



Crystals

an Open Access Journal by MDPI

CiteScore: 5.0

Impact Factor: 2.4

Special Issue Reprint

Robust Microelectronic Devices

Edited by: Michael Waltl

Integrated electronic circuits have influenced our society over the past decades and have become an indispensable part of our daily lives. To maintain this development and ensure benefits for decades to come, continuous further development of electronic chips is necessary. These developments include improving their performance and universality and exploiting the full potential of microelectronic technologies. An important issue for all microelectronic devices is their robustness, i.e., the high performant and reliable function, which is the key for long-term failure safe and stable operation of complex electrical circuits and applications. In real devices, the high-performant and stable operation becomes limited by various physical effects, such as bias temperature instabilities, stress-induced leakage currents, etc. A continuous improvement of the physical understanding of such effects is essential for further optimization of silicon transistors and the improvement of the performance of emerging technologies such as devices based on wide bandgap materials like SiC or GaN as well as for novel 2D transistors. The publications published in this special issue cover various aspects of robust electronic devices and are just as diverse as the field of research itself.

