

Supporting Information for

Acceptor-Donor-Acceptor Small Molecules Based on Indacenodithiophene for Efficient Organic Solar Cells

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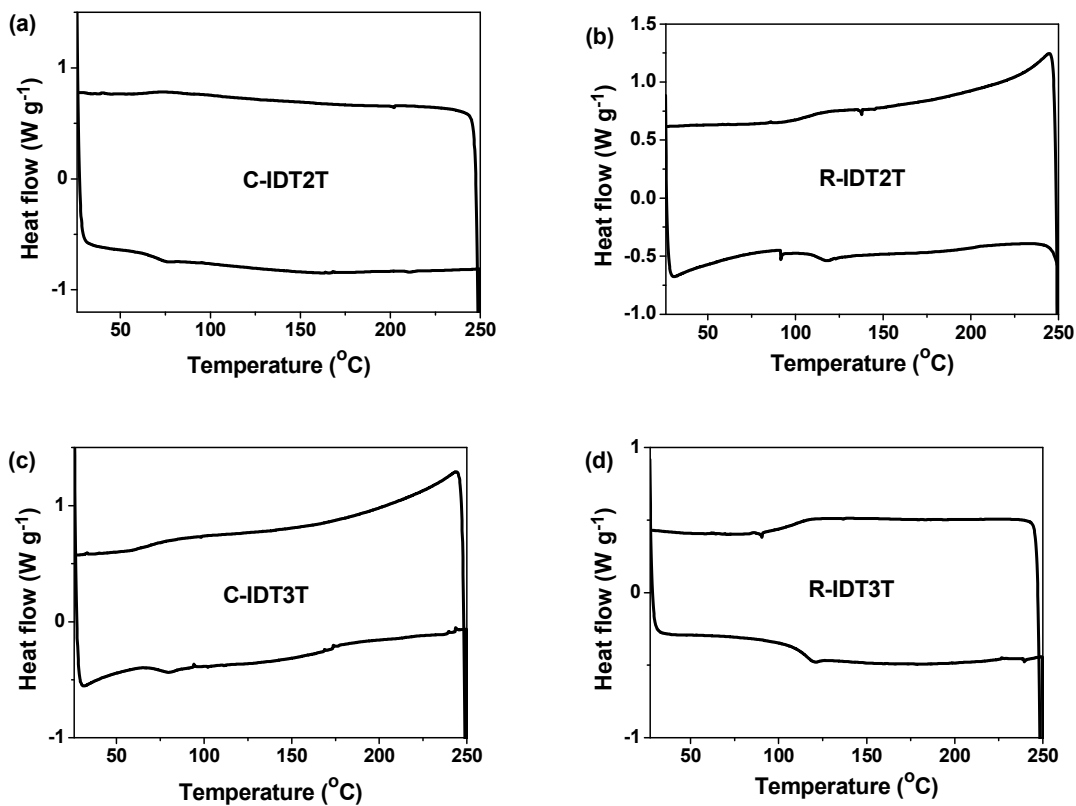


Figure S1. DSC curves of (a) C-IDT2T; (b) R-IDT2T; (c) C-IDT3T; and (d) R-IDT3T.

