

个人简历

个人信息:

姓名: 万晶晶 性别: 女 出生年月: 1986.05
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个人简介: 华东师范大学教授, 国家高层次人才计划, 基金委优秀青年基金。复旦大学化学系本科, 昆士兰大学分子生物科学研究所生物化学博士。

主要学习/工作经历:

2003.09-2007.07: 复旦大学, 化学系, 获得学士学位;
2007.09-2010.12: 复旦大学, 化学系, 获得硕士学位;
2011.01-2014.12: 昆士兰大学, 生物分子研究所, 获得博士学位;
2015.01-2017.03: 昆士兰大学, 生物分子研究所, 博士后;
2018.03-2022.08: 华东师范大学化学与分子工程学院, 青年研究员, 博导
2022.09-至今: 华东师范大学化学与分子工程学院, 教授, 博导
2024.07-至今: 华东师范大学化学与分子工程学院, 副院长

学术背景:

研究方向集中在功能材料辅助的组学预处理, 创建了超快分子选择性吸附界面, 精密调控功能材料结构参数, 突破了复杂生物样本中代谢物和蛋白质的快速、有效分离; 提出了多重解吸脱附离子化方法, 复合多元物理效应提升光电与光热转化, 搭建了激光解离质谱单细胞高灵敏代谢检测平台; 构筑了差异标志物精准解析平台, 整合计算机辅助数据解读和生物功能验证, 实现了重大疾病精准诊断、预后及临床转化, 推进临床转化。

近五年以通讯作者发表SCI论文 35 篇, 包括 Cell Metabolism, Nature Sustainability, Nature Communications, Angewandte Chemie International Edition, Advanced Materials, Advanced Functional Materials, Advanced Science, ACS Nano, Chemical Science等。担任2024年第二届材料生物学国际研讨会执行主席, 2019年Wiley生物诊断国际研讨会大会主席, 在国内外重要学术会议上做邀请报告10余次; 担任VIEW、高等学校化学学报等期刊客座编辑, Chinese Chemical Letter青年编委

主要科研项目与基金:

- (1) 科技部重点研发计划, 项目负责人, SQ2023YFE0103447, 空间多组学揭示糖尿病视网膜病变和脑损伤的关联机制, 2024-04 至 2027-04, 300 万元, 在研, 主持
- (2) 科技部重点研发计划, 课题负责人, 2022YFC2502801, 构建常见致盲性眼病多维组学及多模态影像数据融合全息数据平台, 2022-11 至2025-12, 216 万元, 在研, 主持
- (3) 国家自然科学基金委员会, 优秀青年基金, 22122404, 疾病分子组分析, 2022-01 至 2024-12, 200 万元, 已结题, 主持

(4) 国家自然科学基金委员会, 面上项目, 22474040, 基于高性能激光解吸电离质谱平台的单细胞双组学揭示肝癌免疫疗法应答差异, 2025-01 至 2028-12, 50 万元, 在研, 主持

(5) 国家自然科学基金委员会, 面上项目, 22074044, 复合金属氧化物代谢质谱芯片分析及卵巢癌检测应用, 2021-01 至 2024-12, 63 万元, 已结题, 主持

(6) 国家自然科学基金委员会, 青年项目, 21705107, 新型树枝状环化多肽及其在生物体内的代谢分析, 2018-01 至 2020-12, 25 万元, 已结题, 主持

(7) 中共中央组织部, 海外高层次人才计划青年项目, 2018-02 至 2021-02, 300 万元, 已结题, 主持

代表性学术荣誉与获奖:

皇家化学学会新锐科学家

入选上海市教委上海高校特聘教授计划(东方学者);

获得青年多肽科学家奖项(中国多肽协会);

代表性论文列表:

