A02.纳米材料与新能源
A02. Nanomaterials and New Energy

分会主席：麦立强、张加涛、彭海琳、张桥

单元 A02-1：7 月 13 日下午
主持人：Jiaxing Huang, Jieshan Qiu
地点：会展中心 C3 馆观海厅

13:30-14:00 A02-01 Keynote
A Cut-and-paste Approach to 3D Graphene Oxide-based Architectures
Jiaxing Huang
Northwestern University

14:00-14:30 A02-02 Keynote
LDH Married to Carbon Materials to Create Novel Hybrids for Supercapacitors
Jieshan Qiu
1. School of Chemical Engineering, State Key Lab of Fine Chemicals, Liaoning Key Lab for Energy Materials & Chemical Engineering, Dalian University of Technology.
2. College of Chemical Engineering,Beijing University of Chemical Technology

14:30-14:50 A02-03 Invited
Raman Spectroscopy of Two-Dimensional Semiconductor Materials and Related Heterostructures
Pingheng Tan
Institute of Semiconductors

14:50-15:10 A02-04 Invited
Construction and Electrochemical Energy Storage of Inorganic Mesoscopic-Scale Assembly Structure
Shenglin Xiong
Shandong University

15:10-15:25 A02-05 Oral
Chloride-passivated Mg doped ZnO Nanoparticles for Improving the Performance of Cadimum-Free Quantum-Dots Light-Emitting Diodes
Fei Chen, Zhenyang Liu, Zhongyuan Guan, Zhenbo Deng, Feng Teng, Aiwei Tang
Beijing Jiaotong University

15:25-15:45 茶歇

15:45-16:15 A02-06 Keynote
Biomimetic Asymmetric Nanochannel Membranes for Energy Conversion
Liping Wen
The Technical Institute of Physics and Chemistry, Chinese Academy of Sciences

16:15-16:45 A02-07 Keynote
Functional Transition Metal and Its Compound Nanomaterials: Controllable Synthesis, Structure Characterization and Physicochemical Properties
Rongming Wang
University of Science and Technology Beijing

16:45-17:05 A02-08 Invited
Metal-organic Frameworks Based Materials for Energy Storage and Conversion
Guangqin Li
Sun Yat-sen University

17:05-17:25 A02-09 Invited
Newly Designed Cycloplatinated Polymer Dots as Photocatalysts for Visible Light–Driven Hydrogen Evolution
HO-HSIU CHOU
National Tsing Hua University

17:25-17:40 A02-10 Oral
Energy Storage Mechanism in Aqueous Zinc-ion Battery
Jiang Zhou
Central South University

17:40-17:55 A02-11 Oral
Atomic Layer Deposition of Transition Metal Sulfides and Its Applications in Energy Technology
Xinwei Wang
Peking University Shenzhen Graduate School

单元 A02-2：7 月 14 日上午
主持人：Yadong Yin, Zhiqun Lin
地点：会展中心 C3 馆观海厅

08:30-09:00 A02-12 Keynote
A Rich Variety of Nanocrystals with Precise Controlled Dimensions, Compositions, and Architectures Enabled by Nonlinear Block Copolymers for Solar Cells, Photocatalysis, LEDs and Batteries
Zhiqun Lin
Georgia Institute of Technology, USA

09:00-09:30 A02-13 Keynote
Smart Materials by Nanoscale Assembly
Yadong Yin
Department of Chemistry, University of California, Riverside

09:30-09:50 A02-14 Invited
Novel Two-Dimensional Oxide/Hydroxide Nanosheets for Energy Storage
Linfeng Hu*, Yingchang Jiang, Zhichang Pan
Fudan University

09:50-10:10 A02-15 Invited
Engineering of Active Sites for Efficient Non-Precious Metal Electrocatalysts
JinSong Hu
Institute of Chemistry, Chinese Academy of Sciences

10:10-10:25 A02-16 Oral
CO_2 to Fuels through the Electrochemical Reduction
Jing Shen*[1], Marc Koper [2]
1. Hunan Institute of Engineering
2. Leiden University

10:25-10:45 茶歇

10:45-11:15 A02-17 Keynote
Controlled Synthesis and Catalytic Studies of Energy Nanostructures: Active Sites Engineering and Bandgap Engineering
Leyu wang
Beijing University of Chemcial Technology

11:15-11:45 A02-18 Keynote
One-Dimensional Semiconducting Nanostructures for Flexible Image Sensors
Guozhen Shen
Institute of Semiconductors, Chinese Academy of Sciences

11:45-12:00 A02-19 Oral
Negative/Zero Thermal Expansion in Black Phosphorus Nanotubes
Lei Wang*[1], Cong Wang[2], Qiang Gu[1]
1. University of Science and Technology Beijing
2. Beihang University

单元 A02-3：7 月 14 日下午
主持人：Elad Gross, Shuhui Sun
地点：会展中心 C3 馆观海厅

13:30-14:00 A02-20 Keynote
High Spatial Resolution Mapping of Catalytic Reactions on Single Nanoparticles
Elad Gross
The Hebrew University

14:00-14:30 A02-21 Keynote
Rational Design of Nanomaterials for Fuel Cell and Batteries
Shuhui Sun
Center for Energy, Materials and Telecommunications, Institut National de la Recherche Scientifique (INRS), Canada

