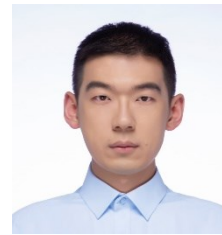


个人简历



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学习经历：

2009年9月-2013年6月 东北师范大学 化学专业 学士学位。

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工作经历：

2016年9月-2018年3月 中国科学院国家纳米科学中心 (北京) 研究院助理

科研成果：

发表第一作者, 共同第一作者以及通讯作者文章共计9篇, 包括 *Angew. Chem., Adv. Fun. Mater., Nanoletter, Lab on chip, Small methods* 等文章。参与发表文章20余篇。

参加和主持的项目：

- 循环肿瘤细胞高效富集、单细胞分析方法 (K821480819), 2019.1-2022.12, 200万, 结题
- 高灵敏监测脑胶质瘤外泌体中小分子药物 (K121410618), 2018.1-2021.12, 20万, 结题

指导学生：

本科生：2名；研究生：2名；博士生：1名。

申请专利：

细胞膜包覆纳米拓扑结构阵列的制备方法及应用。授权号：CN 111647952 B 发明人：刘坚 刘思迪 肖翔

研究方向：

- 以各类硅基材料，聚合物材料为基础进行界面功能化改性。应用并研究改性材料仿生物体微环境，从而诱导生物细胞行为，包括调控干细胞的分化，改变细胞的增殖周期，细胞信息学分析，研究恶性肿瘤细胞侵袭模型的建立。
- 在功能化材料表面基础上，结合微流控芯片技术聚焦于用于败血症患者的血液清理，针对细菌感染引起的菌血症患者的血液细菌快速抓捕，以及败血症患者的血液净化及快速感染细菌种类检测。已与格罗宁根医学院展开临床血液样本初期测试。
- 在微流控基础上，研发并设计高效富集外泌体的系统及循环肿瘤细胞 (CTC)，结合一系列监测技术用于液体活检及肿瘤细胞的耐药机制研究。
- 设计并合成抗各类病原微生物所形成的生物膜材料。已在临床医学领域常见的六种致病菌 (ESKAPE 菌) 展开实验

已发表论文

第一作者及通讯作者文章:

- [1] **S. Liu**, Y. Nie, Q. Zhang, Y. Zhu, X. Li, D. Han, Adhesion Anisotropy Substrate with Janus Micropillar Arrays Guides Cell Polarized Migration and Division Cycle, *Angew Chem Int Ed Engl*, 58 (2019) 4308-4312. (**IF= 16.6**, 一区)
- [2] **S. Liu**, G. Jiang, R. Shi, R. Wu, X. Xiao, T. Yu, Y. Ren, H.C. Mei, H.J. Busscher, J. Liu, Clearance of ESKAPE Pathogens from Blood Using Bacterially Activated Macrophage Membrane-Coated Silicon Nanowires, *Advanced Functional Materials*, 2021, 2007613 (**IF= 19.0**, 一区)
- [3] **S. Liu**, Huibo Wang, Le Yu, Yijin Ren, Hjalmar R. Bouma, Jian Liu, Henny C. van der Mei and Henk J. Busscher, Rapid Bacterial Detection and Gram-Identification Using Bacterially Activated, Macrophage-Membrane-Coated Nanowired-Si Surfaces in a Microfluidic Device, *Nanoletters*, 2023, 23, 8326–8330. (**IF=10.8**, 一区)
- [4] **Sidi Liu**, Fleur E. van Beuningen, Xiang Xiao, Yu Le, Jian Zhao, Rui Shi, Yijin Ren, Hjalmar R. Bouma, Henny C. van der Mei, Jian Liu, and Henk J. Busscher, Macrophage Membrane-Coated, Nanostructured Adsorbent Surfaces in a Microfluidic Device for Extracorporeal Blood Cleansing in Bacterially Induced Sepsis, *Advanced Functional Materials*, 2023, 2305913 (**IF= 19.0**, 一区)
- [5] **Sidi Liu**, Yuanfeng Li, Linqi Shi, Jian Liu, Yijin Ren, Jon D. Laman, Henny C. van der Mei, and Henk J. Maintaining Sidedness and Fluidity in Cell Membrane Coatings Supported on Nano-Particulate and Planar Surfaces, *Bioactive Materials*, 32 (2024) 344–355. (**IF=18.9**, 一区)
- [6] **S. Liu**, Y. Zhu, H. Gao, P. Ge, K. Ren, J. Gao, Y. Cao, D. Han, J. Zhang, One-step fabrication of functionalized poly(etheretherketone) surfaces with enhanced biocompatibility and osteogenic activity, *Mater Sci Eng C Mater Biol Appl*, 88 (2018) 70-78. (**IF= 7.9**, 一区)
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- [8] Zhongyun Jiang¹, **Sidi Liu**¹, Xiang Xiao, Guimei Jiang, Qing Qu, Xinxing Miao, Renfei Wu, Rui Shi, Ruochen Guo and Jian Liu, High-throughput probing macrophage–bacteria interactions at the single cell level with microdroplets, *Lab on a chip*, 22 (2022) 2944-2953 (共同第一作者, **IF=6.1**)
- [9] X. Chen¹, R. Shen¹, **S. Liu**¹, X. Xiao, J. Yan, Y. Zhang, Z. Jiang, B. Nie, J. Liu, The sensitive

detection of single-cell secreted lactic acid for glycolytic inhibitor screening with a microdroplet biosensor, *Anal Methods*, 12 (2020) 3250-3259. (共同第一作者, *IF*= 3.1)

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