Special Issue

Integrated Circuit Research for Nanoscale Field-Effect Transistors

Message from the Guest Editor

As the channel size of field-effect transistors (FETs) shrinks to the nanometer scale, there is increasing demand for atomic-layer materials to minimize the effects of short channels under extreme scaling. Since the proposal of graphene, the first monolayer of graphite, researchers have developed novel nanomaterials such as two-dimensional chalcogenides and single-element two-dimensional materials on FET devices. To draw attention to this research field, this Special Issue will comprehensively introduce the progress in FET device applications. The potential topics include, but are not limited to, nanomaterials in FET devices and the preparation, circuit design, and application of nano-FET devices. We invite authors to contribute original research and review articles covering the latest developments in aspects such as nanomaterial-based devices, sub-reliability, and material stability. There are many issues related to the design, fabrication, and application of field-effect transistors. It is my pleasure to invite you to share your expertise in this Special Issue. See more information in: https://www.mdpi.com/si/191892

Guest Editor

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Deadline for manuscript submissions

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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