Special Issue

Power Semiconductor Devices and Applications, 3rd Edition

Message from the Guest Editor

Power semiconductor devices have contributed to the rise of information technology, since they can be widely used in central processing units, graphic accelerators, digital sound processing, etc. There is a significant demand for power devices that are capable of handling operating voltages from grids or another high-voltage supply. Many power semiconductor devices have been proposed in recent decades, with the majority of technological developments being focused on silicon materials. Wide-gap semiconductors are currently represented by SiCs, while GaN and other compound semiconductor materials have received increasing attention for electric power applications due to their excellent electrical performance. Although power semiconductor devices based on silicon and other semiconductor materials have seen significant advances, there are still many problems to be solved in the field of power electronics. This Special Issue highlights the advances in the design, processing, reliability, and application of power semiconductor devices based on silicon or other semiconductor materials.

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