1. Ruimin Wang[†], Shouzhi Yang[†], Mengfei Wang, Yan Zhou, Xuelian Li, Wei Chen, Wanshan Liu, Yida Huang, Jiao Wu, Jing Cao, Lei Feng, Jingjing Wan*, Jiayi Wang*, Lin Huang*, Kun Qian*, A sustainable approach to universal metabolic cancer diagnosis, *Nature Sustainability*, 2024, DOI: doi.org/101038/s41893-024-01323-9
2. Ru Zhang, Chandrababu Rejeeth, Wei Xu, Chuanying Zhu, Xiyuan Liu, Jingjing Wan, Mawei Jiang*, Kun Qian*, Label-Free Electrochemical Sensor for CD44 by Ligand-Protein Interaction, *Analytical Chemistry*. 2019, 91(11): 7078–7085.
3. Weikang Shu, You Wang, Chao Liu, Rongxin Li, Congcong Pei, Weihua Lou, Sihan Lin, Wen Di*, Jingjing Wan*, Construction of a Plasmonic Chip for Metabolic Analysis in Cervical Cancer Screening and Evaluation, *Small methods*, 2020,4(4): 1900469.
4. Chao Liu, Xiaodan Huang, Jizi Liu, Jing Wang, Zibin Chen, Rui Luo, Chao Hai Wang, Jiansheng Li*, Lianjun Wang, Jingjing Wan, Chengzhong Yu*, A General Approach to Direct Growth of Oriented Metal–Organic Framework Nanosheets on Reduced Graphene Oxides, 2020, 7(4): 1901480.
5. Chao Liu, Jing Wang, Jingjing Wan*, Dr. Yan Cheng, Rong Huang, Chaoqi Zhang, Wenli Hu, Guangfeng Wei*, Chengzhong Yu*, Amorphous Metal–Organic Framework-Dominated Nanocomposites with Both Compositional and Structural Heterogeneity for Oxygen Evolution, *Angewandte Chemie International Edition*, 2020, 59(9): 3630-3637.
6. Chao Liu, Lina Lin, Qiang Sun, Jing Wang, Rong Huang, Wenyi Chen, Shumin Li, Jingjing Wan*, Jin Zou*, and Chengzhong Yu*, Site-specific growth of MOF-on-MOF heterostructures with controllable nano-architectures: beyond the combination of MOF analogues, *Chemical Science*, 2020,11, 3680-3686.
7. Chuanping Zhang, Dr. Zhichao Liu, Limin Zhang, Anwei Zhu, Fumin Liao, Jingjing Wan, Jian Zhou, Yang Tian*, A Robust Au–C≡C Functionalized Surface: Toward Real-Time Mapping and Accurate Quantification of Fe²⁺ in the Brains of Live AD Mouse Models, *Angewandte Chemie International Edition*, 2020, 59(46): 20499-20507.
8. Fang Gao, Chang Lei*, Yang Liu, Hao Song, Yueqi Kong, Jingjing Wan, Chengzhong Yu*, Rational Design of Dendritic Mesoporous Silica Nanoparticles' Surface Chemistry for Quantum Dot Enrichment and an Ultrasensitive Lateral Flow Immunoassay, *ACS Applied Materials & Interfaces*, 2021, 13(12): 21507–21515.
9. Fang Gao, Yang Liu, Chang Lei*, Chao Liu, Hao Song, Zhengying Gu, Pei Jiang, Sheng Jing, Jingjing Wan, Chengzhong Yu*, The Role of Dendritic Mesoporous Silica Nanoparticles' Size for Quantum Dots Enrichment and Lateral Flow Immunoassay Performance, *Small Methods*, 2021, 5(4): 2000924.
10. Deciphering the metabolic heterogeneity of hematopoietic stem cells with single-cell resolution, Jing Cao, Qi Jason Yao, Jiao Wu, Xiaonan Chen, Lin Huang, Wanshan Liu,