14:30-14:50 A02-22 Invited
Design of Nanotructured Arrays Electrodes for Energy Storage and Conversion
Chuanwei Cheng
Tongji University

14:50-15:10 A02-23 Invited
Nano-Materials for Hydrogen Storage and Rechargeable Batteries
Yu Zhang
Key Laboratory of Bio-Inspired Smart Interfacial, Science and Technology of Ministry of Education, School of Chemistry, Beihang University

15:10-15:25 A02-24 Oral
高通量微纳加工及 3D 分析加工平台
王雪丽
蔡司（Zeiss）中国

15:25-15:45 茶歇

15:45-16:15 A02-25 Keynote
2D Oxide Nanomaterials and Their Superior Electrochemical Properties
Xudong Wang
University of Wisconsin-Madison

16:15-16:35 A02-26 Invited
Controlled Preparation of Porous Nanomaterials for Energy Storage and Conversion by Tunable Self-assembly of Block Copolymers in Solution
Yiyong Mai
Shanghai Jiao Tong University

16:35-16:55 A02-27 Invited
Chirality-Related Applications of Helical Nanoparticles with Sub-10-nm Helical Pitches
Zhifeng Huang
Hong Kong Baptist University

16:55-17:15 A02-28 Invited
Themally-Enhanced Generation of Solar Fuels
Liming Zhang*[1], Xiaofei Ye[2], Madhur Boloor[2], Nicolas A. Melsosh[2], William C. Chueh[2]
1. Department of Chemistry, Fudan University
2. Department of Materials Science & Engineering, Stanford University

17:15-17:30 A02-29 Oral
Preparation of Modified Polyacrylonitrile Nanofiber Membranes and Application as an Adsorbent
Aiying Zhang*, Ning Gao, Guiyi Cao, Lin Ye, Zengguo Feng
Beijing Institute of Technology, School of Materials Science and Engineering

17:30-17:45 A02-30 Oral
Applications of Novel Carbon Materials and Transition Metal Oxides/Sulfides as Electrode in Flexible and Wearable All-Solid-State Supercapacitors
Shanglong Peng, Yuxiang Wen, Shuqi Lu
Lanzhou University

17:45-18:00 A02-31 Oral
Aerosol Synthesis of Crumpled Graphene/Tungsten Disulfide/Tungsten Trioxide Ternary Nanohybrids as an Efficient Electrocatalyst for Hydrogen Evolution Reaction
Yantao Chen*[1], Ren Ren[2], Mao Shun[3]
1. School of Materials Science and Engineering, Tianjin University of Technology
2. Department of Mechanical Engineering, University of Wisconsin-Milwaukee
3. State Key Laboratory of Pollution Control and Resources Reuse, College of Environmental Science and Engineering, Tongji University

单元 A02-4：7 月 15 日上午
主持人：Yiding Liu, Qi Chen
地点：会展中心 C3 馆观海厅 A

08:30-08:50 A02-32 Invited
Controlling the Electronic and Optical Properties of Transition Metal Metal Oxides by Doping/Defects for Electronics and Energy Applications
Hongliang Zhang, Gaoliang Fu, Jiaye Zhang
College of Chemistry and Chemical Engineering, Xiamen University

08:50-09:10 A02-33 Invited
Optical Tuning of Gold Nanoparticle Chains: from Reversible Assembly to Interparticle Gap Engineering
Yiding Liu
Third Military Medical University

09:10-09:25 A02-34 Oral
Mass-production of 3D Graphene-Like Carbon for Highly Efficient Solar Thermal Steam Generation
Jinzhang Liu, Lu Sun, Yan Li
Beihang University

09:25-09:40 A02-35 Oral
Rational Design and Controllable Synthesis of Nano-Structured Cobalt-Based Electrocatalysts for Oxygen Evolution Reaction
Fenglei Lv, Qiao Zhang
Soochow University

09:40-09:55 A02-36 Oral
Rh/Si, Os/Si and Ir/Si Nanocomposites as the Best Electrocatalysts designed for the Hydrogen Evolution Reaction
Xing Fan, Haiping Lin, Youyong Li
Soochow University

09:50-10:05 A02-37 Oral
Interfacial Synthesis of Highly Stable $CsPbX_3$/Oxide Janus Nanoparticles
Huicheng Hu[1], Linzhong Wu[1], Yeshu Tan[1], Qiao Zhang[1], Yadong Yin[2]
1 Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University
2 Department of Chemistry, University of California, Riverside

10:05-10:20 A02-38 Oral
Fabrication of Metal Sulfides with Hierarchical Micro/Nano-Structures and Their Applications in Energy Devices
Meidan Ye, Xiaodan Hong, Qun Liu
Xiamen University

10:20-10:40 茶歇

10:40-11:00 A02-39 Invited
Thin Film Fabrication in Perovskite Solar Cells
Qi Chen
Beijing Institute of Technology

11:00-11:20 A02-40 Invited
Photocatalytic Hydrogenation of Carbon Dioxide with High Selectivity to Methanol at Atmospheric Pressure
Le He
Soochow University

11:20-11:40 A02-41 Invited
Antipulverization Anodes by Stress-relieved Structure Design for Robust Lithium Storage
Lianhai Zu, Ting He, Bingjie Cheng, Jinhu Yang
School of Chemical Science and Engineering, Tongji University

