

IMPACT Center SAB/Liaison meetings
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Abstract

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BEOL Indium-Tin-Oxide Transistors with One Nanometer Thick Channel and Ferroelectric-Gating

We report on a new breakthrough on oxide transistors using 1 or 2 nm thick ITO as channel and ferroelectric HZO as gate dielectric. High performance transistor characteristics are demonstrated with maximum drain current beyond 1 A/mm at channel length as large as 0.6 micron and Ion/Ioff ratio beyond 5-6 orders of magnitude. The process temperature is less than 150 C to fulfill BEOL requirement.