

Lithium-ion-based secondary battery packs are emerging as an alternative power source and are being increasingly used in electric vehicles, hybrid or plug-in hybrid electric vehicles. Typically, a standard automotive ...

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A separator plays a crucial role in ensuring the safety in lithium-ion batteries (LIBs). However, commercial separators are mainly based on microporous polyolefin membranes, which possess serious safety risks, such ...

In situ ring-opening polymerization of ether-based monomers has shown promising application in solid-state lithium metal batteries owing to their positive lithium compatibility, mild reaction conditions, and facile preparation. However, typical poly(1,3-dioxolane) (PDOL) based electrolyte still struggles with low ionic conductivity, narrow electrochemical ...

Abstract: Lithium-ion batteries stand out from other clean energy sources because of their high en-ergy density and small size.

Sodium ion batteries (SIBs) are proposed as alternatives to the current widely used lithium ion batteries (LIBs) due to the abundance of battery-grade sodium source in nature.

Lithium-ion batteries (LIBs) are widely used in portable electronics (laptops, intelligent watches, and cell phones) and hybrid/all-electric vehicles. 1,2 As an important component of LIBs, a porous separator facilitates ion transport and ...

Bin-Cheng Wang Tingting Xu Shaozhuan Huang Dezhi Kong Xinjian ... Lithium/sodium metal anodes (MAs) have been investigated for the next-generation high-energy density batteries due to their high theoretical capacity and low redox voltage. ... be a promising strategy to improve the performance of lithium metal anode enabling its application in ...

DOI: 10.1016/j.est.2022.106436 Corpus ID: 255093011; Time Series Feature extraction for Lithium-Ion batteries State-Of-Health prediction @article{Jorge2023TimeSF, title={Time Series Feature extraction for Lithium-Ion batteries State-Of-Health prediction}, author={In{`e}s Jorge and Tedjani Mesbahi and Ahmed Samet and Romuald Bon{"e}}, journal={Journal of Energy ...

A novel hierarchical Co 3 O 4 @a-Fe 2 O 3 core-shell nanoneedle array (Co 3 O 4 @a-Fe 2 O 3 NAs) on nickel foam substrate is synthesized successfully by a stepwise, seed-assisted, hydrothermal approach. This composite nanostructure serving as an anode material for lithium-ion batteries (LIBs) is advantageous in providing large interfacial area for lithium ...



Dezhi Wu, *a Lei Deng,b Yu Sun,b Kwok Siong Teh,c Chuan Shi,d Qiulin Tan,e Jinbao Zhao,f Daoheng Suna and Liwei Lin*ag ... lithium-ion batteries.7 However their relatively lower ionic conductivity about 1 mS cm 1 remains a problem. To date, advances in the separator manufacturing call for high porosity,

A separator plays a crucial role in ensuring the safety in lithium-ion batteries (LIBs). However, commercial separators are mainly based on microporous polyolefin membranes, which possess serious safety risks, such as their thermal stabilities. Although many efforts have been made to solve these problems, th

[16] Li Dezhi, Li Shuo, Zhang Shubo, Sun Jianrui, Wang Licheng, W ang Kai. ... (PHM) of marine power lithium batteries, the estimation of the state of health (SOH) and the prediction of remaining ...

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China leading provider of Li SOCL2 Battery and Lithium MNO2 Battery, Guangzhou Serui Battery Technology Co,.Ltd is Lithium MNO2 Battery factory. Sales & Support ... Address : F6, Dezhi Creative zone A area,Dashi town,panyu district,Guangzhou city,Guangdong province. Worktime: 9:10-18:00 (Beijing time) ...

Lithium-ion-based secondary battery packs are emerging as an alternative power source and are being increasingly used in electric vehicles, hybrid or plug-in hybrid electric vehicles. ... {Abhishek Das and Dezhi Li and David Williams and David Greenwood}, journal={Journal of the Brazilian Society of Mechanical Sciences and Engineering}, year ...

As a critical component in a rechargeable Li-ion battery (LIB), the separator greatly influences the specific discharge capacity, circle life, safety performance of battery and so on [1]. It can not ...

Dezhi Wu is a researcher in micro/nano manufacturing and its equipment, flexible electronics, and energy storage devices. He has published several papers in SCI journals and presented at...

The model uses a data-driven algorithm that eliminates the need to model the internal principles of lithium-ion batteries, and only needs to obtain characteristic indicators ...

EV-Grade LiFePO4 Cells: LiTime 24V 100Ah Lithium ion battery is assembled with Automotive Grade LiFePO4 Cells with UL certification, offering higher energy density, stable performance, greater power, and a low 3% self-discharge rate. 100% DOD & 10-year lifetime: LiTime lithium battery Provides 4000~15000 cycles, with a 10-year...



