Oral presentation | 13 Semiconductors | 13.5 Semiconductor devices/ Interconnect/ Integration technologies

[11p-Z09-1~15]13.5 Semiconductor devices/ Interconnect/ Integration technologies

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Fri. Sep 11, 2020 12:45 PM - 5:15 PM Z09

△：Presentation by Applicant for JSAP Young Scientists Presentation Award

▲：English Presentation

▼：Both of Above

No Mark：None of Above

2:15 PM - 2:30 PM

[11p-Z09-5][The 11th Silicon Technology Division Award Speech] Bilayer tunnel field effect transistor with oxide-/group-IV semiconductors

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Keywords:TFET, oxide semiconductor, group-IV semiconductor

Tunnel field effect transistor (TFET) is one of attractive electrical devices as a steep-slope transistor, which exceed the physical limit of conventional MOSFET. In order to realize high-performance TFET with high compatibility with Si CMOS platform, we are proposing the bilayer TFET structure by utilizing an n-type oxide semiconductor channel and a p-type group-IV semiconductor source. In this study, we will report our achievement about first experimental demonstration of the proposed bilayer TFET structure with the ZnO/Si and ZnO/Ge hetero junction.