## One-pot homopolymerization of thiophene-fused isoindigo for ambient-stable ambipolar organic field-effect transistors

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**Figure S2** Cyclic voltammogram of P(TII-*co*-II), PTII-1 and PTII-2 in thin film drop-casting on a glassy carbon electrode and tested in n-Bu<sub>4</sub>NPF<sub>6</sub>/CH<sub>3</sub>CN solution (scan rate:  $0.1 \text{ V s}^{-1}$ ).



**Figure S3** Output (a) and (b) transfer characteristics of P(TII-*co*-II) annealed at 200 °C and tested under ambient conditions.



**Figure S4** Output (c) and (d) transfer characteristics of PTII-1 annealed at 200 °C and tested under ambient conditions.

Figure S5 The GIXRD corresponding in-plane and out-of-plane line cuts of all the polymers.



**Figure S6** <sup>1</sup>H NMR spectra of P(TII-*co*-II)



Figure S7 <sup>1</sup>H NMR spectra of PTII-1



Figure S8 <sup>1</sup>H NMR spectra of PTII-2



Figure S9 GPC chromatograms of polymers.

