nanomaterials

IMPACT FACTOR 5.3

Indexed in: PubMed

CITESCORE 7.4

an Open Access Journal by MDPI

Semiconductor Nanomaterials for Memory Devices

Guest Editors:

Prof. Dr. Xianbin Li
State Key Laboratory of Integrated Optoelectronics, College of Electronic Science and Engineering, Jilin University, 2699 Qianjin Street, Changchun 130012, China

Prof. Dr. Wei Zhang
Center for Alloy Innovation and Design (CAID), State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, Xi'an 710049, China

Prof. Dr. Ming Xu
1. School of Integrated Circuits, Huazhong University of Science and Technology, Wuhan 430074, China
2. Hubei Yangtze Memory Laboratories, Wuhan 430205, China

Message from the Guest Editors

Memory Technology is a key component of the modern information society. Its value will be further enhanced in the future big-data era. As a kind of matter carrier for recording data or information, semiconductor nanomaterials increasingly play important roles in memory devices due to their potential advantage of device miniature and high-density integration. The electrical/optical/spin/magnetic/chemical/ferroelectric properties, band structure, atomic structure, defect, and various phases of semiconductor nanomaterials together decide the ways of efficient data encoding, which includes volatile and nonvolatile memories. Their microscopic working mechanism, response to external stimuli, characterization/analysis, growth, optimization/design, and device fabrication of the semiconductor nanomaterials are closely related to memory performances including data retention, power consumption, signal contrast, encoding speed, write/erase cycling and so on.

The Special Issue aims at providing an overview of the most recent progress and new developments in the design and utilization of semiconductor nanomaterials for advanced memory devices as well as their related technologies.

Deadline for manuscript submissions:
31 August 2024

mdpi.com/si/149681

nanomaterials

IMPACT FACTOR 5.3 | Indexed in: PubMed | CITESCORE 7.4

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Shirley Chiang
Department of Physics, University of California Davis, One Shields Avenue, Davis, CA 95616-5270, USA

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.
Journal Rank: JCR - Q1 (*Physics, Applied*) / CiteScore - Q1 (*General Chemical Engineering*)

Contact Us

Nanomaterials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/nanomaterials
nanomaterials@mdpi.com
𝕏@nano_mdpi