New energy high voltage battery leakage detection

In this paper, a battery cell anomaly detection method is proposed based on time series decomposition and an improved Manhattan distance algorithm for actual operating data of electric vehicles.

This paper presents a fault diagnosis method for electrolyte leakage of lithium-ion based on support vector machine (SVM) by electrochemical impedance spectroscopy ...

A method of detecting leakage currents in a high voltage battery pack system reduces detection error caused by fluctuations in battery pack voltage during the detection process....

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The Agilent family of HLD leak detectors, PHD-4 portable sniffer leak detector, and C15 component leak detector are rugged, precise, and easy-to-use instruments that accurately and ...

Currently, high-voltage (HV) batteries of around 400 V are used as storage elements in electric cars, and there is a strong trend emerging towards higher voltage batteries, which allow for ...

The experimental results show that the hybrid model proposed in this study outperforms the state-of-the-art techniques such as informer and transformer in voltage fault ...

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Capacity analysis is an effective method for fault estimation, particularly in the case of SC faults. When an SC occurs in a battery cell, additional energy is consumed by the leakage current. This serves as a characterization of a faulty battery cell. By examining capacity-related variables such as remaining charge capacity (RCC) or ...

Taking the leakage detection of byd-qin hybrid high-voltage system as an example, this paper analyzes the fault generation mechanism and puts forward the detection technology of new...

The experimental results show that the hybrid model proposed in this study outperforms the state-of-the-art techniques such as informer and transformer in voltage fault prediction by achieving MAE, MSE, and MAPE

metrics of 0.009272%, 0.000222%, and 0.246%, respectively, and maintains high efficiency in terms of the number of parameters and runtime.

As known, the leakage of lithium battery (LIB) electrolyte is an important cause for runaway failure of LIB, so it has great significance to develop an approach for electrolyte leakage detection with low detection limit and fast response. In this work, we developed a Pd-doped WO 3 gas sensor, taking the main component of electrolyte Ethyl Methyl Carbonate (EMC) as the ...

In order to suppress leakage current caused in the traditional multi-cells series Li-ion battery pack protection system, a new battery voltage transfer method is presented in this paper, which uses the current generated in the transfer process of one of the batteries to compensate for the leakage of itself and other cells except the top cell. Based on the 0.18 µm ...

This paper presents a fault diagnosis method for electrolyte leakage of lithium-ion based on support vector machine (SVM) by electrochemical impedance spectroscopy (EIS) test. And the distribution of relaxation time (DRT) method is also employed to analyze the effect of leakage on the dynamic reaction process with full and half cells. In the ...

meets the battery voltage detection requirements of high accuracy and synchronization. Most importantly, the method has no battery leakage caused by the transfer cir-cuit. However, the safety of battery pack can"t be con-stantly monitored. When the sampling switch is turned on, all battery voltages are sampled and stored in the corre-

The Agilent family of HLD leak detectors, PHD-4 portable sniffer leak detector, and C15 component leak detector are rugged, precise, and easy-to-use instruments that accurately and efficiently detect leaks and are ideally suited for testing batteries in any number of leak detection techniques, such as inside-out, outside-in,

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