

教育与工作背景

- 02/2025 – 至今 讲师, 鲁东大学 物理与光电工程学院
- 01/2023 – 01/2025 Research Assistant Professor, 香港浸会大学 (2024 QS World Ranking 295) 物理系
- 12/2020 – 12/2022 博士后; 北京大学深圳研究生院 (2024 QS World Ranking 17); 导师: Prof. Shihe Yang
- 10/2018 – 09/2020 CSC 联培博士研究生; 布朗大学 (2024 QS World Ranking 73); 导师: Profs. Nitin Padture and Yuanyuan Zhou
- 09/2016 – 12/2020 博士 昆明理工大学; 材料学; 导师: Prof. Jing Feng
- 09/2013 – 07/2016 硕士 昆明理工大学; 材料学;
- 09/2009 – 07/2013 学士 青岛科技大学; 金属材料工程/计算机科学与技术;

已获研究资助

- 胡明钰 (PI), 鲁东大学科研启动经费 (鲁大英才); 150,000 CNY; 60 months (02/2025-06/2030)
- 胡明钰 (PI), 国家自然科学基金 青年科学基金项目 (No. 22309155); 300,000 CNY; 36 months (01/2024-12/2026)
- 胡明钰 (PI), Start Up Grant for New Academics (Hong Kong Baptist University); 200,000 HKD; (01/2023-01/2025)
- 胡明钰 (PI), 中国博士后科学基金 (2021M690193); 80,000 CNY; 24 months (01/2021-12/2022)

研究方向

目前致力于:

- 无机低带隙钙钛矿太阳能电池及无机叠层钙钛矿太阳能电池的开发
- 基于 ^{119}Sn 核磁共振锡化学开发含锡钙钛矿太阳能电池

研究成果 (发表论文 70 余篇, 论文总引用次数: 2971, h-index: 31, i10-index: 53)

其中以第一、共一或通讯作者发表论文:

- Hao Zhang, **Mingyu Hu*** (corresponding author), Qingqing Zhang, Yen-Hung Lin*, Qiang Lou, Maojun Sun, Yueyu Xu, Yi He, Kai Zhang, Shanshan Yu, Haifeng Wu, Haibiao Chen, Linling Li, Liting Zeng, Xinxin Xu, Jiazheng Wang, Jingyi Xu, Dezhen Kong, Jin Shang, Yuqing Su, Xiangyu Li, Changqing Lin, Fion Sze Yan Yeung, Hang Zhou*, Shihe Yang*. Self-assembled 1D/3D heterojunction enables all-inorganic perovskite 4-terminal tandem solar cells with 21.54% certified efficiency, *Nature Communications*, 2026, Just Accepted.
- Yang Jiang, **Mingyu Hu (co-first author)**, Zhi-Wen Yin, Yue-Yu Xu, Yusong Xiao, Zhangwang Guo, Ji-Hong Zheng, Chen-Quan Yang, Ye Yuan, Shihe Yang*, Yuanyuan Zhou*, Mathias Uller Rothmann*, Yi-Bing Cheng, Wei Li*. Revealing and Regulating Microstructure-Driven Sn^{2+} Oxidation in Inorganic Perovskite Tandem Solar Cells, *Joule*, 2026, Just Accepted.
- Mingyu Hu**, Changyu Yang, Yalan Zhang, Shihe Yang*, Yuanyuan Zhou*. Photovoltaics of Low-Bandgap Inorganic Perovskites, *Green Carbon*, 2024, 2(3), 263-273.
- Mingyu Hu**, Yalan Zhang, Jue Gong, Hua Zhou, Xianzhen Huang, Mingzhen Liu, Yuanyuan Zhou*, Shihe Yang*. Surface Sn(IV) hydrolysis improves inorganic Sn-Pb perovskite solar cells, *ACS Energy Letters*, 2023, 8(2), 1035-1041.
- Lin Chen, Keren Luo, Baihui Li, **Mingyu Hu*** (corresponding author), Jing Feng*. Mechanical property enhancements and amorphous thermal transports of ordered weberite-type $\text{RE}_3\text{Nb/TaO}_7$ high-entropy oxides, *Journal of Advanced Ceramics*, 2023, 12(2), 399-413.
- Mingyu Hu**, Gaopeng Wang, Qinghong Zhang, Jue Gong, Zhou Xing, Jinqiang Gao, Jian Wang, Peng Zeng, Shizhao Zheng, Mingzhen Liu, Yuanyuan Zhou*, Shihe Yang*. Antioxidative solution processing yields exceptional Sn(II) stability for sub-1.4 eV bandgap inorganic perovskite solar cells, *Journal of Energy Chemistry*, 2022, 72, 487-494.

