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Article

Design of Functionally Stacked Channels of Oxide Thin-Film Transistors to Mimic Precise Ultralow-Light-Irradiated Synaptic Weight Modulation

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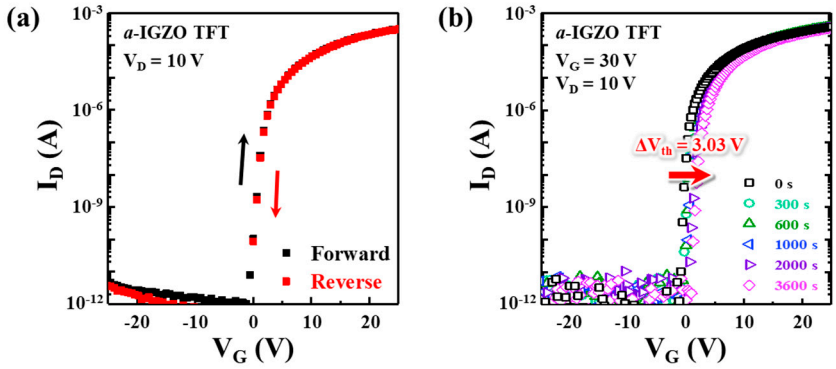
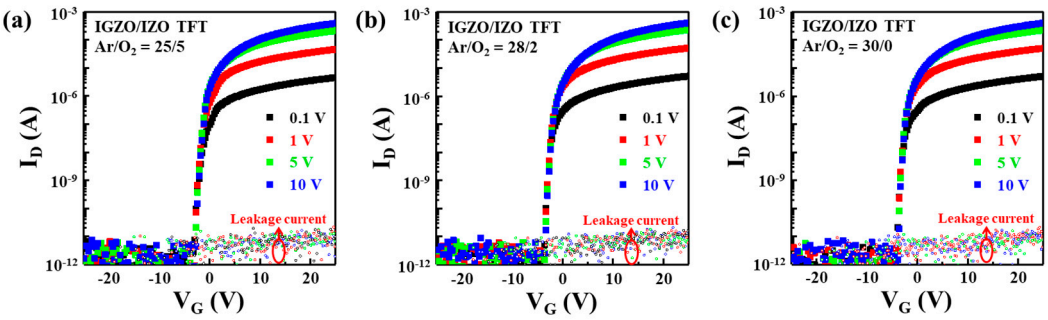


Figure S1. (a) Hysteresis characteristics of *a*-IGZO TFT measured under forward (-30 V to 30 V) and reverse (30 V to -30 V) sweeping. (b) Transfer characteristics of *a*-IGZO TFT under continuous positive bias stress (PBS) with V_G of 30 V.



(d)

	Ar/O_2 = 25/5	Ar/O_2 = 28/2	Ar/O_2 = 30/0
V_{th}	-3.4 V	-3.8 V	- 4.1 V
SS	0.35 V dec^{-1}	0.29 V dec^{-1}	0.27 V dec^{-1}
μ_{FE}	10.1 cm^2 V^{-1} s^{-1}	11 cm^2 V^{-1} s^{-1}	12.4 cm^2 V^{-1} s^{-1}

Figure S2. Transfer characteristics of the IGZO/IZO TFTs under various Ar/O_2 ratio: (a) Ar/O_2 = 25/5, (b) Ar/O_2 = 28/2, (c) Ar/O_2 = 30/0. (d) Summary of electrical performances of the IGZO/IZO TFT.