Curriculum vitae

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Research interests: ***Hydrogen Storage, Battery Materials (Si-based Anode, All-solid-state Batteries); Renewable Energy Storage.***

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EDUCATION

June 2005 Ph.D. in Inorganic Chemistry, Peking University, China
Supervisor: Prof. Xingguo Li
Doctoral thesis title: Preparation and Properties of Nanostructured Magnesium-based Hydrogen Storage Materials

July 2000 B.S. in Materials Chemistry, Peking University, China

EMPLOYMENT HISTORY

August 2016-present Assistant and Associate Professor in Institute of Applied Physics and Materials Engineering (IAPME), University of Macau, Macau SAR, China
Research topic: Development of Next-Generation Energy Storage Materials and Systems

May 2011-July 2016 Assistant Professor in International Institute for Carbon-Neutral Energy Research (WPI-I^2CNER), Kyushu University, Japan
Research topic: Development of High Capacity Hydrogen Storage Materials for Onboard and Stationary Storage Applications

April 2009-April 2011 Postdoc in Department of Heterogeneous Catalysis, Max-Planck-Institut für Kohlenforschung, Germany
Supervisor: Prof. Dr. Ferdi Schüth, Dr. Michael Felderhoff
Research topic: Development, Upscaling and Testing of Nanocomposite Materials for Hydrogen Storage

Curriculum vitae

July 2005-March 2009 Postdoc in Energy Technology Research Institute, National Institute of Advanced Industrial Science and Technology, Japan
Supervisor: Dr. Etsuo Akiba
Research topic: Fundamental Research on Nanostructure and Reaction Mechanism of BCC Type Hydrogen Storage Alloys

TEACHING EXPERIENCE

2021-present Lecturer for ***Inorganic Chemistry*** (Undergraduate Compulsory course, APAC2003 spring), University of Macau, China
2017-present Lecturer for ***Green Energy for Global Society*** (General Education course, GEGA021, GEGA1006), University of Macau, China
2016-2017 Lecturer for ***Chemistry and Modern Society*** course (General Education course, CHEM111 and GEST014), University of Macau, China
2013-2015 Lecturer for ***Advanced Engineering A*** course to Global 30 Project students in English (autumn semesters in 2013, 2014 and 2015), Kyushu University, Japan
Responsibility: Giving lecture introducing research trend in this field; design of the lecture content; design of the class quiz; grading the students for the lecture.
2012-2016 Demonstration outreach on ***Energy Storage for Utilization of Renewable Power Based on Hydrogen Production, Hydrogen Storage and Fuel Cell Technologies*** to visitors and high school students in Kyushu University (total number of attendees 500-600), Japan
Contribution: Design and building of the demonstration system; giving lectures and demonstration to students and visitors; introducing research activities in the institute; Q&A.

FUNDING SUPPORT AS PRINCIPAL INVESTIGATOR

1. Macao Science and Technology Development Fund (FDCT), Macau (Project No.: 0013/2024/RIB1), "Research on Key Technologies for Fabrication and Surface Packaging of Pre-lithiated SiO-Gr Dry-process Electrodes towards Industrialization", 2024.10-2027.10 1968500 MOP (~245000 USD).
2. The Multi-Year Research Grant (MYRG) from University of Macau, Macau (Project No.: MYRG-GRG2024-00206-IAPME), "Development of Stable High-Capacity Silicon-based Anodes upon Multiscale Structure-Interface Coupling Design", 2025.01-2026.12, 440,000 MOP (~55,000 USD).
3. Shenzhen Science and Technology Innovation Committee - 2023 Shenzhen-Hong Kong-Macau Science and Technology Program (Category C), Research on structural stabilization strategy and scale-up of Li_xSi anode for high energy power lithium batteries, 2023.05-2025.04, 3,000,000 RMB (~434,000 USD).
4. Structural optimization strategy and industrialization development of pre-magnesiated and alloyed SiO based anodes for high performance lithium ion batteries, Guangdong Association For Science and Technology, Sep. 2023-Dec. 2025, 282500 MOP (~35,000 USD)
5. Drastic Fluorescence Enhancement of Metal-Organic Framework for Ultra-Efficient Detection of Trace Benzene Vapor and Device Manufacture, WUYI-UM joint project, 2023-08~2026-07 ((~21,000 USD).

6. Macao Science and Technology Development Fund (FDCT), Macau (Project No.: 0090 0090/2022/AFJ), “Exploration of advanced electrode materials for electrocatalytic urea synthesis", 2023. 1-2025.12 2,000,000 MOP (~250,000 USD)
7. Macao Science and Technology Development Fund (FDCT), Macau (Project No.: 0026/2022/AMJ), “Key technology development of high-safety, room temperature polyethylene oxide based solid-state lithium battery", 2022.11-2025.11 2,300,000 MOP (~288,000 USD)
8. The Multi-Year Research Grant (MYRG) from University of Macau, Macau (Project No.: MYRG-GRG2023-00140-IAPME-UMDF), “Interfacial engineering of organic-inorganic hybrid solid-electrolyte interphase protected-LixSi for environmentally stable prelithiation reagents”, 2024.01-2025.12, 160,000 MOP (~20,000 USD).
9. Natural Science Foundation of Guangdong Province (2023A1515010765), China, Catalyst design: construction and application of volcano-type curves for lithium-sulfur batteries, 2023.01-2025.12 (~16,000 USD).
10. The Multi-Year Research Grant (MYRG) from University of Macau, Macau (Project No.: MYRG2022-00105-IAPME), “Interfacial charge transfer modulation of noble metal-free 2D/2D heterostructure materials for bi(tri)-functional electrocatalysis”, 2023.01-2024.12, 672,000 MOP (~84,000 USD).
11. Macao Science and Technology Development Fund (FDCT), Macau (Project No.: 0098/2020/A2), “Controllable synthesis of modified Li_xSi-based composite electrode and the application in high-energy lithium batteries”, 2021.06-2024.06 2,201,000 MOP (~274,000 USD)
12. Natural Science Foundation of Guangdong Province, China, Nonlinear Optical Properties and Application of $Cu_{3-x}P$ Nanocrystals, 2021.01-2023.12 (~16,000 USD).
13. Macao Science and Technology Development Fund (FDCT-GDST), Macau (Project No.:0019/2019/AGJ), “Development of Key Technologies for Soft-packed Lithium-ion Batteries for Wearable Electronic Products”, 2020-2022, 1,170,000 MOP (~146,000 USD)
14. The Multi-Year Research Grant (MYRG) from University of Macau, Macau (Project No.: MYRG2019-00055-IAPME), “An Exploratory Research on All-solid-state Mg Battery: Metastable Mg Nano Alloys as Cathode and $MgB_{12}H_{12}$-based Compounds as Solid Electrolyte”, 2020.01-2021.12, 750,000 MOP (~93,000 USD).
15. Macao Science and Technology Development Fund (FDCT), Macau (Project No.:062/2018/A2), “Metastable Ti-V-C Based Nano Alloys with NaCl-type Lattice for Innovative Lithium-Ion Battery Anode Materials Development”, 2018-2021, 1,788,000 MOP (~221,000 USD)
16. Macao Science and Technology Development Fund (FDCT), Macau (Project No.:118/2016/A3), “Innovative Development of Nanostructured Mg-Co Based Materials for Renewable Energy Storage”, 2017-2020, 1,905,000 MOP (~237,000 USD)
17. Start-up Research Fund from University of Macau, Macau (Project No.: SRG2016-00088-FST), “Design and Development of Hydrogen Storage Materials by Experiment and Simulation Approaches”, 2017-2020, 150,000 MOP (~18,700 USD)

18. Start-up and special fund for demonstration from IAPME, University of Macau, Macau, 2016, 2,304,000 MOP (~288,000 USD)

19. World Premier International Research Center Initiative (WPI) Start-Up funding, International Institute for Carbon-Neutral Energy Research (WPI-I^2CNER), Japan, "Development of High-Capacity Hydrogen Storage Materials for Onboard and Stationary Energy Storage", 2011-2016, 13,000,000 JPY (~120,000 USD).

20. WPI Start-up Funding for Interdisciplinary Research, WPI-I^2CNER, Japan, "Demonstration of Utilization of Renewable Energy with Hydrogen Storage System", 2011, "Nano Processing and Properties of Mg-based Materials for Energy Storage", 2012, "NaCl-type Structure Ti-V-C Compounds for Hydrogen Storage", 2014, total budget 12,970,000 JPY (~120,000 USD).

21.Grants-in-Aid for Scientific Research from Japan Society for the Promotion of Science (JSPS), Japan (Project No.:23860034), "Structure and Properties of Mg-based BCC Type Hydrogen Storage Materials", 2011-2012, 3,250,000 JPY (~30,000 USD).

22.Other accepted competitive grants and supports include: WPI Competitive Support; WPI Travel Support; WPI Equipment Relocation Support; Kyushu University Travel Support; Demonstration Research on a Hydrogen-based Society through Collaboration among Industry, University, Government, and Local Community in Kyushu University 2011-2015; and Interdisciplinary Program in Education and Projects in Research Development in Kyushu University, 2015; etc. with a total amount of about 10,900,000 JPY (~100,000 USD).

Summary: as a principal investigator, achieved a total budget of ca. ~3,112,000 USD.

NOTE-WORTHY AWARDS

2023.10 Most Valuable Paper Award in 10 years, Journal of Magnesium and Alloys (SCI, IF=15.8), China

2023 2022-2023"創客中國"國際中小企業創新創業大賽决赛-----亚軍 The Second Place at the 2022-2023 "Maker China" SME Innovation and Entrepreneurship Global Contest Final.

2022 中國（長沙）海外人才創新創業大賽-----總决賽，一等獎（綠色低碳賽道第一名）the first prize in the finals of the 2022 China (Changsha) Overseas Talent Innovation and Entrepreneurship Competition (the first place in the green and low-carbon track).

2022 2022港澳臺創新創業大賽全國賽------三等獎 （第四名，港澳類企業第一名）

2022 第八届珠海"菁牛匯"創新創業大賽-----晋級决賽，三等獎

2022 2022前海粵港澳臺青年創新創業大賽-----最具潛力獎

2022 Multi-recommended awards (7), 2022 Macao Youth Innovation and Entrepreneurship Competition 2022 澳門青年創新創業大賽7項推送獎項, Macau.

2022 First Place, Macau Trials of ninth Guangdong-Hong Kong-Macao Greater Bay Area Youth Innovation and Entrepreneurship competition of "Dali Cup", 大瀝杯"第九届創青春粵港澳大灣區青年創新創業大賽澳門區選拔賽, Macau.

2021 Best paper award, Journal of Magnesium and Alloys (SCI, IF=15.8), China

2007 JSPS Fellowship, Japan Society for the Promotion of Science, Japan

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2005 First Place Award, GE Foundation Edison Cup Technology Innovation Competition, China Scholarship Council, China/Institute of International Education, USA

PUBLICATIONS

1.Zhan Wang, Shuang Li, Yun Zheng, Yinan Liu, Qilin Feng, Chencheng Xu, Quanchao Zhuang, Zhicheng Ju, Jiangmin Jiang*, **Huaiyu Shao***, Xiaogang Zhang*, Pre-Constructed Mechano-Electrochemical Adaptive Solid Electrolyte Interphase to Enhance Li^+ Diffusion Kinetics and Interface Stability for Chemically Prelithiated SiO Anodes, ***Advanced Science***, 2025, e15555.

2.Yi Liu, Junpo Guo, Xupo Liu, Zhihan Liu, Tian Li, Shuang Wang, Congcong Zhang, Kailun Wang, Tianwen Xu, Weijie Kong, Zijun Chen, Jintao Huang, Junwu Xiao, Hongfang Liu, **Huaiyu Shao**, Deli Wang*, Corrosion-Driven Ni3S4 Gradient in NiFe-LDH Enables Durable Industrial-Scale Water Electrolysis, ***Angewandte Chemie International Edition***, 2025, e202516894.

3.Honggang He, Rui Wang, Qunren Qiu*, Min Li, Shi Chen, Yuxin Tang, Yu Feng, **Huaiyu Shao**, Ruiqing Li, Chunyan Cao*, Bin Fei*, Mingzheng Ge*, 3D PAN/LLZTO nanofibers reinforced composited polymer electrolyte for high-performance solid-state lithium metal batteries, ***Colloids and Surfaces A: Physicochemical and Engineering Aspects***, 2025, 138292.

