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Reliability and Failure Analysis for Future GaN Technologies

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Message from the Guest Editors

The topics of saving global resources by increasing energy efficiency, mastering the problems of future digitalization and communication in society, and transforming mobility systems toward green electric cars and autonomous driving are among the most significant problems global society has to address today. A major target consists in developing powerful, efficient, and reliable electronic devices to provide the required high-performing hardware components. In this context, a huge potential for GaN-based semiconductor devices is currently arising, complementing traditional Si-based electronics for many challenging applications, such as 5G high-speed communication systems, and high-frequency power converters for consumer applications, for data centers, for industry and energy technology, as well as for sensors in mobility applications. Current GaN-device research activities are focusing on size reduction, cost effectiveness, and reliability while dealing with several challenges such as:

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Message from the Editor-in-Chief

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