



Supplementary Material

Influence of Grain Boundary Scattering on Field-Effect Mobility of Solid-Phase Crystallized Hydrogenated Polycrystalline In_2O_3 ($\text{In}_2\text{O}_3\text{:H}$)

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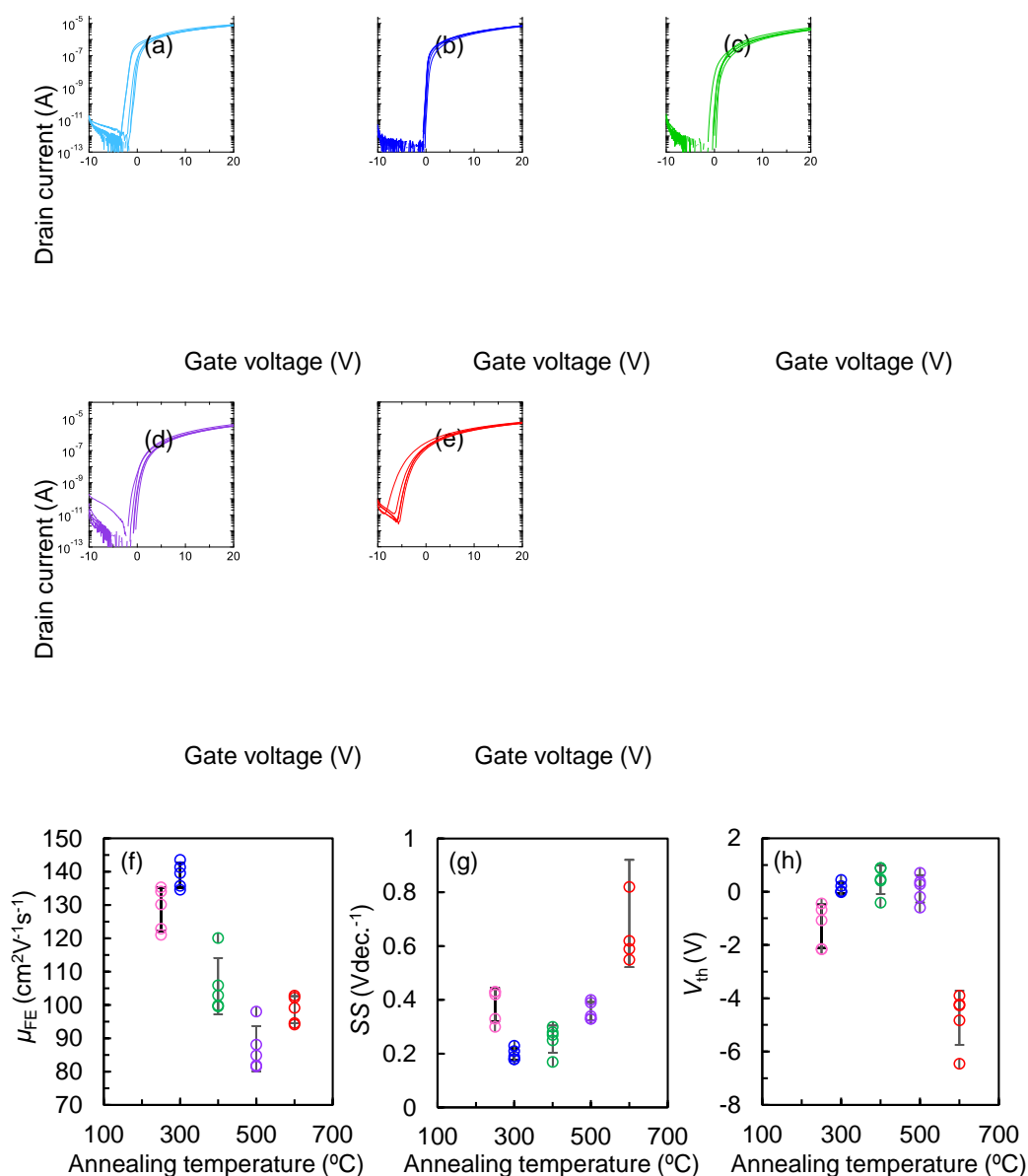


Figure S1. Variations of transfer characteristics of the In₂O₃:H TFTs with channels annealed at various temperatures; (a) 250 °C, (b) 300 °C, (c) 400 °C, (d) 500 °C, and (e) 600 °C. Five TFTs on the same substrate were measured. Variations of (f) μ_{FE} , (g) SS , and (h) V_{th} evaluated from five TFTs. ($V_{ds} = 0.1$ V, $W/L = 300/300$ μm)

Table S1. Summary of the TFT properties. The average values and standard deviations (σ) of the characteristics of 5 TFTs on the same substrate. σ are shown in parentheses.

Annealing temperature	μ_{FE}	SS	V_{th}
(°C)	($\text{cm}^2\text{V}^{-1}\text{s}^{-1}$)	(Vdec^{-1})	(V)
250	128.7 (5.9)	0.38 (0.06)	−1.3 (0.7)
300	139.0 (3.3)	0.19 (0.02)	0.2 (0.2)
400	105.7 (7.6)	0.25 (0.04)	0.4 (0.5)
500	86.9 (6.1)	0.36 (0.03)	0.1 (0.5)
600	98.5 (3.7)	0.72 (0.18)	−4.7 (0.9)