4.Yiyang Xia, Guihong Mao, Tengyu Yao, Jieyu Yang, Yangjie Zhou, Ken Lin, Zhenming Xu, Duo Chen, **Huaiyu Shao**, Laifa Shen*, One-Step Biphasic Interfacial Engineering Stabilizes Single-Crystal Ultrahigh-Nickel Cathodes, ***Advanced Functional Materials***, 2025, e13107.

5.Zikang Xu, Zeyu Cao, Ying Yang, Hang Ren, Jingyuan Zhang, Jinyao Yang, Lifen Long, **Huaiyu Shao**, **Shengyang Dong***, High-entropy engineering of Prussian blue analog enables high-stable Mn-ion storage with ion selectivity and structure stability, ***Energy Storage Materials***, 2025, No. 104457.

6.Xupo Liu, Jiashu Tang, Ye Chen, Xiangjia Song, Junpo Guo, Gongke Wang, Shixing Han, Xin Chen*, Congcong Zhang, Shixue Dou, **Huaiyu Shao***, Deli Wang*, Refining Electrocatalyst Design for 5-Hydroxymethylfurfural Oxidation: Insights into Electrooxidation Mechanisms, Structure–Property Correlations, and Optimization Strategies, ***ACS Catalysis***, 15, 2025, 7308-7339.

7.Qi Zhang, Zhiqiang Zhang, Fangyuan Zeng, Wenjie Li, Jinhao Liu, Shubo Ai, Yun Zheng, Zhe Li, **Huaiyu Shao***, Zhi-Quan Liu*, Revealing crystal defects induced Kirkendall voiding in Cu/Sn solder joints, ***Rare Metals***, in press.

8.Yinan Liu, Yun Zheng, Kunye Yan, Jun Wang, Yunxian Qian, Junpo Guo, Qi Zhang, Congcong Zhang, Pingshan Jia, Zhiyuan Zhang, Shengyang Dong, Jiangmin Jiang, Yan Guo, Rong Chen, Yike Huang, Yingying Shen, Jincheng Xu, Ruifeng Zheng, Yuxin Tang, Wei Jiang, **Huaiyu Shao*,** Multifunctional Interface Engineering of Li13Si4 Pre-Lithiation Additives With Superior Environmental Stability for High-Energy-Density Lithium-Ion Batteries, ***Carbon Energy***, 16, 2025, e70034.

9.Zhiqi Jiang, Li Shao, Yuhan Sun, Yan Dong, Xuerong Zheng, Tongzhou Wang*, Jihong Li*, **Huaiyu Shao**, Lifang Jiao, Yida Deng*, Mitigating Irreversible Ru Dissolution in Acidic OER via Controlled Co‐Induced Reconstruction of RuCo Alloy Electrocatalysts, ***Advanced Functional Materials***, 20,2025,e09656.

10. Hebin Zhang, Zeyu Zheng, Yang Liu, Junhao Liu, Danning Zhao, Jia Du, Kangqi Chang, **Huaiyu Shao***, Pengli Zhu*, Rong Sun, Synergistic Strategy to Break Trade-Off in Thermal-

Mechanical Properties via ZIF-8 Enhanced Epoxy Nanocomposites, ***ACS Applied Polymer Materials***, 7, 2025, 6965-6973.

11.Yihao Zheng, Tao Zhou, Quan Zhang, Haixin Guo, Jianxun Yang, Baofu Ding, **Huaiyu Shao***, Xinchun Yang*, Recent advances in heteroatom-doped RuO2 electrocatalysts for efficient acidic oxygen evolution reaction, ***Science and Technology of Advanced Materials***, 2025, No. 2520159.

12. Hebin Zhang, Junpo Guo*, Bing Han, Yun Zheng, Yingying Shen, Yike Huang, Yinan Liu, Zenan Li, Qi Zhang, Wei Jiang, Yunxian Qian, Pengli Zhu, Jun Wang*, **Huaiyu Shao***, Stress-Induced Failure Analysis of High-Capacity SiOx/Graphite Composite Anodes, ***Batteries & Supercaps***, 2025, No. 2500126.

13.Congcong Zhang, Yinan Liu, Pengrui Bao, Yun Zheng, Yingying Shen, Yike Huang, Pingshan Jia, Zhiyuan Zhang, Kunye Yan, Rong Chen, Yuhao Li, Junpo Guo*, **Huaiyu Shao***, Synergy enhancement mechanism of fluorine-doping and oxygen-defect for high-capacity F/O-CoO anode material, ***Chinese Chemical Letters***, 9, 2025, 111212.

14.Yinan Liu, Wei Jiang, Congcong Zhang, Pingshan Jia, Zhiyuan Zhang, Yun Zheng, Kunye Yan, Jun Wang, Yunxian Qian, Junpo Guo, Rong Chen, Yike Huang, Yingying Shen, Lifen Long, Bang Zheng, **Huaiyu Shao***, Realizing Environmentally Scalable Pre-Lithiation via Protective Coating of LiSi Alloys to Promote High-Energy-Density Lithium-Ion Batteries, ***Inorganics***, 13, 2025, 115.

15.Jinyao Yang, Wendi Wang, Zeyu Cao, Jingyuan Zhang, Hang Ren, Ying Yang, **Huaiyu Shao**, Shengyang Dong*, Self-polymerization of carbonyl pigments for high-performance aqueous ammonium-ion batteries, ***Chemical Communications***, 61, 2025, 5499-5502.

16.You Fan, Oleksandr I Malyi, Huicai Wang, Xiangxin Cheng, Xiaobin Fu, Jingshu Wang, Haifeng Ke, Huarong Xia, Yanbin Shen, Zhengshuai Bai, Shi Chen, **Huaiyu Shao**, Xiaodong Chen, Yuxin Tang*, Xiaojun Bao*, Surface‐Confined Disordered Hydrogen Bonds Enable Efficient Lithium Transport in All‐Solid‐State PEO‐Based Lithium Battery, ***Angewandte Chemie International Edition***, 64, 2025, e202421777.

17.Shengyang Dong, Ruiqi Ren, Jingyuan Zhang, Xiaozhi Bao, Xin Liu, Qiuwei Shi, Zhijie Chen, **Huaiyu Shao***, High-entropy oxides: Emergent materials for electrochemical energy storage and conversion, ***Journal of Materials Science & Technology***, 2025, 227, 192-215.

18. Yike Huang, Yun Zheng, Yan Guo, Qi Zhang, Yingying Shen, Hebin Zhang, Yinan Liu, Yihao Zheng, Pingshan Jia, Rong Chen, Lifen Long, Zhiyuan Zhang, Congcong Zhang, Yuanhang Hou, Kunye Yan, Ziyu Huang, Manting Zhang, Jiangmin Jiang, Shengyang Dong, Wen Lei, **Huaiyu Shao***, Ion Substitution-Induced Distorted MOF Lattice with Deviated Energy and Dielectric Properties for Quasi-Solid-State Ion Conductor, ***Nanomaterials***, 2025, 15, 274.

19. Pingshan Jia, Junpo Guo, Qing Li, Yinan Liu, Yun Zheng, Yan Guo, Yike Huang, Yingying Shen, Lifen Long, Hebin Zhang, Rong Chen, Congcong Zhang, Zhiyuan Zhang, Jingjun Shen, Shengyang Dong, Jiangmin Jiang, Meinan Chang, Xupo Liu, Xiaobing Wang, Yuxin Tang, **Huaiyu Shao***, Revisiting the Kinetics Enhancement Strategies of Si Anode through Deconstructing Particle-Interface-Electrode Integration, ***Energy & Environmental Science***, 2025, (in press).

20.Guiquan Zhao, Pujia Cheng, Wenjin Huang, Hang Ma, Xin Wang, Rong Gu, Genfu Zhao, Lingyan Duan, Yongjiang Sun*, **Huaiyu Shao***, Xiaoxiao Zou*, Hong Guo*, In-situ modification from surface to bulk for enhancing the performance of NCM811 cathode, *Energy Lab*, 3, 2025, 240020-1-240020-9.

Curriculum vitae

21.Bingjie Ma, Cheng Tan, Liuzhang Ouyang*, **Huaiyu Shao**, Naiguang Wang*, Min Zhu, Corrigendum to “Microstructure and discharge performance of Mg-La alloys as the anodes for primary magnesium-air batteries”, ***Journal of Alloys and Compounds***, 1010, 2025, 177549.

22. Yuan Liu, **Huaiyu Shao**, Junpo Guo, Han Yu, Hongli Xu, Xiaoxiong Xu, Yonghong Deng, Jun Wang, He Yan, Toward scale-up of solid-state battery via dry electrode technology, ***Next Energy***, 2025, 7, 100221.

23. Shengyang Dong*****, Hang Ren, Jinyao Yang, Jingyuan Zhang, Zeyu Cao, Lifen Long, Zikang Xu, **Huaiyu Shao***, Xiaogang Zhang*****, An aqueous proton battery under alkaline electrolyte, ***Energy Storage Materials***, 2025, 74, 103888.

24. Shuang Li, Jiangmin Jiang, Qilin Feng, Yun Zheng, Yaxin Chen, Zhicheng Ju, Quanchao Zhuang, Kai Wu, **Huaiyu Shao***, Xiaogang Zhang, Molecular Engineering Chemical Pre-lithiation Reagent with Low Redox Potential for Graphite Anode Enables High Coulombic Efficiency, ***Small***, 2024, 20, 2406274.

25. Han Li, Leitao Xu, Shuowen Bo, Yujie Wang, Han Xu, Chen Chen, Ruping Miao, Dawei Chen, Kefan Zhang, Qinghua Liu, Jingjun Shen, **Huaiyu Shao**, Jianfeng Jia, Shuangyin Wang, Ligand engineering towards electrocatalytic urea synthesis on a molecular catalyst, ***Nature Communications***, 2024, 15, 8858.

26. Yingying Shen, Yun Zheng, Jiangmin Jiang, Junpo Guo, Yike Huang, Yinan Liu, Hebin Zhang, Qi Zhang, Jincheng Xu, **Huaiyu Shao**[*], Li-Si Alloy Pre-lithiated Silicon Suboxide Anode Constructing a Stable Multiphase Lithium Silicate Layer Promoting Ion-transfer Kinetics, ***Journal of Colloid and Interface Science***, 2025, 679, 855-867.

27. Xin Xu, Yan Guo, Huajun Zhao, Yike Huang, Junpo Guo, **Huaiyu Shao**[*], Modification Strategies of Molybdenum Sulfide Towards Practical High-Performance Lithium-Sulfur Batteries: A Review, ***Rare Metals***, 2024, 1-21.

28. Shuangyin Wang*, Yujie Wang, Xiaorong Zhu, Qizheng An, Xiaoran Zhang, Xiaoxiao Wei, Chen Chen, Han Li, Dawei Chen, Yangyang Zhou, Qinghua Liu, **Huaiyu Shao**, Electron Deficiency is More Important than Conductivity in C− N Coupling for Electrocatalytic Urea Synthesis, ***Angewandte Chemie***, 2024, e202410938.

29. Yike Huang, Cuihua An, Yafei Liu, Yusang Guo, Huaxu Shao, Huatang Yuan, **Huaiyu Shao***, Caiyun Wang*, Yijing Wang*, Unraveling the kinetic mechanism of atomic hybrids for the catalytic dehydrogenation of MgH2, ***Journal of Materials Science & Technology***, 2025, 212, 89-95.

30. Jingjun Shen, Manting Zhang, Yike Huang, Chen Chen, Yihao Zheng, Shengyang Dong, Jiangmin Jiang, Wen Lei, Shuangyin Wang, **Huaiyu Shao***, Ru-induced lattice expansion of metallic Co with favorable surface property for high-efficiency water electrolysis, ***Applied Catalysis B: Environment and Energy***, 2024, 358, 124392.

31. Jiangmin Jiang*, Zhan Wang, Xinfeng Wang, Shijing Wang, Shuang Li, Quanchao Zhuang, **Huaiyu Shao***, Cubic iron fluoride anchored on Ti3C2Tx MXene as superior anode for high-performance lithium-ion batteries, ***Journal of Power Sources***, 2024, 613, 234850.

32. Jiali Li, Yueru Jiang, Jianding Li*, Yanling Hu, Yingying Shen, Huajun Zhao, Yongyang Zhu*, Yun Zheng*, **Huaiyu Shao***, Ethylenediamine-mediated synthesis of Pd-based catalysts with enhanced electrocatalytic performances towards formic acid oxidation, ***International Journal of Hydrogen Energy***, 2024, 78, 1070-1077.

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33. Yun Zheng, Yingying Shen, Junpo Guo*, Jianding Li, Jun Wang, De Ning, Yinan Liu, Yike Huang, Yuxin Tang, Yonghong Deng, He Yan*, **Huaiyu Shao***, Recent advances in solid-state lithium batteries based on anode engineering, ***Nano Research Energy***, 2024, 3, e9120118.

