[MEET5] Micro/NanoDisplays and Nanotechnology Application (1)

Special Topics of Interest on Micro/Mini LEDs
Chair: Poopathy Kathirgamanathan (Brunel University London)
Co-Chair: Kyu Chang Park (KyungHee University)
Fri. Nov 29, 2019 1:20 PM - 2:40 PM Conference Hall (1F)

1:40 PM - 2:00 PM

[MEET5-5L(Invited)] Comparison of LTPS, Oxide and LTPO TFTs for Micro-LED Displays

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Keywords: Micro-LED, LTPS TFT, Oxide TFT, TFT Backplane

We review here the LTPS and oxide TFT technologies for micro-LED displays. We have developed BLA of a-Si for LTPS TFTs, exhibiting a high field-effect mobility over 150 cm²/Vs for p-channel device. On the other hand, oxide TFTs using bulk-accumulation (BA) mode exhibit an effective field effect mobilities over 50 cm²/Vs. The BLA TFT backplane was applied to drive a micro-LED displays using digital driving. Oxide TFT backplane was used for micro-LED with high contrast ratio. The LTPO technology and QD color conversion technology will be explained for micro-LED displays.