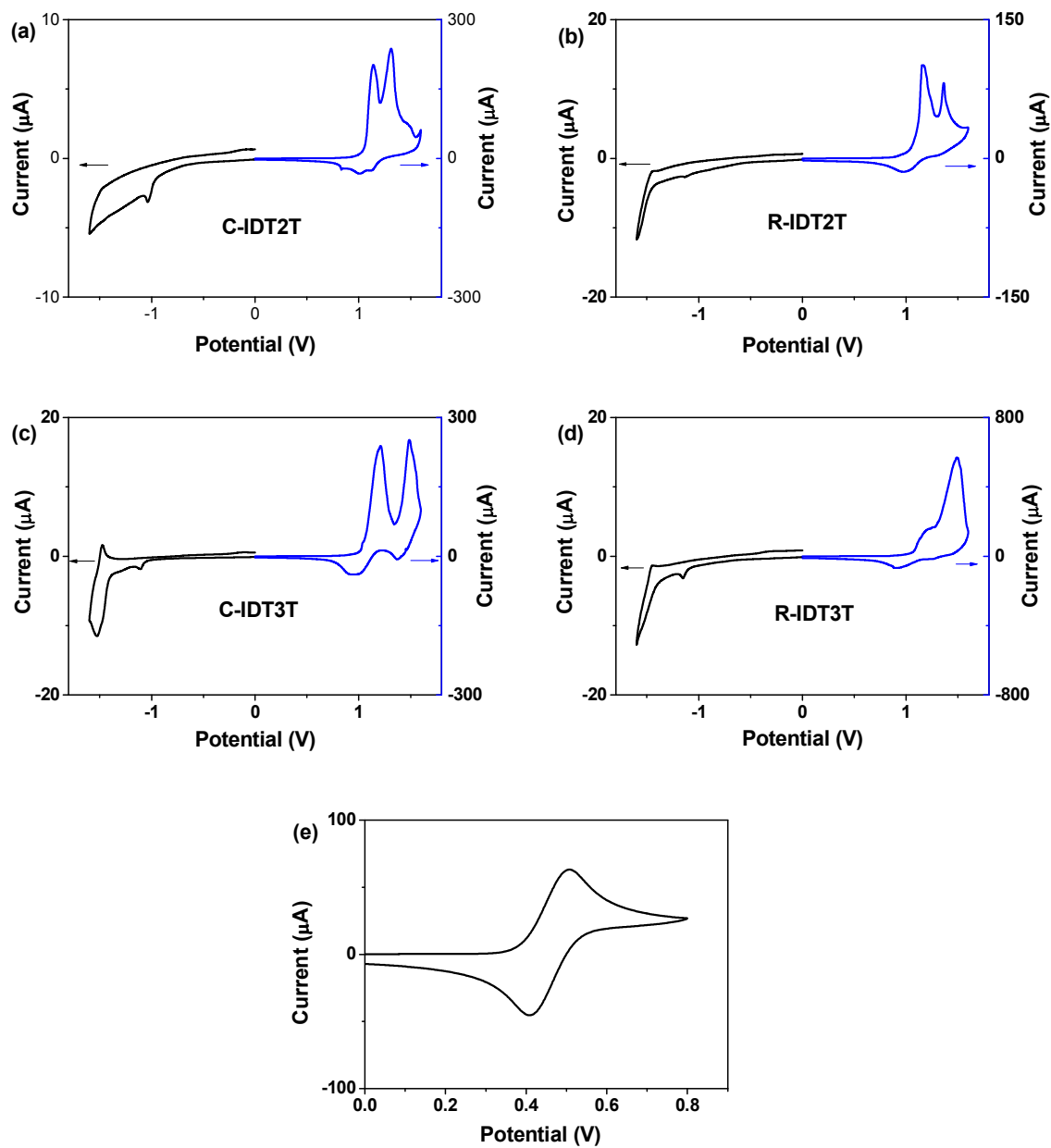


Figure S2. Cyclic voltammograms for (a) C-IDT2T; (b) R-IDT2T; (c) C-IDT3T; (d) R-IDT3T; and (e) ferrocene in CH_3CN / 0.1 M Bu_4NPF_6 at 100 mV s^{-1} .

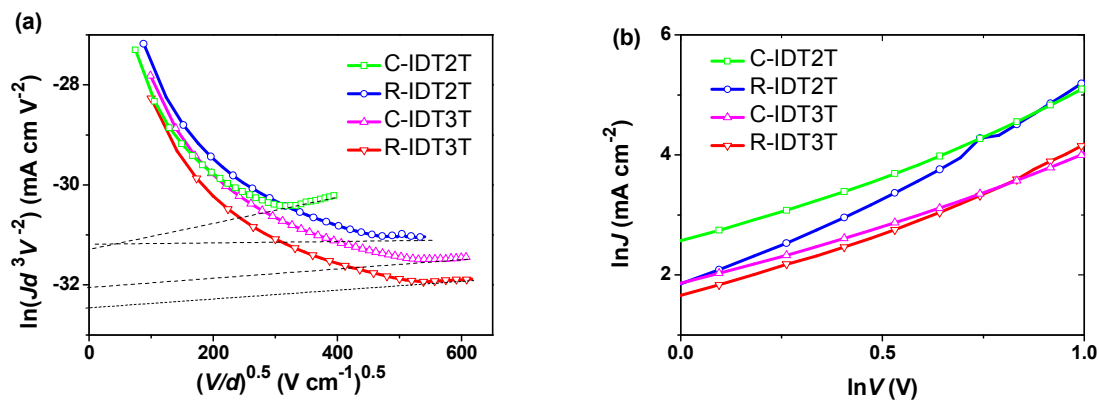


Figure S3. J - V curves for (a) hole-only and (b) electron-only devices based on C-IDT2T, R-IDT2T, C-IDT3T, and R-IDT3T:PC₇₁BM blend films after annealing at 120 °C for 10 min.

