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个人简介：

副研究员，博士，硕士生导师。现就职于江苏科技大学从事教学科研工作，主持江苏省自然科学基金青年项目 1 项，江苏科技大学研究生教育教学改革研究与实践项目 1 项，参与国家自然科学基金项目 1 项，江苏省自然科学基金各 2 项。以第一作者或通讯作者身份在 International Journal of Biological Macromolecules，Industrial Crops and Products，Separation and Purification Technology，Food Chemistry，Food Bioscience，Carbohydrate Polymers 等期刊发表 SCI 收录论文 12 篇，授权发明专利 1 项。目前担任全国桑蚕业标准化技术委员会副秘书长，参与完成国家标准、行业标准多项。

研究方向（领域）：

（1）植物化学；

（2）植物活性成分高效提取、分离技术；

（3）蚕丝生物材料的设计与制备。

招生方向：

硕士：生物学，畜牧学，畜牧，生物与医药，资源利用与植物保护，食品加工与安全

课程教学：

（1）生化分离与分析技术（本科生）

（2）现代仪器分析（本科生）

代表性论著：

（一）论文（#为共同第一作者，*为通讯作者）

[1] Chen-Man Zong, Bei Zhang, Si-Ying Li, Jing Jin, Zhen-Zhen Lu, **Xiao-Hui Yao***, Wei-Guo Zhao, Tao Chen, Dong-Yang Zhang*. A flexible multifunctional sensor with a conductive network based on silk nanofibers and MXene for monitoring physiological activity, capacitive pens, photothermal conversion and antibacterial. International Journal of Biological Macromolecules, 2025, 305, 141148.

[2] Xing Zhou, Ping-Yue Wang, Chen-Xi He, En-Jiang Liu, **Xiao-Hui Yao***, Dong-Yang Zhang*, Tao Chen. Designing a stable continuous fluid catalytic xylem-based reactor with a high mass transfer efficiency via in situ grown ZIF-8-immobilized β-glucosidase on natural directional channel. Sustainable Chemistry and Pharmacy, 2024, 42, 101757.

[3] Chen-Man Zong, Fei-Fan Shuang, Jie Chen, Ping-Yue Wang, Jing-Rou Li, Dong-Yang Zhang*, Peng Song, Tao Chen, Wei-Guo Zhao, **Xiao-Hui Yao***. Nacre-inspired, strong, tough

silk fibroin hydrogels based on biomineralization and the layer-by-layer assembly of ordered silk fabric. International Journal of Biological Macromolecules, 2023, 253, 126730.
[4] Fei-Fan Shuang, Chen-Chen Wang, Wei-Jun Zhu, Tao Chen*, **Xiao-Hui Yao***, Dong-Yang Zhang*, Wei-Guo Zhao. Preparation of a robust silk fibroin scaffold with a reinforced concrete structure constructed with silk nanofibers as the skeleton based on a $CaCl_2$-formic acid solution and freeze-drying method. Polymer Testing, 2022, 111, 107599.
[5] Tao Chen, Fei-Fan Shuang, Qing-Yue Fu, Yu-Xiong Ju, Chen-Man Zong, Wei-Guo Zhao, Dong-Yang Zhang, **Xiao-Hui Yao***, Fu-Liang Cao*. Evaluation of the chemical composition and antioxidant activity of Mulberry (*Morus alba* L.) fruits from different varieties in China. Molecules, 2022, 27, 2688.
[6] **Xiao-Hui Yao***, Yu-Shi Shen, Run-Ze Hu, Ming Xu, Jia-Xing Huang, Chen-Xi He, Fu-Liang Cao*, Yu-Jie Fu, Dong-Yang Zhang*, Wei-Guo Zhao, Li Liu, Tao Chen. The antioxidant activity and composition of the seed oil of mulberry cultivars. Food Bioscience, 2020, 37, 100709.
[7] Dong-Yang Zhang, Ning Zhang, Peng Song, Jing-Yi Hao, Yi Wan, **Xiao-Hui Yao***, Tao Chen, Long Li. Functionalized cellulose beads with three dimensional porous structure for rapid adsorption of active constituents from Pyrola incarnata. Carbohydrate Polymers, 2018, 181, 560–569.
[8] **Xiao-Hui Yao**, Jian-Yi Xu, Jing-Yi Hao, Yi Wan, Tao Chen, Dong-Yang Zhang*, Long Li. Microwave assisted extraction for the determination of chlorogenic acid in Flos Lonicerae by direct analysis in real time mass spectrometry (DART-MS). Journal of Chromatography B, 2018, 1092, 82-87.
[9] **Xiao-Hui Yao**, Zhen-Bin Zhang, Peng Song, Jing-Yi Hao, Dong-Yang Zhang*, Yi-Fei Zhang. Different harvest seasons modify bioactive compounds and antioxidant activities of Pyrola incarnata. Industrial Crops and Products, 2016, 94, 405-412.
[10] **Xiao-Hui Yao**, Dong-Yang Zhang, Meng Luo, Shuang Jin, Yuan-Gang Zu, Thomas Efferth, Yu-Jie Fu*. Negative pressure cavitation-microwave assisted preparation of extract of Pyrola incarnata Fisch. rich in hyperin, 2'-O-galloylhyperin and chimaphilin and evaluation of its antioxidant activity. Food Chemistry, 2015, 169, 270-276.
[11] **Xiao-Hui Yao**, Dong-Yang Zhang, Ming-Hui Duan, Meng Luo, Chun-Ying Li, Yuan-Gang Zu, Yu-Jie Fu*. Preparation and determination of phenolic compounds from Pyrola incarnata Fisch. with a green polyols based-deep eutectic

solvent. Separation and Purification Technology, 2015, 149, 116-123.
[12] **Xiao-Hui Yao**, Dong-Yang Zhang, Yuan-Gang Zu, Yu-Jie Fu*, Meng Luo, Cheng-Bo Gu, Chun-Ying Li, Fan-Song Mu, Thomas Efferth. Free radical scavenging capability, antioxidant activity and chemical constituents of Pyrola incarnata Fisch. leaves. Industrial Crops and Products, 2013, 49, 247-255.

授权专利：

[1] 姚晓慧；张东阳；周紫阳；朱亚星；双菲凡；赵卫国；陈涛；具有定向贯通孔道的蚕丝-碳纳米管复合材料及制备方法，中国发明专利 ZL202011123709.2

科研项目：

1. 江苏省自然科学基金面上项目，BK20231253，仿软骨结构蚕丝纳米纤维网络 PVA 水凝胶超级电容器研究，2023.09-2026.08,（参与，在研）

2. 江苏省自然科学基金青年项目，BK20170579，基于低温负压自组装法构建蚕丝碳纳米管海绵状复合材料及其生物相容性研究，2017.07-2020.06（主持，已结题）

3. 国家自然科学基金青年项目，31600461，具有离子液体功能性基团的新型纳米多孔纤维素微球的构建及其对桑叶中活性成分的吸附机理研究，2017.01-2019.12（参与，已结题）

4. 江苏省自然科学基金青年项目，BK20160553，离子液体基新型纳米多孔纤维素微球的制备及其对桑叶中活性成分的吸附机理研究，2016.07-2019.06（参与，已结题）

5. 国家重点研发计划专项，2016YFF0201902，重要农林产品现代化加工质量提升共性技术标准研究——大宗天然纤维智能化与柔性化加工技术标准研究，2016.06-2019.12（参与，已结题）