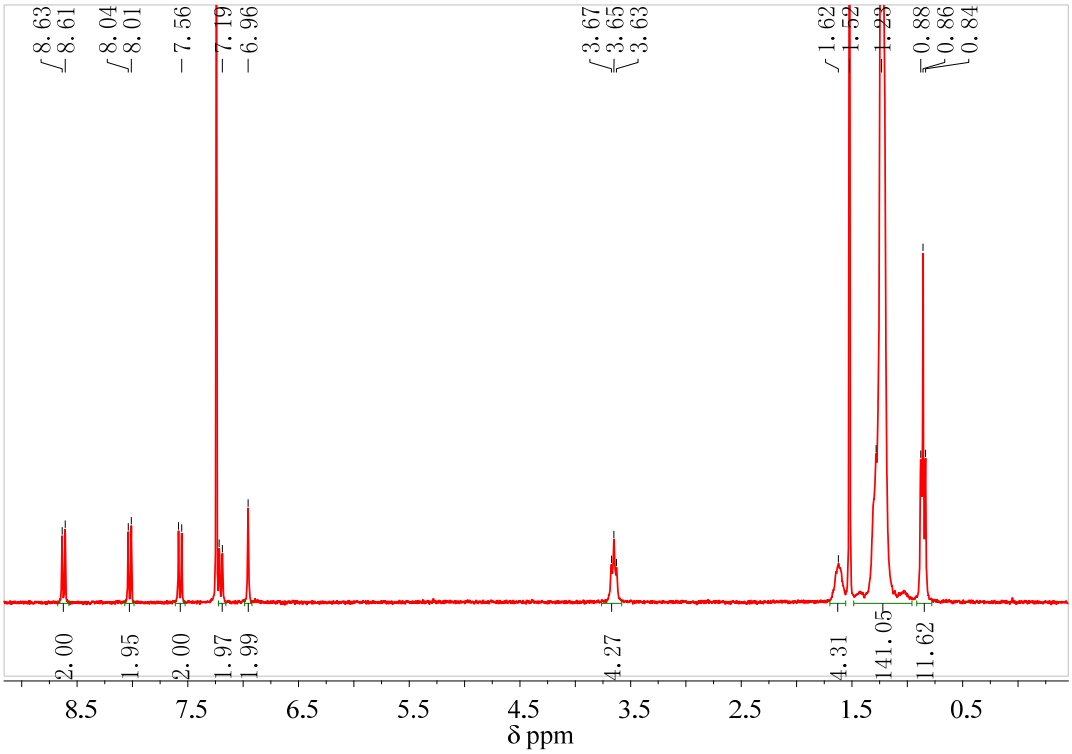

Figure S2. ^{1}H-NMR spectra of **IDTO-40** measured in $CDCl_3$.