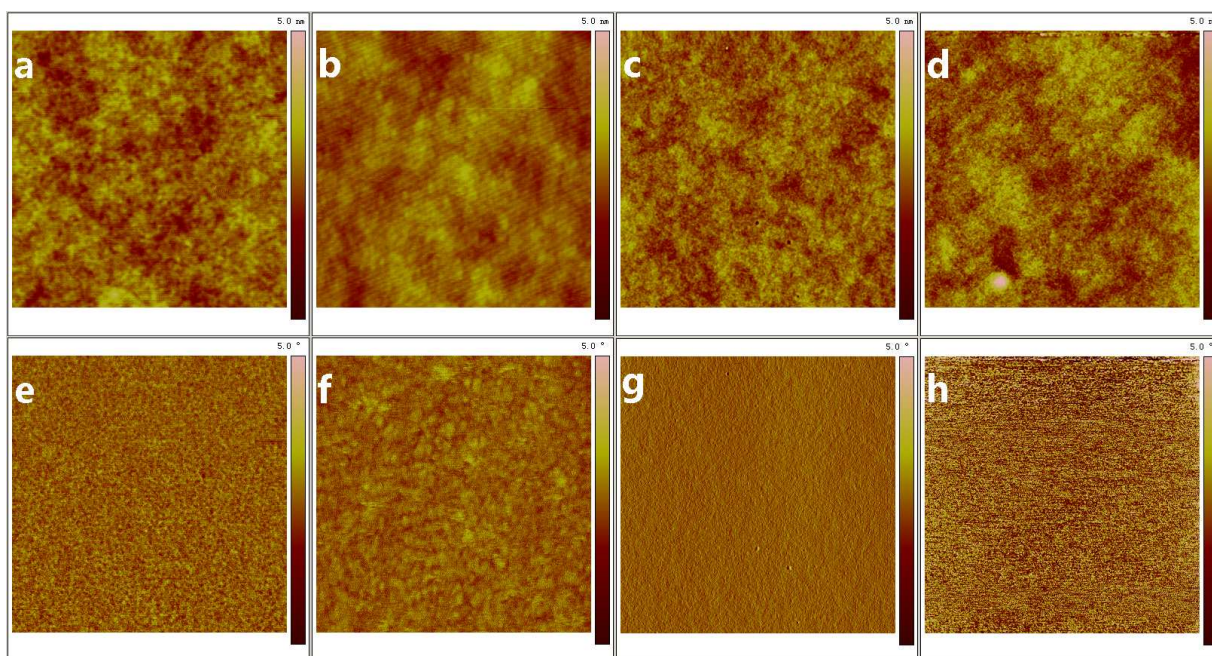


Figure S4. AFM height (top) and phase (bottom) images (3 μm × 3 μm) of (a), (e): C-IDT2T:PC₇₁BM (1:2, w/w); (b), (f): R-IDT2T:PC₇₁BM (1:2, w/w); (c), (g): C-IDT3T:PC₇₁BM (1:2, w/w); (d), (h): R-IDT3T:PC₇₁BM (1:3, w/w) blend as-cast films.

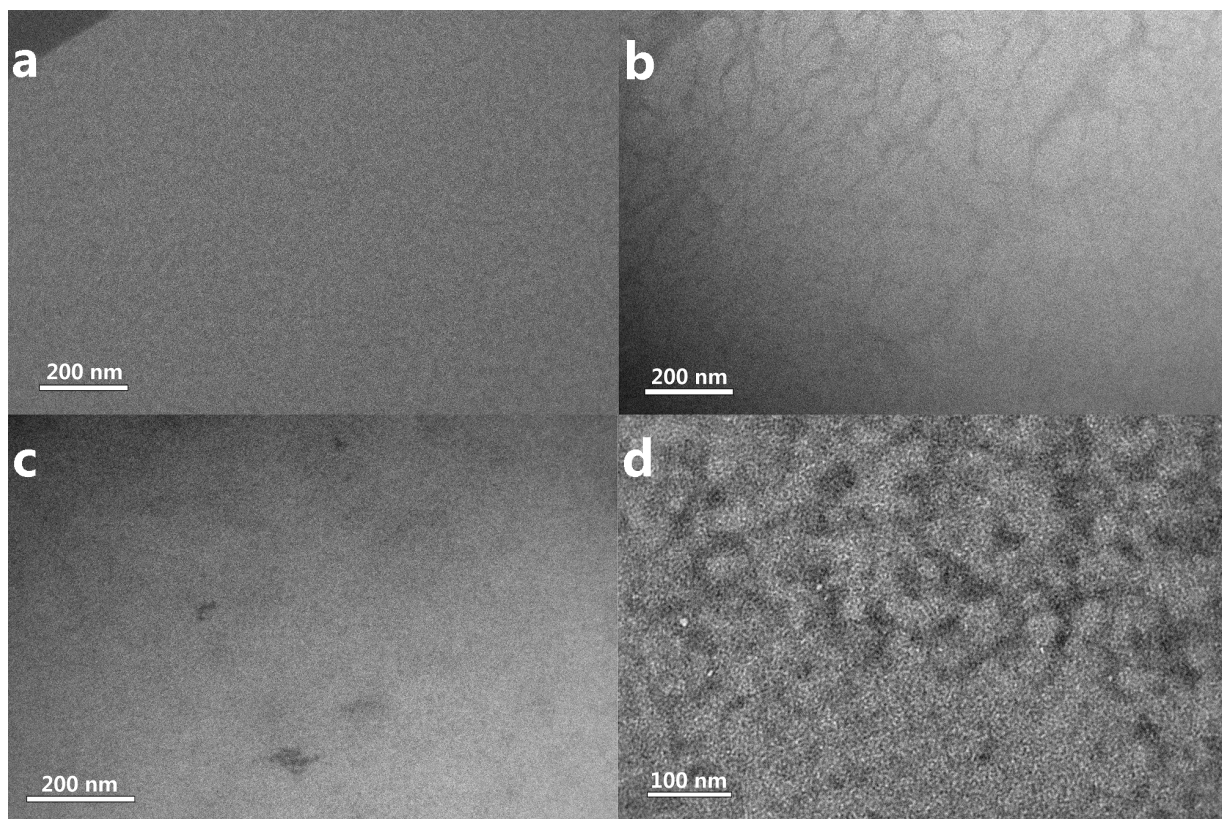


Figure S5. TEM images of a) C-IDT2T:PC₇₁BM (1:2, w/w); b) R-IDT2T:PC₇₁BM (1:2, w/w); c) C-IDT3T:PC₇₁BM (1: 2, w/w); d) R-IDT3T:PC₇₁BM (1:3, w/w) blend films after thermal annealing.

