

The development of advanced rechargeable batteries for efficient energy storage finds one of its keys in the lithium-ion concept. The optimization of the Li-ion technology urgently needs improvement for the active material of the negative electrode, and many recent papers in the field support this tendency. Moreover, the diversity in the ...

Here we report that electrodes made of nanoparticles of transition-metal oxides (MO, where M is Co, Ni, Cu or Fe) demonstrate electrochemical capacities of 700 mA h g⁻¹, with 100% capacity...

Si-TiN alloys are attractive for use as negative electrodes in Li-ion cells because of the high conductivity, low electrolyte reactivity, and thermal stability of TiN. Here it is shown that Si-TiN alloys with high Si content can surprisingly be made by simply ball milling Si and Ti powders in N₂ (g); a reaction not predicted by thermodynamics.

Lithium (Li) metal shows promise as a negative electrode for high-energy-density batteries, but challenges like dendritic Li deposits and low Coulombic efficiency hinder its widespread large-scale adoption. This review ...

Study on manufacture and performance of negative electrode material for Electric vehicle battery . Siyuan Xiao . Beijing Jiaotong University, Beijing, 100000 . Keywords: Sodium ion battery; anode material; annealing; microstructure; electrochemical performance. Abstract: In this paper, Ni-NiO/PCNs anode materials were prepared by in-situ ...

Metal negative electrodes that alloy with lithium have high theoretical charge storage capacity and are ideal candidates for developing high-energy rechargeable batteries. However, such...

In this work, the feasibility of Li-rich Li-Si alloy is examined as a lithium-containing negative electrode material. Li-rich Li-Si alloy is prepared by the melt-solidification of Li and Si...

Lead carbon battery, prepared by adding carbon material to the negative electrode of lead acid battery, inhibits the sulfation problem of the negative electrode effectively, which makes the ...

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