11:40-11:55 A02-42 Oral
Facet-Dependent Performance of Palladium-Catalyzed Selective Hydrogenation of Light Alkynes to olefins
Yong Xu, Qiao Zhang
Soochow University

单元 A02-5：7 月 15 日上午
主持人：Zaicheng Sun, Hongbo Li
地点：会展中心 C3 馆观海厅 B

08:30-08:50 A02-43 Invited
Quantum dots Luminescent Solar Concentrators: From Concept to Real Application
Hongbo Li
Beijing Institute of Technology

08:50-09:10 A02-44 Invited
Nano - A Nature Research Solution for Nanotechnology
Xiang Yan[1]*, Jessie Xiao[2], Prathik Roy[3], Amir Gheisi[4], William Chiuman[5]
1. Database Research Group, Nanoscience & Technology, Springer Nature, Beijing
2. Database Research Group, Springer Nature Beijing
3. DRG, Springer Nature New York
4. DRG, Springer Nature, Heidelberg
5. DRG, Springer Nature, HongKong

09:10-09:25 A02-45 Oral
CdS Nanoribbon-Based Memory Photodetectors
Zhibin Shao, Tianhao Jiang, Jiansheng Jie
SooChow University

09:25-09:40 A02-46 Oral
pH Values Effects on Morphosynthesis of $CaTi_2O_5$ via a Facile Additive-Free Aqueous Strategy and its properties
Weixia Dong, Qifu Bao
Department of material Science and Engineering, Jingdezhen Ceramic Institute, Jingdezhen, 333001, P. R. China

09:40-09:55 A02-47 Oral
Cs_4PbX_6 (X = Cl, Br, I) Nanocrystals: Preparation, Water-Triggered Transformation Behavior, and Anti-Counterfeiting Application
Xiaoya Yu, Qiao Zhang
Institute of Functional Nano and Soft Materials (FUNSOM), Jiangsu Key Laboratory for Carbon-Based Functional Materials and Devices, Soochow University

09:55-10:10 A02-48 Oral
A Core–Shell System Based on Binary Transition Metal Sulfide Toward Synergetic Electrocatalytic Water Splitting
Han Zhu, Songge Zhang, Chen Liu, Mingliang Du
Jiangnan University

10:10-10:25 A02-49 Oral
Crystal Surface Control of Photocatalysts Exhibiting Enhanced Photocatalytic Performance
Ping Li
Institute of Advanced Material, Nanjing Tech University

10:25-10:45 茶歇

10:45-11:05 A02-50 Invited
Nanostructured Transition Metal Nitrides for Advanced Electrochemical Energy Storage
Kaifu Huo
Huazhong University of Science and Technology

11:05-11:25 A02-51 Invited
Metal Halide Nanomaterials: the Synthesis and Optoelectronic Devices
Hongbin Yao, Kun-Hua Wang, Ji-Song Yao
University of Science and Technology of China

11:25-11:45 A02-52 Invited
All-solid-state Flexible Micro-Supercapacitor for Wireless Monitoring System
Weiqing Yang, Haichao Huang, Haitao Zhang
South west Jiaotong University

11:45-12:00 A02-53 Oral
Controlled Preparation of $ZnCo_2O_4$ Nanostructures for Asymmetric Supercapacitor with Ultrahigh Energy Density
Yan Zhao
Jiangsu University

单元 A02-6：7 月 15 日下午
主持人：Feng He, Zhongbin Zhuang
地点：会展中心 C3 馆观海厅 A

13:30-13:50 A02-54 Invited
Chlorination of the π-conjugated Polymer: A Facile Way for Efficient Solar Energy Conversion
Feng He
Southern University of Science and Technology

13:50-14:10 A02-55 Invited
Ultrasmall/Ultrathin Noble Metal Nanomaterials for Energy-Related Catalytic Reactions
Chuanbo Gao
Xi'an Jiaotong University

14:10-14:25 A02-56 Oral
Piezo-electret Gated MoS_2 Field Effect Transistor for Sensory Application
Jing Zhao[1], Guangyu Zhang[2], Qijun Sun[1], Zhonglin Wang[1]
1. Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences
2. Institute of Physics, Chinese Academy of Sciences

14:25-14:40 A02-57 Oral
Polymer Electrolyte Based All-Solid-Supercapacitors: Flexibility, Self-Healing and Integration with Functional Devices
Jian Yan[1], Yan Jian[2], Wu Yucheng[2]
1. Hefei University of Technology
2. Schcool of Materials and Engineering, Hefei University of Technology

14:40-14:55 A02-58 Oral
Rod-like anatase TiO_2 Mesocrystals Composited with Au Nanoparticles in Controlled Locations for Enhanced Photocatalytic Activity
Xiaxi Yao, Wenjun Zhang, Xiuli Hu, Xuhong Wang
Changshu Institute of Technology

14:55-15:10 A02-59 Oral
From Nonluminescent Cs_4PbX_6 (X = Cl, Br, I) Nanocrystals to Highly Luminescent $CsPbX_3$ Nanocrystals: Water-Triggered Transformation through a CsX-Stripping Mechanism
Linzhong Wu, Qiao Zhang
Institute of Functional Nano & Soft Materials, Soochow University