- Kun Qian*, Jingjing Wan*, and Bo O. Zhou*, *Cell Metabolism*, 2024, 16, 209-221.
11. Jing Wang, Yining Yao, Chaoqi Zhang, Qiang Sun, Dan Cheng, Xiaodan Huang, Jiayou Feng, Jingjing Wan, Jin Zou, Chao Liu*, Chengzhong Yu*, Superstructured Macroporous Carbon Rods Composed of Defective Graphitic Nanosheets for Efficient Oxygen Reduction Reaction, *Advanced Science*, 2021, 8(18): 2100120.
 12. Li, Rongxin; Zhou, Yongjie; Liu, Chao; Pei, Congcong; Shu, Weikang; Zhang, Chaoqi; Liu, Lianzhong*; Zhou, Liang*; Wan, Jingjing*; Design of multi-shelled hollow Cr₂O₃ spheres for metabolic fingerprinting, *Angewandte Chemie International Edition*, 2021, 60, 12504–12512.
 13. Pei, Congcong; Liu, Chao; Wang, You; Cheng, Dan; Li, Rongxin; Shu, Weikang; Zhang, Chaoqi; Hu, Wenli; Jin, Aihua; Yang, Yunnan; Wan, Jingjing*; FeOOH@metal-organic framework core-satellite nanocomposites for the serum metabolic fingerprinting of gynecological cancers, *Angewandte Chemie International Edition*, 2020, 59(27): 10831-10835.
 14. You Wang*, Weikang Shu, Sihan Lin, Jiayue Wu, Meng Jiang, Shumin Li, Chao Liu, Rongxin Li, Congcong Pei, Yajie Ding, Jingjing Wan*, Wen Di*, Hollow Cobalt Oxide/Carbon Hybrids Aid Metabolic Encoding for Active Systemic Lupus Erythematosus during Pregnancy, *Small*, 2022, 18(11): 2106412.
 15. Designed Concave Octahedron Heterostructures Decode Distinct Metabolic Patterns of Epithelial Ovarian Tumors, Congcong Pei, You Wang, Yajie Ding, Rongxin Li, Weikang Shu, Yu Zeng, Xia Yin,* and Jingjing Wan*, *Advanced Materials* 2023, 35, 2209083.
 16. Liu, Chao; Sun, Qiang; Lin, Lina; Wang, Jing; Zhang, Chaoqi; Xia, Chunhong; Bao, Tong; Wan, Jingjing*; Huang, Rong; Zou, Jin*; Yu, Chengzhong*; Ternary MOF-on-MOF heterostructures with controllable architectural and compositional complexity via multiple selective assembly, *Nature Communications*, 2020, 11(1): 4971.
 17. Chao Liu*, Tong Bao, Ling Yuan, Chaoqi Zhang, Jing Wang, Jingjing Wan, Chengzhong Yu*, Semiconducting MOF@ZnS Heterostructures for Photocatalytic Hydrogen Peroxide Production: Heterojunction Coverage Matters, *Advanced Functional Materials*, 2022, 32(15): 2111404.
 18. Designing Peptide-Based Nanoinhibitors of Programmed Cell Death Ligand 1 (PD-L1) for Enhanced Chemo-immunotherapy, Fengjuan Xie, Shasha Tang, Ye Zhang, Yinbing Zhao, Yingying Lin, Yining Yao, Meiyang Wang,* Zhengying Gu,* and Jingjing Wan*, *ACS Nano* 2024, 18, 1690–1701.
 19. An Alloy Platform of Dual-Fingerprints for High Performance Stroke Screening, Weikang Shu, Mengji Zhang, Chaoqi Zhang, Rongxin Li, Congcong Pei, Yu Zeng, Liang Zhao,* Jing Zhao,* and Jingjing Wan*, *Advanced Functional Materials*, 2023, 33, 2210267.
 20. Fengjuan Xie, Yingying Lin, Åsa Andersson, Irina Vetter, Liang Zhao*, Jingjing Wan*, Self-assembly of alkylated lysine-dendron oxytocin amphiphiles for enhanced stability and sustained pharmacological activity, *Chemical Communications*, 2023, 59, 13855-13858.
 21. Serum Metabolic Fingerprints Characterize Systemic Lupus Erythematosus, Shunxiang Li, Huihua Ding, Ziheng Qi, Jing Yang, Jingyi Huang, Lin Huang, Mengji Zhang, Yuanjia Tang, Nan Shen, Kun Qian*, Qiang Guo*, and Jingjing Wan*, *Advanced Science*, 2023, 2304610
 22. Liu, Chao; Wang, Jing; Wan, Jingjing*; Cheng, Yan; Huang, Rong; Zhang, Chaoqi; Hu, Wenli; Wei, Guangfeng*; Yu, Chengzhong*; Amorphous metal-organic framework-dominated nanocomposites with both compositional and structural heterogeneity for oxygen evolution, *Angewandte Chemie International Edition*, 2020, 59(9): 3630-3637 (IF = 15.336)
 23. Ziheng Qi, Miao Wang, Chenxi Yan, Yinbing Zhao, Yanhui Wang, Xiaonan Chen, Shunxiang Li, Wenbo Zhuang, Weikang Shu, Yating Wang, Yingying Lin, Jiabin Hou,