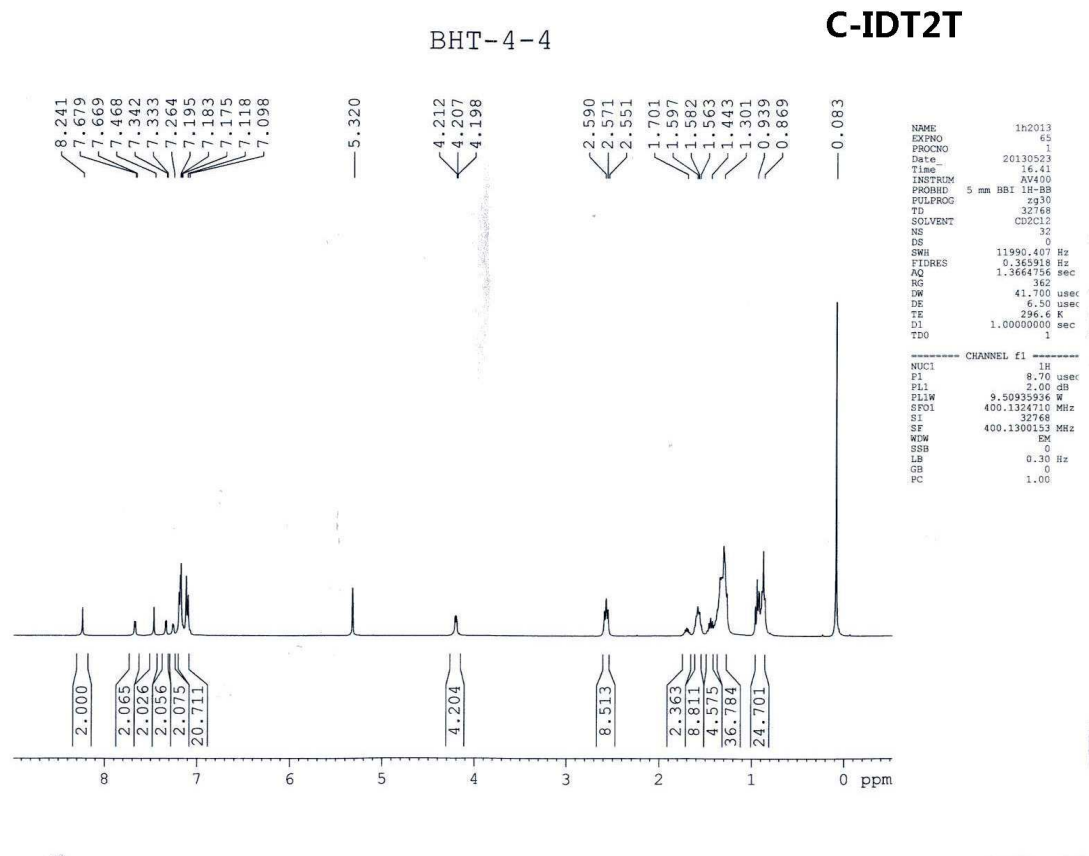


Figure S6. ^1H -NMR spectrum of C-IDT2T.

