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Title: Electrochemical energy storage of tin sulfide

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This study focuses on the synthesis of tin sulfide ( $\text{SnS}_x$ ) films via the eco-friendly successive ionic layer adsorption and reaction (SILAR) method, employing varying quantities ...

This achievement represents a significant step toward integrating renewable energy harvesting with efficient energy storage, offering a promising pathway for practical, sustainable ...

In addition to the development of renewable energy, advances in energy storage technologies, particularly electrochemical devices, are essential for efficient energy conversion and storage [4].

Highlights o The application of tin based negative electrodes in potassium ion batteries has enormous potential for large-scale energy storage. o Structural changes can be ...

In recent years, the tin sulfide family of materials, which includes stable binary compounds such as  $\text{SnS}$ ,  $\text{Sn}_2\text{S}_3$ , and  $\text{SnS}_2$ , has attracted significant attention as materials ...

Tin sulfide ( $\text{SnS}_2$ ) has attracted considerable attention in energy storage applications due to its outstanding properties, such as its semiconducting nature, low toxicity, ...

Herein, we have synthesized tin sulfide nanoparticles homogeneously dispersed onto graphene sheets by simple hydrothermal method. The crystal structure and morphological of ...

New generation of electrochemical energy storage devices (EESD) such as supercapattery is being intensively studied as it merges the ideal energy density of batteries and optimal power ...

The gathered data were then used to evaluate the potential of tin sulfide films as electrode materials in

supercapacitors, highlighting their suitability for sustainable energy ...

After annealing at 300 °C, smooth and well-adhered tin sulfide films were formed, consisting of smaller spherical particles 28-37 nm in size, and the thickness of annealed films ...

In this research, nickel doped tin sulfide /tin oxide (SnS@Ni/SnO<sub>2</sub>) heterostructures were grown directly on the Ni foam and subjected to different calcination temperatures to study their effect ...

Transition metal dichalcogenides (TMDs) are highly valued for energy storage due to their 2D structure and excellent electrochemical properties. In this case, selenides" superior ...

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