

## ■ 综述

PEM 燃料电池冷却方法发展现状研究

电动汽车动力电池寿命衰减的影响因素分析

锂电池用正极材料钴酸锂改性研究进展

许懿婧, 杨国刚, 裴国强(1349)

宗磊, 朱峰, 杜峰, 王辰(1353)

刘巧云, 祁秀秀, 郝卫强(1357)

## ■ 研究与设计

## ● 化学电源

锂电池正极材料 NCMB 的合成与性能的研究

球状多孔状  $Mn_3O_4$ /石墨烯正极材料制备及性能研究

丝瓜络基蜂窝状碳负极材料制备及电化学性能

低温加热下小型锂电池模组的电热性能研究

相变材料和分叉翅片结合的电池热管理模拟

相变材料特性对车用动力电池热失控的影响

基于 PCM-液冷复合的锂离子电池热管理研究

扰流板对电池热管理系统冷却性能的影响研究

软包电池组的冷却结构设计及热仿真优化

三元锂电池储能性能与工作环境温度关系研究

锰酸锂-石墨电池高温循环容量减少的研究

基于气液动力学电池模型和 CKF 算法的 SOC 估测

基于 AMESim 的动力电池老化实验及分析研究

基于强度帕累托进化算法的复合电源参数优化

氢氧燃料电池尾气反向脉冲排水机制研究

基于双重强化传质流道的 PEMFC 性能研究

错列式流道固体氧化物燃料电池及其性能研究

基于交流阻抗技术的燃料电池状态分析

铅酸蓄电池充电寿命快速检测方法及评价研究

超级电容器恒流充放电热行为分析

高循环性能的  $FeCo_2S_4$ /碳纤维复合电极材料

余春林, 陈旭东, 宫川敏夫, 张兴旺(1360)

龚华旭, 龙睿祺, 王庆渊, 杨廷海(1364)

牛子孺, 王春梅, 张浩浩, 杨立荣(1368)

朱峰, 姜景栋, 何颖源, 陈永翀(1373)

郭雪莹, 刘家豪, 杨满江, 李贤斌(1378)

谷清平, 郑成博(1383)

杨梓堃, 竺玉强, 王亚平, 栗欢欢(1388)

王雨, 唐豪, 龚振(1393)

彭连兵, 吴炜烽, 晏裕康, 徐建全(1398)

张阳琳, 别传玉, 高标, 张宇平(1402)

雷少帆, 苏锋, 齐敏杰, 常林荣(1407)

曲智伟, 孙化阳, 竺玉强, 栗欢欢(1412)

陈国庆, 岳丹, 王文(1417)

肖伟, 杜常清, 任卫群(1422)

李政翰, 涂正凯(1428)

赵永豪, 袁伟, 周飞鲲, 汤勇(1433)

王珂, 李星辰, 王永庆, 代雪颖(1438)

刘锋, 曾东荣, 陈丽丽, 王诚(1443)

李秉宇, 杜旭浩, 范辉, 王磊(1447)

冯磊, 李国富(1452)

马骏, 彭景富, 苏冬云, 吉内德·阿里·赛义德(1457)

## ● 物理电源

空间用太阳电池阵双回路型剩磁消除方法研究

Na、K 共掺杂对  $Cu_2ZnSnS_4$  薄膜及器件性能的影响

太阳能聚光电池肋型结构冷却特性的数值研究

光伏组件 PID 效应的修复及抑制研究

张肖君, 林君毅, 尹兴月, 苏彬(1461)

向冬梅, 毕金莲, 李微, 张晓勇(1465)

陈海飞, 王韵杰, 杨慧涵, 邵永辉, 杨洁(1469)

杨跃武(1473)

## ■ 产品博览

上海升立机械

(1377)

电池行业用原材料目录

(1382)

《电源技术》征稿简则.....(1478)

附:《电源技术》2022 年总索引(第 46 卷, 1~12 期)..... I

## MAIN CONTENTS

### Review

Development status and prospect of PEMFC cooling methods.....XU Yijing, YANG Guogang, CHANG Guoqiang(1349)

Analysis of life decline influencing factors of electric vehicle power battery.....ZONG Lei, ZHU Feng, DU Feng, WANG Chen(1353)