15:10-15:25 A02-60 Oral
Cd^{2+}-doped Amorphous TiO_2 Hollow Spheres for Robust and Ultrasensitive Photoelectrochemical Sensing of Hydrogen Sulfide
Hongbo Li[1,2], Jing Li[1], Yunyun Zhu[1], Wenyu Xie[1], Rong Shao[1], Xiaxi Yao[2], Aiqin Gao[2], Yadong Yin[2]
1. Yancheng Institute of Technology
2. University of California, Riverside

15:25-15:45 茶歇

15:45-16:05 A02-61 Invited
Mineral Nanomaterials Enable High-Efficiency Electrocatalysis
Minrui Gao
University of Science and Technology of China

16:05-16:25 A02-62 Invited
Hydrogen Oxidation Reaction Electrocatalysts in Alkaline Electrolyte
Zhongbin Zhuang
Beijing University of Chemical Technology

16:25-16:45 A02-63 Invited
Defect Engineering of Two-Dimensional Layered Materials
Ruitao Lv
Key Laboratory of Advanced Materials (MOE), School of Materials Science and Engineering, Tsinghua University

16:45-17:00 A02-64 Oral
Atomic Configurations, Electronic Structures and Catalysis: Investigations from First Principles Calculations
Haiping Lin
Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University

17:00-17:15 A02-65 Oral
Organic Conjugated Polymer for Emerging Perovskite Solar Cells
Jianyu Yuan, Wanli Ma
Soochow University

17:15-17:30 A02-66 Oral
Metal Charge Transfer Doped Carbon Dots with Reversibly Switchable, Ultra-High Quantum Yield Photoluminscence
Quan Xu, Rigu Su
China University of Petroleum (Beijing)

17:30-17:45 A02-67 Oral
Design and Engineering of Low-dimensional Transition-metal Chalcogenide Nanocrystals/Nanofibers and Their Electrocatalytic Applications
Mingliang Du, Chen Liu, Han Zhu
Jiangnan University

单元 A02-7：7 月 16 日上午
主持人：Feng Bai, Jiulin Wang
地点：会展中心 C3 馆观海厅 A

08:30-08:50 A02-68 Invited
Self-Assembled Porphyrin Nanocrystals for Efficient Visible-Light-Driven Hydrogen Evolution
Feng Bai
Key Laboratory for Special Functional Materials of the Ministry of Education, Henan University

08:50-09:10 A02-69 Invited
Antipulverization Anodes by Stress-relieved Structure Design for Robust Lithium Storage
Lianhai Zu, Ting He, Bingjie Cheng
School of Chemical Science and Engineering, Tongji University

09:10-09:25 A02-70 Oral
Textile Energy Storage And Harvesting Devices as Wearable Power Sources
Xiong Pu
1. Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences
2. School of Nanoscience and Technology, Unersity of Chinese Academy of Sciences

09:25-09:40 A02-71 Oral
Explorations of Electrocatalysts for Application in High Energy Density Lithium- or Zinc-air Batteries
Chaohe Xu, Xiaolong Guo
Chongqing University

09:40-09:55 A02-72 Oral
Highly-efficient Nanocatalysts for the Chemical Transformation of CO and CO_2
Liangbing Wang
Central South University

09:55-10:10 A02-73 Oral
High-Capacity Electrode Materials for Advanced Lithium-Ion Batteries
Biao Gao[1], Kaifu Huo[2]
1. The State Key Laboratory of Refractories and Metallurgy and Institute of Advanced Materials and Nanotechnology, Wuhan University of Science and Technology
2. Wuhan National Laboratory for Optoelectronics (WNLO), Huazhong University of Science and Technology Wuhan

10:10-10:25 A02-74 Oral
Inorganic Energy Storage Materials for New Lithium Air Batteries
Jijing Xu, Xiaoxue Wang, Lina Song, Fei Li, Lijun Zheng, Nan Luo
Jilin university

10:25-10:50 茶歇

10:50-11:10 A02-75 Invited
Key Materials for Lithium Sulfur Batteries and Interface Modifications
Cheng Guo, Huijun Yang, Jingyu Lei, Weijia Zhou, Jiulin Wang
South China University of Technology (SCUT)

11:10-11:25 A02-76 Oral
Activating and Templating of Zn to Synthesize Zn/N co-doped MoC Porous Nanosheets as Electrocatalyst for Efficient Electrochemical Hydrogen Evolution
Jianjian Lin
Nanjing Tech University

11:25-11:40 A02-77 Oral
Design and Synthesis of Synergistic Components for Electrocatalytic Water Splitting
Jiahai Wang
Chemistry and Chemical Engineering Department, Guangzhou University

单元 A02-8：7 月 16 日上午
主持人：Qiaobao Zhang, Liming Zhang
地点：会展中心 C3 馆观海厅 B

08:30-08:50 A02-78 Invited
Harnessing the concurrent reaction dynamics in active Si and Ge to achieve high performance lithium-ion batteries
Qiaobao Zhang, Huixin Chen, Ming-sheng Wang
Xiamen University

08:50-09:05 A02-79 Oral
Multiscale Simulaition Methods for Metal Nanoparticles in Operando Conditions
Beien Zhu, Yi Gao
Shanghai Institute of Applied Physics, CAS

