

Supporting Information

Observation of large threshold voltage shift induced by pre-applied voltage to SiO₂ gate dielectric in organic field-effect transistors

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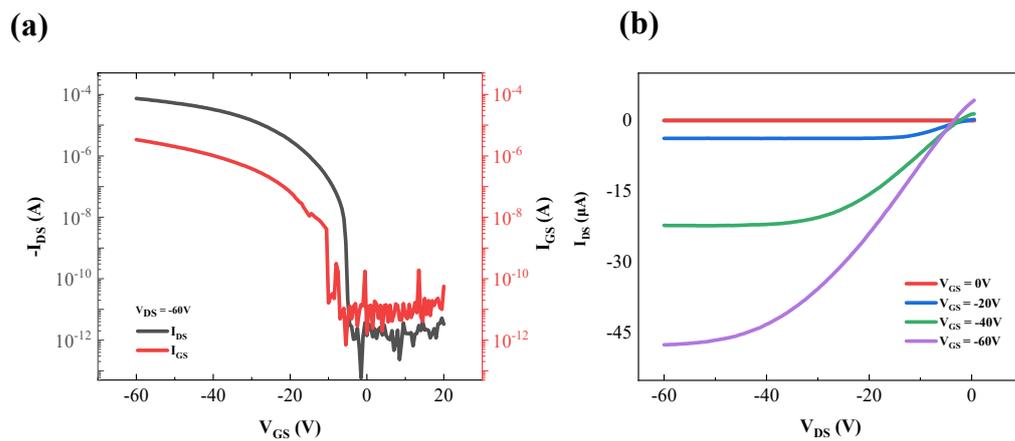


Figure S1. The transfer (a) and output (b) curves of PffBT4T-2DT transistor.

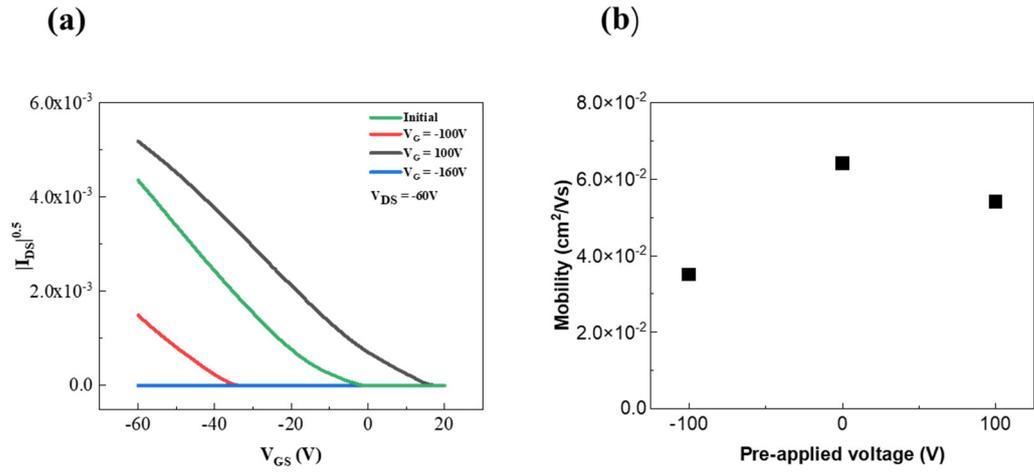
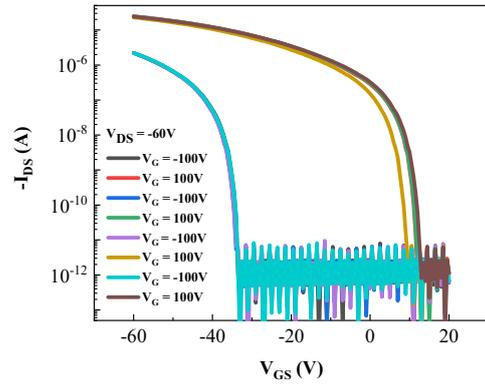


Figure S2. (a) $I_{DS}^{0.5}$ vs V_{GS} plotting, where the data are from Figure 2 (a); (b) Saturation mobility at different pre-applied voltages.

(a)



(b)

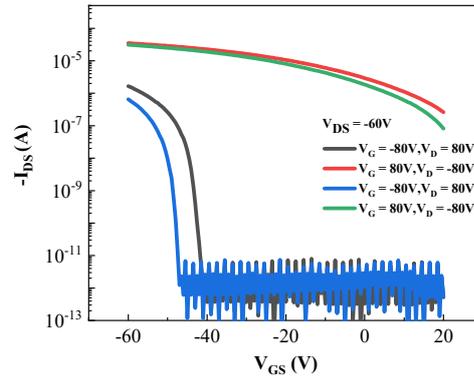


Figure S3. (a) PffBT4T-2DT transistor transfer curves of -100 V and 100 V pre-applied voltage at the gate electrode for multiple times; (b) The transfer curves obtained by repeatedly pre-applied different voltages to the gate and drain electrodes simultaneously.

