

Due to their relatively low molecular weight and excellent compatibility with polymer matrix, molecular semiconductors have been explored in order to fabricate high-quality ...

Abstract Metal oxide semiconductors have emerged as promising materials for energy storage applications due to their unique structural, electrical, and electrochemical properties. This ...

The use of nanomaterials in semiconductor-based applications for energy storage and biosensing has brought transformative progress. Yet, for these technologies to reach maturity, scientific ...

Semiconductors and the associated methodologies applied to electrochemistry have recently grown as an emerging field in energy materials and technologies. For example, ...

As the result, innovative EV charging systems with energy storage and intelligent control for power conversion and distribution are needed. Energy storage comes into play by ...

To further improve the energy storage performance, three semiconductor molecules with high electron affinity were incorporated into the polynorbornene matrix to act as ...

This highlights the importance of continued research and development in this field, as silicon-based energy storage systems have the potential to revolutionize the energy land-scape and ...

Matching Circuit Topologies and Power Semiconductors for Energy Storage in Photovoltaic Systems Due to recent changes of regulations and standards, energy storage is expected to ...

Two-dimensional (2D) transition metal dichalcogenides like molybdenum diselenide (MoSe_2) have shown great potential in optoelectronics and energy storage due ...

Article Open access Published: 19 January 2021 Interstitial boron-doped mesoporous semiconductor oxides for ultratransparent energy storage Jian Zhi, Min Zhou, ...

Due to their relatively low molecular weight and excellent compatibility with polymer matrix, molecular semiconductors have been explored in order to fabricate high-quality flexible energy ...

Researchers have extensively explored solar photovoltaics, wind turbines, and energy storage solutions, leveraging semiconductor innovations to enhance functionality, ...

Dielectric polymers used for electrostatic energy storage often exhibit considerable performance deterioration

at elevated temperatures, which restricts their use in ...

Semiconductors are at the heart of green technology innovation, enabling the expansion of renewable energy through more efficient solar panels, wind turbines, energy ...

"The analog and embedded processing products in modern renewable energy applications are evolving to enable smarter, reliable and more accessible solar, energy storage ...

2 ???· Here, we present a strategy that combines the doped organic semiconductor, [6,6]-phenyl-C 61 -butyric acid methyl ester (PCBM), with a unipolar nanosecond electric pulse ...

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