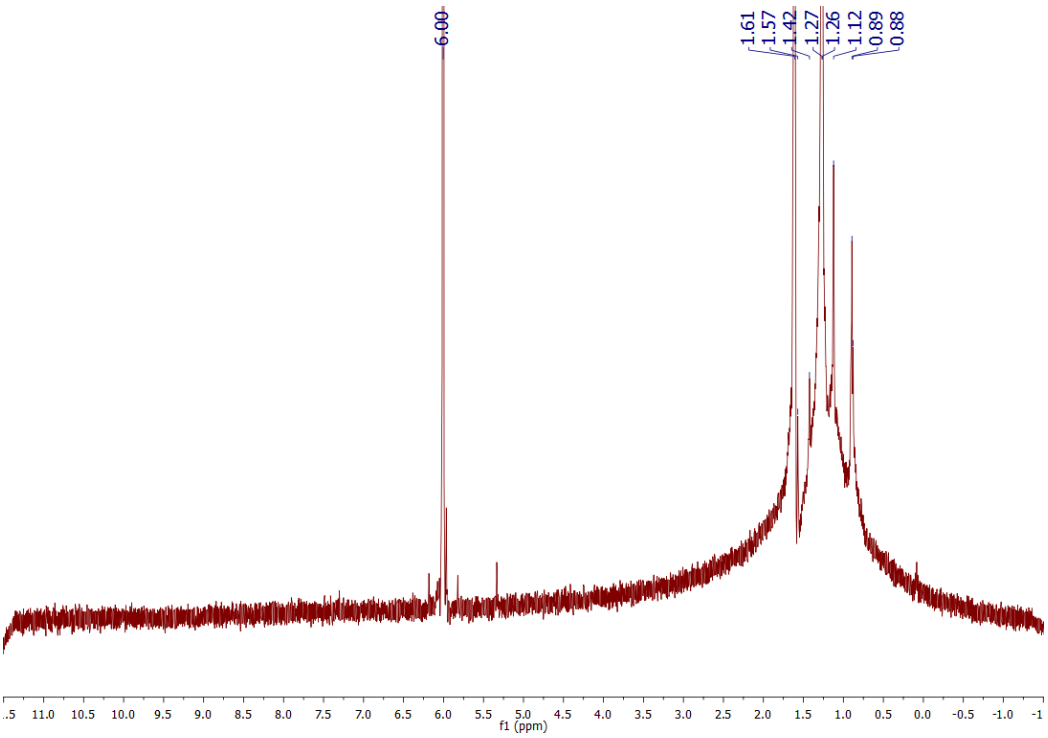

Figure S3. ^{1}H-NMR spectra of **PIDTOBT** measured in TCE-D_2.

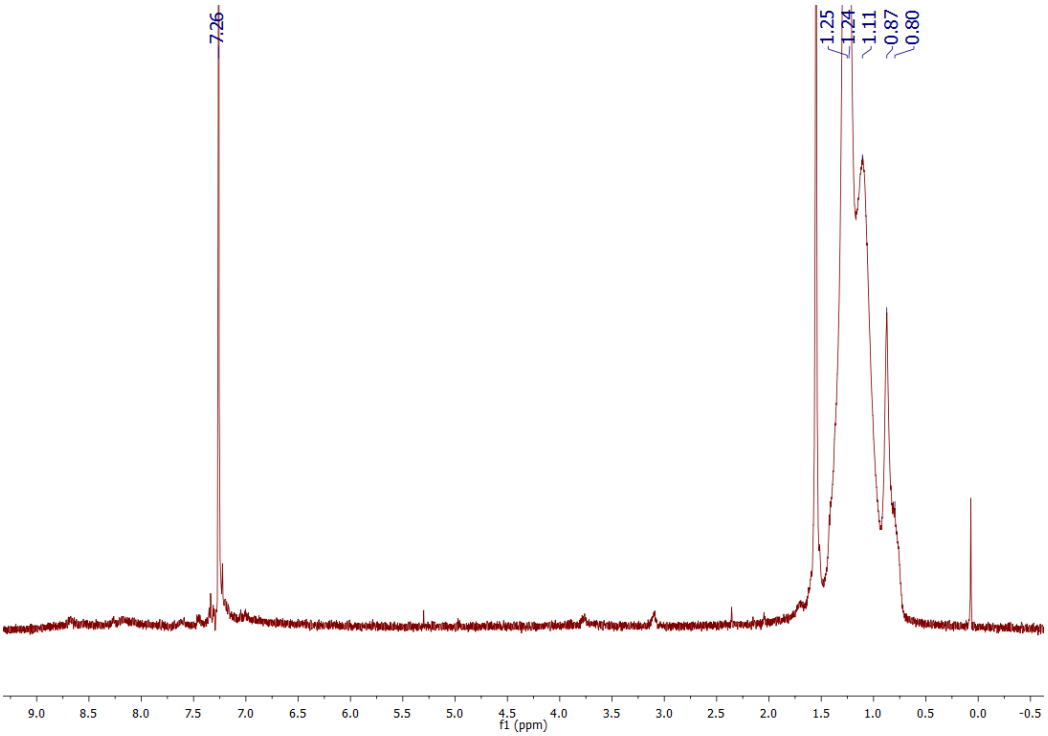

Figure S4. ^{1}H-NMR spectra of **PIDTOBTz** measured in $CDCl_3$.