34. Kang Chen, Mili Liu, Zhuoyin Peng, Hao Zhong, Lang Gan, Jincheng Huang, Jing Zhao, Hui Wang, Jiangwen Liu, **Huaiyu Shao**, Liuzhang Ouyang*, Enabling one-step regeneration of LiBH4 with self-sustaining hydrogen in its spent fuel—one pathway to storing renewable hydrogen, ***Journal of Alloys and Compounds***, 2024, No. 174209.

35. Manting Zhang, Tingting Zhou, Gang Huang, Fengyan Han, **Huaiyu Shao***, Ting Hu*, Caiqin Wang*, Dual-function CoP on nitrogen doped carbon framework with induced interfacial coupling for overall water splitting, ***Surfaces and Interfaces***, 2024, 104224.

36. Qi Zhang, Yinan Liu, Yun Zheng, Yan Guo, Yike Huang, Liqing He, Huajun Zhao, Zhe Li, Jingjun Shen, Jincheng Xu, Yingying Shen, Hebin Zhang, Junpo Guo*, Zhi-Quan Liu*, **Huaiyu Shao***, Boosting Li ion kinetics in H–Co3O4@ CNT electrode by synergic design of CNT coating and hollow structure, ***Journal of Power Sources***, 2024, 599, No. 234234.

37.Huajun Zhao, Shiguang Hu, Yanchen Fan, Qingrong Wang, Jianding Li, Mingman Yuan, Xinzhi Ma, Jun Wang*, **Huaiyu Shao***, Yonghong Deng*, Significance of electrolyte additive molecule structure in stabilizing interphase in LiNi0. 8Co0. 1Mn0. 1O2/artificial graphite pouch cells at high temperature, ***Energy Storage Materials***, 2024, 65, 103151.

38.Dawei Chen, Jiani Liu, Jingjun Shen, Yiqiong Zhang*, **Huaiyu Shao***, Chen Chen*, Shuangyin Wang*, Electrocatalytic C–N Couplings at Cathode and Anode, ***Advanced Energy Materials***, 2024, e2303820.

39.Shuang Li, Jiangmin Jiang*, Yun Zheng, Zhicheng Ju, Quanchao Zhuang, Kai Wu*, **Huaiyu Shao***, Xiaogang Zhang*, Pre-Lithiation Technology for Rechargeable Lithium‐Ion Batteries: Principles, Applications, and Perspectives, ***Batteries & Supercaps***, 2024, e202400115.

40.Xiaojin Tu, Xiaorong Zhu, Shuowen Bo, Xiaoran Zhang, Ruping Miao, Guobin Wen, Chen Chen, Jing Li, Yangyang Zhou, Qinghua Liu, Dawei Chen, **Huaiyu Shao**, Dafeng Yan, Yafei Li, Jianfeng Jia, Shuangyin Wang, A Universal Approach for Sustainable Urea Synthesis via Intermediate Assembly at the Electrode/Electrolyte Interface, ***Angewandte Chemie***, 2024, 136, e202317087.

41.Qingyuan Li, Huibo Wang, Yueyang Wang, Guoxing Sun, Zongjin Li, Yanyan Zhang, **Huaiyu Shao**, Yinzhu Jiang, Yuxin Tang, Rui Liang, Critical Review of Emerging Pre-etallization Technologies for Rechargeable Metal-Ion Batteries, ***Small***, 2024, 20, 2306262.

42.J Shen, Y Zheng, W Lei, **Huaiyu Shao***, Unraveling the Fundamental Concepts of Superaerophobic/Superhydrophilic Electrocatalysts for Highly Efficient Water Electrolysis: Implications for Future Research, ***ChemElectroChem***, 2024, 11, e202300465.

43. Yuhan Song, Yinan Liu, Ziwen Zou, Zexu Wang, Yiwei Sun, **Huaiyu Shao**, Menglong Hao*, Fast Mg-based hydrogen storage with flow-through hydrogen as a cooling medium: A numerical study, ***International Journal of Hydrogen Energy***, 2024, 50, 235-246.

44.B Li, L He, Y Guo, H Zhao, J Shen, W Lei, J Xu, **Huaiyu Shao***, High energy ball milling to synthesize transition metal vanadates with boosted lithium storage performance, ***Materials Today Communications***, 2023, 37. No. 107496. (Dec. 2023)

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45.Ye Jiang, Jiangmin Jiang*, Ping Nie, Weijia Guo, Chao Geng, Zongfu Sun, Yi Fei, Yaxin Chen, Quanchao Zhuang, Zheng Xing*, Zhicheng Ju, **Huaiyu Shao***, Recent progress and prospects of pitch-based carbon anodes for alkali metal-ion (Li/Na/K) batteries, ***Journal of Energy Storage***, 2023, 72, No. 108484. (Nov. 25, 2023)

46.Yujung Chen, Peisen Liao, Kehan Jin, Yun Zheng, Huaiyu Shao and Guangqin Li, Current progress in metal–organic frameworks and their derivatives for electrocatalytic water splitting, ***Inorganic Chemistry Frontiers***, 2023, 10, 6489-6505. (Nov. 21, 2023)

47.Qing Sun, Guifang Zeng, Jing Li, Shang Wang*, Marc Botifoll, Hao Wang, Deping Li, Fengjun Ji, Jun Cheng, **Huaiyu Shao**, Yanhong Tian*, Jordi Arbiol, Andreu Cabot*, and Lijie Ci*, Is Soft Carbon a More Suitable Match for SiOx in Li-Ion Battery Anodes? ***Small***, 2023, 19, No. 2302644. (Sep. 13, 2023).

48. Y Zheng, M Ma*, **Huaiyu Shao***, Recent advances in efficient and scalable solar hydrogen production through water splitting, ***Carbon Neutrality***, 2023, 2, No. 23. (Sep. 11, 2023).

49.Yan Guo, Jing Li, Gaoqian Yuan, Junpo Guo, Yun Zheng, Yike Huang, Qi Zhang, Jielei Li, Jingjun Shen, Chenhao Shu, Jincheng Xu, Yuxin Tang, Wen Lei*, **Huaiyu Shao***, Elucidating the Volcanic Type Catalytic Behavior in Lithium Sulfur Batteries via Defect Engineering, ***ACS Nano***, 2023, 17, 18253–18265. (Sep. 5, 2023)

50.Lei Zhang, Shi Wang*, Qian Wang*, **Huaiyu Shao***, Zhong Jin*, Dendritic Solid Polymer Electrolytes: A New Paradigm for High-Performance Lithium-Based Batteries, ***Advanced Materials***, 2023, 35, 2303355. (Sep. 13, 2023)

51. Zhenjiang Liu, Haiyan Zhang*, Shangshang Zhang, Shengkai Li, **Huaiyu Shao**, Zhenghui Li, Precise surface selenizing modulation for amorphous MoP@MoSe2/SnP2O7 hierarchical nanofibers as sodium ion battery anode, ***Applied Surface Science***, 2023, 630, No. 157508. (Sep. 2023)

52.Ping Liang, Yihao Zheng*, Fengru Liu, **Huaiyu Shao**, Chaofan Hu, Bingfu Lei, Xuejie Zhang, Yingliang Liu, Jianle Zhuang*, and Xingcai Zhang*, General Synthesis of Carbon Dot-Based Composites with Triple-Mode Luminescence Properties and High Stability, ***JACS Au***, 2023, 3, 2291-2298. (Aug. 2023)

53.Yike Huang, **Huaiyu Shao***, et al. Li- and Mg-based borohydrides for hydrogen storage and ionic conductor, ***Journal of Materials Science & Technology,*** 2023, 153, 181-204. (Aug. 2023)

54.Yun Zheng, Junpo Guo, De Ning, Yike Huang, Wen Lei, Jing Li, Jianding Li, Götz Schuck, Jingjun Shen, Yan Guo, Qi Zhang, Hao Tian, Hou Ian, **Huaiyu Shao***, Design of Metal–Organic Frameworks for Improving Pseudo-Solid-State Magnesium-Ion Electrolytes: Open Metal sites, Isoreticular Expansion, and Framework Topology, ***Journal of Materials Science & Technology,*** 2023, 144, 15-27. (May 2023)

55.Xiangyan Li, Bing Han**, Yucheng Zou, Ruohong Ke, Yonghong Deng, Sudong Wu, Yusheng Zhao, **Huaiyu Shao**, Junpo Guo, Meng Gu*, Observing the structural diversity of electrochemically deposited lithium metal in three dimensions, ***Journal of Power Sources***, 2023, 567, No. 232948.

56.Jingjun Shen, Jing Li, Bo Li, Yun Zheng, Xiaozhi Bao, Junpo Guo, Yan Guo, Chenglong Lai, Wen Lei, Shuangyin Wang, **Huaiyu Shao***, Ambient Fast Synthesis of Superaerophobic/Superhydrophilic Electrode for Superior Electrocatalytic Water Oxidation, ***Energy & Environmental Materials***, 2023, No. e12462. (Nov. 2023)

Curriculum vitae

57.Dan Chan, Yunfei Liu, You Fan, Huibo Wang, Shi Chen, Tianwei Hao, Heng Li, Zhengshuai Bai, **Huaiyu Shao**, Guichuan Xing, Yanyan Zhang, Yuxin Tang, Functional Janus Membranes: Promising Platform for Advanced Lithium Batteries and Beyond, ***Energy & Environmental Materials***, 2023, No. e12451. (Sep. 2023)

58.Kang Chen, Hao Zhong, Liuzhang Ouyang*, Fen Liu, Hui Wang, Jiangwen Liu, **Huaiyu Shao***, Min Zhu, Achieving a novel solvent-free regeneration of $LiBH_4$ combining hydrogen storage and production in a closed material cycle, ***Journal of Magnesium and Alloys***, 2023, 11, P1697-1708. (May 2023)

59.Yan Guo, Junpo Guo, Bo Li, Yun Zheng, Wen Lei, Jiangmin Jiang, Jincheng Xu, Jingjun Shen, Jielei Li and **Huaiyu Shao***, Metal Chelation Enables High-Performance Tea Polyphenol Electrodes for Lithium-Ion Batteries, Inorganics, 2023, 11, No. 148. (March. 2023)

60.Jianfei Chen, Haiyan Zhang*, Haowei Wang, Yingxi Lin, Yudie Tang, **Huaiyu Shao**, Shuqi Zhang, Design and construction of hollow nanocube NiMoO4 electrode with high performance for asymmetric supercapacitor, ***Journal of Nanostructure in Chemistry***, 2023, 13, 79-88. (Feb. 2023)

61.Xiaozhi Bao, Linqing Zhuo, Weikang Dong, Junpo Guo, Gang Wang, Bingzhe Wang, Qi Wei, Zongyu Huang, Jianding Li, Jingjun Shen, Jianhui Yu, Zhaogang Nie, Wencai Ren, Guanyu Liu, Guichuan Xing, **Huaiyu Shao***, Black Arsenic-Phosphorus Nanosheets for Highly Responsive Photodetection and Dual-Wavelength Ultrafast Pulse Generation at Telecommunication Band, ***ACS Applied Materials & Interfaces,*** 2022, 14 (46), 52270-52278.

62.Yun Zheng, Yang Xu, Junpo Guo, Jianding Li, Jingjun Shen, Yan Guo, Xiaozhi Bao, Yike Huang, Qi Zhang, Jincheng Xu, Jue Wu, Hou Ian, **Huaiyu Shao***, Cobalt Sulfide Nanoparticles Restricted in 3D Hollow Cobalt Tungstate Nitrogen-Doped Carbon Frameworks Incubating Stable Interfaces for Li-ion Storage, ***Electrochimica Acta***, 2022, No. 141134.

63.Jianding Li, Yun Zheng, Xiaozhi Bao, Liqing He, Haiyan Zhang, Yuxin Tang, **Huaiyu Shao***, Ultrasmall ZnO Nanocrystals Confined in Honeycombed N-Doped Carbon for High-Performance and Stable Lithium/Sodium Ion Batteries, ***Energy Technology***, 2022, No. 2200446.

64.Bingjie Ma, Cheng Tan, Liuzhang Ouyang, **Huaiyu Shao**, Naiguang Wang, Min Zhu, Microstructure and discharge performance of Mg-La alloys as the anodes for primary magnesium-air batteries, ***Journal of Alloys and Compounds***, 2022, No. 165803.

