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个人信息

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教育经历

2014-09 至 2016-06	厦门大学	凝聚态物理	硕士
2016-09 至 2020-06	厦门大学	凝聚态物理	博士
2017-10 至 2019-10	德州大学奥斯汀分校	电气工程与计算机	国家公派联合培养博士

研究领域

依托于智能传感团队,开展微纳器件与智能传感研究,二维半导体薄膜制备与微纳米器件研究,包括生物场效应晶体管传感器、新型信息阻变存储器,光电传感器及其它光电器件的设计与研究。

科研项目

- (1) 国家自然科学基金青年科学基金项目, 62204096, 二维氮化硼阻变存储器的循环耐受性研究, 30 万, 2023.1-2025.12, 在研, 主持。
- (2) 福建省科学技术厅, 福建省自然科学基金青年项目, 2021J05176, 基于不同金属导电细丝调控下的氮化硼存储器无极型阻变特性研究, 8 万, 2021.11-2024.11, 在研, 主持。
- (3) 集美大学高成果培育项目, CM23062, 热解法多层大面积二硫化钼薄膜及高良率忆阻器的制备, 5 万, 2023-2026, 在研, 主持。
- (4) 福建省教育厅, 福建省中青年教师教育科研项目, JAT200291, 氮化硼阻变存储器的阻变性能分散性研究, 2021.01 至 2023.12, 结题, 主持。
- (5) 集美大学, 集美大学启动项目, ZQ2020014, 基于氮化硼薄膜的随机阻变存储器性能研究、2020.09.03-2025.07.31, 结题, 主持。
- (6) 国家自然科学基金-面上项目, 62275102, 基于光栅耦合超材料等离子激元的光感知芯片灵敏度增强机理研究, 59 万, 2023.01-2026.12, 参与。
- (7) 福建省科学技术厅, 福建省科技厅-引导性项目, 数字微流控-核磁共振新冠病毒诊断芯片开发, 15 万, 2021.11-2024.11, 参与。

- (8) 福建省科学技术厅, 福建省自然科学基金青年项目, 2022J05164, 基于植入式光纤的金属玻璃密封件裂纹缺陷表征及监测研究, 2022.08-2025.08, 参与。

代表性论著（第一作者及*通讯作者）：

国际期刊（SCI）

1. **Pingping Zhuang**, Han Yan, Bo Li, Chao Dou, Tian Ye, Changjie Zhou, Huili Zhu, Bo Tian, Yushan Chen, Dong Lin, Weiwei Cai, Daquan Yu, Jing Liu*, Weiyi Lin*, Large-area multilayer molybdenum disulfide for 2D memristors, **Materials Today Nano**, 23, 100353, 2023. (影响因子 13.364; JCR 一区)
2. Han Yan, **Pingping Zhuang***, Bo Li, Tian Ye, Changjie Zhou, Yushan Chen, Tiejun Li, Weiwei Cai, Daquan Yu, Jing Liu, Weiyi Lin, Metal Penetration and Grain Boundary in MoS₂ Memristors, **ADVANCED ELECTRONICS MATERIALS**, 2024, in revision. (影响因子 6.2; JCR 一区)
3. Chao Dou, Zhichao Wu, Wei Chen, Han Yan, Degui Li, Xue-Qiu You, Yu-Shan Chen, Changjie Zhou, Sining Chen, **Pingping Zhuang***, Jing Liu, Au-functionalized wrinkle graphene biosensor for ultrasensitive detection of Interleukin-6, **CARBON**, 216, 2024. (影响因子 10.9; JCR 一区)
4. **Pingping Zhuang**, Jing Liu, Junjie Huang, Chao Dou, Weiwei Cai, Weiyi Lin*, Charge distribution in turbostratic few-layer graphene studied by carbon isotope labeling, **CARBON**, 189, 21-26, 2022. (影响因子 10.9; JCR 一区)
5. Weiyi Lin, **Pingping Zhuang***, Holes distribution in bilayer graphene, **APPLIED SURFACE SCIENCE**, 595, 153517, 2022. (影响因子 7.392; JCR 一区)
6. Jing Liu*, Chao Dou, Wei Chen, Wen-Zhuang Ma, Dan Meng, Xue-Qiu You, Yu-Shan Chen, Changjie Zhou, **Pingping Zhuang***, Ultrasensitive graphene sensor for nitrate detection using triethylamine as a probe molecule, **MICROCHEMICAL JOURNAL**, 2022, 183, 108043. (影响因子 5.3; JCR 一区)
7. **Pingping Zhuang**, Wenzhuang Ma; Jing Liu*, Weiwei Cai, Weiyi Lin*, Progressive RESET induced by Joule heating in hBN RRAMs, **APPLIED PHYSICS LETTERS**, 2021, 118, 143101. (影响因子 3.597; JCR 一区)
8. **Pingping Zhuang**, Weiyi Lin,* Jaehyun Ahn, Massimo Catalano, Harry Chou, Anupam Roy, Manuel Quevedo-Lopez, Luigi Colombo, Weiwei Cai,* and Sanjay K. Banerjee*, “Nonpolar Resistive Switching of Multilayer-hBN-Based Memories”, **ADVANCED ELECTRONICS MATERIALS**, 6 (1), 1900979, 2020. (影响因子 6.593; JCR 一区)
9. **Pingping Zhuang**¹, Weiyi Lin¹, Bo Tian, Cankun Zhang, Zhijuan Zhao, Tien-mo. Shih*, Weiwei Cai*, “Atomic-Concentration Diffusion Governing Integrated-Territory Graphene Syntheses at Catalyst-Insulator Interfaces”, **CARBON**, 102, 403-408, 2016. (IF 7.466; JCR 一区)