09:05-09:20 A02-80 Oral
Construction of Surface Microstructure and Adjusted HER Catalytic Activity Sites for Molybdenum Carbide
Weijia Zhou
South China University of Technology (SCUT)

09:20-09:35 A02-81 Oral
Interface Engineering in Planar Perovskite Solar Cells Within a Standard Structure
Chen Tao
Wuhan University

09:35-09:50 A02-82 Oral
Study on Thermoelectric Properties of Co-Evaporated Sn-Se Films with Different Phase Formations
Baohai Jia, Guojian Li, Shiying Liu, Shan Liu, Yongjun Piao, Qiang Wang
Northeastern University

09:50-10:05 A02-83 Oral
Gradient Ultra-Fine Grained Surface Layer in 6063 Aluminum Alloy Obtained by Means of Rotational Accelerated Shot Peening
Ying Liu[1], Hai Lu Xu[2], Yan Fang Liu[1], Zhong Cheng Liu
1. School of Materials Science and Engineering, Nanjing University of Science and Technology, Nanjing
2. PuJiang Institute, Nanjing Technology University, Nanjing

10:05-10:20 A02-84 Oral

A Ternary $ZnGeP_2$-TiC-C Nanocomposite as Large Capacity and Long Lifetime Anode for Lithium Ion Batteries

Guoping Liu, Zhicong Shi, Wenwu Li, Zaiping Guo
Guangdong Provincial Key Laboratory of Functional Soft Condensed Matter, Smart Energy Research Centre, School of Materials and Energy, Guangdong University of Technology

10:20-10:45 茶歇

10:45-11:05 A02-85 Invited

Carbide (MxCy) Derived Functional Nano-Carbon Electrocatalyst for Oxygen Reduction and Hydrogen Evolution Reactions

Zongkui Kou, Wenqiang Li, Shichun Mu
State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology

11:05-11:25 A02-86 Invited

Thermally-Enhanced Generation of Solar Fuels

Liming Zhang*[1], Xiaofei Ye[2], Madhur Boloor[2], Nicolas A. Melsosh[2], William C. Chueh[2]
1. Department of Chemistry, Fudan University
2. Department of Materials Science & Engineering, Stanford University

11:25-11:45 A02-87 Invited

g-C_3N_4 Embedded Carbon Dots for Visible Light Photocatalytic H_2 Production

Zaicheng Sun
Beijing University of Technology

墙展

A02-P01

Nanocellulose/Conductive Polymer Aerogel Electrodes for Supercapacitor Application with Higher Conductivity and Capacitance via Adding Vapor Grown Nano-Carbon Fiber as Conducting Networks

Yanping Chen [1,2], Shaoyi Lyu [1], Shenjie Han [1], Limin Guo [1], Wenjun Wang[2], Siqun Wang[3,1]
1. Research Institute of Wood Industry, Chinese Academy of Forestry
2. Beijing Engineering Research Center of Cellulose and Its Derivatives, School of Materials Science and Engineering, Beijing Institute of Technology
3. Center for Renewable Carbon, University of Tennessee

A02-P02

$CsPbBr_3$ Nanocrystals Embedded in Cs_4PbBr_6 Host Matrices: Ion Concentration Difference Induced Formation and Application in White Light-Emitting Diodes

Wenkang Wang*[1], Tianjin Zhang[1], Duofa Wang[1], Song Wang[2]
1. Hubei University
2. Hubei University of Arts and Science

A02-P03

Efficient Hydrogen Isotopologues Separation through a Tunable Potential Barrier: The Case of a C2N Membrane

Yuanyuan Qu*[1], Feng Li[1,2], Mingwen Zhao[1]
1. Shandong University
2. University of Jinan

A02-P04

A New Approach to Produce a Nanocrystalline Layer on Surface of a Large Size Pure Titanium Plate

Quantong Yao
Northeastern University

A02-P05

Thermal Stability and Photocatalytic Activity of Highly Ordered Anodized TiO_2 Nanotube Arrays with Interstitial Nitrogen as Dominant Point Defect

Qing Ma*[1,2], Zhiyuan Luo[3], Shang Gao[3], Dingning Ke[1], Ting Kuang[1], Linlin Song[1], Shishan Ji[2]
1. Experiment and Innovation Center, Shenzhen Graduate School, Harbin Institute of Technology
2. Research Institute of Tsinghua University in Shenzhen

A02-P06

Synthesis of Open Helmet-Like Carbon Skeletons for Application in Lithium-Ion Batteries

Wentao Jing

A02-P07

Super-Sensitive O_2 Gas Sensor Based on La-SnO_2 Nanofibers through Temperature Modulation

Ya Xiong*, Hui Li, Tianchao Guo, Qingzhong Xue
China University of Petroleum

A02-P08

Preparation of b-oriented MFI Zeolite Films in Neutral Synthesis Condition

Yong Peng
College of Science, Nanchang Institute of Technology

A02-P09

Superior Energy Storage Performance Achieved in Bismuth Ferrite-Based Film Capacitors via Domain Engineering

Hao Pan*[1], Jing Ma[1], Ji Ma[1], Qinghua Zhang[2], Lin Gu[2], Yang Shen[1], Yuan-Hua Lin[1], Ce-Wen Nan[1]
1. State Key Laboratory of New Ceramics and Fine Processing, School of Materials Science and Engineering, Tsinghua University
2. Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences

