Special Issue

GaN Power Devices: Recent Advances, Applications, and Perspectives

Message from the Guest Editors

In recent years, remarkable progress has been made in the development of lateral and vertical gallium nitride (GaN)-based power devices. In particular, high-performance lateral multi-channel AlGaN/GaN Schottky barrier diodes with a breakdown voltage over 10 kV, vertical p–n diodes with a blocking voltage greater than 6 kV and very high Baliga's figure-of-merits, vertical junction barrier Schottky diodes with a low on-resistance below than 1mΩ·cm2, and vertical FETs with a blocking voltage greater than 1kV and specific on-resistances less than 2 mΩ·cm2 have been successfully demonstrated. The aim of this Special Issue is to present high-quality contributions that address the latest challenges in GaN power devices and applications. The topics of interest include, but are not limited to, the following themes: 1. Novel edge termination methods and techniques;
2. Novel device architectures and concepts;
3. Fabrication technology, reliability, and characterization;
4. Simulation and design.

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