10. **Pingping Zhuang**¹, Weiyi Lin¹, Bo Tian, Tien-mo Shih*, Weiwei Cai*, “Ultraviolet-Light-Induced Electron Transfer between Chlorine Anions and Graphene”, **CARBON**, 123, 380-384, 2017. (影响因子 8.821; JCR 一区)
11. **Pingping Zhuang**, Weiyi Lin*, Binbin Xu, Weiwei Cai*, “Oxygen-Assisted Synthesis of Hexagonal Boron Nitride Films for Graphene Transistors”, **APPLIED PHYSICS LETTERS**, 111, 203103, 2017. (编辑推荐; 影响因子 3.597; JCR 一区)
12. **Pingping Zhuang**, Weiyi Lin, Harry Chou, Anupam Roy, Weiwei Cai*, Sanjay K. Banerjee*, “Growth of Lateral Graphene/h-BN Heterostructure on Copper Foils by Chemical Vapor Deposition”, **NANOTECHNOLOGY**, 30 (3), 03LT01, 2018. (影响因子 3.551; JCR 二区)
13. Weiyi Lin[#], **Pingping Zhuang**[#], Bo Tian, Tie Liu, Cankun Zhang, Tien-mo Shih*, Weiwei Cai*, “An Ion-migration and Electron-transfer Cycle Containing Graphene and Copper Substrate Analyzed with Raman Spectra”, **CARBON**, 116, 15-19, 2017. (影响因子 8.821; JCR 一区)

代表性论著（合作作者）：

国际期刊（SCI）

1. Weiyi Lin, Bo Tian, **Pingping Zhuang**, Jun Yin, Cankun Zhang, Qiongyu Li, Tien-mo Shih*, Weiwei Cai*, “Graphene-Based Fluorescence-Quenching-Related Fermi Level Elevation and Electron-Concentration Surge”, **NANO LETTERS**, 16, 5737-5741, 2016. (影响因子 12.08; JCR 一区)
2. Weiyi Lin, **Pingping Zhuang**, Harry Chou, Yuqian Gu, Richard Roberts, Wei Li, Sanjay K. Banerjee, Weiwei Cai*, Deji Akinwande, “Electron Redistribution and Energy Transfer in Graphene/MoS₂ Heterostructure”, **APPLIED PHYSICS LETTERS**, 114, 113103, 2019. (编辑推荐, 影响因子 4; JCR 二区)
3. Weiyi Lin, **Pingping Zhuang**, Deji Akinwande, Xue-Ao Zhang, and Weiwei Cai*, “Oxygen-assisted synthesis of hBN films for resistive random access memories”, **APPLIED PHYSICS LETTERS**, 073101, 2019. (影响因子 4; JCR 二区)
4. Jacob N. Rohan*, **Pingping Zhuang**, SS Teja Nibhanupudi, Sanjay K. Banerjee, Jaydeep P. Kulkarni*, “Neural Network Assisted Compact Model for Accurate Characterization of Cycle-to-cycle Variations in 2-D h-BN based RRAM Devices” 77th Device Research Conference (DRC) 2019
5. VO₂-based thermally tunable emitter and preliminary design of switching for mid-infrared atmospheric windows, **RESULTS IN PHYSICS**, 31, 2021. (影响因子 5.3; JCR 二区)
6. Fingerprint detection in the mid-infrared region based on guided-mode resonance and phonon-polariton coupling of analyte, **OPTICS EXPRESS**, 29(23), 2021. (影响因子 3.8; JCR 一区)

7. Biaxial hyperbolic metamaterial THz broadband absorber utilizing anisotropic two-dimensional materials, **RESULTS IN PHYSICS**,22,2021. (影响因子 5.3; JCR 二区)
8. Synthesis of 4-in. multilayer molybdenum disulfide via space-confinement thermolysis, **APPLIED PHYSICS LETTERS**, 123(21), 211603, 2023. (影响因子 4; JCR 二区)
9. Wide-band and narrow-band switchable terahertz absorber based on graphene, **RESULTS IN PHYSICS**, 52, 2023. (影响因子 5.3; JCR 二区)
10. InSnO:N homojunction thin-film transistors fabricated at room temperature, **VACUUM**, 213, 2023. (影响因子 4; JCR 二区)

发明专利

1. 庄萍萍; 刘璟; 窦超; 闫晗. 一种石墨烯传感器及其制备方法和应用. 中国: 114778616B, 2022-12-30. (已授权)
2. 庄萍萍; 林伟毅; 闫晗. 过渡金属硫化物薄膜及其制法、阻变存储器及其制法. 中国: CN202211327632.X, 2023-03-14. (已公开)