

## A01.能量转换与存储材料

分会主席：武英、潘洪革、黄学杰、李箭

单元 A01-1: 7月13日下午

主持人：黄学杰，李箭

地点：会展中心 306

13:30-13:50 A01-01

LiNi<sub>0.5</sub>Mn<sub>1.5</sub>O<sub>4</sub> as cathode material for Li-ion Batteries

黄学杰

中国科学院物理所

13:50-14:10 A01-02

层状富锂锰基正极材料的研究进展

夏定国

北京大学

14:10-14:30 A01-03

Development of separators for high safety lithium-ion batteries

赵金保

厦门大学

14:30-14:50 A01-04

三维多级孔金属集流体的储锂性能研究

施志聪

广东工业大学

14:50-15:05 A01-05

In situ formation of hierarchical electronic/ionic conducting shells for Silicon nanoparticles anode

周玉

中南大学

15:05-15:20 A01-06

片状氧化亚铜与石墨烯复合材料的制备及其在锂离子电池负极材料中的应用研究

蒲方昭

西安交通大学

15:20-15:35 A01-07

Sulfide solid electrolytes based all-solid-state rechargeable batteries

姚霞银

中国科学院宁波材料技术与工程研究所

15:35-15:50 茶歇

15:50-16:10 A01-08

基于“造孔工程”的层次孔碳材料及其在超级电容器中的应用

杨维清，张海涛，苏海，刘芳延，古冰妮

西南交通大学材料先进技术教育部重点实验室，材料科学与工程学院

16:10-16:30 A01-09

钠离子电池正负极材料的研究

曹余良

武汉大学化学与分子科学学院

16:30-16:50 A01-10

固体氧化物电池燃料极的表面反应过程

夏长荣

中国科学技术大学

16:50-17:10 A01-11

Study about supercapacitor based on printed electronic technology

杨正春

天津理工大学

17:10-17:30 A01-12

Self-assembled Core-shell Structured Perovskite Cathode for Intermediate and Low Temperature Solid Oxide Fuel Cells

陈静

河南工业大学

17:30-17:45 A01-13

Effect of NiO addition on oxygen reduction reaction at lanthanum strontium cobalt ferrite cathode for solid oxide fuel cell

Mubashar Nadeem, Yihang Li, Changrong Xia

CAS Key Laboratory of Materials for Energy Conversion, Department of Materials Science and Engineering, University of Science and Technology of China

17:45-18:00 A01-14

Highly conductive NiSe<sub>2</sub> nanostructures for all-solid-state battery-supercapacitor hybrid devices

孟璐

浙江大学

单元 A01-2: 7月14日上午

主持人：潘洪革，麦立强

地点：会展中心 306

08:30-09:00 A01-15

Engineering Low-Dimensional Nanostructures for Effective Energy Conversion and Storage

Zheng-Xiao Guo

University College London

09:00-09:20 A01-16

Destabilization of light-metal borohydrides by catalysts, nanoconfinement and reactive combination

高明霞

浙江大学

09:20-09:40 A01-17

The reversibility of conversion reactions in lithium stored SnO<sub>2</sub> based anode materials

胡仁宗

华南理工大学

09:40-10:00 A01-18

Obstacles toward unity efficiency of LiNi<sub>1-2x</sub>CoxMnxO<sub>2</sub> (x=0~1/3) (NCM) cathode materials and the corresponding solutions: Insights from ab initio calculations

梁超平

中南大学粉末冶金国家重点实验室

10:00-10:10 茶歇

10:10-10:30 A01-19

One Dimensional Nanomaterials for Emerging Energy Storage

麦立强

武汉理工大学

10:30-10:50 A01-20

The construction of core-shell structure for SOFC cathode with enhanced performance

池波

华中科技大学

10:50-11:10 A01-21

Electrochemical reaction processes near the surface and interface of oxide materials