A02-P10

Mo_2C on Carbon Fiber Paper Synthesized in Molten Salt for Hydrogen Evolution Reaction

Wenjin Yuan*[1,2], Nianxiang Qiu[2], Qin Huang[2], Zhenduo Cui[1], Shengli Zhu[1], Zhaoyang Li[1], Yanqin Liang[1]
1. School of Materials Science and Engineering, Tianjin University, Tianjin
2. Engineering Laboratory of Nuclear Energy Materials, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences

A02-P11

$MoSe_2$ Nanosheets Grown on Graphite as Effective Catalytic Hydrogen Evolution Electrodes

Xu Mao*, Jianpeng Zou, Danni Li
State Key Laboratory of Powder Metallurgy, Central South University

A02-P12

Synthesis of Hierarchical $Cd_{0.65}Zn_{0.35}Te$ Nanostructures via Self-Assembly of Quantum Dots

Wangwei Lu*,Gaoling Zhao,Gaorong Han
School of material science and engineering, Zhejiang University,

A02-P13

SERS Performance of β-Sn/rGO Hybrid Structure

Hanhan Wu*, Bin Li, Hong-Hai Zhong, Ying-Wei Lu
Hefei University of Technology

A02-P14

The Effects of Reductive Degree of Graphite Oxide on the Visible-Light-Driven Photocatalytic Activity of $MnWO_4$ for Water Splitting

Hongru Zhou*, Yuanyuan Peng, Jun Ke
Wuhan Institute of Technology

A02-P15

Two-Step Vapor Deposition of Self-Catalyzed Large-Size PbI_2 Nanobelts for High-Performance Photodetectors

Mingming Han*, Zai-xing Yang
Shandong University

A02-P16

Preparation and Enhanced Photoelectrocatalytic Activity of Ternary TiO_2-Fe_2O_3/Cu Nanocomposites

Hexi Zhao*, Huiyuan Chen, Hui Nan
Qinghai University

A02-P17

Control of Microstructure and Properties of Graphene Aerogel via Manipulation of Ice Crystal Template by Freeze-Casting

Xiangyu Zhu*[1], Pingwei Wu[2], Hailong Zhang*[1]
1. State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing
2. School of Materials Science and Engineering, University of Science and Technology Beijing

A02-P18

Cost-Effective Ag nanorods/rGO for Oxygen Reduction in Alkaline Medium

Dongxiang Zhu*, Ji-Gui Cheng, Ying-Wei Lu
HeFei University of Technology

A02-P19

Controlled Aqueous Synthesis of Noble Metal/Semiconductor Hybrid Nanocrystals and their Applications

Xinyuan Li*[1], Meng Xu[1], Hongzhi Wang[1], Muwei Ji[2], J iatao Zhang[1]
1. Beijing Institute of Technology
2. Graduate School at Shenzhen, Tsinghua University

A02-P20

Effect of Annealing on the Magnetic Properties of FeCoNiCuNbSiB Soft Magnetic Alloys

Zhun Li*[1], Kefu Yao[2], Deren Li[1], Zhichao Lu[1]
1. Advanced Technology and Materials Co., Ltd
2. Tsinghua University

A02-P21

Tuning the Electronic Structure of NiO via Li doping for Fast Oxygen Evolution Reaction

Gaoliang Fu*, Xiaojian Wen, Jun Cheng, Kelvin H. L. Zhang
College of Chemistry and Chemical Engineering, Xiamen University

A02-P22

Plasmon-Enhanced Photoelectrochemical Hydrogen Generation beyond Visible Region: The Case of Au/CdSe Hybrid Nanorods from Core/Shell to Nano-Dumbbell

Hongzhi Wang*, Jia Liu, Jiatao Zhang
Beijing Institute of Technology

A02-P23

Ligand Engineering on CdTe Quantum Dots in Perovskite Solar Cells for Suppressed Hysteresis

Jiawen Xiao*, Ma Sai, Shijie Yu, Chenxiao Zhou, Yujing Li, Qi Chen
Beijing Institute of Technology

A02-P24

Cross-Sized and Cross-dimensional Self-Assembly of Perovskite Nanocrystals on Flexible Substrate and Their Fluorescence Properties

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Beijing Institute of Technology

A02-P25

Naphtho[1,2-b:4,3-b'] Dithiophene-Based Hole Transporting Materials for High-performance Perovskite Solar Cells: Molecular Engineering and Opto-electronic Properties

Binbin Cui*, Ning Yang
Beijing Institute of Technology

A02-P26

Thiols Initialization and Solvents Coordination Enabled Novel Cation Exchange Strategy for Tailoring Composition and Property of Semiconductor Nanostructures

Bing Bai*, Meng Xu, Jiatao Zhang
Beijing Institute of Technology

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From In doped Ag_2S to $AgInS_2$ NCs: Synthesis and Optical Properties

Huishan Shang*, Jiatao Zhang
Beijing Institute of Technology

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Photoelectronic Properties of Cu_2O/Cu Semiconductor-Metal Hetero-Nanocrystals: Enhancement from Cu Metal Nanocrystals

