

Shuoren LI

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Education

The Hong Kong University of Science and Technology, Nansha, China 2023 Sept - 2025 Jun (Expected)
Mphil in Sustainable Energy and Environment (SEE) GPA: 3.817/4.00

Anhui Polytechnic University, Wuhu, China 2019 Sept - 2023 Jun
BS in Applied Chemistry (Top-class) Average Grades: 83.17/100 GPA: 3.22/4.0

Academic focus / background:

localized surface plasmon resonance, nanoelectronics, photocatalysis, nanostructure
ORCID:0000-0002-1655-3836 Google Scholar: [Shuoren Li - Google Scholar](#)
Research ID: JAO-3369-2023 Scopus: 57222258499

Publication

Chuanping Li*, **Shuoren Li**, Chen Xu and Kongshuo Ma. Plasmon-enhanced unidirectional charge transfer for efficient solar water oxidation, *Nanoscale*, 2021, 13(8), 4654-4659. (IF=8.307/Q1)

Chuanping Li, **Shuoren Li**, Tianxiang Hang, Feifei Guo, Xiangdong Zhu*, Tianfu Liu*. Metal-Organic Frameworks Derived Plasmonic Catalyst with Full Spectral Response for Photoelectrochemical Water Splitting Enhancement, *Small Structures*, 2021, 2100071. (Back Cover:10.1002/ssr.202270020) (IF=11.343/Q1)

Shuoren Li, Ping Ge, Tianxiang Hang, Hui Zhou, Feifei Guo, Yueyue Wu, Chuanping Li*. Defect-Engineered Plasmonic Z-Scheme Heterostructures for Superior Photoelectrochemical Water Splitting. *Applied Surface Science*, 610, (2023), 155454. (IF=7.392/Q1)

Tianxiang Hang, Chuanping Li*, Dandan Liang, **Shuoren Li**, Hui Zhou, Ping Ge, Xian-Dong Zhu* and Tian-Fu Liu. Metal-Organic Frameworks-based Hierarchical Heterojunction Coupling with Plasmonic Nanoshells for Self-Powered Photoelectrochemical Immunoassay. *Chemical Engineering Journal*, 431, 2022), 133465. (IF=16.744/Q1)

Hui Zhou; Xian-Dong Zhu*; Ping Ge; Tianxiang Hang; **Shuoren Li**; Feifei Guo; Yueyue Wu Chuanping Li*. Synergistic Coupling of Surface Plasmon Resonance with Metal-Organic Frameworks based Biomimetic Z-Scheme Catalyst for Enhanced Photoelectrochemical Water Splitting. *Applied Surface Science*, 605, (2022), 154693. (IF=7.392/Q1)

Ping Ge, Tianxiang Hang, Yueyue Wu, **Shuoren Li**, Xingxing Meng, Chuanping Li*. MOFs-Derived Co3S4/NiS Co-Doped Heterostructures: Towards Simultaneous Acceleration of Charge Carrier Separation and Catalytic Kinetics. *ACS Applied Energy Materials*, 2023, 6, 1, 278-284.(IF= 6.959/Q1)

Chuanping Li*, Tianxiang Hang, Hui Zhou, Ping Ge, **Shuoren Li**, Xian-Dong Zhu*. Engineering Non-Noble Plasmonic Center in MOF-Derived Z-Scheme Heterojunctions for Enhanced Photoelectrochemical Water Splitting. *Inorganic Chemistry Frontiers*, 2023, 10, 3375-3382.(IF= 7.779/Q1)

Shuoren Li, Rui Wu, Xingxing Meng, Leilei Diao, Jing Wang, Chuanping Li*. Metal-Organic Framework-Derived Sugarcoated Haws-like AgNWs/ZIF-8/Pd for Plasmon-Promoted Photocatalytic Hydrogenation. Under Review.

Shuoren Li, Sihao Huang, Zixuan Yu, Chang Yan*, Zhou Teng*. Perovskite Materials for Highly Efficient Photo(electro)catalytic Solar Water Splitting: A mini review. Under Review.

Research Experience

The Hong Kong University of Science and Technology, Nansha, China 2023 Sept - 2025 Jun (Expected)
Function Hub - Sustainable Energy and Environment Trust

Supervisor: **A.P. Chang YAN** Co-supervisor: **A.P. Teng ZHOU**
RBM Project Supervisor: **Dr. Xiaoyan WANG**

Anhui Polytechnic University, Wuhu, China

Construction of efficient photoelectrocatalytic system

2020 Jun – 2023 Jun

Team leader of undergraduate

Supervisor: **Prof. Chuanping Li**

- Study on the ultra-sensitive detection of ascorbic acid by Au nanoshells
- The preparation of Ag/Au bimetallic nanoshells and enhanced methanol oxidation catalysis

Westlake University, Hangzhou, China

2022 Jun - Jul

Laboratory of Nanosynthesis

Visiting student

Supervisor: **Prof. Hongyu CHEN**

- Learn the synthesis mechanism of common nanomaterials such as ultra-fine Au nanowire, Ag nanocube, Au nanosheet, etc.
- Enhance the ability to think about the process of nanomaterial synthesis research
- Trained in communication skills from an academic perspective

National Innovation Training Program for College Students, China

2021 Sept - 2022 Sept

Construction of new heterogeneous nanostructures

Team Leader of Training program

- Understanding the formation and mechanism of binary/ternary hetero-nanostructures
- Precise tuning of catalyst band structure for high-level separation and transport of charges
- Attempts to explain the intrinsic mechanism of the synergistic enhancement of hetero-nanostructures and plasmonic resonance effect

Anhui Laboratory of Clean Energy Materials and Chemistry for Sustainable Conversion of Nature Resources, Wuhu, China

2020 Jun – 2023 Jun

Photoelectric Energy Conversion and Biosensing Laboratory

Laboratory members

- Construct and use Z-scheme catalyst to achieve high-efficiency photoelectric catalytic aquatic hydrogen production
- Construction and application of new ultra-sensitive photoelectric sensor

Participant Experience

- JACS Innovation Summit – Yanqi Molecular Science Forum July 19, 2021
- The Eighteenth International Symposium on Electroanalytical Chemistry Aug 25-27, 2021
- CCS-RSC Young Chemists Summit 2021 Dec 15-16, 2021
- CCS The 21st Nation Conference on Organometallic Chemistry Aug 19-23 2022

Extracurricular Activities

Student Union of Anhui Polytechnic University, Wuhu, China

2019 Oct – 2021 Oct

Minister of Youth Science and Innovation Department

- Participated in national and provincial science and technology innovation competitions as a student judge many times
- Managed budget allocation and sponsorship program with external parties: developed cooperation with Vitesco Technologies, Anhui Heli Co., Ltd

Additional Information and Awards

- Skilled in Origin, ChemDraw, C4D, Photoshops, Visual C++, Python, and some commonly used data processing software. Self-study of the Ansys Lumerical FDTD.
- Xinlong Scholarship (10000 RMB, The highest grade scholarship on campus), AHPU 2020 - 2021
- Top 10 College Students (Science and Technology Innovation), AHPU 2020
- The 17th "Challenge Cup" National College Student Curricular Academic Science and Technology Works Competition - Second prize of Anhui Province