65.Huibo Wang, De Ning, Litong Wang, Heng Li, Qingyuan Li, Mingzheng Ge, Junyan Zou, Shi Chen, **Huaiyu Shao**, Yuekun Lai, Yanyan Zhang, Guichuan Xing, Wei Kong Pang, Yuxin Tang, In Operando Neutron Scattering Multiple-Scale Studies of Lithium-Ion Batteries, ***Small***, 18 (2022), No. 2107491.

66. Yongyang Zhu, Hao Zhong, Liuzhang Ouyang, Jiangwen Liu, Hui Wang, **Huaiyu Shao***, Min Zhu, Synthesis of NaBH 4 as a hydrogen carrier from hydrated borax using a Mg–Al alloy, ***Inorganic Chemistry Frontiers***, 2022, 9, 370-378.

67.Yiwen Xie, Haiyan Zhang, Jiale Yu, Zhenjiang Liu, Shangshang Zhang, Huaiyu Shao, Yuliang Cao, Xifeng Huang, Shengkai Li, A Novel Dendrite-Free Lithium Metal Anode via Oxygen and Boron Codoped Honeycomb Carbon Skeleton, ***Small***, 18 (2022), No. 2104876.

68.Wen Lei, Heng Li, Yuxin Tang*, **Huaiyu Shao***, Progress and perspectives on electrospinning techniques for solid-state lithium batteries, ***Carbon Energy***, 2022, 4, 539-575.

Curriculum vitae

69.Jingxin Zhao, Zifeng Cong, Jun Hu, Hongyu Lu, Litong Wang, Huibo Wang, Oleksandr I. Malyi, Xiong Pu, Yanyan Zhang, Huaiyu Shao, Yuxin Tang, Zhong Lin Wang, Regulating Zinc Electroplating Chemistry to Achieve High Energy Coaxial Fiber Zn Ion Supercapacitor for Self-Powered Textile-based Monitoring System, ***Nano Energy***, 2021, 106893, ISSN 2211-2855, https://doi.org/10.1016/j.nanoen.2021.106893.

70.Bo Li, Jingjun Shen, Huajun Zhao, Wen Lei, Xueqing Yu, Jincheng Xu, Yuxin Tang, Haiyan Zhang, **Huaiyu Shao**[*], In-situ Formed Amorphous Manganese Vanadate Encapsulating MnO via Salt-assisted Ball Milling toward 3D Hierarchical Porous Electrodes for Superior Lithium Storage, ***Chemical Engineering Journal*** , 431 (2022) No. 133732.

71.Zhaoming Tong, Liang Huang, Junyan Guo, Haijun Zhang, Quanli Jia, Gaoran Li, Wen Lei, Huaiyu Shao, Shaowei Zhang, A spatially efficient "tube-in-tube" hybrid for durable sulfur electrochemistry, ***Journal of Materials Chemistry A***, 10, 2022, 5460-5469.

72.Jingjun Shen, Bo Li, Yun Zheng, Ziyi Dai, Jielei Li, Xiaozhi Bao, Junpo Guo, Xueqing Yu, Yan Guo, Mingzheng Ge, Wen Lei[*], **Huaiyu Shao**[*], Engineering the Composition and Structure of Superaerophobic Nanosheet Array for Efficient Hydrogen Evolution, ***Chemical Engineering Journal***, 433 (2022) No. 133517.

73.Kang Chen, Jun Jiang, Liuzhang Ouyang[*], Hui Wang, Jiangwen Liu, **Huaiyu Shao**[*], Min Zhu, Enhanced hydrogen generation from hydrolysis of MgLi doped with expanded graphite, ***Journal of Magnesium and Alloys***, 9 (2021) 2185-2193.

74.Huajun Zhao, Jun Wang, **Huaiyu Shao**[*], Kang Xu[*], Yonghong Deng[*], Gas Generation Mechanism in Li-Metal Batteries, ***Energy & Environmental Materials***, 2022, 5, P327-336. (Jan. 2011)

75.Huajun Zhao, Yunxian Qian, Guangfu Luo, Jian Chang, Chaoyang Wang, Jun Wang[*], **Huaiyu Shao**[*], Yonghong Deng[*], Cathode-anode reaction products interplay enabling high performance of $LiNi_{0.8}Co_{0.1}Mn_{0.1}O_2$/artificial graphite pouch batteries at elevated temperature, ***Journal of Power Sources***, 514 (2021) 230583. 1 December 2021.

76.Naiguang Wang, Jianwen Liang, Jingjing Liu, Yixiang Huang, **Huaiyu Shao**, Qiong Cai, Mingchang Hu, Zhicong Shi, AS61 Magnesium Alloy with Nano-Scale Mg_2Sn Phase as a Novel Anode for Primary Aqueous Magnesium Battery, ***Journal of the Electrochemical Society***, 168 (2021). No. 100537. October 2021.

77.Xiaozhi Bao, Tian Sun, Yan Liu, Chuan Xu, Weiliang Ma, Junpo Guo, Yun Zheng, Shivananju Bannur Nanjunda, Huating Liu, Zongyu Huang, Shaojuan Li, Shenghuang Lin, Guichuan Xing, Wencai Ren[*], Qiaoliang Bao[*], **Huaiyu Shao**[*], A graphene–Mo_2C heterostructure for a highly responsive broadband photodetector, ***Physical Chemistry Chemical Physics***, 40 (2021) 23024-23031. 28 Oct. 2021.

78.Junpo Guo, Dongqi Dong, Jun Wang[*], Dan Liu, Xueqing Yu, Yun Zheng, Zhaorui Wen, Wen Lei, Yonghong Deng, Jie Wang[*], Guo Hong[*] and **Huaiyu Shao**[*], Silicon-based lithium ion battery system: state of the art from half and full cell viewpoint, ***Advanced Functional Materials***, 31 (2021), 2102546. August 20, 2021.

79.Zhenjiang Liu, Haiyan Zhang, Shangshang Zhang, Jiale Yu, Shengkai Li, **Huaiyu Shao**, Yudie Tang, Daofeng Wen & Zhenghui Li, Facile Preparation of MoP/TiO_2 Composite by Electrospinning Method for Sodium Ion Battery Anode, ***Materials Research Letters***, 9 (2021), 382-390. 07/2021.

Curriculum vitae

80.Cheng Lin, Liuzhang Ouyang*, Renzong Hu, Jun Liu, Lichun Yang, **Huaiyu Shao***, Min Zhu, Synthesis of amorphous SeP_2/C composite by plasma assisted ball milling for high-performance anode materials of lithium and sodium-ion batteries, ***Progress in Natural Science: Materials International***, 31 (2021), 567-574. August 2021.

81.Huajun Zhao, Yunxian Qian, Shiguang Hu, Guangfu Luo, Chenxi Nie, Peiqi Qiu, Yuanyuan Kang, Han Wang, Yanli Chu, Qingrong Wang, Jun Wang, **Huaiyu Shao***, Kang Xu*, Yonghong Deng*, Tale of Three Phosphate Additives for Stabilizing NCM811/Graphite Pouch Cells: Significance of Molecular Structure-Reactivity in Dictating Interphases and Cell Performance, ***ACS Applied Materials and Interfaces***, 2021, 13(25), 29676-29690.

82.Xueqing Yu, Junpo Guo, Bo Li, Jincheng Xu, Peng Gao*, Kwan San Hui, Kwun Nam Hui*, **Huaiyu Shao***, Sub-Nanometer Pt Clusters on Defective NiFe LDH Nanosheets as Trifunctional Electrocatalysts for Water Splitting and Rechargeable Hybrid Sodium–Air Batteries, ***ACS Applied Materials and Interfaces***, 2021, 13(23), 26891-26903.

83.Bo Li, Xiaomin Huang, Jianding Li, Huajun Zhao, Xueqing Yu, Qinghao Qin, Jincheng Xu, Wen Lei, Dongyu Feng, Yonghong Deng, Jinlong Zheng, Yuncai Chen, Ning Wang*, **Huaiyu Shao***, Design of Pseudocapacitance and Amorphization Co-Enhanced Mn_3O_4/Graphene Sheets Nanocomposites for High-Performance Lithium Storage, ***Applied Surface Science***, 2021, 563, 150199.

84.Jianding Li, Yun Zheng, **Huaiyu Shao***, Co/N dual hybrid strategy for superior capacity and long cyclic stability Li^+/K^+ storage of ZnO/N-doped carbon nanosheet framework, ***Journal of Alloys and Compounds***, 2021, 879, 160438.

85.J. Zou, Y. Zhang, S. Chen, **H. Shao**, Y. Tang*, Recent Development on Surface-interface Chemistry of All-solid-state Lithium Batteries, ***Chemical Journal of Chinese Universities***. 2021, 42, 1005-1016.

86.Yudie Tang, Haiyan Zhang*, Shangshang Zhang, Lun Li, Zhenjiang Liu, Zhenghui Li, Junyao Shen, **Huaiyu Shao**, High Performance Anode for Sodium-Ion Batteries: Calcium Pre-Intercalated Layered Vanadium Oxide/Carbon composite, ***Chemical Engineering Journal***, 2021, 424, 130378.

87.Chunyan Cao, Huilong Dong, Fanghua Liang, Yu Zhang, Wei Zhang, Hailou Wang, Huaiyu Shao, Hongchao Liu, Kai Dong, Yuxin Tang, Yuekun Lai, Mingzheng Ge, Interfacial reinforcement structure design towards ultrastable lithium storage in MoS_2-based composited electrode, ***Chemical Engineering Journal***, , 2021, 416, 129094.

88.Guanyu Liu, Xiaozhi Bao (co-first author), Weikang Dong, Qi Wei, Haoran Mu, Wenguo Zhu, Bingzhe Wang, Jianding Li, Babar Shabbir, Yuan Huang, Guichuan Xing, Jianhui Yu, Peng Gao, **Huaiyu Shao***, Xiangping Li*, and Qiaoliang Bao*, Two-Dimensional $Bi_2Sr_2CaCu_2O_{8+\delta}$ Nanosheets for Ultrafast Photonics and Optoelectronics, ***ACS Nano***, 2021, 15(5), 8919-8929.

89.Yun Zheng, Jianding Li, Bingpu Zhou*, Hou Ian*, **Huaiyu Shao***, Advanced sensitivity amplification strategies for voltammetric immunosensors of tumor marker: State of the art, ***Biosensors and Bioelectronics***, 178 (2021) 113021.

90.Bannur N. Shivananju, Lu Zhou, Yuefeng Yin, Wenzhi Yu, Babar Shabbir, Haoran Mu, Xiaozhi Bao, Yiqiu Zhang, Sun Tian, Qingdong Ou, Shaojuan Li, Mohammad M. Hossain, Yupeng Zhang, **Huaiyu Shao**, Guichuan Xing, Nikhil V. Medhekar, Chang-Ming Li, Jian Liu, Qiaoliang Bao*,

Curriculum vitae

Probing the dynamic structural changes of DNA using ultrafast laser pulse in graphene-based optofluidic device, ***InfoMat***. 3 (2021) 316-326.

91.D.F. Wu, L.Z. Ouyang*, J.M. Huang, J.W. Liu, H. Wang, X.S. Yang, **H. Shao***, M. Zhu, Improvement on hydrogen generation properties of $Zr(BH_4)_4 \cdot 8NH_3$, ***Progress in Natural Science: Materials International***, 2021, 31(1): 41-46.

92.Yongyang Zhu, Liuzhang Ouyang*, Hao Zhong, Jiangwen Liu, Hui Wang, **Huaiyu Shao**, Zhenguo Huang*, Min Zhu, Efficient synthesis of sodium borohydride: Balancing reducing agents with intrinsic hydrogen source in hydrated borax, ***ACS Sustainable Chemistry & Engineering***, 2020, 8, 13449-13458.

93.Bowen Shao, Yukun She, Shaokang Tian, Xiangyu Liu, Yibo Zhao, Lei Li* and **Huaiyu Shao***, Enhanced Cycling Performance of Li–O_2 Battery by Highly Concentration Electrolyte of LiFSA/Methyl Pivalate, ***Journal of The Electrochemical Society***, 2020, 167, No. 110547.

94.Xueqing Yu, Yao Kang, Shuo Wang, Hui, Kwan San Hui, K.N. Hui*, Huajun Zhao, Jianding Li, Bo Li, Jincheng Xu, Liang Chen*, **Huaiyu Shao***, Integrating PtNi Nanoparticles on NiFe Layered Double Hydroxide Nanosheets as Bifunctional Catalyst for Hybrid Sodium-Air Batteries, ***Journal of Materials Chemistry A***, 8 (2020) 16355-16365.

