

Supporting Information

An Organic-Inorganic Hybrid Semiconductor for Flexible Thin Film Transistor using Molecular Layer Deposition

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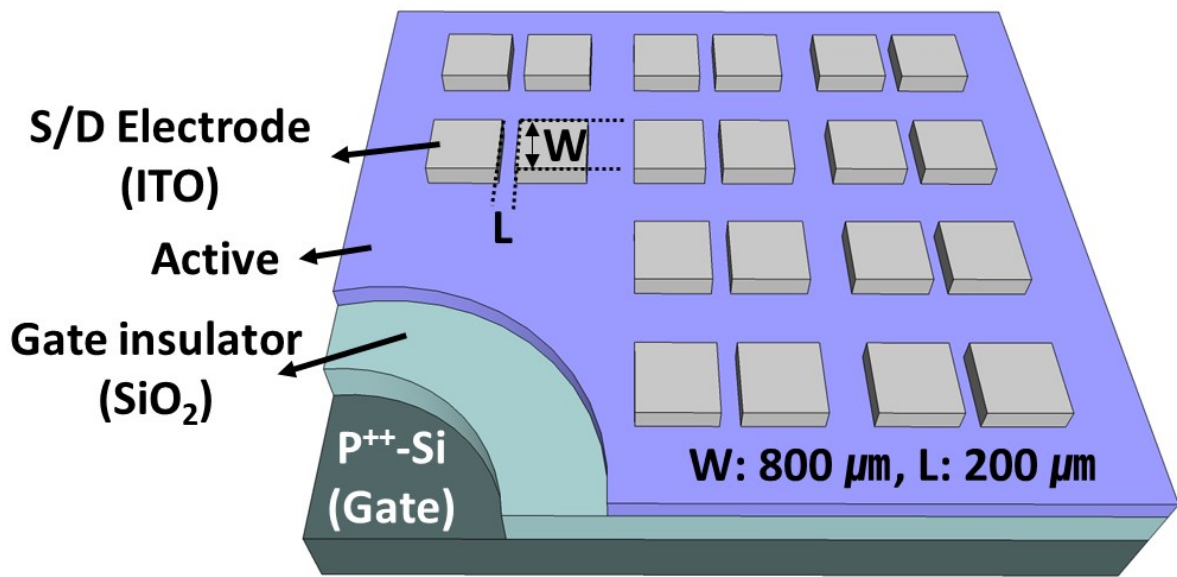


Figure S1. Schematics of thin film transistors (TFTs) via fine-metal mask (FMM). Thermal silicon dioxide (SiO₂, 100 nm) was used as gate insulator and ITO S/D electrode (100 nm) was deposited using reactive sputter. Device width (W) and length (L) are 800 and 200 μm, respectively. indium oxide, 99:1 and 49:1 hybrid films are used as active layer.

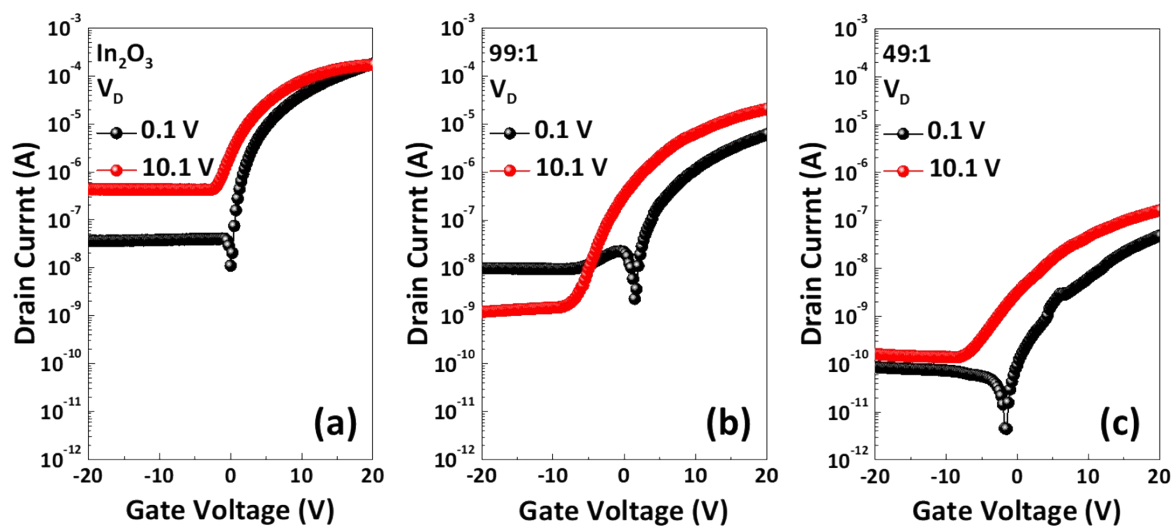


Figure S2. Transfer characteristics of (a) In_2O_3 , (b) 99:1 indicone and (c) 49:1 indicone. Off current of each devices is relatively high compare to figure 5. This phenomenon is caused by the un-patterned gate electrode, insulator and active. As indicone layer increased, the device parameters are decreased.

Table S1. The device parameters of In_2O_3 , 99:1 indicone, and 49:1 indicone

Sample	In_2O_3	99:1 (In_2O_3:Indicone)	49:1 (In_2O_3:Indicone)
V_{th} (V)	-1.47	-0.52	7.71
SS (V/decade)	2.73	2.23	4.95
μ_{FE} (cm^2/Vs)	9.30	0.82	0.01