Tao Guo*, Xianqun Fan*, Yun Su* & Jingjing Wan*, A mass spectrometry-based strategy allows signature metabolite identification in tear fluid from people with diabetic cataracts. *Nature Communication*, 16, 10246 (2025).

24. Keke Li, Ruimin Wang, Zhengying Gu, Wenyun Weng, Wanshan Liu, Yida Huang, Jiao Wu, Ziyue Zhang, Shouzhi Yang, Jun Su, Yujie Tang, Kun Qian*, Mawei Jiang*, Lin Huang* & Jingjing Wan*, Serum metabolic profiling enables diagnosis, prognosis, and monitoring for brainstem gliomas. *Nature Communication*, 16, 6108 (2025).

25. Xiaonan Chen, Yun Wang, Congcong Pei, Rongxin Li, Weikang Shu, Ziheng Qi, Yinbing Zhao, Yanhui Wang, Yingying Lin, Liang Zhao*, Daihui Peng*, Jingjing Wan*, Vacancy-Driven High-Performance Metabolic Assay for Diagnosis and Therapeutic Evaluation of Depression, *Advanced Materials*, 2024, 36(28): 2312755.

26. Yingying Lin, Jiabin Hou, Bin Li, Weikang Shu*, Jingjing Wan*, Advancements in Nanomaterials and Molecular Probes for Spatial Omics, *ACS Nano*, 2025, 19, 12: 11604–11624.

27. Yingying Lin, Xinjie Gao, Shuang Xu, Ziheng Qi, Yanhui Wang, Xiaonan Chen, Yating Wang, Xintong Hu, Jiabin Su, Heng Yang, Qiwei Zhang, Weikang Shu*, Kai Hong*, Wei Ni*, Jingjing Wan*, In-Source Photoderivatization-Enhanced Neurometabolic Profiling Deciphers Vascular Cognitive Impairment, *Journal of the American Chemical Society*, 2026, <https://doi.org/10.1021/jacs.5c16124>.

28. Chenming Chan, Yating Wang, Jingjing Wan, Yujie Han, Zhaoli Xue, Yang Tian*, Qi-Wei Zhang*, De Novo Labile C–N Bonds Enable Dynamic Covalent Chemistry and Reversible Bioimaging, *Journal of the American Chemical Society*, 2026, <https://doi.org/10.1021/jacs.5c16437>.

29. Ziheng Qi, Jiao Qi, Ye Zhang, Yanhui Wang, Yuchen Feng, Zifan Yang, Yating Wang, Weikang Shu, Dongling Guo, Ching Kang, Keke Zhang, Yi Lu, Jingjing Wan*, Xiangjia Zhu*, Plasma Metabolic Profile with Machine Learning Reveals Distinct Diagnostic and Biological Signatures for Pathologic Myopia, *Advanced Science*, 2025, 12(39), e05861.

30. Yanhui Wang, Rongxin Li, Weikang Shu, Xiaonan Chen, Yingying Lin, Jingjing Wan*, Designed Nanomaterials-Assisted Proteomics and Metabolomics Analysis for In Vitro Diagnosis, *Small Methods*, 2023, 8(1): 2301192.

