Supporting Information

High-performance Flexible Gas Sensors based on Layer-by-Layer Assembled Polythiophene Thin films

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Figure S1. C1s and S 2p XPS spectra of the LLA P3BT film at different etching depths.

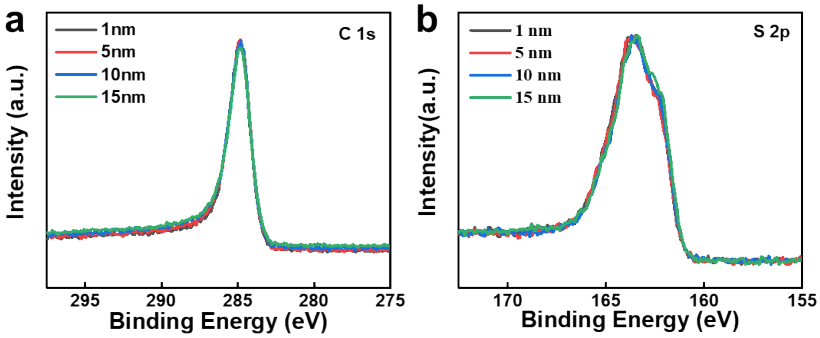

Figure S2. (a) High-resolution Mo 3d XPS spectra of the LLA P3BT film on the surface (without etching). (b) Mo 3d XPS spectra of the LLA P3BT film at different etching depths.

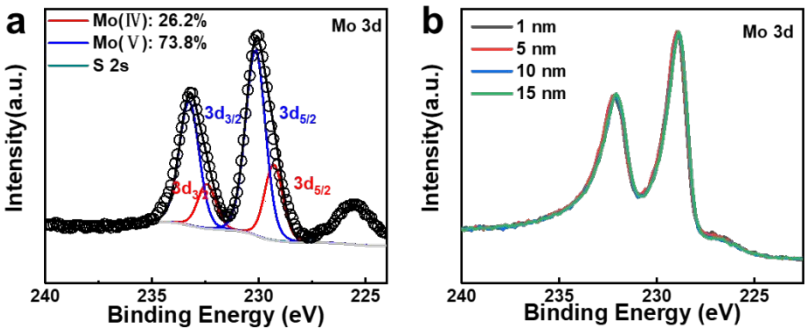

Figure S3. High-resolution Mo 3d XPS spectra of the LLA P3BT film after rinse process.

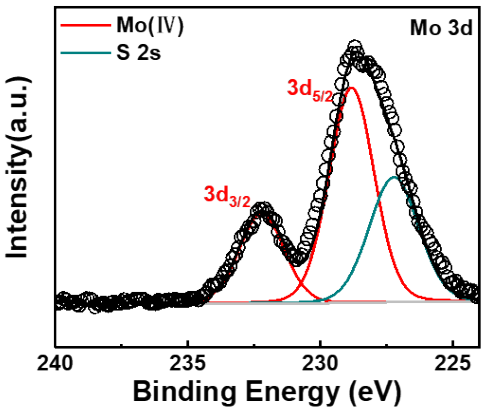

Figure S4. GIXRD spectra of the rinsed LLA P3BT film and spin-coated P3BT film (both with thickness of 70 nm).

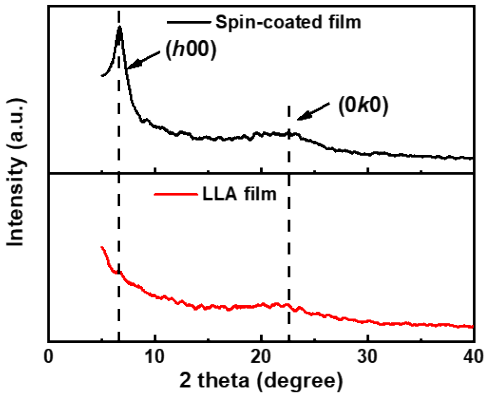

Figure S5. I-V curves of the spin-coated P3BT film and LLA P3BT films with or without rinse (with thickness of 70 nm).

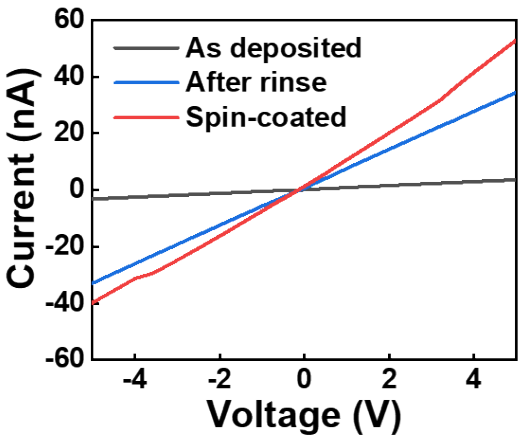

Figure S6. (a) I-V curves of the spin-coated and LLA P3BT device with film thickness of 10 nm. (b) I-t curves of the gas sensor with 10 nm LLA P3BT film exposed to NH_3 at varied concentrations.