陈燕

华南理工大学

11:10-11:30 A01-22

**Facile synthesis and superior lithium storage performance of ball-milled metal sulfides-carbon nanocomposites**

曾宏  
安泰科技股份有限公司

11:30-11:45 A01-23

**High-performance Mn/V-based cathode materials for Li/Na-ion batteries**

邓健秋  
桂林电子科技大学

11:45-12:00 A01-24

**Bimetal Pt-Co nanoparticles supported on modified SiO<sub>2</sub> nanospheres as high-efficient catalyst for hydrogen generation from hydrolysis of ammonia borane**

李媛  
燕山大学

单元 A01-3: 7月14日下午

主持人: 武英, 陈人杰

地点: 会展中心 306

13:30-13:50 A01-25

**Catalytic Mechanism of Carbon Nanotubes Supported Nickel on Hydrogen Storage Properties of Magnesium Borohydride**

武英  
安泰科技股份有限公司

13:50-14:10 A01-26

**金属硼氢化物及其氨合物水解**

欧阳柳章  
华南理工大学

14:10-14:30 A01-27

**Nanoconfinement of Mg by ultrathin carbon layer with enhanced hydrogen storage properties**

刘彤  
北京航空航天大学

14:30-14:50 A01-28

**Improved hydrogen storage performance of MgH<sub>2</sub> with Ni/Co-based compounds**

王一菁  
先进能原材料化学教育部重点实验室 南开大学化学学院

14:50-15:05 A01-29

**Superior hydrogenation properties in a Mg<sub>65</sub>Ce<sub>10</sub>Ni<sub>20</sub>Cu<sub>5</sub> nanoglass processed by melt-spinning followed by high-pressure torsion**

林怀俊  
暨南大学

15:05-15:20 A01-30

**Hydrolysis Batteries: Generating Electrical Energy during Hydrogen Absorption**

肖锐  
北京大学化学与分子工程学院

15:20-15:35 A01-31

**Numerical simulation of dendrite growth and micro segregation of Ni-Cu alloy using phase-field method**

王明光  
重庆文理学院

15:35-15:50 茶歇

15:50-16:10 A01-32

**High Energy Density Li-S Battery and its Key Materials**

陈人杰  
北京理工大学

16:10-16:30 A01-33

**Rational Design of Cathode Materials for Lithium-Sulfur Batteries**

Bo Jin, Huan Li  
Key Laboratory of Automobile Materials, Ministry of Education, and College of Materials Science and Engineering, Jilin University

16:30-16:50 A01-34

**The Design, Synthesis and Structure-Performance Relationship of Cathode Catalysts for Li-air Batteries**

刘向峰  
中国科学院大学

16:50-17:05 A01-35

**Synthesis of TiO<sub>2</sub>-C nano-sheets by high-energy ball milling Ti<sub>2</sub>CT<sub>x</sub> for enhanced performance photocatalysts**

李京晓  
南京理工大学

17:05-17:20 A01-36

**Insight into factors behind the different pseudocapacitance contributions of amino-contained aromatic isomers adsorbed onto graphene**

赵逸  
北京航空航天大学

17:20-17:35 A01-37

**Influence of Manganese Dioxide Catalyst on Electrochemical Performances of Magnesium Air Battery**

刘慧  
中南大学

17:35-17:50 A01-38

**In-situ growth of MoS<sub>2</sub> on hollow carbon fibers derived from biomass for lithium and sodium storage**

Guilong Liu  
洛阳师范学院

17:50-18:05 A01-39

**Starfish-like Hierarchical Zn<sub>x</sub>Co<sub>1-x</sub>S@C@CNTs as high performance anode materials for lithium ion batteries**

王浩  
复旦大学材料科学系

单元 A01-4: 7月15日上午

主持人: 朱敏, 王先友

地点: 会展中心 306

08:30-09:00 A01-40

**高容量储氢材料的热力学和动力学调控**

朱敏  
华南理工大学

09:00-09:20 A01-41

**A new AB<sub>4</sub>-type single-phase superlattice compound for electrochemical hydrogen storage**

韩树民  
燕山大学

09:20-09:40 A01-42

**Design and effective catalysis of hybrid catalyst on hydrogen sorption kinetics of magnesium-based hydride**

Yunfeng Zhu<sup>\*1,2</sup>, Zhongliang Ma<sup>1,2</sup>, Jiguang Zhang<sup>1,2</sup>, Yana Liu<sup>1,2</sup>, Liqun Li<sup>1,2</sup>

