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导师: Professor Hisahiro EINAGA; Associate Professor Hajime HOJO

个人信息

民族：汉　　籍贯：安徽宣城　　性别：男　　出生年月：1996.10.12　　政治面貌：群众

教育经历

2021.10至2025.3	九州大学（日本）	材料科学与工程	博士
2018.09至2021.6	云南大学（双一流高校）	新能源材料与器件	硕士
2014.09至2018.6	安徽农业大学	材料科学与工程	学士

研究方向

- 本科阶段：壳聚糖接枝改性提升对有机物的吸附降解性能（天然高分子）　　导师：高慧教授
- 硕士阶段：硅/有机薄膜集成的太阳能电池应用研发（能源方向）　　导师：杨宇教授；孙韬副教授
- 博士阶段：微波辅助加热催化在能源转换上的应用　（能源催化）

科研成果

第一（共同第一）作者

1) ***Zitao Ni***, Hajime Hojo, and Hisahiro Einaga*. "Comparative Evaluation of Microwave Heating Performance across Structurally Diverse Tungsten Oxides." ***The Journal of Physical Chemistry C*** 128, no. 33 (2024): 13807-13815.
2) ***Zitao Ni***, Hajime Hojo, and Hisahiro Einaga*. "Efficient Ethanol Dehydration to Ethylene Using Microwave-Assisted Heating Based on HPW/SBA-15. " ***Industrial & Engineering Chemistry Research, (R1)***
3) ***Zitao Ni***, Siyu Ding, Hua Zhang, Ruijie Dai, Anran Chen, Rongfei Wang, Jin Zhang et al. "Phosphorus and Selenium Co-Doped WO3 Nanoparticles for Interface Modification and Photovoltaic Properties Enhancement of Monolayer Planar Silicon/PEDOT: PSS Hybrid Solar Cells." ***Advanced Materials Interfaces*** 9, no. 21 (2022): 2200812.
4) ***Zitao Ni***, Wenzhong Fan, Tao Sun, Rongfei Wang, Jie Yang, Jin Zhang, Yao Zhou, Anran Chen, Yu Yang, and Chaoyu Xiang. "The Degradation Kinetics Study of Aromatic Organics with Different Functional Compounds on Anatase 001 Surface." ***Nano*** 15, no. 07 (2020): 2050087.
5) Lingfeng Yang, ***Zitao Ni***, Yifan Zhao, Youyu Long, Min Xi, Anran Chen, and Hua Zhang. "Interfacial Electric Field Stabilized Ru Single-Atom Catalysts for Efficient Water Oxidation." ***ACS Catalysis*** (2024).

通讯作者

6) Youyu Long, Lingfeng Yang, Zhao, Yifan, Hua Zhang, Anran Chen*, Guangzhi Hu*, ***Zitao Ni *.*** Modulating the Local Charge Distribution of Single-Atomic Ru Sites for Efficient Hydrogen Evolution Reaction. ***Carbon Energy.*** **(Accepted)**
7) Yifan Zhao, Hua Zhang*, Ji Chen, Shuwen Zhao, Min Xi, Lingfeng Yang, Youyu Long, ***Zitao Ni****, Yao Zhou, and Anran Chen*. "Interfacial electronic engineering of heterostructured Co2P-MoNiP/NF nano-sea-urchin catalysts for efficient and stable hydrogen evolution via water/seawater splitting." ***Chemical Engineering Journal*** 477 (2023): 147092.

