Special Issue

Steep Switching Field Effect Transistor

Message from the Guest Editors

The various steep-switching devices, including tunneling field-effect transistors (FETs), negative capacitance FETs, feedback FETs, and nano-electromechanical FETs, have been explored in efforts to reduce the dynamic power and to improve the operation speed. The devices can overcome the switching limit of the MOSFET with the different operating mechanisms and/or the improved gate-to-channel coupling. Despite the theoretical advantages, various technical issues still exist in each steep-switching FET, and innovative solutions are required. In this Special Issue, we focus on the development of steep-switching devices for various applications such as components of logic circuits or neuromorphic circuits, memory devices, and sensors. Articles, short communications, and review articles that cover a broad range of possible topics, including fabrication, modeling, characterization, and simulation, are all welcomed.

Guest Editors

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