95.Haoran Mu, Zeke Liu, Xiaozhi Bao, Zhichen Wan, Guanyu Liu, Xiangping Li, **Huaiyu Shao**, Guichuan Xing, Babar Shabbir, Lei Li, Tian Sun, Shaojuan Li, Wanli Ma, Qiaoliang Bao*, Highly stable and repeatable femtosecond soliton pulse generation from saturable absorbers based on two-dimensional $Cu_{3-x}P$ nanocrystals, ***Frontiers of Optoelectronics***, 13 (2020) 139-148.

96.Kaiyao Wu, Yuying Meng, Jincheng Xu, Kaveh Edalati, **Huaiyu Shao**, Wei Li, Huai-Jun Lin*, Novel Fe-based Nanoglass as Efficient Noble-metal-free Electrocatalyst for Alkaline Hydrogen Evolution Reaction, ***Scripta Materialia***, 188 (2020) 135-139.

97.Ao Cheng, Weihao Zhong, Zhaopeng Li, Dejian Cheng, Yingxi Lin, Yudie Tang, **Huaiyu Shao**, Zhenghui Li, Haiyan Zhang*, Few-layer MoS_2 embedded in N-doped carbon fibers with interconnected macropores for ultrafast sodium storage, ***Carbon***, 168 (2020) 691-700.

98.Huai-Jun Lin*, Hai-Wen Li, **Huaiyu Shao**, Yanshan Lu, Kohta Asano, In situ Measurement Technologies on Solid-State Hydrogen Storage Materials: A Review, ***Materials Today Energy***, 17 (2020) No. 100463.

99.Kang Chen, Liuzhang Ouyang*, Hui Wang, Jiangwen Liu, **Huaiyu Shao***; Min Zhu, A High-performance Hydrogen Generation System: Hydrolysis of $LiBH_4$-based Materials Catalyzed by Transition Metal Chlorides, ***Renewable Energy***, 156 (2020) 655-664.

100.Yongyang Zhu, Liuzhang Ouyang*, Hao Zhong, Jiangwen Liu, Hui Wang, **Huaiyu Shao***, Zhenguo Huang*, and Min Zhu, Closing the loop for hydrogen storage: Facile regeneration of $NaBH_4$ from its hydrolytic product, ***Angewandte Chemie International Edition***, 59 (2020) 8623-8629.

101.Miaolian Ma, Kang Chen, Liuzhang Ouyang*, Jun Jiang, Fen Liu, **Huaiyu Shao***; Min Zhu, Kinetically Controllable Hydrogen Generation at Low Temperatures by Alcoholysis of $CaMg_2$-Based Materials in Tailored Solutions, ***ChemSusChem***, 13 (2020) 2709-2718.

102.Zhixiang Liu, Mengyuan Xiang, Yao Zhang*, **Huaiyu Shao***, Yunfeng Zhu, Xinli Guo, Liquan Li, Hui Wang, Wanqiang Liu, Lithium migration pathways at composite interface of $LiBH_4$ and two-

dimensional MoS_2 enabling superior ionic conductivity at room temperature, ***Physical Chemistry Chemical Physics***, 22 (2020), 4096-4105.

103.Miaolian Ma, Kang Chen, Jun Jiang, Xu-Sheng Yang, Hui Wang, **Huaiyu Shao***, Jiangwen Liu, Liuzhang Ouyang*, Enhanced Hydrogen Generation Performance of $CaMg_2$-based Materials by Ball Milling, ***Inorganic Chemistry Frontiers***, 2020, 7, 918-929.

104.Zongxiong Huang, Guanzhou Li, Youlun Huang, Xiefang Gu, Naiguang Wang, Jianping Liu, Oi Lun Li, **Huaiyu Shao**, Yong Yang*, Zhicong Shi*, Facile one-pot synthesis of low cost MnO_2 nanosheet/Super P Li composites with high oxygen reduction reaction activity for Zn-air batteries, ***Journal of Power Sources***, 448 (2020) 227385.

105.Qingdong Ou, Xiaozhi Bao, Yinan Zhang, **Huaiyu Shao**, Guichuan Xing, Xiangping Li, Liyang Shao, Qiaoliang Bao*, Band structure engineering in metal halide perovskite nanostructures for optoelectronic applications, ***Nano Materials Science***, 1 (2019) 268-287.

106.Jianding Li, Huajun Zhao, Meimei Wang, Yongyang Zhu, Bo Li, Xueqing Yu, Jincheng Xu, Yajun Cheng, Liuzhang Ouyang*, and **Huaiyu Shao***, Rational Design of 3D N-doped Carbon Nanosheet Framework Encapsulated Ultrafine ZnO Nanocrystals as Superior Performance Anode Materials in Lithium Ion Batteries, ***Journal of Materials Chemistry A***, 7 (2019) 25155-25164.

107.Chenglei Qin, Liuzhang Ouyang*, Hui Wang, Jiangwen Liu, **Huaiyu Shao***, Min Zhu, Regulation of high-efficient regeneration of sodium borohydride by magnesium-aluminum alloy, ***International Journal of Hydrogen Energy***, 44 (2019) 29108-29115.

108.Jianding Li, Bo Li, Xueqing Yu, Huajun Zhao, **Huaiyu Shao***, Geometrical Effect in Mg-based Metastable Nano Alloys with BCC Structure for Hydrogen Storage, ***International Journal of Hydrogen Energy***, 44 (2019) 29291-29296.

109.Cheng Lin, Liuzhang Ouyang*, Chaojin Zhou, Renzong Hu, Lichun Yang, Xusheng Yang*, **Huaiyu Shao**, Min Zhu, A Novel Selenium-Phosphorous Amorphous Composite by Plasma Assisted Ball Milling for High-Performance Rechargeable Potassium-Ion Battery Anode, ***Journal of Power Sources***, 443 (2019) 227276.

110.Yicheng Zhong, Yuanmao Chen, Yifeng Cheng, Qinglu Fan, Huajun Zhao, **Huaiyu Shao**, Yanqing Lai, Zhicong Shi*, Xi Ke*, Zaiping Guo*, Li Alginate-based Artificial SEI Layer for Stable Lithium Metal Anodes, ***ACS Applied Materials and Interfaces***, 11 (2019) 37726-37731.

111.Chong Lu, Jianxin Zou*, Xiaoqin Zeng, Wenjiang Ding, **Huaiyu Shao***, Enhanced hydrogen sorption properties of core-shell like structured $Mg@NaBH_4/MgB_2$ composite, ***Journal of Alloys and Compounds***, 810 (2019) 151763.

112.Kang Chen, Liuzhang Ouyang*, Hao Zhong, Jiangwen Liu, Hui Wang, **Huaiyu Shao***, Yao Zhang, Min Zhu*, Converting H^+ from Coordinated Water into H^- Enables Super Facile Synthesis of $LiBH_4$, ***Green Chemistry***, 21 (2019) 4380-4387.

113.Hao Zhong, Liuzhang Ouyang*, Meiqin Zeng, Jiangwen Liu, Hui Wang, **Huaiyu Shao***, Michael Felderhoff*, Min Zhu, Realizing Facile Regeneration of Spent $NaBH_4$ with Mg-Al Alloy, ***Journal of Materials Chemistry A***, 7 (2019) 10723-10728.

114.Jun Jiang, Liuzhang Ouyang*, Hui Wang, Jiangwen Liu, **Huaiyu Shao***, Min Zhu, Controllable hydrolysis performance of MgLi alloys and the hydrides, ***Chemphyschem***, 20 (2019) 1316-1324.

Curriculum vitae

115.Huajun Zhao, Xueqing Yu, Jianding Li, Bo Li, **Huaiyu Shao**[*], Lei Li[*] and Yonghong Deng[*], Film-forming Electrolyte Additives for Rechargeable Lithium Ion Batteries: Progress and Outlooks, ***Journal of Materials Chemistry A***, 7 (2019) 8700-8722.

116.Qun Luo, Jianding Li, Bo Li, Bin Liu, **Huaiyu Shao**[*], Qian Li[*], Kinetics in Mg-based Hydrogen Storage Materials: Enhancement and Mechanism, ***Journal of Magnesium and Alloys***, 7 (2019) 58-71. (**Best Paper award** of the Journal in 2021)

117.Bo Li!, Liqing He!, Jianding Li, Hai-Wen Li, Zhouguang Lu, **Huaiyu Shao**[*], Ti-V-C Based Alloy with a FCC Lattice Structure for Hydrogen Storage, ***Molecules***, 24 (2019) No. 552.

118.Meichun Wang, Liuzhang Ouyang[*], Meiqin Zeng, Jiangwen Liu, Chenghong Peng, **Huaiyu Shao**[*], Min Zhu, Magnesium borohydride hydrolysis with kinetics controlled by ammoniate formation, ***International Journal of Hydrogen Energy***, 44 (2019) 7392-7401.

119.Bo Li, Jianding Li, Huajun Zhao, Xueqing Yu, **Huaiyu Shao**[*], Mg-based Metastable Nano Alloys for Hydrogen Storage, ***International Journal of Hydrogen Energy***, 44 (2019) 6007-6018. (*Highly cited paper by Web of Science, captured on Jan. 2020*)

120.Fengchen Zhou, Liuzhang Ouyang[*], Meiqin Zeng, Jiangwen Liu, Hui Wang, **Huaiyu Shao**[*], Min Zhu, Growth Mechanism of Black Phosphorus Synthesized by Different Ball Milling Techniques, ***Journal of Alloys and Compounds***, 784 (2019) 339-346.

121.Miaolian Ma, Lingli Yang, Liuzhang Ouyang[*], **Huaiyu Shao**[*], Min Zhu, Promoting Hydrogen Generation from the Hydrolysis of Mg-Graphite Composites by Plasma-Assisted Milling, ***Energy***, 167 (2019) 1205-1211. (*Highly cited paper by Web of Science, captured on Jan. 2020*)

122.Zhenhua Tan, Liuzhang Ouyang[*], Jianmei Huang, Jiangwen Liu, Hui Wang, **Huaiyu Shao**[*], Min Zhu, Hydrogen Generation via Hydrolysis of Mg_2Si, ***Journal of Alloys and Compounds***, 770 (2019) 108-115. (*Highly cited paper by Web of Science, captured on Jan. 2020*)

123.Daifeng Wu, Liuzhang Ouyang[*], Jian Mei Huang, Jiangwen Liu, Hui Wang, **Huaiyu Shao**[*], Min Zhu, Synthesis and Hydrogen Storage Property Tuning of $Zr(BH_4)_4$•$8NH_3$ via Physical Vapour Deposition and Composite Formation, ***International Journal of Hydrogen Energy***, 43 (2018) 19182-19188.

124.**Huaiyu Shao**[*], Hai-Wen Li, Yajun Cheng, Huaijun Lin, Liqing He, Next-Generation Energy Storage Materials Explored by Advanced Scanning Techniques, ***Scanning***, 2018 (2018) No. 3280283 (editorial).

125.Chengguang Lang, Liuzhang Ouyang[*], Lingli Yang, Leyang Dai[*], Daifeng Wu, **Huaiyu Shao**, Min Zhu, Enhanced hydrogen storage kinetics in Mg@FLG composite synthesized by plasma assisted milling, ***International Journal of Hydrogen Energy***, 43 (2018) 17346-17352.

126.Bo Li, Jianding Li, **Huaiyu Shao**[*], Liqing He[*], Mg-based Hydrogen Absorbing Materials for Thermal Energy Storage-A Review, ***Applied Sciences***, 8 (2018) No. 1375.

127.Liqing He, Huaijun Lin, Hai-Feng Li, Yaroslav Filinchuk, Junjun Zhang, Ying Liu, Mingyang Yang, Yan Hou, Yonghong Deng[*], Hai-Wen Li, **Huaiyu Shao**[*], Liping Wang, Zhouguang Lu[*], $Na_3NH_2B_{12}H_{12}$ as High Performance Solid Electrolyte for All-solid-state Na-ion Battery Application, ***Journal of Power Sources***, 396 (2018) 574-579.

Curriculum vitae

128.Jianding Li, Jincheng Xu, Bo Li, Liqing He*, Huaijun Lin*, Hai-Wen Li*, **Huaiyu Shao***, Advanced SEM and TEM Techniques Applied in Mg-based Hydrogen Storage Research, ***Scanning***, 2018 (2018) No. 6057496.

129.Bo Li, Jianding Li, **Huaiyu Shao***, Wei Li and Huaijun Lin*, Synthesis, Morphology, and Hydrogen Absorption Properties of TiVMn and TiCrMn Nanoalloys with a FCC Structure, ***Scanning***, 2018 (2018) No. 5906473.

