

Graphynes, two-dimensional layers of sp- and sp²-bonded carbon atoms, have recently received considerable attention because of their potential as new Dirac materials. Here, focusing on their large surface area, we explore the ...

Lithium-sulfur (Li-S) batteries are considered as one of the promising next-generation energy storage systems because of their high energy density. While the low utilization of sulfur and sluggish reaction kinetics would lead to degradation of electrochemical performance and thus hinder the practical application of Li-S batteries. Herein, a double-shelled TiO₂-graphene ...

No. 11, Xingke East Street, Yanqi Economic Development Area, Huairou District, Beijing, 101407 China. Search for more papers by this author. Li Zhang, Li Zhang. China Automotive Battery Research Institute Co., Ltd., No. ...

Thermal management system is essential for lithium-ion batteries in electric vehicle to control operating temperature and temperature differences. Phase change material (PCM) is commonly used in the study of battery thermal management system (BTMS). ... Three batteries were tested separately for experiment repeatability. Yanqi Zhao et al ...

Yanqi Zhao, Boyang Zou, Jianning Ding, Yulong Ding. The battery thermal management system is essential to the electric vehicle. In this paper, a battery pack consisting of 20 cylindrical lithium-ion batteries, along with the copper foam/ paraffin composite phase change material, and liquid cooling channels were set up. ...

A new heat transfer enhancement approach was proposed for the cooling system of lithium-ion batteries. A three-dimensional numerical simulation of the passive thermal ...

for lithium-ion batteries Yanqi Feng and Hui Liu-Rate Behavior of MoO₂ /Graphene Oxide Lithium-Ion Battery Anodes from Electrochemical Contributions Hao Fu, Zhanwei Xu, Tian Wang et al.-This content was downloaded from IP address 157.55.39.79 on 14/06/2022 at 02:57.

Sodium-ion batteries (SIBs) are promising candidates for the replacement of lithium-ion batteries (LIBs) because of sodium's abundant reserves and the lower cost of ...

Molybdenum dioxide (MoO₂) as one of the conversion-based materials has the advantages of good chemical stability, affordable cost and high theoretical capacity (838 mAh g⁻¹) to meet the demand of high energy density. Therefore, MoO₂ has potential to be used as safe and durable anode in lithium-ion batteries. However, like most transition-metal oxide (TMO) ...

(DOI: 10.1016/j.rser.2022.112667) This review aims to provide an insight into the composite phase change material (CPCM) based battery thermal management system (BTMS), with a focus on the improvement of battery thermal management (BTM) performance using both passive and hybrid BTMS. The mechanism of battery heat generation and temperature effect on batteries ...

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