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A02-P29

Reduction of Intrinsic Defects in Hybrid Perovskite Films via Precursor Purification

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A02-P30

The effect of W modification on Structure Stability and Electrochemical Performance of Ni-rich $LiNi_{0.8}Co_{0.1}Mn_{0.1}O_2$ Cathode Material

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A02-P31

Graphene Quantum Dots/Bi_2MoO_6 Hybrid Photocatalyst with Efficient Physical and Chemical Simultaneous Co-catalysis for Photocatalytic Oxidation

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Facile Synthesis of $NiCo_{2-x}Fe_xO_4$ Nanotubes/Carbon Textiles Composites for High-performance Electrochemical Energy Storage Devices

Zhaohui Liu*, Longqiang Wang, Yufeng Cheng, Xiangyang Cheng, Bo Lin, Longfei Yue, Shougang Chen
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A02-P33

A Three-Dimensional Structure Si/Ni_3Si Anode with High Conductivity for Lithium-Ion Battery

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A02-P34

Enhancing Gas Sensitivity and Sensing Mechanism at Atomic and Molecule Level of WO_3 Nanoparticles by Hydrogenation

Qin Du*, Li Wang, Juan Yang, Junfang Liu, Yukun Yuan, Mengzhu Wang, Bin Liu, Xiao Zhang, Yan Ren, Hua Zhao, Heqin Yang
Shanxi Normal University

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Hydrogenated TiO_2 Nanosheet Based Flowerlike Architectures: Enhanced Sensing Performances and Sensing Mechanism

Junfang Liu*, Ye Wang, Miao Wang, Cuijin Pei, Meng Cui, Yukun Yuan, Guoping Han, Bin Liu, Hua Zhao, Heqing Yang, Shengzhong Liu
Shanxi Normal University

A02-P36

Metal Halide Perovskite Modified Garnet Electrolyte Enabled Enhanced-performance Solid State Li Metal Batteries

Jiafeng Wu*, Xinyue Li, Lang Liu, Wenjie Qu, Rui Luo, Lei Wei, Renjie Chen, Yujing Li, Qi Chen
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A02-P37

A Strategy in Fabricating New 2D Cesium Lead Halide Perovskite Material with Anionic Spacers

Yizhou Zhao[*1,2], Siyu Zhang[1], Xiuxiu Niu[1], Yue Lu[3], Zhu Cheng[1], Jiawen Xiao[1], Huachao Zai[1,2], Manling Sui[3], uanping Zhou[4], Yujing Li[1], Qi Chen[1]

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Synthesis of p-Type Au@CdS by Cation Exchange Method and Its Utilization for Efficient Photoelectrochemical Water Splitting

Rongrong Pan*, Jia Liu, Jiatao Zhang

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Pt-Ag Porous Alloy Nanotube Rich in Controlled Pt at the Surface with Enhanced Activity and Durability Toward Oxygen Reduction

Erhuan Zhang*, Jia Liu, Jiatao Zhang

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X-ray Scattering Observation of Two-Dimensional Interfacial Colloidal Crystallization

Longlong Wu*, Xiao Wang, Gang Chen

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A02-P41

Manipulation of Facet Orientation in Hybrid Perovskite Polycrystalline Films by Cation Cascade

Cheng Zhu[*1,2], Guanghaojie Zheng[2,3,4], Jingyuan Ma[4], Xiaonan Zhang[3,4], Gang Tang[1], Yihua Chen[2], Liang Li[1], Jinsong Hu[4], Jiawang Hong[1], Qi Chen[1], Xingyu Gao[3,4], Huanping Zhou[2]

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A02-P42

Heterovalent Sb^{3+}/Ag^{+} Doping in CdS Quantum Dots with Efficient Tunable Luminescence: Cation Exchange Enabled Ternary Ag_3SbS_3 Nanocrystals Conversion into Doped Binary CdS QDs

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A02-P43

Inkjet-Printed Thermochromic Vanadium Dioxide Nanoparticle Films for Smart Windows

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A02-P44

Dynamic Hosts for High-Performance Li-S Batteries Studied by Cryo-STEM and in Situ XRD

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A02-P45

One-Pot Solvothermal Synthesis of Graphene/α-MnS Nanocomposite for Electrochemical Capacitor Electrodes

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A02-P46

Grain Boundary "Patches" by in Situ Conversion to Enhance Perovskite Solar Cells Stability

Lang Liu*[1], Sheng Huang[1], Yue Lu[2], Pengfei Liu[1], Yizhou Zhao[1], Congbo Shi[1], Siyu Zhang[1], Jiafeng Wu[1], Haizheng Zhong[1], Manling Sui[2], Huanping Zhou[3], Haibo Jin[1], Yujing Li[1], Qi Chen[1,4]

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Direct Anodic Exfoliation of Graphite onto High-density Aligned Graphene for Large Capacity Supercapacitors

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A02-P48

Mn_7C_3 Confined in the Mesoporous Carbon Spere for High Rate Lithium-Sulfur Batteries

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A02-P49

Controllable Preparation of Tungsten / Tungsten Carbide Nanowires Using Carbon Nanotubes as Templates

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One-Pot Synthesis of Pt72Ru28 Porous Nanoalloy Assembled with Sub-4.0 nm Particles for Methanol Oxidation

