

一、个人基本信息

姓名：张肖

性别：男

出生年月：1989年8月

职称：副教授

最高学历：博士

工作单位：中国民航大学 科技创新研究院

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二、学习和工作经历

1、教育经历

2012-2017 南开大学，环境科学与工程学院，硕博连读

2008-2012 安徽大学，物理与材料科学学院，本科

2、工作经历

2021.12 至今 中国民航大学，科技创新研究院，副教授

2017.11-2021.12 中国民航大学，科技创新研究院，讲师

三、研究方向

(1) 新型洁净高效气体灭火技术与装备

(2) 锂电池热失控防治技术与装备

四、教学科研成果

1、主持/参与科研项目

- (1) 飞机货舱动态变压环境下火灾动力学机理及灭火技术研究，中央高校重点项目，2023.03-2025.03，主持；
- (2) 货舱化学灭火气体优异灭火性能的深度优选，天津市自然科学基金，2022.01-2023.12，主持；
- (3) 含氟烯烃化学灭火气体的结构性能关系与机制研究，天津市教委计划项目，2021.01-2022.12，主持；
- (4) 含氟醚烃灭火剂的灭火效果与机制研究，火灾国家重点实验室开放课题，2020.01-2021.12，主持；
- (5) 新型气体灭火材料及灭火设备合作开发，横向开发项目，2020.08-2021.12，主持；
- (6) 锂电池热失控灾害防护抑制剂筛选、复配与研发，横向开发项目，2021.08-2022.12，主持；
- (7) 变重力环境下火焰行为与烟气运动特征的演化机理研究，国家自然科学基金联合项目，2020.01-2023.12，参与单位负责人；
- (8) 复杂体系拉曼高光谱定性分析中的双特征融合建模方法研究，国家自然科学基金面上项目，2020.01-2023.12，参与；
- (9) 公共安全重点研发计划课题项目，2019.02-2022.01，参与；
- (10) 飞机灭火材料环境友好性评价，中央高校基本科研业务费一般项目，2018.01-2019.12,主持。

2、学术论文和专利

➤ 学术论文 (近五年) :

- (1) Zhenzhen Jin, Xiao Zhang*, The fire-extinguishing performance and mechanism of fluorinated cyclobutane through experimental measurement and numerical calculation, New Journal of Chemistry, 2023, 47, 15787-15796

- (2) Zhenxiang Chang, Rourou Yu, Shukai Li, Yueying Guo, Zhaoyang Tan, **Xiao Zhang***, Jiexiang Liu, A comparative on the thermal decomposition and fire-extinguishing performance of C₅F₈ and C₅F₇Cl, Int J Quantum Chem, 2023, 10.1002/qua.27217.
- (3) Zhao Yang, Shiqi Liu, Xingyu Wang, **Xiao Zhang***, Combustion inhibition of cup-burner flame with C₂HF₃Cl₂ and its kinetics mechanism investigation, Chemical Physics Letters, 2023, 813, 140275
- (4) 刘士奇, **张肖***, 化学气体灭火剂作用下甲烷射流火焰行为, 科学技术与工程, 2023.
- (5) Rourou Yu, Wenhao Hu, Xingyu Wang, **Xiao Zhang***, Zhaoyang Tan, In depth study on the fire-extinguishing mechanism of Octafluoro-2-butene as a new promising Halon substitute, Int J Quantum Chem. 2022, e26913.
- (6) 程槽, **张肖***, 含氟烯烃 HFO-1336mzz(E)的协同灭火效应研究, 消防科学与技术, 2021, 40, 1508-1512.
- (7) **Xiao Zhang**, Zhao Yang, Xin Huang, Xingyu Wang, Yuelei Pan, Xiaomeng Zhou, Combustion enhancement and inhibition of hydrogen-doped methane flame by HFC-227ea. International Journal of Hydrogen Energy, 2021, 46, 21704–21714.
- (8) Rui Wu, Xingyu Wang, Lu Cheng, Changxing Ren, Xingyou Wei, **Xiao Zhang***. Experimental and theoretical studies on the thermal decomposition of trans-1-chloro-3,3,3-trifluoropropene/2-chloro-3,3,3-trifluoropropene and their fire-extinguishing performance. New journal of Chemistry, 2020, 44, 12932–12941.
- (9) **Xiao Zhang**, Zongkai Yue, Haijun Zhang, Lu Liu and Xiaomeng Zhou. Repeated administrations of Mn₃O₄ nanoparticles cause testis damage and fertility decrease through PPAR-signaling pathway. Nanotoxicology, 2020, 14, 326-340.
- (10) **Xiao Zhang**, Mengyuan Wang, Xingyu Wang, Xiutao Li, Xiaomeng Zhou, Mesoporous NiCo₂O₄ network constructed from ultrathin-mesoporous nanosheets as high performance electrocatalyst in dye

sensitized solar cell. *Journal of Electroanalytical Chemistry*, 2020, 861, 15, 113907.

- (11) Xingyu Wang, Rui Wu, Lu Cheng, **Xiao Zhang***, **Xiaomeng Zhou***. Suppression of propane cup-burner flame with HFO-1336mzz(Z) and its thermal stability study. *Thermochimica Acta*, 2020, 683, 178463.
- (12) Pengkun Wei, Xue Chen, Guizhu Wu, Jing Li, Yang Yang, Zeiwei Hao, **Xiao Zhang***, Jing Li *, Lu Liu *. Recent advances in cobalt-, nickel-, and iron-based chalcogen compounds as counter electrodes in dye-sensitized solar cells. *Chin. J. Catal.*, 2019, 40, 1282–1297
- (13) Chengcheng Xu, Xinyue Huang, Xin Xu, **Xiao Zhang***, Haijun Zhang*. Theoretical studies on the BC₂N monolayers with promising photoelectronic characteristics and remarkable environmental stabilities. *Int. J. Quantum. Chem.* 2019, e26120
- (14) Xuemin Li, Jinwu Bai, Bo Zhou, Xianfeng Yuan, **Xiao Zhang***, and Lu Liu*. High Performance of 3D Symmetric Flowerlike Sb₂S₃ Nanostructures in Dye-Sensitized Solar Cells. *Chem. Eur. J.* 2018, 24, 1–8.
- (15) **Xiao Zhang**, Haijun Zhang, Xingyu Wang and Xiaomeng Zhou. Enhanced electrocatalytic performance of nickel diselenide grown on graphene toward the reduction of triiodide redox couples. *RSC Adv.*, 2018, 8, 28131–28138.

➤ 著作

- (1) 周晓猛, 张肖, 张永丰, 倪晓敏, 廖光焯, 洁净高效气体灭火技术原理及应用, 科学出版社, 2022.

3、获奖与学术兼职

- (1) *Frontiers in Materials* 副主编
- (2) *Frontiers in Chemistry* 专刊编辑
- (3) 天津市“131”创新人才培养工程第三层次

五、其他

其他未尽事项