Research progress on modification of lithium cobalt oxide as cathode material for lithium battery.....LIU Qiaoyun, QI Xiuxiu, HAO Weiqiang(1357)

### Research and design

#### Chemical power sources

Synthesis and properties of NCMB cathode material for lithium-ion battery.....YU Chunlin, CHEN Xudong, MIYAGAWA Toshio, ZHANG Xingwang(1360)

Preparation of spherical porous Mn<sub>3</sub>O<sub>4</sub>/graphene cathode materials and their performance.....GONG Huaxu, LONG Ruiqi, WANG Qingyuan, YANG Tinghai(1364)

Preparation and electrochemical performance of honeycomb-like carbon anode materials derived from loofah.....NIU Ziru, WANG Chunmei, ZHANG Haohao, YANG Lirong(1368)

Study on electric-thermal performance of small scale lithium battery module under low-temperature heating process.....ZHU Feng, JIANG Jingdong, HE Yingyuan, CHEN Yongchong(1373)

Simulation on PCM-based battery thermal management enhanced by bifurcated fins.....GUO Xueying, LIU Jiahao, YANG Manjiang, LI Xianbin(1378)

Effect of phase change material characteristics on thermal runaway of vehicle lithium power battery.....GU Qingping, ZHENG Chengbo(1383)

Thermal management of lithium-ion battery based on PCM-liquid cooling coupling.....YANG Ziyin, ZHU Yuqiang, WANG Yaping, LI Huanhuan(1388)

Study on effect of spoilers on cooling performance of battery thermal management system.....WANG Yu, TANG Hao, GONG Zhen(1393)

Cooling structure design and thermal simulation optimization of soft pack battery.....PENG Lianbing, WU Weifeng, YAN Yukang, XU Jianquan(1398)

Research on relationship between energy storage performance and working temperature of ternary lithium battery.....ZHANG Yanglin, BIE Chuanyu, GAO Biao, ZHANG Yuping(1402)

Study on loss of capacity of lithium manganate-graphite cell during charge-discharge cycle at elevated temperature.....LEI Shaofan, SU Feng, QI Minjie, CHANG Linrong(1407)

SOC estimation based on gas-liquid dynamics model and CKF algorithm.....QU Zhiwei, SUN Huayang, ZHU Yuqiang, LI Huanhuan(1412)

Ageing experiment and analysis of power battery based on AMESim.....CHEN Guoqing, YUE Dan, WANG Wen(1417)

Parameter optimization of hybrid energy storage system based on strength Pareto evolutionary algorithm.....XIAO Wei, DU Changqing, REN Weiqun(1422)

Study on reverse moisture purging mechanism of water management in hydrogen and oxygen proton exchange membrane fuel cell.....LI Zhenghan, TU Zhengkai(1428)

Study on performance of PEMFC based on double enhanced mass transfer channel.....ZHAO Yonghao, YUAN Wei, ZHOU Feikun, TANG Yong(1433)

Study on solid oxide fuel cell with staggered flow channel and its performance.....WANG Ke, LI Xingchen, WANG Yongqing, DAI Xueying(1438)

Condition analysis of PEMFC based on AC impedance technology.....LIU Feng, ZENG Dongrong, CHEN Lili, WANG Cheng(1443)

Study on rapid detection method and evaluation of discharge and charge life of lead-acid battery.....LI Bingyu, DU Xuhao, FAN Hui, WANG Lei(1447)

Thermal behavior analysis of supercapacitor under constant current charge and discharge.....FENG Lei, LI Guofu(1452)

FeCo<sub>2</sub>S<sub>4</sub>/carbon fiber composite electrode material with high cycling performance.....MA Jun, PENG Jingfu, SU Dongyun, SYED Junaid · Ali (1457)

#### Physical power sources

A "double-back-wiring" remanence elimination method for space solar array.....ZHANG Xiaojun, LIN Junyi, YIN Xingyue, SU Bin(1461)

Effect of Na and K Co-doping on performance of CZTS thin film devices.....XIANG Dongmei, BI Jinlian, LI Wei, ZHANG Xiaoyong(1465)

Numerical study on cooling characteristics of solar concentrating cells with fin structure.....CHEN Haifei, WANG Yunjie, YANG Huihan, SHAO Yonghui, YANG Jie(1469)

Study on repair and prevention of PID effect of photovoltaic module.....YANG Yuwu(1473)