Fengling Zhao*, Wei yue Zhao, Qiang Yuan

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A02-P51

Enhanced Upconversion Based on the Ultrahigh Local Field Enhancement in a Multilayered UCNPs-Metamaterial Composite System

Shiping Zhan*[1], Xiaofeng Wu[1], Chao Tan[1], Jian Xiong[2], Shigang Hu[1], Junshan Hu[1], Shaobin Wu[1], Yongyi Gao[1], Yunxin Liu[1]

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A02-P52

Enhanced Gas Separation Performance of Ionic Liquid Nanoconfined in MoS_2 Nanochannels

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Ionic Liquid Selectively Facilitates CO_2 Transport through Graphene Oxide Membrane

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Fe_2N Encapsulated in n-doped Porous Carbon Derived from MOFs as Synergistic Catalyst for ORR

Xiaoxiao Huang*, Yanglong Hou

Peking University

A02-P55

Stable p-type ZnO Nanowires for Photoelectrochemical and Photocatalytic Water Splitting

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A02-P56

Free-Standing n-doped Carbon Nanofibers/Carbon Nanotubes Hybrid Film for Flexible, Robust Half and Full Lithium-Lon Batteries

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A02-P57

High-throughput Preparation and Characterization of Perovskite Microflakes Based on Microdroplet Array

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Boosting the Deep Discharging/Charging Lithium Storage Performances of Li_3VO_4 through Double-Carbon Decoration

Huancheng Liu*, Ping Hu,Qiang Yu,Zhenhui Liu,Ting Zhu,Wen Luo,Liang Zhou,Liqiang Mai
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A02-P59

Composition-Driven Shape Evolution to Cu-rich PtCu Octahedral Alloy Nanocrystals as Superior Bifunctional Catalysts for Fuel Cell

Fang Yang*, Chaozhong Li, Qiang Yuan
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A02-P60

Controlled Cation Exchange Reaction between Cu^{2+} and Bi_2Te_3 Nanoplate: Controlled Synthesis, Characterization and Mechanism

Xiangyun Bai*, Ning Su, Shuai Guo, Yuxiong Chen, Jin Wang, Muwei Ji, Bo Li
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Monodispersed Sub-5.0 nm PtCu Nanoalloys: Composition-Tunable Synthesis and their Applications for Oxygen Reduction Reaction and Ethanol Oxidation Reaction

Tengyue Ma*, Taiyang Liu, Qiang Yuan
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Low Temperature Derived Atomic Cobalt on n-doped Graphene as an Efficient Electrocatalyst for the Oxygen Reduction Reaction and Zn-Air Batteries

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Defect Engineering of Molybdenum Disulfide to Tunable Hydrogen Evolution Behavior through Ion Irradiation

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A02-P64

Hybrid Electrodes with High Capacity for Lithium Ion Battery Anodes

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Enhancing Efficiency and Stability of Perovskite Solar Cells via a High Mobility p-type PbS Buffer Layer

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Wuhan University

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Defects and Interfaces on PtPb Nanoplates Boost Fuel Cell Electrocatalysis

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Fe Isolated Single Atoms on S, N Codoped Carbon by Copolymer Pyrolysis Strategy for Highly Efficient Oxygen Reduction Reaction

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Resolving the Local Electrochemistry of Lithium-Ion Battery Electrode Materials via ESM

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A02-P69

Scalable Synthesis of $Co_{0.5}Ni_{0.5}MoO_4$ Double-Shelled Hollow Spheres for High-Performance Supercapacitors and Lithium-Ion Batteries

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Effect of Different Rare Earth Element (Gd^+Y) on the Microstructure and High Temperature Tensile Properties of Mg-xGd-yY-0.5Zr Alloys

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High Specific Capacity Carbon Coated Silicon/Graphene Nanocomposite Anode Materials for Li-Ion Batteries

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Broadband Antireflection Sub-Microstructures on 4H-SiC

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Controllable Synthesis of Ultrathin $CsPbBr_3$ Nanoplatelets and Their Reversible Transformation into Cs_4PbBr_6 Nanocrystals

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High-Performance Lithium-Sulfur Vatteries with a Carbonized Chitosan Modified Separator

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A02-P75

Mesoporous Lamellar-Shaped Lithium-Rich Cathode Material for Lithium-Ion Batteries with Exceptional Rate Capability and Stability

Min Li[1,2], Yi Zhou[1,2], Xiaoyan Wu[2], Lei Duan[2], Chunming Zhang[2], Fang Zhang[2], Dannong He[1,2]*

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Controllable Synthesis of Non-Stoichiometric Copper Chalcogenide Nanocrystals with Tunable Near-Infrared Localized Surface Plasmon Resonance Absorption

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A02-P77

石墨烯负载纳米银复合材料的制备及性能研究

周懿涵

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A02-P78

In situ Growth of Heterostructured Sn/SnO Nanospheres Embedded in Crumpled Graphene as an Anode Material for Lithium-ion Batteries

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A02-P79

Facile *In-Situ* Synthesis of Crystalline VOOH-Coated VS_2 Microflowers with Superior Sodium Storage Performance

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A02-P80

***In situ* grown of $Ni(OH)_2$ nanosheets on nickel foam as binder-free electrode for electrochemical pseudocapacitor**

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