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膨胀辉钼矿/碳复合材料构筑及其储锂性能

彭成龙，史明明，刘 倩，刘华圣，李 珍

Construction of Expansion Molybdenite /Carbon Composites Material and Its Lithium Storage Properties

PENG Chenglong, SHI Mingming, LIU qian,
LIU Huasheng, LI Zhen

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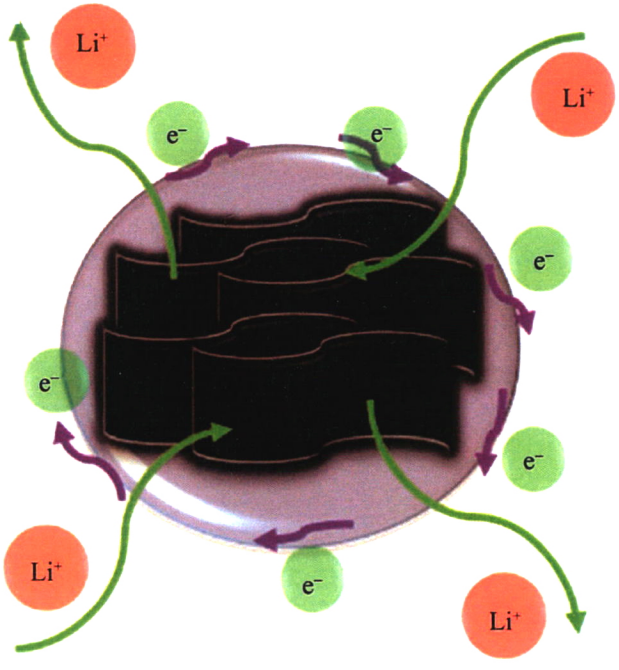

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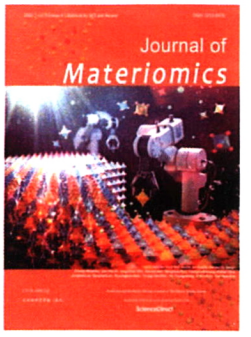
Special Issue on

"Low-dimensional Integrated Opto-Electronic Materials and Devices"



1. Summary and scope

Low-dimensional (LD) materials and devices are backbones of new generation optoelectronic circuitries and systems with higher integration capacity and better performance. Entering post-Moore era, silicon (Si)-based electronic transistor technology is confronted with increasing short-channel and energy consumption bottlenecks. In response of this challenge, novel LD optoelectronic materials with exotic photo- and electro-physical effects are on augmenting demand to both expand the functionality and promote the efficiency of integrated information devices. Low-dimensional semiconductors (from 0D-2D) have evinced great potential to achieve this goal. The epitaxy/solution-grown quantum dots represent as excellent quantum sources for single-photon emission and future quantum information processing. Endowed with the naturally formed 1D waveguide structure, semiconductor nanowires have been manifested as excellent nano-lasers and photodetectors, with emission and photo-response spanning from ultra-violet (UV) to mid-infrared (mid-IR) range. Furthermore, the van der Waals-layered semiconductors, emerging over the last decade, have exhibited great competitiveness in atomically thin 2D transistors, light-emitting devices and photo-detectors with spin-valley-entangled optoelectronic characteristics. Given the vast choice of nanomaterials, more fascinating fundamental physics and device application can be uncovered by integrating these LD materials in a hybrid device architecture. In light of this, comprehensive and systematic research efforts are invoked to thoroughly understand the subject matter and further advance this research field.

The Journal of Materiomics (JMAT), indexed in SCI (Impact Factor of 6.425) and Scopus (Cite score of 8.8), is a leading academic journal that publishes cutting-edge research in the general field of materials science, particularly systematic studies of the relationships among composition, processing, structure, property, and performance of advanced materials. The journal is going to publish a special issue on the topic of low-dimensional integrated opto-electronic materials and devices in 2023.

The topics that the special issue will include, but not be limited to:

- Integrated LD material growth, synthesis and fabrication.
- Photo-and electro-physics of integrated LD semiconductor heterostructures.
- Integrated LD optoelectronic devices, including LEDs, lasers, modulators and photodetectors.
- New concept of LD information system, including brain-inspired neuromorphic devices and on-chip systems.

2. Submission Guideline

Authors should prepare their manuscripts following the online submission page of Journal of Materiomics at http://www.journals.elsevier.com/journal-of-materiomics. All manuscripts will be peer-reviewed according to the journal reviewing procedures.

3. Important Dates

Manuscript submission due date: October 30, 2022; Publication date before June 30, 2023

4. Guest Editors

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