

Poster Presentation

## [AMDp1]Oxide TFTs

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

---

10:40 AM - 1:10 PM

### [AMDp1-1]Improvement in carrier mobility of ZnON transistor by tantalum encapsulation

\*Minjae Kim<sup>1</sup>, Jae Kyeong Jeong<sup>1</sup> (1. Hanyang Univ. (Korea))

Keywords:Thin-film transistors, Zinc Oxynitride, Tantalum oxide, Encapsulation, Metal-oxynitride semiconductors

The TaOx/ZnON thin-film stack showed a more uniform distribution of nanocrystalline ZnON with an increased stoichiometric anion lattice compared to control ZnON thin-films. Significantly, improved mobility of 89.4 cm<sup>2</sup>/Vs were achieved for TaOx/ZnON TFTs. This improvement can be explained by the removal and passivation effect of TaOx film on ZnON.