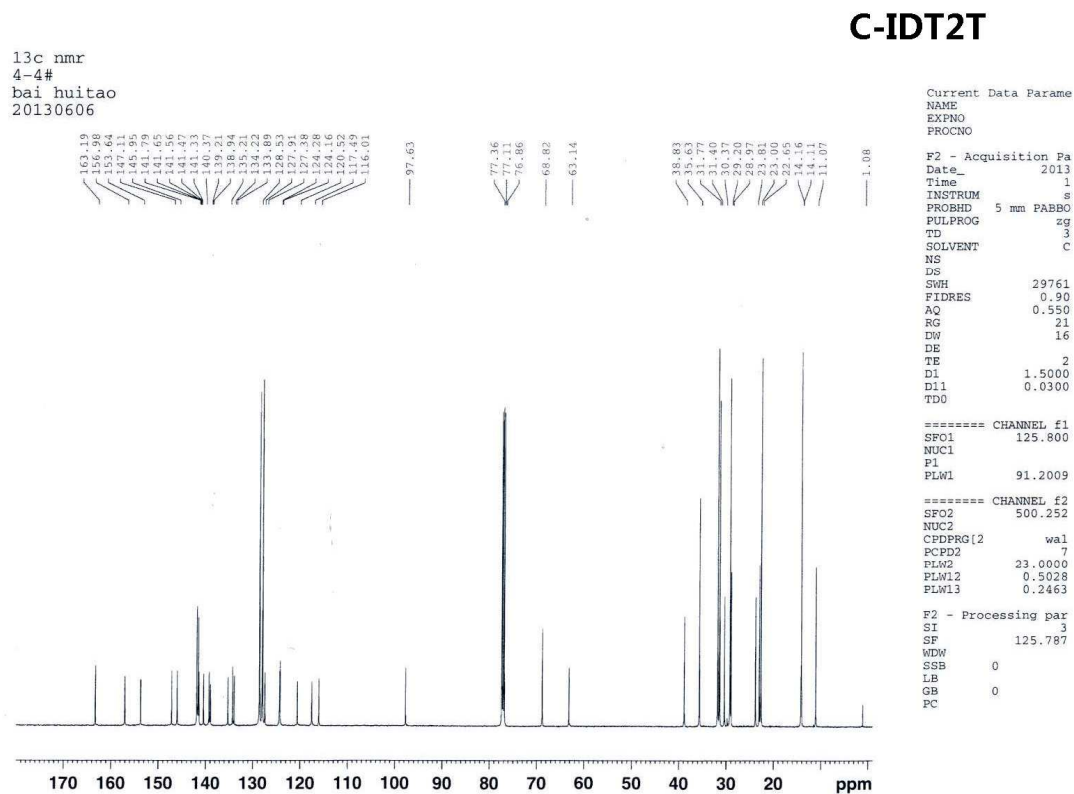


Figure S7. ^{13}C -NMR spectrum of C-IDT2T.

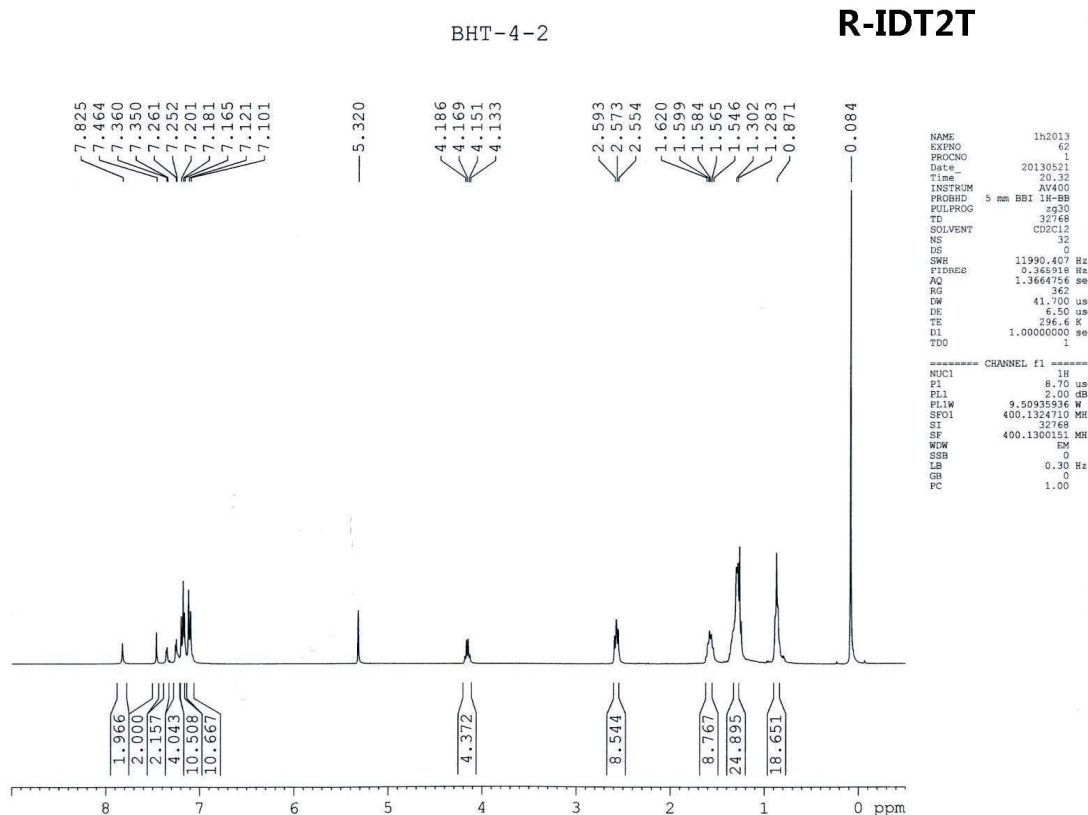


Figure S8. ^1H -NMR spectrum of R-IDT2T.

