

Special Issue

Extremely-Low-Power Devices and Their Applications

Message from the Guest Editor

Over the past 60 years, the size reduction of electron devices has increased the density and speed of semiconductor chips exponentially. However, as the end of Moore's law approaches, power-consumption issues are becoming more critical in terms of energy efficiency, reliability, density and even performance. For example, it is expected that the ICT industry will use 20% of all electricity and emit up to 5.5% of the world's carbon emissions by 2025. Thus, extremely-low-power electronic systems are indispensable to the future of the ICT industry and various pioneering ideas have been proposed, including sharp-switching devices, M/NEMS devices, extremely-low-power memory/sensors, reconfigurable computing devices, neuromorphic devices and so forth. This Special Issue on extremely-low-power devices and their applications will cover the timely topics of pioneering semiconductors, M/NEMS and sensor devices for dramatic power saving and boosting energy efficiency.

Guest Editor

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