130.Xiaojing Jiang, Kai Fu, Rui Xiao, Yong Wu, Bingxue Sun, **Huaiyu Shao**, Xiuqi Wu, Jie Zheng*, Xingguo Li*, Hydrogen storage properties of Y-Mg-Cu-H nanocomposite obtained by hydrogen-induced decomposition of YMg_4Cu intermetallic, ***Journal of Alloys and Compounds***, 751 (2018) 176-182.

131.Jianding Li, Bo Li, **Huaiyu Shao***, Wei Li and Huaijun Lin*, Catalysis and Downsizing in Mg-based Hydrogen Storage Materials, ***Catalysts***, 8 (2018) 89.

132.Liqing He, Yanda Fu, Dong Wu, Dehui Zhang, Hua Cheng, Huaijun Lin, Xiangnan Li, Wei Xiong, Qing Zhu, Yonghong Deng, **Huaiyu Shao***, Hai-Wen Li*, Xingzhong Zhao and Zhouguang Lu*, A Facile Solvent-Free Method for $NaBH_4$ and $Na_2B_{12}H_{12}$ Synthesis, ***Inorganica Chimica Acta***, 474 (2018) 16-21.

133.**Huaiyu Shao***, Liqing He (first two authors contributed equally), Huaijun Lin*, and Hai-Wen Li, Progress and Trends in Magnesium-based Materials for Energy-Storage Research: A Review, ***Energy Technology***, 6 (2018) 445-458. (*Best of 2018 for the Journal; Highly cited paper by Web of Science, captured on Jan. 2020*)

134.Zhenhua Tan, Liuzhang Ouyang*, Jiangwen Liu, Hui Wang, **Huaiyu Shao***, and Min Zhu, Hydrogen Generation by Hydrolysis of Mg-Mg_2Si Composite and Enhanced Kinetics Performance from Introducing of $MgCl_2$ and Si, ***International Journal of Hydrogen Energy***, 43 (2018) 2903-2912. *(Highly cited paper by Web of Science, captured on Jan. 2020)*

135.**Huaiyu Shao***, Heat Modeling and Materials Development of Mg-based Nanomaterials Combined with Solid Oxide Fuel Cell for Stationary Energy Storage, ***Energies***, 10 (2017) 1767.

136.Minghong Huang, Liuzhang Ouyang*, Jiangwen Liu, Hui Wang, **Huaiyu Shao*** and Min Zhu, Enhanced hydrogen generation by hydrolysis of Mg doped with flower-like MoS_2 for fuel cell applications, ***Journal of Power Sources***, 365 (2017) 273-281.

137.Meichun Wang, Liuzhang Ouyang*, Chenghong Peng, Xiaoke Zhu, Weiheng Zhu, **Huaiyu Shao*** and Min Zhu, Synthesis and hydrolysis of $NaZn(BH_4)_3$ and its ammoniates, ***Journal of Materials Chemistry A***, 5 (2017) 17012-17020.

138.Daifeng Wu, Liuzhang Ouyang*, Jiangwen Liu, Hui Wang, **Huaiyu Shao*** and Min Zhu, Hydrogen generation properties and hydrolysis mechanism of $Zr(BH_4)_4$•$8NH_3$, ***Journal of Materials Chemistry A***, 5 (2017) 16630-16635. **(feature paper of *Journal of Materials Chemistry A*)**

139.Miaolian Ma, Liuzhang Ouyang*, Jiangwen Liu, Hui Wang, **Huaiyu Shao*,** and Min Zhu, Air-stable hydrogen generation materials and enhanced hydrolysis performance of MgH_2-$LiNH_2$ composites, ***Journal of Power Sources***, 359 (2017) 427–434.

140.Liqing He*, **Huaiyu Shao***(first two authors contributed equally), Michael Felderhoff, Hai-Wen Li, Xiangnan Li,Qing Zhu, Dehui Zhang, Dong Wu, Yanda Fu, Yonghong Deng,

Curriculum vitae

Zhouguang Lu*, Facile synthesis of anhydrous $Li_2B_{12}H_{12}$ with high purity by solvent-free method, ***Inorganica Chimica Acta***, 464 (2017) 147-151.

141.Minghong Huang, Liuzhang Ouyang*, Jianshan Ye, Jiangwen Liu, Xiangdong Yao, Hui Wang, **Huaiyu Shao*** and Min Zhu, Hydrogen generation via hydrolysis of Magnesium with seawater using Mo, MoO_2, MoO_3 and MoS_2 as catalysts, ***Journal of Materials Chemistry A***, 5 (2017) 8566-8575.

142.Kaveh Edalati*, **Huaiyu Shao**, Hoda Emami, Hideaki Iwaoka, Etsuo Akiba and Zenji Horita, Activation of Titanium-Vanadium Alloy for Hydrogen Storage by Introduction of Nanograins and Edge Dislocations Using High-pressure Torsion, ***International Journal of Hydrogen Energy***, 41 (2016) 8917-8924.

143.**Huaiyu Shao***, Xingguo Li*, Effect of Nanostructure and Partial Substitution on Gas Absorption and Electrochemical Properties in Mg_2Ni-based Alloys, ***Journal of Alloys and Compounds***, 667 (2016) 191-197.

144.**Huaiyu Shao**, Michael Felderhoff*, Claudia Weidenthaler, Kinetics Enhancement, Reaction Pathway Change and Mechanism Clarification in $LiBH_4$ with Ti-catalyzed Nanocrystalline MgH_2 Composite, ***Journal of Physical Chemistry C***, 119 (2015) 2341-2348.

145. **Huaiyu Shao***, Weigang Ma, Masamichi Kohno, Yasuyuki Takata, Gongbiao Xin, Shigenori Fujikawa, Sayoko Fujino, Sean Bishop, Xingguo Li, Hydrogen Storage and Thermal Conductivity Properties of Mg-based Materials with Different Structures, ***International Journal of Hydrogen Energy***, 39 (2014) 9893-9898.

146. **Huaiyu Shao***, Xingguo Li*, Kinetics and Thermodynamics of Nanostructured Mg-based Hydrogen Storage Materials Synthesized from Metal Nanoparticles, ***Advanced Materials Research***, 924 (2014) 189-192.

147. **Huaiyu Shao***, Chunguang Chen, Tong Liu*, Xingguo Li*, Phase, Microstructure and Hydrogen Storage Properties of Mg-Ni Materials Synthesized from Metal Nanoparticles, ***Nanotechnology***, 25 (2014) 135704.

148. Jianjiang Hu*, Raiker Witter, **Huaiyu Shao**, Michael Felderhoff and Maximilian Fichtner, Beneficial Effects of Stoichiometry and Nanostructure for a $LiBH_4$-MgH_2 Hydrogen Storage System, ***Journal of Materials Chemistry A***, 2 (2014) 66-72.

149. Stephen Matthew Lyth*, **Huaiyu Shao** (first two authors contributed equally), Jianfeng Liu, Kazunari Sasaki and Etsuo Akiba, Hydrogen Adsorption on Graphene Foam Synthesized via Combustion of Sodium Ethoxide, ***International Journal of Hydrogen Energy***, 39 (2014) 376-380.

150. Tong Liu, Hailong Shen, Yang Liu, Lei Xie, Jianglan Qu, **Huaiyu Shao**, Xingguo Li*, Scaled-up Synthesis of Nanostructured Mg-based Compounds and Their Hydrogen Storage Properties, ***Journal of Power Sources***, 227 (2013) 86-93.

151. **Huaiyu Shao***, Junko Matsuda, Hai-Wen Li, Etsuo Akiba, Ankur Jain, Takayuki Ichikawa, Yoshitsugu Kojima, Phase and Morphology Evolution Study of Ball Milled Mg-Co Hydrogen Storage Alloys, ***International Journal of Hydrogen Energy***, 38 (2013) 7070-7076. (**Highlighted by International Association for Hydrogen Energy (IAHE)**)

Curriculum vitae

152. Jianxin Zou*, Craig Buckley, **Huaiyu Shao**, Gang Ji, and Kemin Zhang, Light-Metal-Based Nanostructures for Energy and Biomedical Applications, ***Journal of Nanomaterials***, Volume 2013 (2013), Article ID 203542 (editorial).
153. **Huaiyu Shao***, Gongbiao Xin, Xingguo Li and Etsuo Akiba, Thermodynamic Property Study of Nanostructured Mg-H, Mg-Ni-H and Mg-Cu-H Systems by High Pressure DSC Method, ***Journal of Nanomaterials***, 2013 (2013) Article ID 281841, 7 pages.
154. **Huaiyu Shao***, Gongbiao Xin, Jie Zheng, Xingguo Li*, Etsuo Akiba, Nanotechnology in Mg-based Materials for Hydrogen Storage, ***Nano Energy***, 1 (2012) 590-601.
155. Hyunjeong Kim*, Jin Nakamura, **Huaiyu Shao**, Yumiko Nakamura, Etsuo Akiba, Karena W. Chapman, Peter J. Chupas, and Thomas Proffen, Variation in the Ratio of Mg_2Co and $MgCo_2$ in Amorphous-like Mechanically Alloyed Mg_xCo_{100-x} Using the Atomic Pair Distribution Function Analysis, ***Zeitschrift fuer Kristallographie***, 227 (2012) 299-303.
156. Hyunjeong Kim*, Jin Nakamura, **Huaiyu Shao**, Yumiko Nakamura, Etsuo Akiba, Karena Chapman, Peter Chupas, Thomas Proffen, Insight into the Hydrogenation Properties of Mechanically Alloyed $Mg_{50}Co_{50}$ from the Local Structure, ***Journal of Physical Chemistry C***, 115 (2011) 20335-20341.
157. **Huaiyu Shao**, Michael Felderhoff* and Ferdi Schüth, Hydrogen Storage Properties of Nanostructured MgH_2/TiH_2 Composite Prepared by Ball Milling under High Hydrogen Pressure, ***International Journal of Hydrogen Energy***, 36 (2011) 10828-10833.
158. **Huaiyu Shao**, Michael Felderhoff*, Ferdi Schüth and Claudia Weidenthaler, Nanostructured Ti-catalyzed MgH_2 for Hydrogen Storage, ***Nanotechnology***, 22 (2011) 235401.
159. Hyunjeong Kim*, Jin Nakamura, **Huaiyu Shao**, Yumiko Nakamura, Etsuo Akiba, Karena Chapman, Peter Chupas, Thomas Proffen, Local Structural Evolution of Mechanically Alloyed $Mg_{50}Co_{50}$ Using Atomic Pair Distribution Function Analysis, ***Journal of Physical Chemistry C***, 115 (2011) 7723–7728.
160. Junko Matsuda*, **Huaiyu Shao**, Yumiko Nakamura and Etsuo Akiba, The Nanostructure and Hydrogenation Reaction of $Mg_{50}Co_{50}$ BCC Alloy Prepared by Ball-milling, ***Nanotechnology***, 20 (2009) 204015.
161. **Huaiyu Shao**, Kohta Asano, Hirotoshi Enoki and Etsuo Akiba*, Fabrication, Hydrogen Storage Properties and Mechanistic Study of Nanostructured $Mg_{50}Co_{50}$ Body-centered Cubic Alloy, ***Scripta Materialia***, 60 (2009) 818-821.
162. **Huaiyu Shao**, Kohta Asano, Hirotoshi Enoki and Etsuo Akiba*, Correlation Study between Hydrogen Absorption Property and Lattice Structure of Mg-based BCC Alloys, ***International Journal of Hydrogen Energy***, 34 (2009) 2312-2318.
163. **Huaiyu Shao**, Kohta Asano, Hirotoshi Enoki and Etsuo Akiba*, Fabrication and Hydrogen Storage Property Study of Nanostructured Mg-Ni-B Ternary Alloys, ***Journal of Alloys and Compounds***, 479 (2009) 409-413.
164. **Huaiyu Shao**, Kohta Asano, Hirotoshi Enoki and Etsuo Akiba*, Preparation and Hydrogen Storage Properties of Nanostructured Mg-Ni BCC Alloys, ***Journal of Alloys and Compounds***, 477 (2009) 301-306.

