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#### 教育经历:

2019-09 至 2022-09, 北京交通大学, 光学工程, 获得工学博士学位

2017-09 至 2019-09, 北京交通大学, 光学, 获得理学硕士学位

2013-09 至 2017-07, 聊城大学, 物理学, 获得学士学位

工作经历: 2022.10~至今: 讲师 鲁东大学物理与光电工程学院

目前研究领域: 钙钛矿太阳能电池设计制备及机理研究 有机光电子材料与器件自旋动力学研究

承担研究课题: 1.国家自然科学基金青年科学基金项目, 柔性钙钛矿太阳能电池中自旋与轨道相互作用的应力调控及作用机制, 2024-01-01~2026-12-31 在研, 主持  
2.鲁东大学人才引进科研启动经费 2022.10~2027.10 主持。

主讲课程: 《太阳能电池原理与工艺》 《材料表面工程技术》

#### 代表性成果:

- (1) **Qi Zhang;** Haomiao Yu, Defect-Induced Rashba Effect in Metal Halide Perovskite Thin Films Deposited on a Flexible Substrate, *Advanced Optical Materials*, 2024, 2302238.
- (2) **Qi Zhang;** Liying Pei; Haomiao Yu, Achieving Band Gap Reduction and Carrier Lifetime Enhancement in Metal Halide Perovskites via Mechanical Stretching, *The Journal of Physical Chemistry Letters*, 2021, 12(30): 7207-7212.
- (3) **Qi Zhang;** Haomiao Yu; Bin Hu, External Field-Tunable Internal Orbit-Orbit Interaction in Flexible Perovskites. *The Journal of Physical Chemistry Letters*, 2020, 11(24): 10323-10328.
- (4) **Qi Zhang;** Haomiao Yu; Bin Hu, Substrate Dependent Spin-Orbit Coupling in Hybrid Perovskite Thin Films, *Advanced Functional Materials*, 2019, 29(35): 1-7.
- (5) Haomiao Yu; **Qi Zhang;** Bin Hu, Using Mechanical Stress to Investigate the Rashba Effect in Organic-Inorganic Hybrid Perovskites, *The Journal of Physical Chemistry Letters*, 2019, 10(18): 5446-5450.
- (6) Haomiao Yu; **Qi Zhang;** Bin Hu, Improving photovoltaic performance of inverted planar structure perovskite solar cells via introducing photogenerated dipoles in the electron transport layer, *Organic Electronics*, 2018, 63: 137-142.
- (7) Liying Pei; Haomiao Yu; **Qi Zhang,** Concave and Convex Bending Influenced Mechanical Stability in Flexible Perovskite Solar Cells, *The Journal of Physical Chemistry C*, 2020, 124(4): 2340-2345.
- (8) Qin Yang; Kai Wang; Haomiao Yu; **Qi Zhang,** Surface Polarization and Recombination in Organic-Inorganic Hybrid Perovskite Solar Cells based on Photo- and Electrically Induced Negative Capacitance Studies, *Organic Electronics*, 2018, 62(11): 203-208.