
Poster Presentation

[AMDp1]Oxide TFTs

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[AMDp1-25L]Photo-induced instability behaviors of IGZO TFTs caused by the reversible charge trapping

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Keywords:IGZO transistor (TFT), photo-irradiation, charge trapping

Photo-induced instability phenomena were investigated in IGZO TFT. The photo-responsivity behaviors attributed to the induced gate bias reveal that, resulting from their substantial trapping feature, photo-carriers (electrons and holes) activated in IGZO solid contribute differently to the negative shift V_{th} of the device. The bidirectional switching behavior under photo-irradiation also clearly indicates that the hysteresis enhancement predominantly comes from the long-lived reversible charge effect (holes) in n-type devices.