09:40-10:00 A01-43

**Superwetting Nanoarray Electrodes for Gas-involving Electrocatalysis**

孙晓明  
北京化工大学

10:00-10:10 茶歇

10:10-10:30 A01-44

**Layered/Spinel Lithium-Rich Oxide Nanowires as Excellent Performance Cathode Materials for Lithium-Ion Batteries**

王先友  
湘潭大学

10:30-10:50 A01-45

**Microchanneled supporting electrodes of solid oxide cells: fabrication and applications**

于丽波  
济南大学

10:50-11:05 A01-46

**A stability study of flat-tubular solid oxide fuel cells with double-side cathodes**

杨钧  
中国科学院宁波材料技术与工程研究所

11:05-11:20 A01-47

**The Rational Design of Nanocarbon and Metal Composite Materials for Lithium-Sulfur Battery Cathode: Li- or S-Binding**

陈翔  
清华大学

11:20-11:35 A01-48

**Improved structural reversibility and cycling stability of Li<sub>2</sub>MnSiO<sub>4</sub> cathode materials for lithium-ion batteries**

吴霞  
清华大学深圳研究生院

11:35-11:50 A01-49

**A First-principle Study towards Understanding Surface Reactions in Li-I Batteries.**

刘智骁  
湖南大学

11:50-12:05 A01-50

**Multilevel structures of Li<sub>3</sub>V<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub>/c-p nano-composites derived from low-cost, hybrid v-mofs for long-life lithium ion batteries**

王朝阳  
武汉理工大学

单元 A01-5: 7月15日下午

主持人: 刘江, 蒲健

地点: 会展中心 306

13:30-13:50 A01-51

**Stable operation of Ag-based anode solid oxide fuel cells on propane**

刘江  
华南理工大学

13:50-14:10 A01-52

**Solid state lithium sulfur battery and its in-situ mechanism study**

晏成林  
苏州大学

14:10-14:30 A01-53

**2D Materials in Energy and Environmental Applications: Piezocatalysis and Water Splitting**

Jyh Ming Wu  
National Tsing Hua University

14:30-14:50 A01-54

**Active, durable nanostructured bismuth oxide decorated cobaltite oxygen electrode of reversible solid oxide cells**

艾娜  
福州大学

14:50-15:10 A01-55

**N-p-MCNTs Supported Mn<sub>3</sub>O<sub>4</sub> Quantum Dots ORR Electrocatalysts for Zn-air Batteries**

Zongxiong Huang  
Guangdong University of Technology

15:10-15:25 A01-56

**First-principles study on the core-shell cathode for solid oxide fuel cell**

卢晓康  
华中科技大学材料科学与工程学院

15:25-15:40 A01-57

**直接碳固体氧化物燃料电池铈基阳极及其电极过程**

吴孟欣  
哈尔滨工业大学

15:40-15:50 茶歇

15:50-16:10 A01-58

**The investigation on stabilization mechanism of long-term operation of solid oxide fuel cell stacks**

蒲健  
华中科技大学

16:10-16:30 A01-59

**Thermoelectric properties of SnSe thin films**

戴吉岩  
香港理工大学

16:30-16:45 A01-60

**Fabrication and Supercapacitive Properties of N/P Co-doped Carbon Materials**

夏开胜  
中国地质大学

16:45-17:00 A01-61

**Hollow Nanostructures for Applications in Li/Na-Ion Batteries**

Chuncheng Yang\*  
School of Materials Science and Engineering, Jilin University

17:00-17:15 A01-62

**Investigation of Catalytic Activity Mechanism of Cathode Materials for Fuel Cells by Synchrotron Radiation Soft X-ray Absorption Spectroscopy and High Temperature In Situ Photoelectron Spectroscopy**