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Semantic Scholar extracted view of "SOH estimation method for lithium-ion batteries based on an improved equivalent circuit model via electrochemical impedance spectroscopy" by Chaofan Li et al. ... Electrochemical Impedance Spectroscopy Based on the State of Health Estimation for Lithium-Ion Batteries. Dezhi Li Dongfang Yang Liwei Li Licheng ...

The estimation of state of health (SOH) of a lithium-ion battery (LIB) is of great significance to system safety and economic development. This paper proposes a SOH estimation method based on the SSA-Elman model for the first time. To improve the correlation rates between features and battery capacity, a method combining median absolute ...

DOI: 10.1016/J.JPOWSOUR.2020.228906 Corpus ID: 224956140; Mechanism investigation of high oxide cathode for sodium-ion batteries performance Na3V2(PO4)2O2F/reduced graphene @article{Ma2021MechanismIO, title={Mechanism investigation of high performance Na3V2(PO4)2O2F/reduced graphene oxide cathode for sodium-ion batteries}, author={Cai ...

With the advantageous features include suitable lithium insertion position and "zero strain" structure, Li 4 Ti 5 O 12 has become one of the ideal anode materials for lithium-ion battery and ...

A lithium-ion or Li-ion battery is a type of rechargeable battery that uses the reversible intercalation of Li + ions into electronically conducting solids to store energy. In comparison with other commercial rechargeable batteries, Li-ion ...

Li et al. (2020) proposed a multi-timescale framework based on ICA method to estimate the SOH of batteries by extracting highly correlated features related to battery ...

Lithium-ion battery (LIB) health prognosis is essential for ensuring the safety of electric vehicles while they are in use. However, conventional approaches for accurate health state forecasting face challenges due to the complex interplay of battery degradation mechanisms and the significant variability in operating conditions during cycling. In this study, we propose a ...

Synergy of Sulfur/Polyacrylonitrile Composite and Gel Polymer Electrolyte Promises Heat-Resistant Lithium-Sulfur Batteries. Yu Liu Dezhi Yang +4 authors Yuping Wu. Materials Science, Engineering. iScience. 2019; 31. PDF. Save. Freestanding porous sulfurized polyacrylonitrile fiber as a cathode material for advanced lithium sulfur batteries.

Composite membranes have been fabricated made of ultrafine PVDF fibers via a tip-induced electrospinning (TIE) process and Al2O3 nanoparticles via a dip-coating process. These membranes exhibit good thermal stability and electrochemical properties as the separators for applications in lithium ion batteries (LIBs).



Lithium-ion-based secondary battery packs are emerging as an alternative power source and are being increasingly used in electric vehicles, hybrid or plug-in hybrid electric vehicles. Typically, a standard automotive battery pack consists of hundreds, even thousands, of individual cells which are connected in series and/or parallel to deliver the required power and ...

In order to improve the estimation accuracy of lithium battery SOH, this paper proposes an estimation method of lithium-ion battery SOH based on IALO-SVR. Firstly, the ...

DOI: 10.1039/d1gc01639c Corpus ID: 238686001; Recycling of spent lithium-ion batteries in view of green chemistry @article{Li2021RecyclingOS, title={Recycling of spent lithium-ion batteries in view of green chemistry}, author={Yukun Li and Weiguang Lv and Han-Guo Huang and Wenyi Yan and Xiaokang Li and Pengge Ning and Hongbin Cao and Zhi Sun}, ...

Synergy of Sulfur/Polyacrylonitrile Composite and Gel Polymer Electrolyte Promises Heat-Resistant Lithium-Sulfur Batteries. Yu Liu Dezhi Yang +4 authors Yuping Wu. Materials Science, Engineering. iScience. 2019; 31. PDF. Save. Designer Anion Enabling Solid-State Lithium-Sulfur Batteries. Heng Zhang Uxue Oteo +5 authors M. Armand.

The state of health (SOH) estimation plays an important role in keeping the safe and stable operation of lithium-ion battery management system (BMS). To solve the problem of low estimation accuracy of traditional estimation methods, this paper proposes a SOH estimation method based on improved ant lion optimization algorithm and support vector regression ...

Yanshuo Liu1, Licheng Wang 2*, Dezhi Li1 and Kai Wang1* Abstract Lithium-ion batteries (LIBs) are crucial for the large-scale utilization of clean energy. However, because of the com- ... Keywords Lithium-ion batteries, State-of-health, Electrochemical impedance spectroscopy, SOH estimation, Battery management system

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