165. **Huaiyu Shao**, Tong Liu, Yuntao Wang, Hairuo Xu and Xingguo Li*, Preparation of Mg-based Hydrogen Storage Materials from Metal Nanoparticles, ***Journal of Alloys and Compounds***, 465 (2008) 527-533.
166. **Huaiyu Shao**, Kohta Asano, Hirotoshi Enoki and Etsuo Akiba*, Preparation and Hydrogen Storage Properties of Mg-Ni-B BCC Alloys, ***Materials Science Forum***, 561-565 (2007) 1625-1628.
167. Lei Xie, **Huaiyu Shao**, Yuntao Wang, Yan Li and Xingguo Li*, Synthesis and Hydrogen Storing Properties of Nanostructured Ternary Mg-Ni-Co Compounds, ***International Journal of Hydrogen Energy***, 32 (2007)1949-1953.
168. Yuntao Wang, **Huaiyu Shao**, Yan Li, Lei Xie, Xingguo Li* and Seiki Takahashi, Hydrogen Absorption and Field-dependent Diamagnetism of SmNiAl, ***Journal of Magnetism and Magnetic Materials***, 311 (2007) 535-544.
169. Yonghua Leng, **Huaiyu Shao**, Yuntao Wang, Masaaki Suzuki, Xingguo Li*, A New Method to Synthesize Ni_3C Nanoparticles in Solution, ***Journal of Nanoscience and Nanotechnology***, 6 (2006) 221-226.
170. Yuntao Wang, Hui Zhang, **Huaiyu Shao**, Xingguo Li*, Lefu Zhang and Seiki Takahashi, Anomalous Diamagnetism of SmNiAl due to Hydrogenation and Field Cooling, ***Applied Physics Letters***, 88 (2006) Art. No. 072505.
171. Yuntao Wang, **Huaiyu Shao**, Xingguo Li*, Lefu Zhang and Seiki Takahashi, Hydrogen Absorption Property and Magnetism of SmFeAl and Its Hydrides, ***Journal of Magnetism and Magnetic Materials***, 302 (2006) 297-301.
172. **Huaiyu Shao**, Yuntao Wang, Hairuo Xu and Xingguo Li*, Preparation and Hydrogen Storage Properties of Nanostructured Mg_2Cu alloy, ***Journal of Solid State Chemistry***, 178 (2005) 2211-2217.
173. **Huaiyu Shao**, Yuntao Wang and Xingguo Li*, Synthesis and Properties of Nanostructured Mg_2Ni-based Compounds, ***Materials Science Forum***, 475-479 (2005) 2445-2448.
174. **Huaiyu Shao**, Hairuo Xu, Yuntao Wang and Xingguo Li*, Preparation and Hydrogen Storage Properties of Mg_2Ni Intermetallic Nanoparticles, ***Nanotechnology***, 15 (2004) 269-274.
175. **Huaiyu Shao**, Yuntao Wang, Hairuo Xu and Xingguo Li*, Hydrogen Storage Properties of Magnesium Ultrafine Particles Prepared by Hydrogen Plasma-metal Reaction, ***Materials Science and Engineering B***, 110 (2004) 221-226.
176. **Huaiyu Shao**, Hairuo Xu, Yuntao Wang and Xingguo Li*, Synthesis and Hydrogen Storage Behavior of Mg-Co-H System at Nanometer Scale, ***Journal of Solid State Chemistry***, 177 (2004) 3626-3632.
177. Tong Liu*, **Huaiyu Shao**, Xingguo Li, Synthesis and Characteristics of Ti-Fe Nanoparticles by Hydrogen Plasma-metal Reaction, ***Intermetallics***, 12 (2004) 97-102.
178. Yuntao Wang, **Huaiyu Shao**, Xingguo Li*, Lefu Zhang and Seiki Takahashi, Mictomagnetism and Shifted Magnetic Hysteresis Cycle in SmFeAl, ***Journal of Magnetism and Magnetic Materials***, 284 (2004) 13-16.

179. **Huaiyu Shao**, Tong Liu, Xingguo Li*, Lefu Zhang, Preparation of Mg_2Ni Intermetallic Compound from Nanoparticles, ***Scripta Materialia***, 49 (2003) 595-599.
180. Tong Liu*, **Huaiyu Shao**, Xingguo Li, Oxidation Behaviour of Fe_3Al Nanoparticles Prepared by Hydrogen Plasma-metal Reaction, ***Nanotechnology***, 14 (2003) 542-545.
181. Tong Liu*, Yaohua Zhang, **Huaiyu Shao**, Xingguo Li, Synthesis and Characteristics of Sm_2O_3 and Nd_2O_3 Nanoparticles, ***Langmuir***, 19 (2003) 7569-7572.
182. Tong Liu*, **Huaiyu Shao**, Xingguo Li, Synthesis of Fe-Al Nanoparticles by Hydrogen Plasma-metal Reaction, ***Journal of Physics: Condensed Matter***, 15(2003) 2507-2513.
183. **Huaiyu Shao**, Tong Liu and Xingguo Li*, Preparation of the Mg_2Ni Compound from Ultrafine Particles and Its Hydrogen Storage Properties, ***Nanotechnology***, 14 (2003) L1-L3. (**One of the top 10 most popular articles in *Nanotechnology* that year**)

(>170 journal papers published or in press. Google Scholar Citation 7333, h-index: 47, up to July 2025)

PATENT

1. 邵懷宇，龍立芬，董升陽, 黃一可，劉奕男，一種高電導率的固態氫離子電解質及其製備方法和應用，China Patent, Application No. 2024110759572
2. 邵懷宇, 洪果, 郭軍坡, LixSi 複合材料及其製備方法和鋰離子電池負極材料, China Patent, 專利號 ZL 202110004324.2
3. 邵懷宇, 郭燕, 郭軍坡, 鄭雲, 軟包電池檢測裝置, China Patent, 專利號 ZL 2023 2 0203141.8.
4. 邵懷宇, 劉奕男, 鄭雲, 郭軍坡, 鋰矽合金納米顆粒和幹法鋰矽合金負極材料的製備方法，China Patent, 專利號 ZL 202310018056.9.

BOOK/BOOK CHAPTER/SPECIAL ISSUE

1. (Book) **Huaiyu Shao** (**editor**), ***Hydrogen Storage: Preparation, Applications and Technology***, Nova Science Publishers, New York, USA, Oct. 2018, ISBN: 978-1-53614-220-4.
2. (Special Issue) Huaiyu Shao (lead guest editor), Hai-Wen Li, Yajun Cheng, Huaijun Lin, Liqing He (guest editors), ***Next-Generation Energy Storage Materials Explored by Advanced Scanning Techniques***, special issue for ***Scanning*** (impact factor 1.242), Wiley-Hindawi, England, Nov. 2018.
3. (Book Chapter) Jianding Li, Bo Li and **Huaiyu Shao***, Nano Processing Techniques in Mg-based Hydrogen Storage Materials, Chapter 7, 163-196. in ***Hydrogen Storage: Preparation, Applications and Technology***, Nova Science Publishers, New York, USA, Oct. 2018. ISBN: 978-1-53614-220-4.
4. (Book Chapter) **Huaiyu Shao***, Xiubo Xie, Jianding Li, Bo Li, Tong Liu*, Xingguo Li, Nanostructured Mg-based Hydrogen Storage Materials: Synthesis and Properties ***Hydrogen Storage Technologies***, Chapter 3, P89-116, Editors: Mehmet Sankir and Nurdan Demirci Sankir, Wiley-Scrivener publishing, USA, August 2018, ISBN: 9781119459880.
5. (Book Chapter) Bo Li, Jianding Li, **Huaiyu Shao***, Huaijun Lin*, Liqing He, Nano Processing in Mg-based Hydrogen Storage Materials: Research Progress and Trends, ***New***

Trends in Nanotechnology, Material and Environmental Sciences, Chapter 6, P131-158, AV Akademikerverlag, Saarbrücken, Germany, Feb. 2018, ISBN 978-620-2-21118-5.

6. (Book Chapter) **Huaiyu Shao**, Stephen M Lyth, Solid Hydrogen Storage Materials: High Surface Area Adsorbents, ***Hydrogen Energy Engineering***, P241-251. Springer Japan, 2016.

7. (Special Issue) Jianxin Zou, Craig Buckley, **Huaiyu Shao**, Gang Ji, and Kemin Zhang (editors), ***Light-Metal-Based Nanostructures for Energy and Biomedical Applications***, Special Issue in ***Journal of Nanomaterials*** (impact factor 2.207), Hindawi Publishing Corporation, Egypt, 2013.

8. (Book Chapter) **Huaiyu Shao**, Hydrogen Storage System of Metal Hydrides, ***Hydrogen and Hydrogen Energy***, Chapter 8.1-4, P209-247, China Machine Press, Beijing, China, 2012.

9. (Book Chapter) Xingguo Li, **Huaiyu Shao** and Tong Liu, Synthesis of Nanoparticles and Their Properties by Hydrogen Plasma Metal Reaction, ***Trends in Nanotechnology Research***, Chapter 5, P99-132, Nova Science Publishers, New York, USA, 2004, ISBN 1-59454-091-8.

ORAL PRESENTATIONS FOR INTERNATIONAL CONFERENCES ETC.

1. **Invited talk**, 12th International Conference on Advanced Materials and Engineering Materials (ICAMEM2023), Bangkok, Thailand, Dec. 2023.
2. **Invited talk**, 1st World Energy Materials Conference, Shenzhen, Guangdong, China. Nov. 2023.
3. **Invited talk**, **Session organizer,** The 13th Asian Meeting on Ferroelectrics jointly with the 13th Asian Meeting on Electroceramics (AMF-13 & AMEC-13), Macau SAR, China, Nov. 2023.
4. **Invited talk**, 2023 International Conference on Frontier Materials, Qingdao, Shandong, China, Oct. 2023.
5. **Invited talk**,第一届海峡两岸暨港澳新材料论坛, Suzhou, Jiangsu, China. July, 2023.
6. **Invited talk**, 第二届亚洲先进材料高峰论坛暨“一带一路”青年材料学者国际研修班, Yiwu, Zhejiang, Aug. 2023.
7. **Invited talk**, Magnesium-based energy storage materials: hydrogen absorption and release kinetics, thermodynamics and thermal conductivity properties and systems, China Association for Hydrogen Energy 2019, CAHE2019, Guangzhou, China, Nov. 2019.
8. **Plenary talk**, Mg-based Nanomaterials for Energy Storage, 20th European Annual Conference on Advanced and Energy Materials, Osaka, Japan, Oct. 7-8, 2019.
9. **Invited talk,** Relatively Stable Metastable Nano Alloys for Energy Storage, Chinese Materials Conference 2019, Chengdu, Sichuan, China, July 10-14, 2019.
10. **Keynote talk**, Mg and Ti Based Metastable Nano Alloys for Energy Storage Development, 2nd International Seminar on Materials Science and Application, Shanghai, China, Dec. 2018.
11. **Invited talk,** Relatively Stable Metastable Nano Alloys for Energy Storage, 16th International Symposium on Metal-Hydrogen Systems (MH2018), Guangzhou, China, Nov. 2018.
12. **Keynote talk**, Metastable Nano Alloys for Hydrogen Storage, 2018 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area, Macau, Macau SAR (China), July 27, 2018.

13.**Invited talk**, **organizing committee member**, Downsizing in Mg-based Materials for Hydrogen Storage, The 14th Cross-Strait Workshop on "Nano Science and Technology" (CSWNST14), Macau, Macau SAR (China), June 23, 2018.
14.**Keynote talk**, **organizing committee member**, Nanotechnology in Mg-based hydrogen storage materials, International Conference on Nanoscience & Technology, New York, USA, May 21-22, 2018.
15.**Keynote talk**, **international technical committee member,** Mg-based Hydrogen Absorption Materials with Unique Structures for Energy Storage, 2018 International Conference on Environmental and Energy Engineering, Xiamen, China, March 2018.
16.**Keynote talk**, Downsizing in Mg-based Hydrogen Storage Materials for Kinetics Enhancement and Thermodynamics Tailor, 2nd International Conference on Materials Research and Engineering, Shanghai, China, Dec. 2017.
17.**Invited talk,** Hydrogen and Fuel Cell Technologies for Energy Storage, Shanghai Jiao Tong University, Shanghai, China, Dec. 2017.
18.**Invited talk,** Hydrogen and Fuel Cell Technologies for Energy Storage, Shanghai University, Shanghai, China, Dec. 2017.
19.**Invited talk,** Hydrogen and Fuel Cell Technologies for Energy Storage, Jinan University, Dec. 2017.
20.**Invited talk,** Hydrogen and Fuel Cell Technologies for Energy Storage, Sun Yat-sen University, Guangzhou, China, Dec. 2017.
21.**Invited talk**, Mg-based Hydrogen Storage Materials for Onboard and Stationary Energy Storage, 2017 Frontiers in Materials Processing Applications, Research and Technology, Bordeaux, France, July 2017.
22.**Invited talk**, Development of Mg-based Materials for Stationary Energy Storage, the 4th International Expo and Conference on Energy Storage in China, Beijing, China, March 2017.
23.**Plenary lecture, international technical committee member, session chair**, Nano Processing and Catalysis in Mg-based Materials for Hydrogen Storage, 2017 International Conference on Environmental and Energy Engineering, Suzhou, China, March 2017.
24.**Speaker**, Onboard and Stationary Hydrogen Energy Storage in Nanostructured Mg-based Materials, International Workshop on Functional Materials 2016, Macau, December 2016.
25.**Speaker**, **responsible local organizer,** Downsizing and Geometrical Effect for Hydrogen Storage, Macau Summit on Carbon and Energy Materials 2016, Macau, November 2016.
26.**Invited talk**, Mg-based Hydrogen Storage Materials-From Onboard to Stationary Applications, Nanjing Tech University, China, July 2016.
27. **Invited talk**, **session organizer and chair,** Onboard and Stationary Hydrogen Energy Storage in Nanostructured Mg-based Materials, International Conference on Small Science, Prague, Czech, June 2016.
28. **Speaker, session vice-chair**, Nano Processing in Mg-based Materials for Energy Storage Applications, 2nd Annual World Congress of Smart Materials-2016, Singapore, March 2016.
29. **Invited talk,** Nanotechnology and Catalysis in Mg-based Materials for Hydrogen Storage, Dalian Institute of Chemical Physics (DICP), Chinese Academy of Sciences (CAS), November 2015.