陈泽志  
中国科学技术大学

17:15-17:30 A01-63

**Prussian Blue-Based Cathodes for Sodium Ion Batteries**

姜银珠  
浙江大学

17:30-17:45 A01-64

**The effects of external stresses and chemical stresses on the lithium ion diffusion in battery electrodes**

宫文婧  
湘潭大学

17:45-18:00 A01-65

**Electrochemical synthesis of titanium carbide-polyaniline composite film with high capacitance performance**

刘宝忠  
河南理工大学

单元 A01-6: 7月16日上午

主持人: 韩树民, 李箭

地点: 会展中心 306

08:30-08:50 A01-66

**手性介观结构无机材料及其手性响应性**

车顺爱  
同济大学化学科学与工程学院

08:50-09:10 A01-67

**Solid polymer electrolytes for all solid state lithium ion battery**

Ruiping Liu\*, Zirui Wu, Peng He  
China University of Mining & Technology (Beijing)

09:10-09:25 A01-68

**An all-organic aqueous battery based on quinone-adsorption**

徐源  
香港科技大学

09:25-09:40 A01-69

**Effects of combination method on the electrochemical performance of graphene-CaTi<sub>2</sub>O<sub>4</sub>(OH)<sub>2</sub> electrode material**

包启富  
江西省景德镇陶瓷大学

09:40-09:55 A01-70

**CO<sub>2</sub> Plasma-Treated TiO<sub>2</sub> Film as an Effective Electron Transport Layer for High-Performance Planar Perovskite Solar Cells**

王康  
陕西师范大学

09:55-10:10 A01-71

**Effect of Microstructural feature of Precipitate on the Strength and Toughness Relationship**

王航  
中国石油集团石油管工程技术研究院

10:10-10:20 茶歇

10:20-10:35 A01-72

**Ions Transportation through MOF Membranes and Its Applications in Li-S batteries and fuel cells**

Yi Guo\*, Xinsheng Peng  
Zhejiang Unioversity

10:35-10:50 A01-73

**Lower-Dimensional Perovskites for Solar Cells and Optoelectronics**

赵奎  
陕西师范大学

10:50-11:05 A01-74

**Mechanical properties and microstructure of epoxy resin enhanced oil-well cement stone**

Mingdan He<sup>\*1</sup>, Ming Li<sup>1</sup>, Yongjin Yu<sup>2</sup>, Weiyuan Xiao<sup>1</sup>, Junlan Yang<sup>1</sup>, Hao Wang<sup>1</sup>  
1.Southwest Petroleum University  
2.CNPC Engineering Technology Research Institute

11:05-11:20 A01-75

**75Low-Temperature-Gradient Crystallization for Multi-Inch High-Quality Perovskite Single Crystals for Record Performance Photodetectors**

刘渝城  
陕西师范大学

11:20-11:35 A01-76

**Influence of Manganese Dioxide Catalyst on Electrochemical Performances of Magnesium Air Battery**

hui liu\*, Kun Yu, Li Li, Xiangchun Xu  
Central South University

11:35-11:50 A01-77

**Highly conductive NiSe<sub>2</sub> nanostructures for all-solid-state battery-supercapacitor hybrid devices**

Lu Meng<sup>\*1</sup>, Haoyu Wu<sup>1</sup>, Tian Zhang<sup>1</sup>, Haichao Tang<sup>1</sup>, Yang Tian<sup>1</sup>, Yuliang Yuan<sup>1</sup>, Qinghua Zhang<sup>1</sup>, Yujia Zeng<sup>2</sup>, Jianguo Lu<sup>1</sup>  
1.Zhejiang University  
2.Shenzhen University

墙展

A01-P01

**Effects of neutron irradiation on the elastic modulus of reactor pressure vessel steels**

Chengliang Li<sup>\*1</sup>, Guogang Shu<sup>2</sup>, Wei Liu<sup>1</sup>  
1.School of Materials Science and Engineering, Tsinghua University  
2.Sate Key laboratory of Nuclear power Safety Monitoring Technology and Equipment, China Nuclear Power Engineering Co. Ltd

A01-P02

**Microstructures and Properties of Zn-Al-Mg Alloys with Different Mg and Al Contents**

Guanghai Liu\*  
Shougang Research Institute of Technology

A01-P03

**A high-performance hybrid Mg<sup>2+</sup>/Li<sup>+</sup> battery based on hierarchical copper sulfide microflowers conversion cathode**