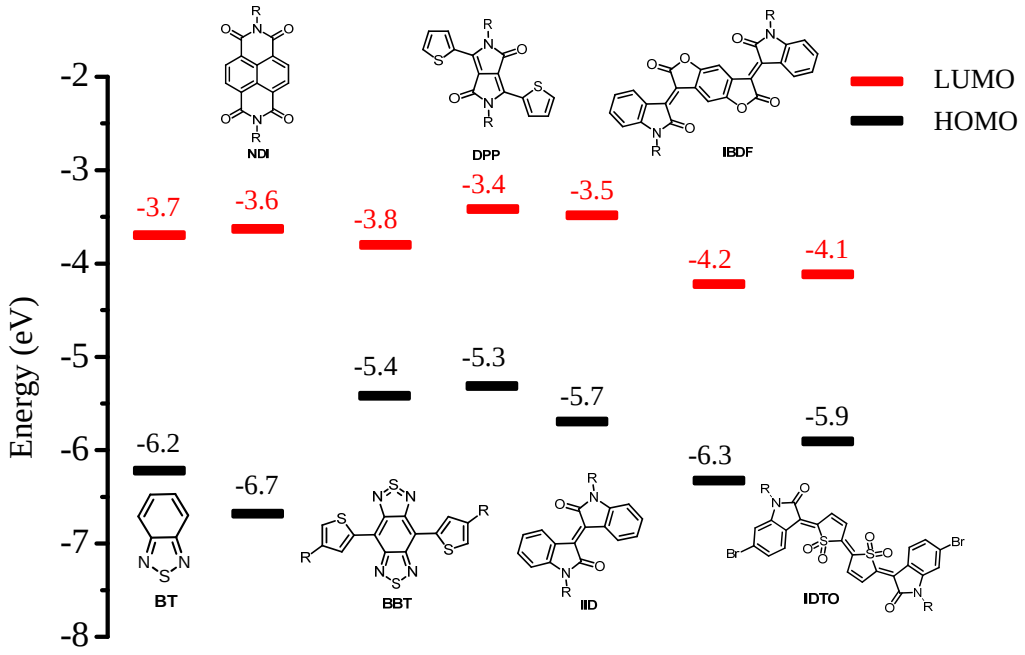

Figure S5. Chemical structures and HOMO/LUMO levels of several electron-deficient building blocks.[1,2]

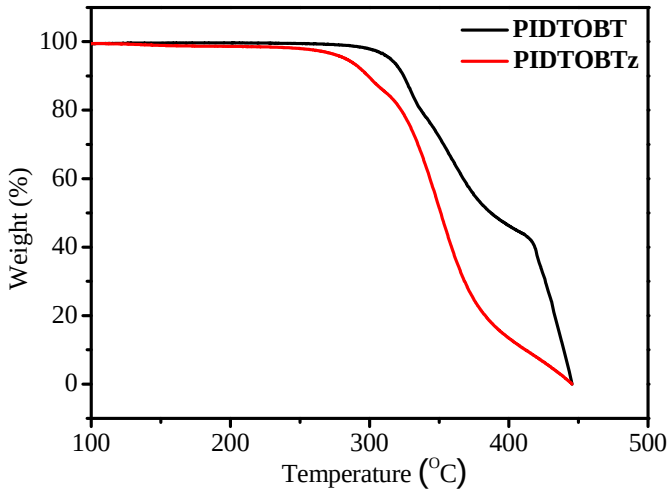

Figure S6. TGA curves of **PIDTOBT** and **PIDTOBTz** at a heating rate of 10 °C min^{-1} under air.