R-IDT2T

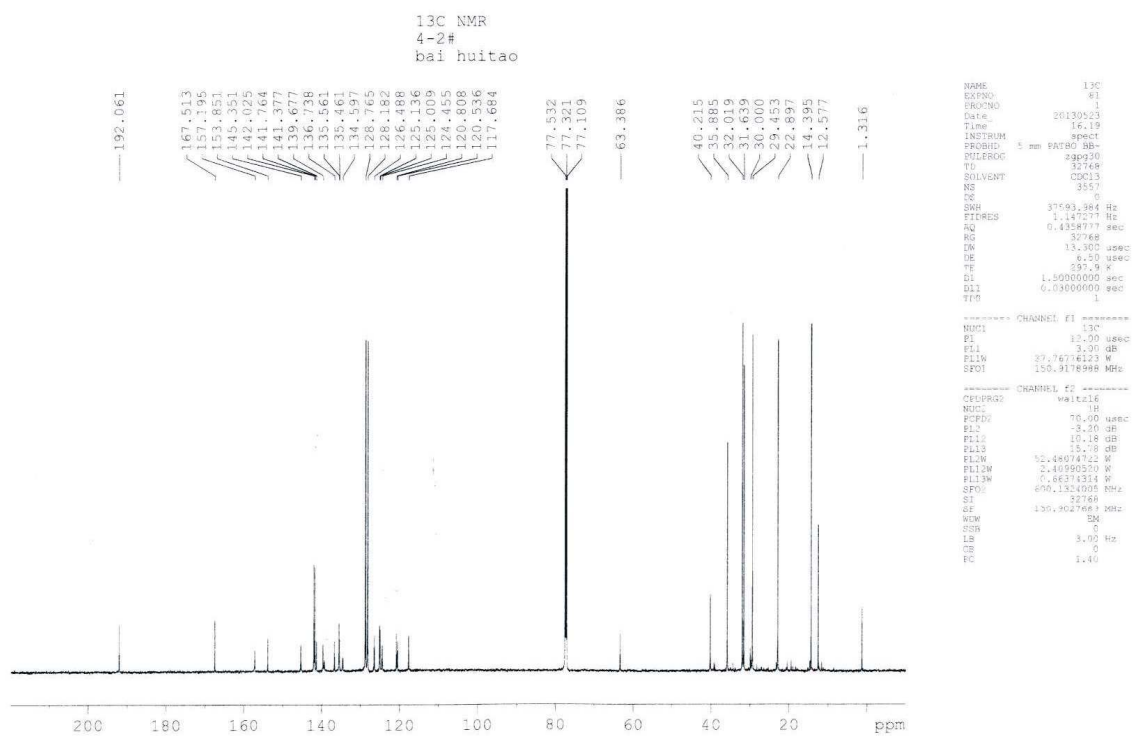


Figure S9. ¹³C-NMR spectrum of R-IDT2T.

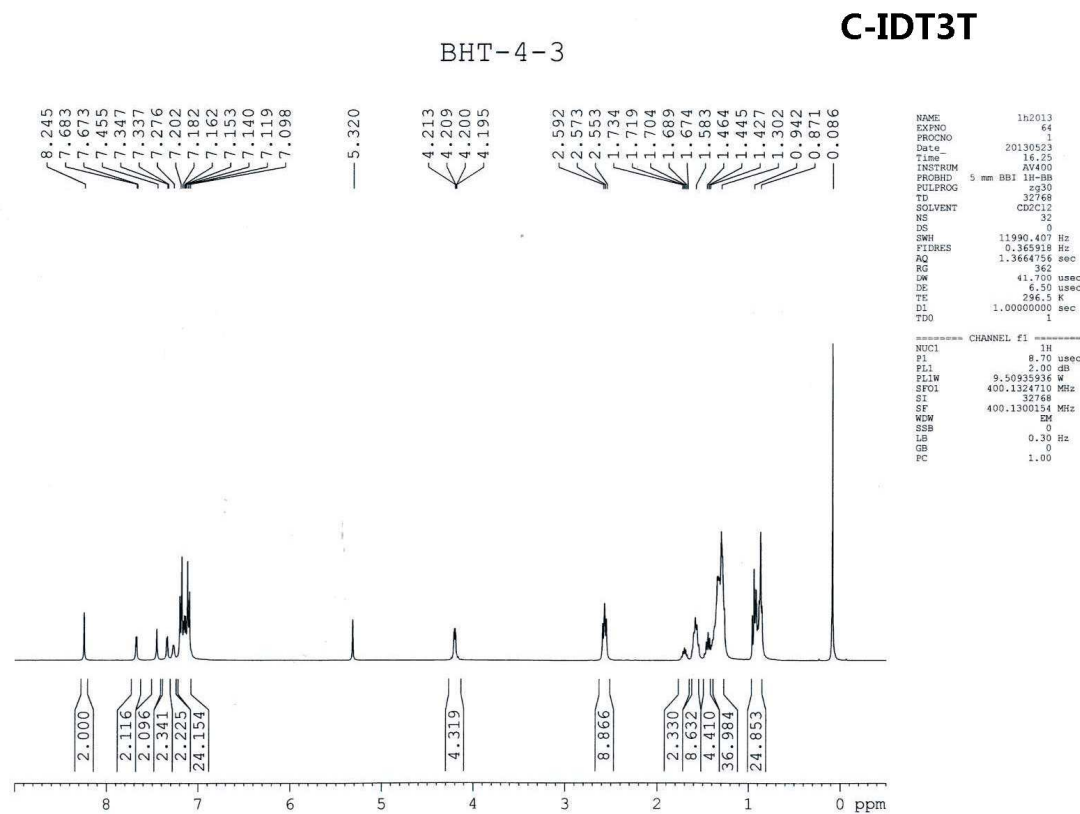


Figure S10. ^1H -NMR spectrum of C-IDT3T.

