
Oral Presentation

[AMD7]Oxide TFT: Fabrication Process

Chair: Toshiaki Arai (JOLED Inc.)

Co-Chair: Yujiro Takeda (Sharp)

Fri. Nov 29, 2019 1:20 PM - 2:40 PM Mid-sized Hall B (1F)

2:25 PM - 2:40 PM

[AMD7-4L]Low-Temperature IGZO Technology on Transparent Plastic Foil by Atmospheric Spatial Atomic Layer Deposition

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Keywords:spatial atomic layer depositionIGZO, display, thin-film transistors, large-area processing

We use sALD to deposit IGZO and Al₂O₃ layers in top-gated self-aligned TFTs, achieving a low-temperature process flow ($\leq 200^{\circ}\text{C}$). We attain mobility of 8 cm²/Vs and switch-on voltage of -0.1 V for transistors with channel lengths down to 1 μm , enabling a 200 ppi QVGA display on transparent PEN foil.