8) Ji Chen, Yifan Zhao, Shuwen Zhao, Hua Zhang, Youyu Long, Lingfeng Yang, Min Xi, ***Zitao Ni***, Yao Zhou, and Anran Chen. "Heterogeneous bimetallic oxides/phosphides nanorod with upshifted d band center for efficient overall water splitting." ***Chinese Chemical Letters*** 35, no. 9 (2024): 109268.
共同作者
9) Hua Zhang, Abuduwayiti Aierke, Yingtang Zhou, ***Zitao Ni***, Ligang Feng, Anran Chen, Thomas Wågberg, and Guangzhi Hu. "A high-performance transition-metal phosphide electrocatalyst for converting solar energy into hydrogen at 19.6% STH efficiency." ***Carbon Energy*** 5, no. 1 (2023): e217.
10) Hua Zhang, Yintang Zhou, Ming Xu, Anran Chen, ***Zitao Ni***, Ouardia Akdim, Thomas Wågberg, Xiaoyang Huang, and Guangzhi Hu. "Interface engineering on amorphous/crystalline hydroxides/sulfides heterostructure nanoarrays for enhanced solar water splitting." ***ACS nano*** 17, no. 1 (2022): 636-647.
11) Ziru Wang, Chen Zhu, ***Zitao Ni***, Hajime Hojo, and Hisahiro Einaga. "Enhanced photocatalytic benzene oxidation to phenol over monoclinic WO3 nanorods under visible light." ***ACS Catalysis*** 12, no. 24 (2022): 14976-14989.
12) Ruijie Dai, Hua Zhang, Weijie Zhou, Yao Zhou, ***Zitao Ni***, Ji Chen, Shuwen Zhao et al. "Interface engineering of bimetallic nitrides nanowires as a highly efficient bifunctional electrocatalyst for water splitting." ***Journal of Alloys and Compounds*** 919 (2022): 165862.
13) Hua Zhang, Hongyi Li, Shuai Niu, Yao Zhou, ***Zitao Ni***, Qianwen Wei, Anran Chen et al. "Bifunctional heterostructured nitrogen and phosphorus co-doped carbon-layer-encapsulated Co2P electrocatalyst for efficient water splitting." ***Cell Reports Physical Science*** 2, no. 10 (2021).
14) Hua Zhang, Yao Zhou, Ji Chen, Ziqiu Wang, ***Zitao Ni***, Qianwen Wei, Anran Chen et al. "3D Melamine Sponge-Derived Cobalt Nanoparticle-Embedded N-Doped Carbon Nanocages as Efficient Electrocatalysts for the Oxygen Reduction Reaction." ***ACS omega*** 6, no. 31 (2021): 20130-20138.
15) Wenzhong Fang, ***Zitao Ni***, Pan Wang, Chaoyu Xiang, Tao Sun, Jing Zhang, Rongfei Wang, Jie Yang, and Yu Yang. "The ideal doping concentration of silicon wafer for single junction hybrid n-Si/PEDOT: PSS solar cells with 3.2% elevated PCE and Voc of 620 mV." ***Journal of Materials Science: Materials in Electronics*** 31 (2020): 6398-6405.
16) Wenzhong Fang, Pan Wang, ***Zitao Ni***, Tao Sun, Chaoyu Xiang, Kun Yue, Rongfei Wang et al. "Planar organic-Si hybrid solar cell with MoOx mixed PEDOT: PSS as hole injection layer profits from Mo5+ and Mo6+ synergistic effects." ***Advanced Materials Interfaces*** 7, no. 19 (2020): 2000754.

参会发表

Ni, Z., Fang W, Sun T, Yang Y* Investigation of n-Si/PEDOT: PSS Heterojunction Solar Cell Performance and PEDOT: PSS Modification. ***China SoG Silicon and PV Power Conference, CSPV.*** Shanghai. China (***Oral Presentation***)

Ni, Z., Hojo, H. and Einaga, H*. Comparative Evaluation of Microwave Heating Performance across Structurally Diverse Tungsten Oxides. ***9th Asia-Pacific Congress on Catalysis, APCAT-9.*** Hangzhou. China (***Oral Presentation***)

Ni, Z., Hojo, H. and Einaga, H*. Microwave-Assisted Heating for Dehydration of Ethanol to Ethylene using HPW/SBA- 15. ***The 5th Global Congress on Microwave Energy Applications 2024 (5GCMEA).*** Fukuoka, Japan (***Oral Presentation***)

项目经历

石墨烯复合纳米碳黑颗粒与硼酸钴纳米片三维材料的电催化性能研究 01/2019-12/2020
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