

基本情况

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个人主页



个人简介

王慧，男，博士，硕士生导师，2023 年 12 月毕业于浙江大学机械专业，获浙江大学优秀博士学位论文。

主要从事航空发动机燃烧室点火联焰机理及点火性能仿真计算方法研究。主持辽宁省教育厅青年项目、沈阳发动机研究所横向课题，参与国家自然科学基金项目。在 Fuel、Appl. Therm. Eng.、Phys. Fluids 等期刊发表高水平 SCI 论文十余篇，授权国家发明专利 1 项，欧洲专利 1 项。

主讲课程

《工程测试技术》(省级一流课程)、《科学计算与 MATLAB 语言》

研究方向

- 航空发动机环形燃烧室点火
- 环形燃烧室喷雾火焰点火特性
- 环形燃烧室在预燃射流点火下的联焰机理
- 燃烧室点火性能仿真计算方法

研究成果

- [1] Hui Wang, Zhixin Zhu, Elsayed Barakat, Jing Hou, Haroun Hassan, Jing Liu, Wen Zeng, Wenjie Tao, Gaofeng Wang. Investigation of flow interaction and the impact on flame propagation in an annular combustor with centrally staged burners[J]. Fuel, 2025, 390: 134694. (SCI, IF:6.7)
- [2] Hui Wang, Liang Zhong, Elsayed Barakat, Yifan Xia, Wenjie Tao, Xiaokang Tong, Gaofeng Wang. Experimental investigation on the ignition dynamics of an annular combustor with multiple centrally staged swirling burners[J]. Physics of Fluids, 2022, 34(7), 075103. (SCI, IF:4.6)
- [3] Gaofeng Wang, Hui Wang, Yifan Xia, Liang Zhong, Elsayed Barakat, Wenjie Tao. Flame propagation patterns and local flame features of an annular combustor with multiple centrally staged swirling burners[J]. Physics of Fluids, 2023, 35(8), 085134. (SCI, IF:4.6)
- [4] Elsayed Barakat, Hui Wang*, Lanfang Zhao, Zhixin Zhu, Keqi Hu, Haroun Hassan, Gaofeng Wang. Enhancement of the precooling system performance for aviation engines by volatile liquid injection[J]. Applied Thermal Engineering, 2024, 249: 123446. (SCI, IF:6.4)
- [5] Elsayed Barakat, Hui Wang, Haroun Hassan, Chenghao Qian, Jing Hou, Tai Jin, Gaofeng Wang. Experimental investigation of ultrasonic water injection effects on laminar flame characteristics of propane-air mixtures[J]. Fuel, 2025, 404: 136221. (SCI, IF:6.7)