

To develop electrolytes suitable for flexible energy storage devices, it is imperative to modify the physical state of the electrolyte to a solid or quasi-solid form, thereby preventing any leakage during mechanical deformation.

For sustainable living and smart cities, the decarbonization of society is a central aim of energy research. Clean energy plays a key role in achieving global net-zero targets due ...

widely used substrates for fiber -type energy storage devices. This section reviews the current state of fiber -based energy storage devices with respect to conductive materials, fabrication ...

Recently, the three -dimensional (3D) printing of solid-state electrochemical energy storage (EES) devices has attracted extensive interests. By enabling the fabrication of well- designed EES ...

For implantable energy storage devices, to effectively improve leakage issues, internal short-circuiting, and ease of packaging, quasi-solid-state hydrogels composed of organic polymer matrices with ion-conducting species ...

The rapid consumption of fossil fuels in the world has led to the emission of greenhouse gases, environmental pollution, and energy shortage. 1,2 It is widely acknowledged that sustainable ...

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

Self-discharge (SD) is a spontaneous loss of energy from a charged storage device without connecting to the external circuit. This inbuilt energy loss, due to the flow of ...

The scarcity of fossil energy resources and the severity of environmental pollution, there is a high need for alternate, renewable, and clean energy resources, increasing ...

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