Special Issue

SiC Based Miniaturized Devices, 3rd Edition

Message from the Guest Editors

MEMS devices are found in many of today's electronic devices and systems, the reduction in dimensions has led to nanometer-scale devices, called NEMS. The plethora of applications on the commercial market speaks for itself, especially for the highly precise manufacturing of silicon-based MEMS and NEMS. Silicon carbide (SiC) is a well-known wide-bandgap semiconductor, the adoption of which in commercial products is experiencing exponential growth, especially in the power electronics arena. While SiC MEMS have been around for decades, in this Special Issue, we seek to both present an overview of the devices that have been demonstrated to date and bring new technologies and points of progress in the MEMS processing field to the forefront. Thus, this Special Issue seeks to showcase research papers, short communications, and review articles that focus on the following: (1) novel designs, fabrication, control, and modeling of SiC MEMS and NEMS based on all kinds of actuation mechanisms; (2) new developments in applying SiC MEMS and NEMS in consumer electronics, optical communications, industry, medicine, agriculture, space, and defense.

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