

Supplementary Materials: High-Performance of Amorphous InGaSnO Thin-Film Transistor with ZrAlO_x Gate Insulator by Spray Pyrolysis

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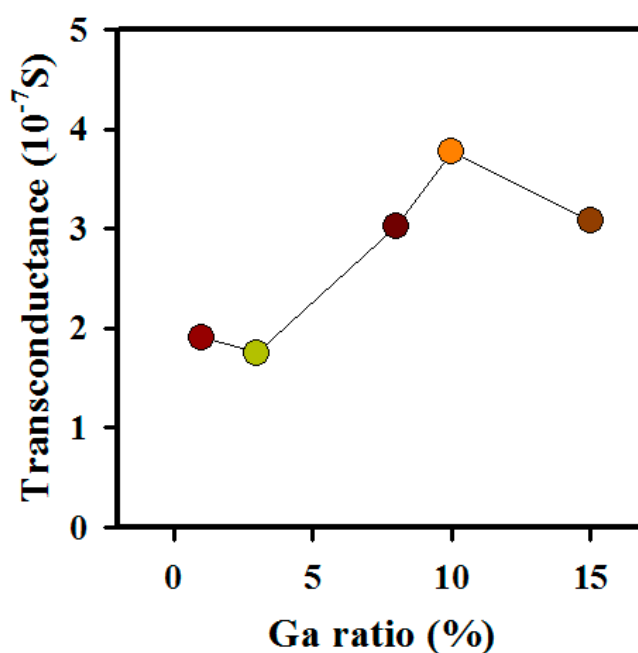


Figure S1. The transconductance (g_m , $\Delta I_D/\Delta V_G$) of the IGTO TFTs with different Ga ratio (1, 3, 8, 10, and 15%).

Table S1. Summary of the deconvoluted O1s XPS spectra for the (1, 3, 8, 10, and 15) IGTO films. M-O, V_o, and -OH represents metal-oxide, oxygen vacancy, and hydroxyl group, respectively.

Ga ratio (%)	M-O-M (%)	V _o (%)	M-OH (%)
1	56.67	32.34	10.99
3	61.16	28.42	10.42
8	63.01	28.12	8.87
10	69.22	23.59	7.19
15	61.86	28.11	10.03