Optoelectronic information and energy storage

Polymer nanocomposites with enhanced optical and electrical properties are highly sought after for various technological applications, including optoelectronic devices, ...

This article explores the applications of optoelectronics in renewable energy systems, examining how optoelectronic technologies are transforming solar energy, wind power, energy storage, ...

Abstract: With the rapid development of internet, internet of things, cloud computing and artificial intelligence, human society has entered the age of Big Data. In the face of such a large amount ...

The 2025 International Conference on Optoelectronic Information, Energy Storage and Green Energy (ESGE 2025) is about to be held in the picturesque city of Guilin, which is an important ...

In contemporary society, the integration of optoelectronic technologies has become increasingly indispensable, playing pivotal roles in critical domains such as sensing, ...

Her research interests include the chemistry, properties, and application of polymer and hybrid organic/inorganic materials technologies for a range of optoelectronic device and sustainable energy ...

Herein, the latest research progress and development trends of optoelectronic information devices based on 2D materials are summarized. This work gives a comprehensive review of this field, covering ...

Synthesis and electrochemical characterization of pseudocapacitive ?-MoO 3 thin film as transparent electrode material in optoelectronic and energy storage devices ...

This work aims to fabricate the undoped and doped polyvinyl alcohol (PVA)/carboxymethyl cellulose (CMC)-blended polymers with ZnCo 2 O 4 -CdS, multi-walled ...

By overcoming fundamental material properties such as carrier mobility limitations, resistive losses, and diffraction-limited miniaturization, this technology has redefined performance metrics in ...

DFT-based evaluation of covalent organic frameworks for adsorption, optoelectronic, clean energy storage, and gas sensor applications Original Paper Published: 16 ...

New products on the market | DEMUDA MPPT DM series solar controller 2023 World Solar photovoltaic and energy Storage Industry Expo was held in Guangzhou Canton Fair In the three-day photovoltaic ...

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Additionally, research on a new generation of high-efficiency organic solar cells and high-performance energy storage batteries is being conducted to contribute to the realization of the ...

The optical data storage technique is one of the most significant topics of the optical applications, which is considered as the prominent solution for conquering the challenge of the explosive increase ...

Optoelectronic Information Science and Engineering is an electronic information profession combining optical engineering with electronic, information and mechanical engineering. This ...

As the core carrier of the information age, optoelectronic display and storage technologies are evolving from one-way information transfer to multi-dimensional and intelligent interaction ...

Here, we report an optoelectronic array for in-sensor computing by integrating photodiodes (PDs) with resistive random-access memories (RRAMs).

Their properties make them suitable for optoelectronic applications such as optical coatings and bandgap tuners, as well as energy storage solutions like thin-film ...

Optoelectronic devices, such as Light-Emitting Diodes (LEDs), photodetectors, solar cells, and laser diodes, can enhance the eficiency of renewable energy systems by improving energy ...

Fabrication and development morphological, structural, dielectric, linear and nonlinear optical properties of PS/BaTiO 3 -SiC nanocomposites for optoelectronic and energy ...

Here, we provide an overview of the current status of research and technology developments in data storage and spin-mediated energy harvesting in relation to energy ...

The 2nd International Conference Optoelectronic Information and Optical Engineering (OIOE2026) will be held on October 24-26, 2026 in Wuhan, China. It mainly discusses the latest research and skills in the fields of ...

This study highlights the great potential of the PD-RRAM optoelectronic array as an energy-efficient in-sensor computing primitive for future IoT applications.

Transparent, photosensitive and highly efficient pseudocapacitive binder-free Mo-modified NiO thin film electrode for bifunctional optoelectronic and energy storage ...

Welcome to OIOE2026 The 2nd International Conference Optoelectronic Information and Optical Engineering (OIOE2026) will be held on October 24-26, 2026 in Wuhan, China.

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Optoelectronic materials are foundational for many technologies that broadly define the information age. They find applications in thin-film transistors, light emitting diodes, solar cells, sensors, and the ...

Synthesis and electrochemical characterization of pseudocapacitive ?-MoO 3 thin film as transparent electrode material in optoelectronic and energy storage devices

Inspired by this process, optoelectronic devices have been developed to simulate the work process of the retina system, but traditional silicon-based visual devices require long-distance data communication ...