

BLINK SOLAR

Electrochemical energy storage application of Ni_3Se_2



Overview

What is a controllable Ni_3Se_2 nanowire array?

Controllable nanoarchitecture arrays of the transition metal selenide, supported on conductive substrates, are promising materials for high-performance electrochemical energy storage and conversion applications. Herein, Ni_3Se_2 nanowire arrays with a rich-grain-boundary are rationally grown on a nickel foam (.

Can Ni_3Se_2 nanosheets be used as attracting electrode materials?

In summary, we have triumphantly used a facile two-step strategy to Ni_3Se_2 nanosheets on the surface of the 3D NiSe nanowires arrays directly deposited on Ni foam as attracting electrode materials for high-energy ASC device.

Is Ni_3Se_2 a good electrolyzer?

The Ni_3Se_2 nanowire array electrode is shown to be a high-performance alkaline water electrolyzer with current density of 10 mA cm^{-2} at a cell voltage of 1.62 V. The results demonstrate Ni_3Se_2 as a promising 2D highly active electrode for electrochemical energy storage and conversion applications.

Can $\text{NiSe@Ni}_3\text{Se}_2$ be used for oxygen evolution reaction?

In addition, the as-obtained $\text{NiSe@Ni}_3\text{Se}_2$ catalyst can present favorable electrocatalytic performances for oxygen evolution reaction (OER) with a small overpotential of 281 mV at 10 mA cm^{-2} .

Electrochemical energy storage application of Ni₃Se₂

Synthesis of 3D Ni₃Se₂ nano-architectures for



Abstract The multifunctional 3D Ni₃Se₂ nano-architectures were successfully synthesized by a facile solvothermal route, and their electrochemical performances were ...

ACS Applied Energy Materials

Developing transition metal selenide materials with high capacity, excellent rate capability, and satisfactory durability presents significant challenges due to their sluggish ...



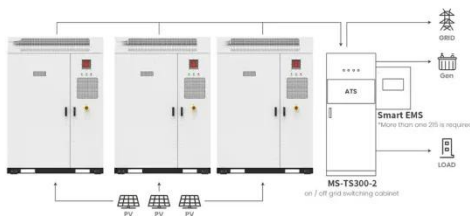
Rich-Grain-Boundary of Ni₃Se₂ Nanowire Arrays as ...



All the results make Ni₃Se₂ electrode as a promising 2D highly active electrode for electrochemical energy storage and conversion applications.

Rich-grain-boundary of Ni₃Se₂ nanowire arrays as ...

Controllable nanoarchitecture arrays of the transition metal selenide, supported on conductive substrates, are promising materials for high-performance electrochemical energy ...



Application scenarios of energy storage battery products

Researching , Fabrication of Nickel Selenide/Nickel Sulfide

In this paper, Ni₃Se₂/Ni₃S₂ nanocomposites were synthesized on nickel foam by a solvothermal and selenization method, and their structures and electrochemical energy storage ...

Synthesis of 3D Ni₃Se₂ nano-architectures for electrochemical energy

3D multifunctional Ni₃Se₂ nano-architecture electrodes on Ni foam for electrochemical energy storage and conversion applications have been achieved, which ...



ACS Applied Energy Materials

Developing transition metal selenide materials with high capacity, excellent rate capability, and satisfactory

durability presents ...



Development of $\text{MnAl}_2\text{O}_4/\text{Ni}_3\text{Se}_2$ nanocomposite for ...

Fossil fuel utilization leads to environmental pollution and depletion of energy supplies, prompting the preparation of environmentally friend and advanced energy storage ...



Synthesis of 3D Ni_3Se_2 nano-architectures for electrochemical energy

Semantic Scholar extracted view of "Synthesis of 3D Ni_3Se_2 nano-architectures for electrochemical energy storage and conversion" by Songyang Li et al.

Ni_3Se_2 thin films deposited on CuO nanomaterials as ...

Abstract With the ever-increasing demand for high-performance energy

storage devices, the development of efficient and stable electrode materials for supercapacitors has ...



Rich-grain-boundary of Ni_3Se_2 nanowire ...

Controllable nanoarchitecture arrays of the transition metal selenide, supported on conductive substrates, are promising materials for ...

Ni_3Se_2 nanosheets in-situ grown on 3D NiSe nanowire ...

This inspiring work both uncovers the superiority of transition metal selenides, and provides an available pathway for their practical applications in high-performance energy ...



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