Aiqiong Qin\*, Ting Li, Hao Wu, Yanru Hu, Daohong Zhang  
South-Central University for Nationalities

A01-P04

**Nanoencapsulated phase change materials with polymer-SiO<sub>2</sub> hybrid shell materials: compositions, morphologies, and properties**

Yalin Zhu<sup>\*1,2</sup>, Shuen Liang<sup>2</sup>, Xuan Luo<sup>1</sup>, Lin Zhang<sup>1</sup>  
1.Science and Technology on Plasma Physics Laboratory, Research Center of Laser Fusion, China Academy of Engineering Physics (CAEP)  
2.Institute of Chemical Materials, China Academy of Engineering Physics (CAEP)

A01-P05

**Electrochemical Performance of Polypyrrole Nanowires/Nitrogen Functionalized Graphene Composite Supercapacitor Electrodes**

Jing Li\*, Junfeng Shi, Chen He, Yang Li  
Shanghai Polytechnic University

A01-P06

**Novel core/shell CoSe<sub>2</sub>@PPy nanoflowers for high-performance fiber asymmetric supercapacitors**

Yun Ma\*, Xiao Liang, Qiufan Wang, Daohong Zhang  
South-central University For Nationalities

A01-P07

**Facile Synthesis of Carbon Supported Nano-Ni Particles with Superior Catalytic Effect on Hydrogen Storage Kinetics of MgH<sub>2</sub>**

Zhongliang Ma<sup>\*1,2</sup>, Yunfeng Zhu<sup>1,2</sup>, Jiguang Zhang<sup>1,2</sup>, Yana Liu<sup>1,2</sup>, Liquan Li<sup>1,2</sup>  
1.College of Materials Science and Engineering, Nanjing Tech University  
2.Jiangsu Collaborative Innovation Centre for Advanced Inorganic Function Composites, Nanjing Tech University

A01-P08

**The diffusion phenomenon of cathode components in YSZ electrolyte of SOFC**

Si Chen\*, Dong Yan, Manman Liu, Jian Li, Jian Pu, Bo Chi  
Center for fuel cell innovation, School of materials science and engineering, Huazhong University of Science and Technology

A01-P09

**Fe<sup>3+</sup> doped TiO<sub>2</sub> octahedrons derived from a metal-organic framework toward visible-light photocatalytic conversion of CO<sub>2</sub> into solar fuel**

Yang Chen\*  
Anhui Polytechnic University

**A01-P10****Surfactant dependent zinc cobalt sulfide: high performance charge storage material for asymmetric supercapacitors**

Yuan Yang\*, Pengchao Si

Key Laboratory for Liquid-Solid Structural Evolution &amp; Processing of Materials (Ministry of Education), School of Materials Science and Engineering, Shandong University

**A01-P11****Basic Properties of Proton Conductor BZCYYb Material**Yifan Zhang\*, Jian Li, Lichao Jia, Dong Yan, Bo Chi, Jian Pu  
Center for Fuel Cell Innovation, HuaZhong University of Science and Technology**A01-P12****A novel perovskite Nd(Ba<sub>0.4</sub>Sr<sub>0.4</sub>Ca<sub>0.2</sub>)Co<sub>1.6</sub>Fe<sub>0.4</sub>O<sub>5+δ</sub> as cathode for proton-conducting solid oxide fuel cells**Junyu Chen\*, Bo Liu, Peng Qiu, Licao Jia, Jian Li  
Center for Fuel Cell Innovation, School of Materials Science and Engineering Huazhong University of Science and Technology**A01-P13****First-Principles Study of the Surface Stress and the Surface Strain of Pt Catalysts**Guangdong Liu\*, Huiqiu Deng<sup>1</sup>, Zhenhua Zeng<sup>2</sup>