31. Wei Chen, Minjia Niu, Xvelian Li, Shouzhi Yang, Ruimin Wang, Wanshan Liu, Fanyu Meng, Yan Zhou, Haojie Jin, Jingjing Wan*, Yongchun Yu,* Jiayi Wang*, Kun Qian*, Lin Huang*, ZnS/Au Composites Advance Comprehensive Characterization of Low-Molecular-Weight Compounds Toward Pharmaceutical Analysis of Traditional Chinese Medicine, *Advanced Functional Materials*, <https://doi.org/10.1002/adfm.202525256>Digital Object Identifier (DOI).

32. Jia Yi , Congcong Pei, Tangming Zhang, Qin Qin, Xiaoxia Gu, Yekan Li, Danping Ruan*, Jingjing Wan*, Liang Qiao*, Nanoscale Multipatterning Zn,Co-ZIF@FeOOH for Eradication of Multidrug-Resistant Bacteria and Antibacterial Treatment of Wounds, *ACS Applied Materials & Interfaces*, 2024, 16(43): 58217–58225.

33. Yating Wang, Yinbing Zhao, Ziheng Qi, Shouzhi Yang, Weikang Shu, Yingying Lin, Yanhui Wang, Xiaonan Chen, Bin Li, Jiabin Hou, Fanhe Yu, Xiaohui Liu*, Lin Huang*, Jingjing Wan*, An All-in-Tip Accelerated Proteomics Platform for Large-Scale Cancer Screening, *Analytical Chemistry*, 2026, 98(5): 4050–4064.

34. Xuewei Wang, Yu-Fei Song, Jingjing Wan, Yi Shi, Qi-Wei Zhang*, Yang Tian, Near-Infrared Room-Temperature Phosphorescent Organic Nanoparticles for Amyloid- β Targeting and Time-Resolved Imaging, *Analytical Chemistry*, 2025, 97(27): 14594–14601.

35. Quan Hu, Weixiu Zhao, Yinbing Zhao, Rongxin Li, Yu Zeng, Shuhuan Feng, Wen Di, Weikang Shu*, Weihua Lou*, Jingjing Wan*, You Wang*, Hollow Mesoporous Carbon Nanospheres/Ni Hybrids Aid in Metabolic Encoding for COVID-19 Recovery Assessment in Mothers and Fetuses, *Analytical Chemistry*, 2025, 97(11): 6126–6135.

36. Congcong Pei, Rui Su, Songting Lu, Xiaonan Chen, Yajie Ding, Rongxin Li, Weikang

Shu, Yu Zeng, Yingying Lin, Liang Xu, Yuqiang Mi*, and Jingjing Wan*, Hollow multishelled heterostructures with enhanced performance for laser desorption/ionization mass spectrometry based metabolic diagnosis, *Journal of Materials Chemistry B*, 2023,11, 8206-8215.

37. Yajie Ding, Congcong Pei, Kai Li, Weikang Shu, Wenli Hu, Rongxin Li, Yu Zeng, Jingjing Wan*, Construction of a ternary component chip with enhanced desorption efficiency for laser desorption/ionization mass spectrometry based metabolic fingerprinting, *Frontiers in Bioengineering and Biotechnology*, 2023,11, 1118911.

38.Xiaonan Chen, Wendi Yu, Yinbing Zhao, Yuxi Ji, Ziheng Qi, Yangtai Guan, Jingjing Wan*, Yong Hao*, Diagnosis of epilepsy by machine learning of high-performance plasma metabolic fingerprinting, *Talanta*, 2024, 277, 126328.

39.Yating Wang, Yi Qin, Shanshan Zeng, Ziyue Zhang, Wanshan Liu, Jingjing Wan, Kun Qian, Shunxiang Li, Jie Xiao, Proteomic and metabolomic analysis of plasma for pain at different labor stages, *Talanta*, 2025, 282, 126905.