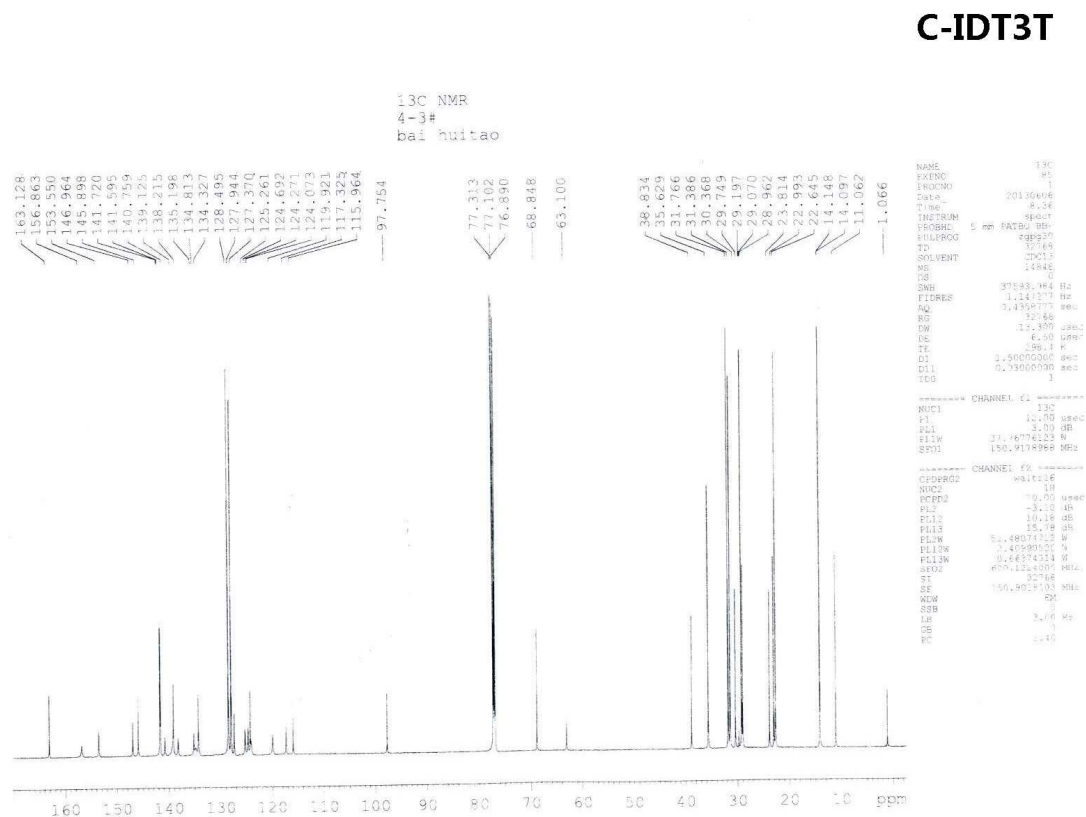


Figure S11. ¹³C-NMR spectrum of C-IDT3T.