30. **Speaker,** Effect of Nanostructure and Catalysis on Kinetics, Thermodynamics and Reaction Pathway in Mg-based Hydrogen Storage Materials, the 4th Global Conference on Materials Science and Engineering (CMSE2015), Macau, China, August 2015.
31. **Invited talk,** NaCl-type Structure Ti-V-C Based Materials for Hydrogen Storage, Gordon Research Conference (on Hydrogen-Metal Systems), Easton, MA, USA, July 2015.
32. **Invited talk,** Nanotechnology and Catalysis in Mg-based Materials for On-board and Stationary Energy Storage, Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences (CAS), June 2015.
33. **Speaker**, Nanotechnology in Mg-based Materials for Hydrogen Storage, TechConnect World Innovation Conference, Washington D.C., USA, June 2015.
34. **Speaker, session chair**, Mg-based Hydrogen Storage Materials for Energy Storage of Renewable Power, Grand Renewable Energy 2014, Tokyo, Japan, July 2014.
35. **Speaker**, Kinetics Enhancement, Thermodynamics Tailor and Thermal Conductivity Study in Mg-based Hydrogen Storage Materials, International Symposium on Metal-Hydrogen Systems, Manchester, UK, July 2014.
36. **Speaker, session organizer and chair**, Mg-based Hydrogen Storage Nanomaterials: Kinetics, Thermodynamics, and Applications, U.S. National Congress on Theoretical and Applied Mechanics (USNCTAM2014), Lansing, MI, USA, June 2014.
37. **Invited talk**, Nanotechnology and Catalysis in Mg-based Materials for Hydrogen Storage: Kinetics, Thermodynamics and Thermal Conductivity, 2014 Energy Material Nanotechnology East Meeting, Beijing, China, May 2014.
38. **Speaker**, Geometrical Effect Study in Mg-based BCC Structure Materials for Hydrogen Storage, the 8th International Symposium on Hydrogen and Energy, Zhaoqing, Guangdong, China, February 2014.
39. **Speaker, session chair**, Geometrical Effect Clarification in Mg-based BCC Structure Hydrogen Storage Materials, International Conference on Hydrogen Production 2014, Fukuoka, Japan, February 2014.
40. **Invited talk, symposium organizer and chairman**, Geometrical Size Effect in Mg-based BCC Structure Hydrogen Storage Materials, the 1st International Young Scientists Fusion Forum, Chengdu, China, October 2013.
41. **Plenary lecture**, **Committee Vice-Chairman**, Kinetics, Thermodynamics and Thermal Conductivity in Mg-based Hydrogen Storage Nanomaterials, the 12th China International Nano-Science and Technology Symposium, Chengdu, China, October 2013.
42. **Invited talk, session chair**, A Novel Energy Storage Concept based on Mg-based Hydrogen Storage Materials, World Hydrogen Technology Conference (WHTC) 2013, Shanghai, China, September 2013.
43. **Invited talk**, Mg-based Hydrogen Storage Materials: Kinetics, Thermodynamics, Thermal Conductivity and Applications, European-Materials Research Society (E-MRS) 2013 Fall, Warsaw, Poland, September 2013.
44. **Invited talk, session organizer and chair**, Geometrical Effect Study in Mg-based BCC Structure Nanomaterials, American Chemical Society (ACS) National Meeting 2013 Fall, Indianapolis, Indiana, USA, September 2013.

45. **Invited talk**, Nanotechnology and Catalysis in Mg-based Materials for Onboard and Energy Storage, University of Chinese Academy of Sciences, Beijing, China, Nov. 2012.
46. **Speaker**, Catalytic Effect Study on $MgH_2/LiBH_4$ Nanocomposites, International Symposium on Metal-Hydrogen Systems 2012, Kyoto, Japan, October 2012.
47. **Invited talk**, Development of Mg-based Nanomaterials for Onboard and Stationary Hydrogen Storage, Shanghai Jiaotong University, Shanghai, China, September 2012.
48. **Speaker**, Development of Mg-based Nanomaterials for Energy Storage, National Hydrogen Conference, Nanjing, Jiangsu, China, September 2012.
49. **Speaker**, Development of Mg-based High-temperature Energy Storage System, Japan Institute of Metals and Materials (JIM) 2012 Fall meeting, Matsuyama, Japan, Sep. 2012.
50. **Invited talk**, Development of Mg-based Nanomaterials for Onboard and Stationary Hydrogen Storage, Ford Motor Company, Dearborn, MI, USA, September 2012.
51. **Speaker**, Catalyzed Nanostructure Mg-based Materials for Energy Storage, the 2nd Asian Symposium on Hydrogen Storage Materials, Jeju, Korea, April 2012.
52. **Speaker**, Applications of Metal Hydrides for Energy Storage, I^2CNER International Workshop, Kyushu University, Japan, February 2012.
53. **Invited talk**, Development of Nanostructure Mg-based Materials for Energy Storage, Peking University, Beijing, China, November 2011.
54. **Invited talk**, Development of Nanostructure Mg-based Materials for Energy Storage, Shanghai University, Shanghai, China, November 2011.
55. **Speaker**, Nanotechnology in Mg-based Materials for Hydrogen Storage, Japan Institute of Metals and Materials (JIM) 2011 Fall, Naha, Japan, November 2011.
56. **Plenary lecture**, Nanotechnology and Catalysis in Mg-based Materials for Energy Storage, the 10th China International Nano-Science and Technology Symposium, Hangzhou, China, October 2011.
57. **Invited talk**, Research on Nanostructure Mg-based Materials for Energy Storage, Zhejiang University, China, October 2011.
58. **Speaker**, Nanotechnology in Study of Mg-based Hydrogen Storage Materials, the 1st Asian Symposium on Hydrogen Storage Materials, Hangzhou, China, May 2011.
59. **Speaker**, $LiBH_4$ and Ti-catalyzed Nanocrystalline MgH_2 Composite for Hydrogen Storage, the 5th International Symposium on Hydrogen and Energy, Stoos, Switzerland, January 2011.
60. **Plenary lecture**, Nanotechnology in Hydrogen Storage Study, the 9th China International Nano-Science and Technology Symposium, Xi'an, Shanxi, China, November 2010.
61. **Invited talk**, Preparation, Property and Application of Nanostructured Hydrogen Storage Materials, Shanghai University, Shanghai, China, December 2008.
62. **Speaker**, Hydrogen Storage Properties and Mechanism Study of Mg-Co BCC Alloys, AsiaNano 2008, Singapore city, Singapore, November 2008.
63. **Speaker**, Preparation, Hydrogen Storage Properties and Mechanism Study of Mg-Co BCC Alloys, Japan Institute of Metals and Materials (JIM) 2008 Fall, Kumamoto, Japan, September 2008.

64. **Speaker**, Fabrication, Properties and Mechanism Study of Mg-Co-based BCC Alloys, International Symposium on Metal-Hydrogen Systems 2008, Reykjavik, Iceland, June 2008.
65. **Speaker**, Preparation, Properties and Mechanism Study of Mg-Co-based BCC Alloys, Materials Research Society (MRS) 2007 Fall, Boston, USA, November 2007.
66. **Speaker**, Preparation, Properties and Mechanism Study of Mg-Co-based BCC Alloys, the 6th Pacific Rim International Conference on Advanced Materials and Processing (PRICM6), Jeju, Korea, November 2007.
67. **Speaker**, Preparation and Hydrogen Properties Study of Mg-based BCC Alloys, Renewable Energy Conference 2006, Makuhari, Chiba, Japan, October 2006.

PROFESSIONAL ORGANIZATION MEMBERSHIPS

- American Chemical Society (ACS)
- Japan Institute of Metals and Materials (JIM)
- Physical Society of Macao (PSM)

PROFESSIONAL SERVICES

- Conference organizing experience:
  - 2022, 第二届海峡两岸暨港澳能源青年论坛, organizing committee member;
  - 2021, International Conference on Frontier Materials 2021, Academic Committee;
  - June 2018, The 14th Cross-Strait Workshop on "Nano Science and Technology" (CSWNST14), Macau, Macau SAR (China), organizing committee member;
  - 2018 International Conference on Nanoscience & Technology, New York, USA, May 2018, organizing committee member;
  - 2018 International Conference on Environmental and Energy Engineering, Xiamen, China, March 2018, international technical committee member;
  - 2017 International Conference on Environmental and Energy Engineering, Suzhou, China, March 2017, international technical committee member, session chair;
  - 2016 Macau Summit on Carbon and Energy Materials, Macau, China, Nov. 2016, responsible local organizer;
  - 2016 International Conference on Small Science, Prague, Czech, June 2016, session organizer and chair;
  - 2014 U.S. National Congress on Theoretical and Applied Mechanics (USNCTAM2014), Lansing, MI, USA, June 2014, session organizer of Mechanics of Energy Storage session;
  - 2013 the 1st International Young Scientists Fusion Forum, Chengdu, China, October 2013, symposium organizer and chairman;
  - 2013 the 12th China International Nano-Science and Technology Symposium, Chengdu, China, October 2013; Committee Vice-Chairman;
  - 2013 American Chemical Society (ACS) National Meeting 2013 Fall , Indianapolis, USA, Sep. 2013, session organizer of Hydrogen Energy session; etc.

- Editorial (Youth Editorial) Board ***Journal of Magnesium and Alloys (IF=15.8), Rare Metals (IF=9.6), Frontiers in Energy Research (IF=2.964), Metals (IF=2.6), Inorganics (IF=3.1), etc. Journals.***
- ***Editor for Book of "Hydrogen Storage: Preparation, Applications and Technology" by Nova Scientific Publishers (New York, USA).***
- ***Editor for Journal Materials Chemistry and Physics: Sustainability and Energy (Elsevier, https://www.sciencedirect.com/journal/materials-chemistry-and-physics-sustainability-and-energy/about/aims-and-scope)***

- ***Lead guest editor for a special issue of "Hydrogen Carriers for Hydrogen Transport and Storage", Materials Chemistry and Physics, Impact Factor: 4.3, Elsevier. 2024.***
- ***Editor for new launched Elsevier Journal-Materials Chemistry and Physics: Sustainability and Energy.***
- Reviewer for ***Nature Communications, Science Advances, Advanced Materials, Advanced Energy Materials, Angewandte Chemie, Nano Energy, Energy Storage Materials, Journal of Magnesium and Alloys, ACS Applied Materials & Interfaces, Journal of Materials Chemistry A, Nanoscale, Chem. Com. Nanotechnology, Journal of Power Sources, International Journal of Hydrogen Energy, Materials and Design, Journal of Physics, D: Applied Physics, Materials, Journal of Nanoscience and Nanotechnology, Journal of Energy Chemistry, Electrochimica Acta, Energies, Journal of Solid State Chemistry, Renewable Energy, Materials Research Express, Journal of Physics and Chemistry of Solids, Journal of Alloys and Compounds, Materials Chemistry and Physics, Arabian Journal of Chemistry, Green, Vacuum, Journal of Thermal Analysis and Calorimetry, Results in Physics, The Journal of Physical Chemistry, Journal of Energy Engineering, Journal of Nanomaterials, Chemical physics, Solid State Ionics,*** etc. over 80 SCI journals.
- Grant proposal reviewer for ***LE STUDIUM*** (**France,** co-financing from the European Union Horizon 2020 and the Marie Skłodowska-Curie Actions (MSCA)), ***Romanian National Research Council, Hong Kong government, etc***.