7. Lin Chen, Baihui Li, Keren Luo, Hao Xu, **Mingyu Hu* (corresponding author)**, Hongxia Li, Gang Wang, Shixian Zhao, Jing Feng*. Origins of high fracture toughness and glass-like thermal conductivity in Zr-Ta-O composites, *Journal of the American Ceramic Society*, 2022, 105(11), 6508-6516.
8. ShengYu, Feng Qian, **Mingyu Hu* (corresponding author)**, Zhenhua Ge, JingFeng, Xiaoyu Chong*. Enhanced thermoelectric performance in inorganic CsSnI₃ perovskite by doping with PbI₂, *Materials Letters*, 2022, 308, 131127.
9. **Mingyu Hu**, M. Chen, P. Guo, H. Zhou, J. Deng, Y. Yao, Y. Jiang, J. Gong, Z. Dai, Y. Zhou, F. Qian, X. Chong, J. Feng*, R.D. Schaller, K. Zhu, N.P. Padture*, Y. Zhou*. Sub-1.4eV bandgap inorganic perovskite solar cells with long-term stability, *Nature Communications*, 2020, 11(1), 1-10.
10. Feng Qian, **Mingyu Hu* (corresponding author)**, Jue Gong, Chunyu Ge, Yunxuan Zhou, Jun Guo, Min Chen, Zhenhua Ge, Nitin P Padture, Yuanyuan Zhou*, Jing Feng*. Enhanced thermoelectric performance in lead-free inorganic CsSn_{1-x}GexI₃ perovskite semiconductors, *Journal of Physical Chemistry C*, 2020, 124(22), 11749-11753.
11. Xin Wang, Jie Yu*, **Mingyu Hu* (corresponding author)**, Yongjie Wu, Liuli Yang, Wei Ye, Xue Yu. The effects of hydroxyl by water addition on the photoluminescence of zero-dimensional perovskites Cs₄PbBr₆ nanocrystals, *Journal of Luminescence*, 2020, 221, 116986.
12. **Mingyu Hu**, Jie Yu*, Xiaolong Zhou, Zhenjun Hong, Wei Ye. Surface layer structure change and tribological property of Cu/FeS composite under electric field, *Rare Metals*, 2019, 38(9), 885-891.
13. Taiqiao Liu, **Mingyu Hu (co-first author)**, Wenting Lu, Jianxiang Zhan, Xiaoying Cui, Xianghao Zhan, Jie Yu. First-principles investigation on thermodynamic phase stability of jadeite under high temperature and high pressure, *Physica B: Condensed Matter*, 2019, 567, 55-60.
14. Chunyu Ge, **Mingyu Hu (co-first author)**, Peng Wu, Qi Tan, Zhizhong Chen, Yiping Wang, Jian Shi, Jing Feng*. Ultralow thermal conductivity and ultrahigh thermal expansion of single crystal organic-inorganic hybrid perovskite CH₃NH₃PbX₃ (X=Cl, Br, I), *Journal of Physical Chemistry C*, 2018, 122(28), 15973-15978.
15. **Mingyu Hu**, Chunyu Ge, Jie Yu, Jing Feng*. Mechanical and optical properties of Cs₄BX₆ (B = Pb, Sn; X = Cl, Br, I) zero-dimension perovskites, *Journal of Physical Chemistry C*, 2017, 121(48), 27053-27058.

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1. **胡明钰**, 于杰, 徐旭辉, 冯晶, 周晓龙, 徐明丽, 孟彬。一种零维钙钛矿结构发光材料 A₄BX₆ 及其制备方法, ZL201710346813.X
2. **胡明钰**, 冯晶。ModulusBall 模量曲面可视化软件, 2017SR419316