1.Hunan University

2.Purdue University

**A01-P14****Hydrogen desorption properties of MgH<sub>2</sub> promoted by the hydrogen-induced Al\* formed in situ from Al<sub>12</sub>Mg<sub>17</sub> in hydriding combustion synthesis**Shicheng Luo\*<sup>1,2</sup>, Yanglin Zhu<sup>1,2</sup>, Jiguang Zhang<sup>1,2</sup>, Yana Liu<sup>1,2</sup>, Yao Zhang<sup>3,2</sup>, Yunfeng Zhu<sup>1,2</sup>, Liquan Li<sup>1,2</sup>

1.College of Materials Science and Engineering, Nanjing Tech University, Nanjing 210009, China

2.Jiangsu Collaborative Innovation Center for Advanced Inorganic Function Composites, Nanjing Tech University, Nanjing 210009, China

3.College of Materials Science and Engineering, Southeast University, Nanjing 211189, China

**A01-P15****Hierarchical core-shell structure of the FeCo<sub>2</sub>S<sub>4</sub>@Ni(OH)<sub>2</sub> arrays for all-solid-state asymmetric supercapacitors**Shuo Li\*<sup>1</sup>, Wei Huang<sup>2</sup>, Pengchao Si<sup>1</sup>

1.Key Laboratory for Liquid-Solid Structural Evolution and Processing of Materials, Ministry of Education, School of Materials Science and Engineering, Shandong University, Jinan 250061, People's Republic of China

2.Department of Chemistry Technical University of Denmark DK-2800 Kongens Lyngby, Denmark.

**A01-P16****Phosphorus-Based Materials for Sodium-ion Batteries**Bi Fu\*<sup>1</sup>, Jiangyu Li<sup>1,2</sup>

1.Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, Shenzhen, Guangdong 518055, China

2.Department of Mechanical Engineering, University of Washington, Seattle, WA 98195-2600, USA

**A01-P17****Nitrates induced stress corrosion cracking in tubing from oil well**

Peng Wang\*, Xinhu Wang, Yaorong Feng

State Key Laboratory for Performance and Structure Safety of Petroleum Tubular Goods and Equipment Materials, CNPC Tubular Goods Research Institute

**A01-P18****Surface-engineering enhanced sodium storage performance of Na<sub>3</sub>V<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> cathode via in-situ self-decorated conducting polymer route**Jiexin Zhang\*, Xinpeng Ai, Hanxi Yang, Yuliang Cao  
Wuhan University**A01-P19****A Scalable Strategy to Develop Advanced Anode for Sodium-Ion Batteries: Commercial Fe<sub>3</sub>O<sub>4</sub> Derived Fe<sub>3</sub>O<sub>4</sub>@FeS with Superior Full-Cell Performance**

Baohua Hou\*, Yingying Wang, Jinzhi Guo, Qiuli Ning, Xinglong Wu

Northeast Normal University

**A01-P20****Co<sub>3</sub>O<sub>4</sub> nanofasciculus consisted of nanowire on carbon fibers as electrode materials for long-life pseudocapacitors**

Yawei Yu\*, Xiulan Hu

Nanjing Tech University

**A01-P21****Carbon-coated Na<sub>3</sub>V<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> Microspheres as a Superior Rate and Long Cycle Lifespan Cathode Material for Sodium Ion Batteries**

Tianci Yuan\*, Jiangfeng Qian, Xinpeng Ai, Hanxi Yang, Yuliang Cao

College of Chemistry and Molecular Science, Wuhan University

**A01-P22****Water-in-salt electrolyte enables aqueous supercapacitors**

Xiaowen Zheng\*, Pengchao Si

Key Laboratory for Liquid-Solid Structural Evolution and Processing of Materials, Ministry of Education, School of Materials Science and Engineering, Shandong University, Jinan 250061, People's Republic of China

**A01-P23****A<sub>0.5</sub>LiNi<sub>0.8</sub>Co<sub>0.15</sub>Al<sub>0.05</sub>O<sub>2</sub>·0.5Li<sub>2</sub>MnO<sub>3</sub> composite electrode with high voltage and stability**

