

Poster Presentation

[AMDp2]Active-Matrix Devices

Thu. Nov 28, 2019 2:30 PM - 5:00 PM Main Hall (1F)

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[AMDp2-1]Self-Heating Effect of Low-Temperature Polycrystalline Silicon Thin Film Transistor Considering Grain Boundary Protrusion

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Keywords:LTPS TFT, grain boundary protrusion, self-heating, technology computer-aided design (TCAD)

A proper estimation of the self-heating effect is crucial to ensure the reliable performance of high mobility transistors. We perform Silvaco TCAD based thermal distribution modeling in grain, grain boundary (GB) and protrusion of excimer laser annealed (ELA) low-temperature polycrystalline (LTPS) silicon thin-film transistors (TFTs).