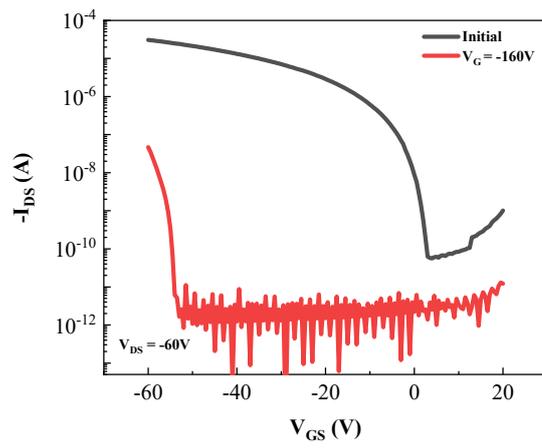


Figure S4. Transfer curves of PffBT4T-2DT transistor without PFBT modification at different pre-applied voltages to the gate electrode.

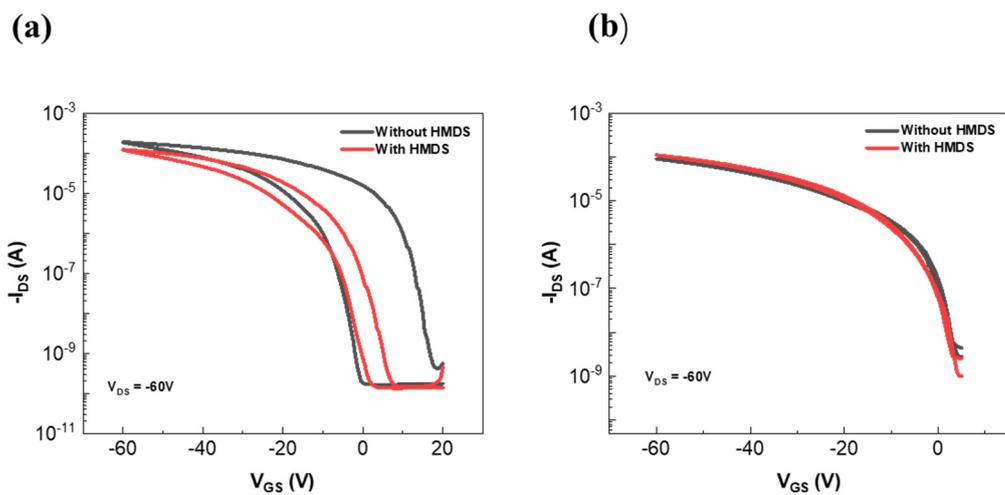


Figure S5. Hysteresis behaviors of PffBT4T-2DT (a) and PDPP3T (b) transistors before and after HMDS modification.

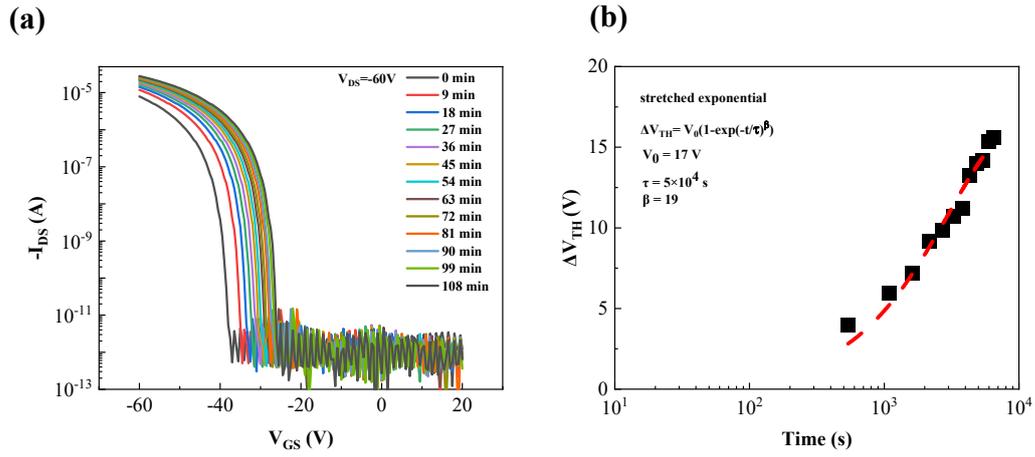


Figure S6. (a) Pre-applied a -140 V gate voltage, the relationship of HMDS treated device transfer curve with time; (b) Fitting the threshold voltage over time after a pre-applied -140 voltage by stretched exponential model.

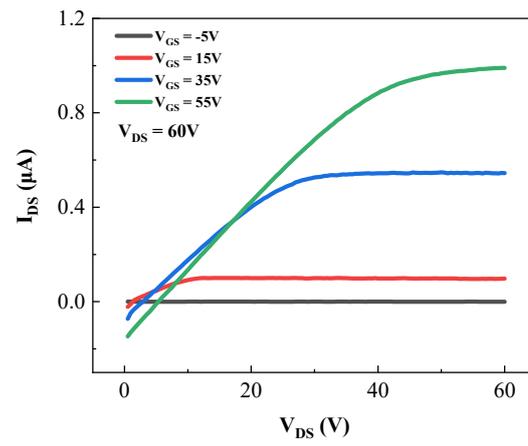


Figure S7. Output curves of PTzNDI-2FT transistor.