Special Issue

Memory Nanomaterials: Growth, Characterization and Device Fabrication

Message from the Guest Editors

The traditional semiconductor technology has gradually approached the physical limit, which makes it difficult to greatly improve the storage efficiency, reservoir performance. In order to make breakthrough progress, we must turn to innovative methods, find new principles, new materials, and new structures. Therefore, this Special Issue focuses on the following scientific fields:

- Si-based heterostructures and nanostructures in DRAM;
- Strained silicon materials in DRAM peripheral circuits;
- The process and integration of nanostructures in DRAM;
- Supercapacitor high-k materials for DRAM;
- Growth and Characterization of IGZO material;
- New materials in emerging DRAM architecture (2T0C, 2T1C...);
- RRAM materials and devices;
- MRAM materials and devices (STT-MRAM, SOT-MRAM, VCMA-MRAM, etc.);
- FRAM materials and devices;
- PCM materials and devices;
- Reliability analysis and characterization of Memory;
- Characterization of memory nanostructures;
- Materials calculation and device simulation;
- Logic-Memory 3D integration;
- Emerging memory applications;

Assistant

Guest Editors

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Deadline for manuscript submissions

closed (30 September 2023)

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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.

Editor-in-Chief

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