

The vast majority of electrolyte research for electrochemical energy storage devices, such as lithium-ion batteries and electrochemical capacitors, has focused on liquid-based solvent systems because of their ...

Rechargeable batteries and electrochemical capacitors are two primary types of electrochemical energy storage devices. Batteries, such as lithium-ion and sodium-ion batteries (LIBs and SIBs), rely on reversible shuttling of ...

A new, sizable family of 2D transition metal carbonitrides, carbides, and nitrides known as MXenes has attracted a lot of attention in recent years. This is because MXenes ...

Within the solid fuel class, there are two fuel cell types that could potentially result in a paradigm shift with respect to power generation and application potential: Microbial Fuel Cells (MFC) ...

Abstract High entropy materials have garnered considerable attention recently as a class of materials with intricate stoichiometry, exhibiting high levels of entropy. ... catalysis, and electrochemical energy storage. 13-17 ...

3 Biomolecules for Electrochemical Energy Storage 3.1 Quinone Biomolecules. A large class of redox biomolecules belongs to quinone compounds, and participate in a wide variety of ...

The demand for portable electric devices, electric vehicles and stationary energy storage for the electricity grid is driving developments in electrochemical energy-storage (EES) ...

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