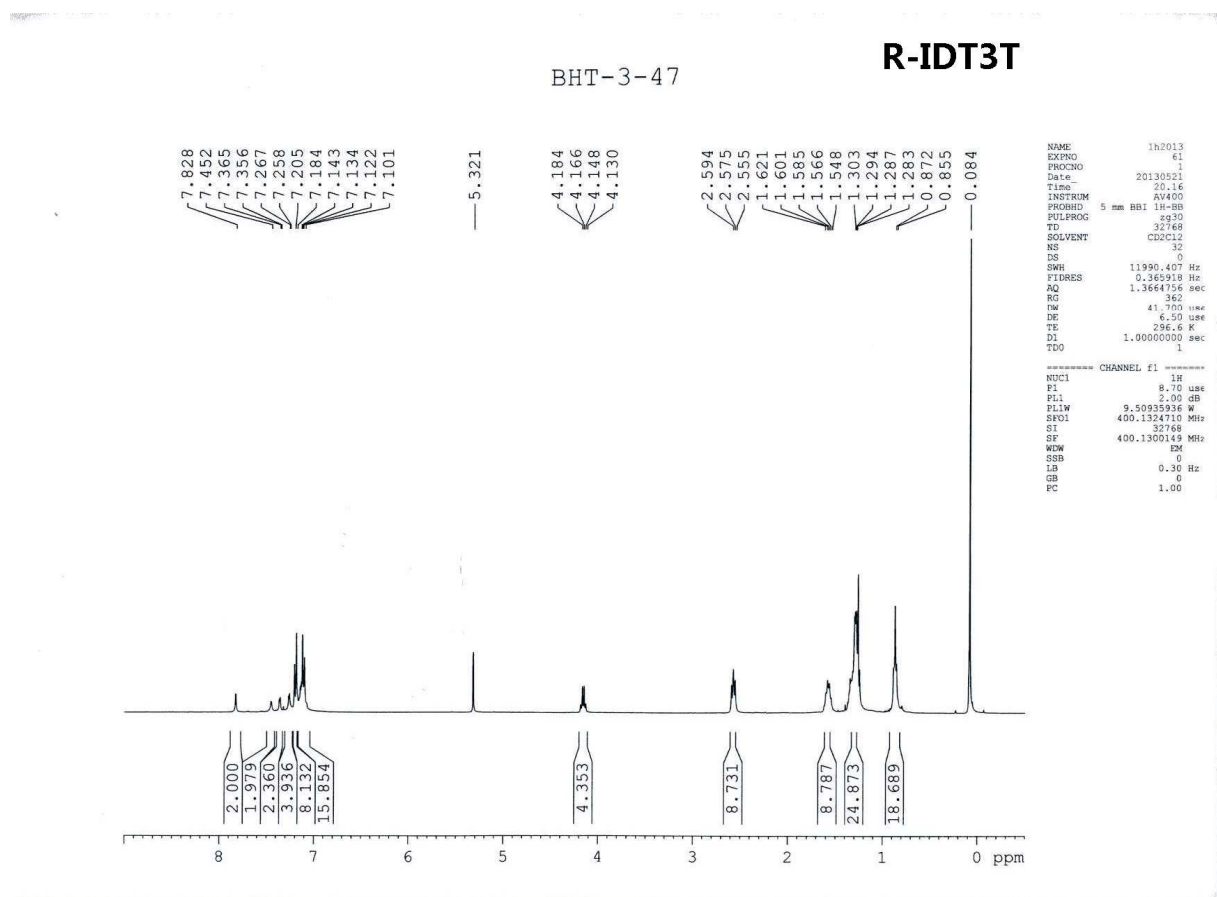


Figure S12. ^1H -NMR spectrum of R-IDT3T.

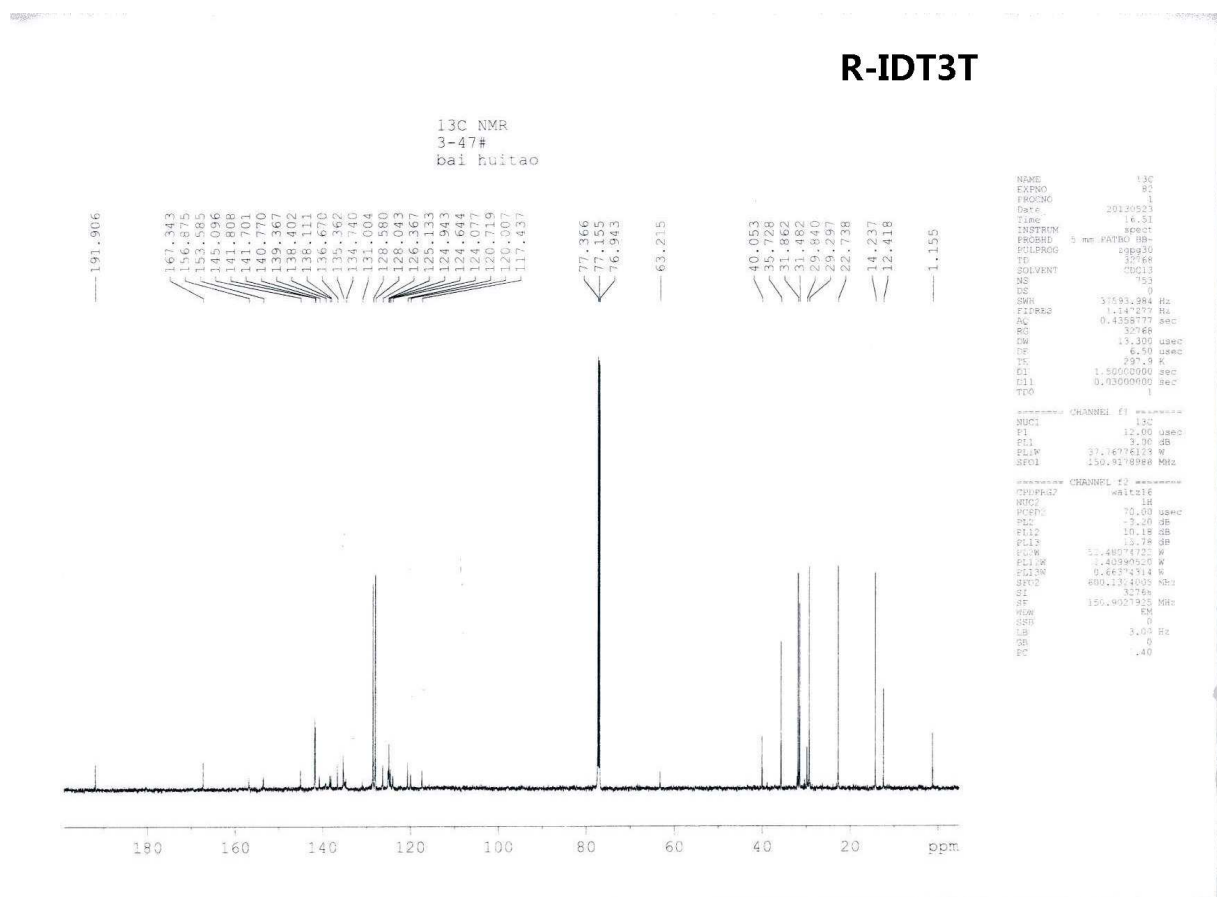


Figure S13. ¹³C-NMR spectrum of R-IDT3T.