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**Electronic Supplementary Information** 

## Solution processable low bandgap thienoisoindigo-based small molecules for organic electronic devices

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Fig. S1. <sup>1</sup>H NMR spectra of compound 2.



Fig. S2. <sup>13</sup>C NMR spectra of compound 2.





**Fig. S3.** <sup>1</sup>H NMR spectra of compound 3.





**Fig. S4.** <sup>13</sup>C NMR spectra of compound 3.





Fig. S5. <sup>1</sup>H NMR spectra of compound 4.



**Fig. S6.** <sup>13</sup>C NMR spectra of compound 4.



Fig. S7. <sup>1</sup>H NMR spectra of compound 5.





Fig. S8. <sup>1</sup>H NMR spectra of TII(BFu)<sub>2</sub>.

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Fig. S9. <sup>13</sup>C NMR spectra of TII(BFu)<sub>2</sub>.







Fig. S10. <sup>1</sup>H NMR spectra of TII(Na)<sub>2</sub>.



Fig. S11. <sup>13</sup>C NMR spectra of TII(Na)<sub>2</sub>.



Fig. S12. Cyclic voltammograms of TII(BFu)<sub>2</sub> and TII(Na)<sub>2</sub> in CH<sub>2</sub>Cl<sub>2</sub> containing 0.1 M tetrabutylammonium perchlorate.



Fig. S13. Output (left) and transfer (right) characteristics for TII(BFu)<sub>2</sub> film pre-annealed at 150 °C (a), 170 °C (b) and 190 °C (c).



Fig. S14. Output (left) and transfer (right) characteristics for TII(Na)<sub>2</sub> film pre-annealed at 130 °C (a), 170 °C (b) and 190 °C (c).