

The main request to be fulfilled for the wide distribution of electric vehicles is the availability of fast-charging lithium-ion batteries (LIBs). However, fast charging accelerates the ...

The combination of higher energy density, cycle life, safety, and faster charging, compared to other battery chemistries, has promoted lithium-ion batteries (LIBs) to a widespread power ...

Semantic Scholar extracted view of "Highly effective Al-doped titanium niobate porous anode material for rechargeable high-rate Li-ion storage performance" by R. ...

Lithium-ion batteries for high-power applications have become an increasingly important area of development as these devices have been used in implantable medical ...

Erbium-doped thin-film lithium niobate (TFLN) lasers have attracted great interest in recent years due to their compatibility with high-speed electro-optic (EO) modulation ...

This paper describes the syntheses and electrochemical properties of a new niobate compound, aluminum niobate ($\text{AlNb}_{11}\text{O}_{29}$), for Li^+ storage. $\text{AlNb}_{11}\text{O}_{29}$ -microsized particles and ...

Lithium half batteries assembled with $\text{N-Nb}_{2}\text{O}_{5}\text{-X @CNTs}$ as negative electrodes exhibited a reversible capacity of 208.3 mA h g⁻¹ at 0.1 A g⁻¹ (Fig. 6 c ... with a ...

voltages of 1.55 and 1.8 V,[10,11] respectively, preventing lithium plating. However, in order to obtain high rate performance, Fast charging is one of the key requirements for next-generation ...

Lithium-ion batteries (LIBs) are excellent energy storage devices for portable electronics and large-scale energy storage systems, owing to their high energy densities, high ...

Abstract Fast charging is one of the key requirements for next-generation lithium-ion batteries, however, lithium-ion diffusion rates of typical electrode materials are limited. ... but it also decreases the volumetric ...

To provide titanium niobate suitable for a negative electrode of a lithium battery and excellent in electric conductivity.SOLUTION: A doped titanium niobate is provided, which has a chemical ...

ion doped materials have the advantages of longer excited state lifetimes and less refractive index changes caused by doped ion excitation, which promotes the in-depth research on the PICs of ...

Semantic Scholar extracted view of "Enhanced electrochemical properties of vanadium-doped titanium

niobate as a new anode material for lithium-ion batteries" by Xiao ...

For 5% MgO doped lithium niobate (MgO:LN) at 1064nm, $d_{31}=4.4\text{pm/V}$, $d_{33}=25\text{pm/V}$ [1]. The highest nonlinear coefficient is $d_{33}=25\text{pm/V}$, which corresponds to interactions that are parallel ...

In this work, we synthesize pristine titanium niobate (TiNb_2O_7 , as denoted TNO) and novel aluminium doped TNO (Al-TNO) mesoporous materials via a facile ...

Lithium-ion batteries stand out as the most promising energy storage devices for electric vehicles and grid systems [1], [2] commercial batteries typically employ graphite as an anode material ...

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