Jingsong Yang\*, Yuliang Cao, Jiangfeng Qian, Xinpeng Ai, Hanxi Yang

College of Chemistry and Molecular Sciences, Wuhan University

**A01-P24****A Practicable Li/Na-Ion Hybrid Full Battery Assembled by a High-Voltage Cathode and Commercial Graphite Anode: Superior Energy Storage Performance and Working Mechanism**

Jinzhi Guo\*, Xinglong Wu

Northeast Normal University

**A01-P25****Hydrogen storage properties of AB<sub>4</sub>-type single-phase La-Nd-Mg-Ni-Al-based alloy**Yumeng Zhao\*<sup>1,2</sup>, Wenfeng Wang<sup>2</sup>, Yuan Li<sup>2</sup>, Shumin Han<sup>1,2</sup>

1.State key laboratory of metastable materials science and technology, Yanshan university

2.College of Environmental and Chemical Engineering, Yanshan University

**A01-P26****A new type of composite electrolytes with high specific capacity and good air-stability for room-temperature solid-state lithium battery**

Huanliang Guo\*, Zhuoliang Jiang, Mengyang Gao, Jianyong Hu, Hui Sun

State Key Laboratory of Heavy Oil Processing, Beijing Key Laboratory of biogas upgrading utilization, Institute of New Energy, China University of Petroleum-Beijing, Beijing, 102249, China, sunhui@cup.edu.cn

**A01-P27****Effect of carbon nanotubes on the microstructural evolution and hydrogen storage properties of Mg(BH<sub>4</sub>)<sub>2</sub>**

Zan Jiang, Jianguang Yuan, huanqing Han, Ying Wu, Shaoxiong Zhou

China Iron &amp; Steel Research Institute Group, Advanced Technology &amp; Materials Co., Ltd

**A01-P28**

**Triboelectric nanogenerator based on turbine structure for efficient water wave energy harvesting and self-powered water flow velocity sensing**

Xi Chen\*, Cong Zhai, Jian He, Shanshan He, Ziyang Yang, Tao Wen, Chenyang Xue

Science and Technology on Electronic Test and Measurement Laboratory, North University of China, Taiyuan, 030051, China

**A01-P29**

**The Design of Minitype Broadband Micro-Energy Generator**

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**A01-P30**

**Highly efficient synergetic catalysis of graphene supported nickel on hydrogen storage of Mg<sub>90</sub>Al<sub>10</sub> composite**

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**A01-P31**

**Synthesis and electrochemical properties of Sn/RGO composites as lithium-ion battery anodes**

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**A01-P32**

**An Ultralong Lifespan and Low-Temperature Workable Sodium-Ion Full Battery for Stationary Energy Storage**

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Northeast Normal University

**A01-P33**

**Ni/Co-LDH Modified PP Separator for High-Performance Li-S Batteries**

Zhaoyan Zhu\*, Yang Na, Wu Gang, Wang Yu-Zhong

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**A01-P34**

**Metal-Organic Framework Template Derived Porous CoSe<sub>2</sub> Nanosheet Arrays for Energy Conversion and Storage**

Tian Chen\*

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**A01-P35**

**Preparation and characterization of nano spherical V<sub>2</sub>O<sub>5</sub> powders**

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**A01-P36**

**锂离子电池高镍三元正极材料的制备与改性研究**

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**A01-P37**

**金属有机骨架负载硫化亚锡复合材料的制备及其电化学性能研究**

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**A01-P38**

**优化 Li<sub>6.76</sub>La<sub>3</sub>Zr<sub>1.76</sub>Ta<sub>0.24</sub>O<sub>12</sub> (Ta-LLZO) 固态电解质的制备工艺**

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**A01-P39**

**Preparation and characterization of barium strontium titanate powders**

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**A01-P40**

**High-temperature Transport Properties of Ca<sub>0.98</sub>Dy<sub>0.01</sub>Re<sub>0.01</sub>MnO<sub>3</sub> ceramics (Re=Nd, Gd, Yb)**

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**A01-P41**

**Free-standing N-doped carbon foam based highly compressible all-solid-state asymmetric supercapacitors**

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**A01-P42**

**Mesoporous lamellar-shaped lithium-rich cathode material for lithium-ion batteries with exceptional rate capability and stability**

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