
Poster Presentation

[AMDp1]Oxide TFTs

Thu. Nov 28, 2019 10:40 AM - 1:10 PM Main Hall (1F)

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[AMDp1-9]Fluorine-doped Indium Gallium Zinc Oxide Thin-Film Transistors Fabricated via Solution Process

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Keywords: IGZO TFTs, Fluorine, Doping effect, Solution process

Fluorine-doped indium-gallium-zinc-oxide thin-film transistors were fabricated using a sol-gel process. The devices showed the enhanced electrical properties of V_{th} , saturation mobility, subthreshold swing and positive bias stress stability with an incorporation of the fluorine into the IGZO channel layer. This may be attributed the effect of fluorine doping. It generates the free electron by replacing the oxygen atoms and decreases the total trap states by occupying the oxygen vacancies.