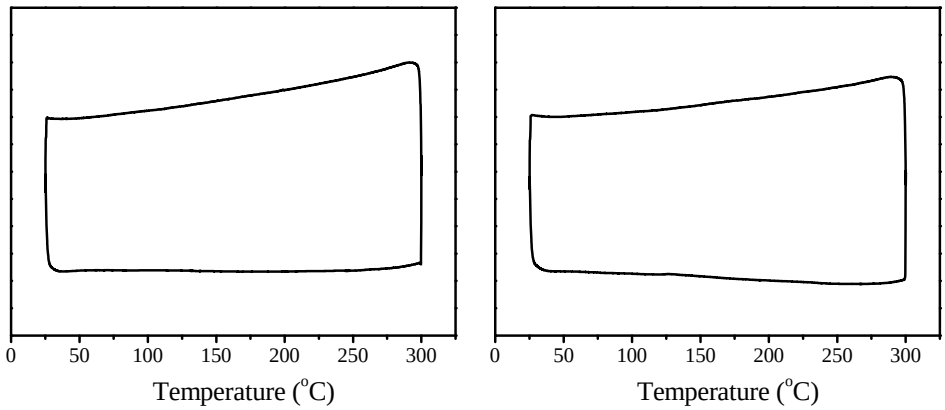

Figure S7. DSC curves of **PIDTOBT** (left) and **PIDTOBTz** (right) at a heating/cooling rate of 10 °C min^{-1} under nitrogen.

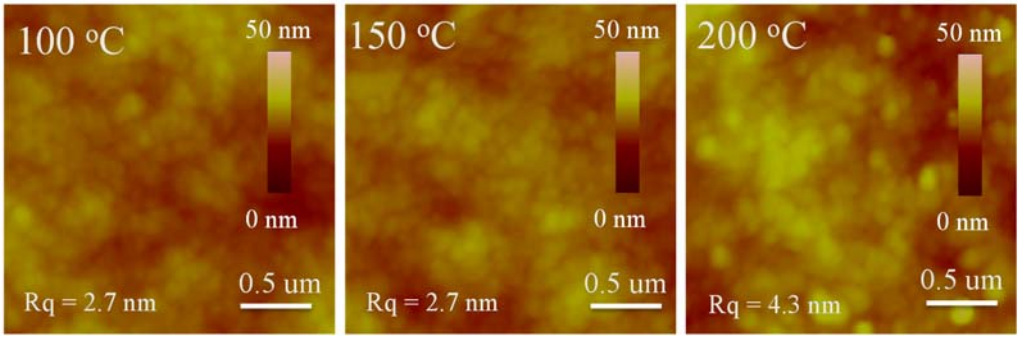

Figure S8. AFM height images (2 μm × 2μm) of **PIDTOBT** thin films on SiO_2/Si substrates annealed at different temperatures.

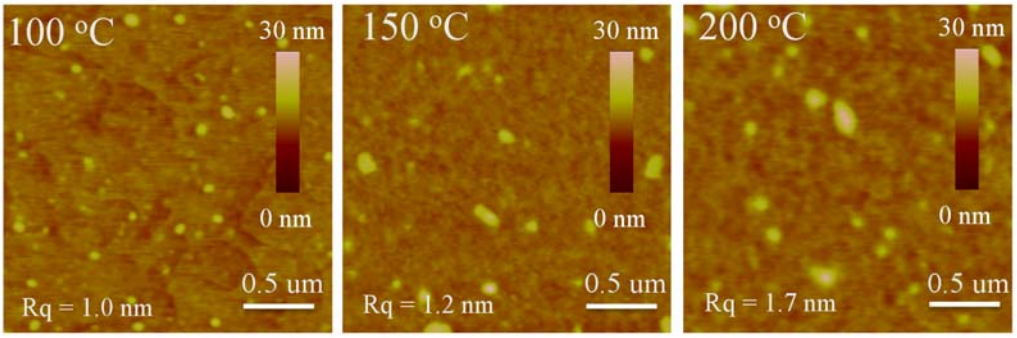

Figure S9. AFM height images (2 μm × 2μm) of **PIDTOBTz** thin films on SiO_2/Si substrates annealed at different temperatures.

References

1 J. D. Yuen and F. Wudl, *Energy Environ. Sci.*, 2013, **6**, 392–406.

2 T. Lei, X. Xia, J.-Y. Wang, C.-J. Liu and J. Pei, *J. Am. Chem. Soc.*, 2014, **136**, 2135–2141.