

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)

1:20 PM - 1:45 PM

[AMD7-1(Invited)]Nanostructured IGZO thin-film transistors with remarkably enhanced current density and on-off ratio

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Keywords:Thin-film transistor, oxide semiconductor, nanostructures

We develop oxide TFTs with nanoscale and periodic degenerately doped heterostructures by using a strategy based on near-field nanolithography. These nanostructured TFTs remarkably enhanced in current density, compared with homogeneous IGZO TFTs. The on- off ratio was higher than 10^9 , with notably scaling effect with channel length.