Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Electronic Supplementary Information

Tuning polymorphism in 2,3-thienoimide capped oligothiophenes based field-effect transistors by implementing vacuum and solution deposition methods

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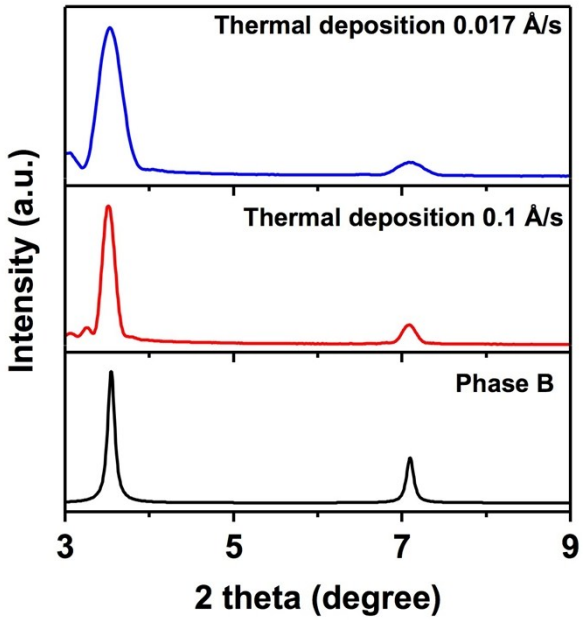

Figure S1. XRD patterns of C_4-NT4N thin film on HMDS-treated Si/SiO_2 deposited by thermal sublimation at 0.1 Å/s (red line) and 0.017 Å/s (blue line) and theoretical X-ray diffractogram of C_4-NT4N phase B (black line).

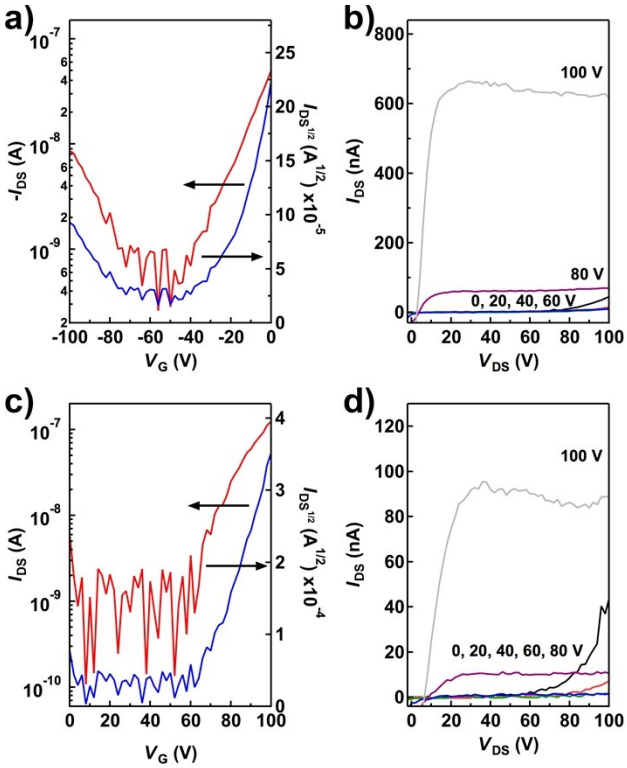

Figure S2. Transfer and output characteristics of representative field-effect transistors based on C_6-NT4N films deposited by LCW from (a, b) anisole and (c, d) 1,2-DCB solution (drain voltage $V_{SD} = \pm 100$ V).

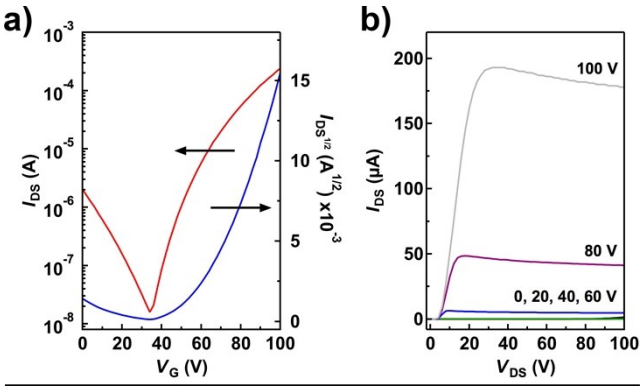

Figure S3. (a) Transfer and (b) output characteristics measured at positive source−drain bias of a representative field-effect transistor based on C_6-NT4N film deposited by thermal sublimation (bottom gate/top contact configuration, drain voltage $V_{SD} = 100$ V).

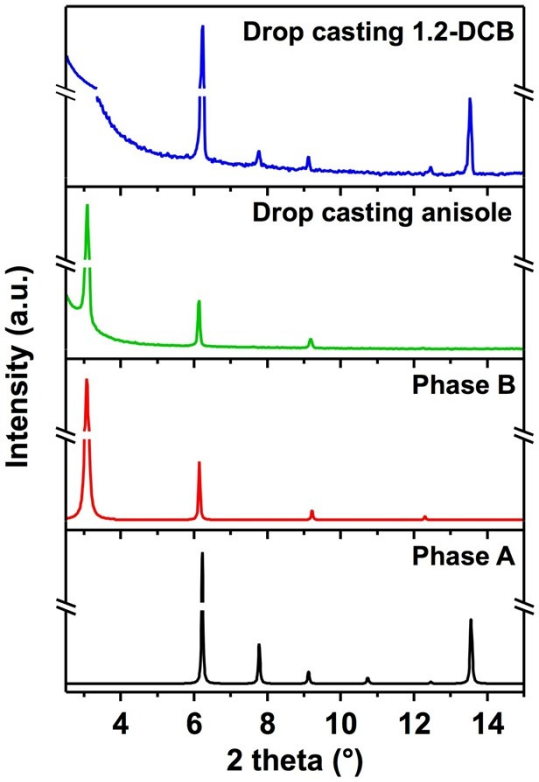

Figure S4. XRD patterns of the C_6-NT4N thin films deposited on Cytop by drop casting from 1,2-DCB (blue line) and anisole (green line) solution, and calculated diffractograms of A (black line) and B (red line) phases.

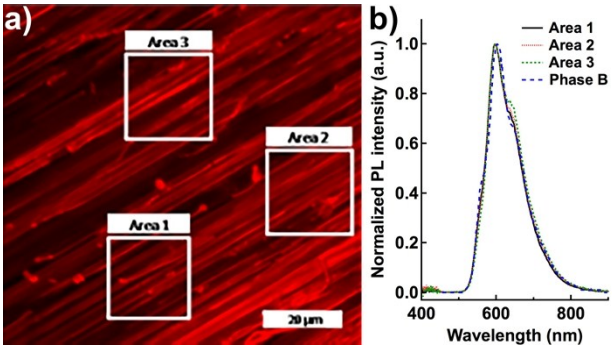

Figure S5. (a) Confocal fluorescence image and (b) localized emission spectra (λ_{ex} = 405 nm) of C_6-NT4N microstripes deposited on Cytop by LCW from 1,2-DCB solution. PL spectrum of C_6-NT4N thin film deposited by thermal sublimation (phase B) is reported as comparison (blue dashed line).