



## **Design, Development and Application of Microelectronics and Semiconductor Devices**

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### **Message from the Guest Editors**

Research on innovative technologies for new materials and semiconductors has significantly increased, driven by the expansion of microprocessors, smart devices, sensors, and consumer electronics connected to the Internet of Things (IoT) in the digital era. The prospects are stimulating, but several challenges are emerging. One such challenge is related to the energy consumption of these devices, their speed, and reliability. The enhanced integration of new thin film technologies with VLSI has been suggested, as well as the development of novel transistors for the creation of modern circuits. Therefore, this collection considers recent advances in the design, modeling, fabrication, characterization, applications, and perspectives of microelectronic and semiconductor devices. It focuses on how these developments can address current and future challenges, promoting innovative solutions that optimize performance and energy efficiency, while exploring emerging applications across various fields of science and technology.





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## Message from the Editor-in-Chief

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