



| | |
|--------|------------------|
| 姓名 | 张明珠 |
| 性别 | 女 |
| 出生年月 | 1990年10月 |
| 学位 | 博士 |
| 职称 | 副教授 |
| E-mail | Echo8453@163.com |

张明珠，女，汉族，1990年10月出生，安徽安庆人，博士，中共党员，硕士生导师，同时担任安庆师范大学生命科学学院研究生秘书。于2010年考入安庆师范大学生物科学专业，2014年考入安徽大学生命科学学院，师从陈彦教授，从事天然产物食用菌多糖免疫调节活性研究，并于2016年通过硕博连读转安徽大学化学与化工学院，师从田玉鹏教授，主要从事小分子荧光探针的生物学功能应用研究。2019年博士毕业后就职于安庆师范大学专任教师岗位，主要从事小分子荧光探针诊疗应用和天然产物多糖的生物学功能应用研究以及师范生教学

能力提升培养研究；作为指导教师，指导研究生参加互联网+、大学生创新创业年会、“田家炳”杯全国教育硕士教学技能大赛等多项比赛并获奖；主持安徽省高校自然科学类研究重点多项安徽省重点实验室基金，参与国家自然科学基金、安徽省重点教学研究项目。在《Sens. Actuators B-Chem.》（中科院分区 1 区 Top 期刊），《Chem. Sci.》，《Theranostics》，《Inorg. Chem.》，《Chem. Eng. J.》，J. Mater. Chem. B., 和 Int. J. Biol. Macromol 等知名国际期刊上发表 SCI 论文 20 余篇；在 CSCD 核心期刊《植物学报》发表论文 1 篇；获得国家专利 3 项。

一、主讲课程

本科生：《生物化学》、《生物教学论》、《生化分离与分析技术》

研究生：《生物教育测量与评价》、《生物实验教学研究》

二、工作经历

2023.01—至今 安庆师范大学生命科学学院 副教授讲师、研究生秘书及党支部书记

2019.07—2022.12 安庆师范大学生命科学学院 讲师、研究生辅导员及党支部书记

三、荣获奖励

获得的教学表彰/奖励：

国家级（2项）

[1] 2022年，全国“田家炳杯”全日制教育硕士学科教学（生物）专业教学技能大赛，全国教育专业学位研究生指导委员会，优秀指导教师奖；

[2] 2021年，第十四届全国大学生创新创业年会，教育部，优秀指导教师奖；

省部级（2项）

[3] 2022年，安徽省新时代育人质量工程省级研究生优秀辅导员(2022yxfdy033)，省教育厅；

[4] 2022年，“引领、创新、实践”三位一体生态学研究生人才培养模式的探索（2022jxcgjy161），安徽省教学成果奖（研究生育人成果）三等奖，省教育

厅；

指导学生学科竞赛获奖：

国家级（3项）

[5] 2022年，全国“田家炳杯”全日制教育硕士学科教学（生物）专业教学技能大赛，**全国二等奖，教育部；**

[6] 2021年，全国大学生创新创业年会“最佳创意项目”（排名18），**教育部；**

[7] 2021年，全国大学生创新创业年会“改革成果项目”，**教育部；**

省部级（5项）

[8] 2022年，第八届安徽省“互联网+”大学生创新创业大赛**金奖；**

[9] 2021年，第七届安徽省“互联网+”大学生创新创业大赛**银奖；**

[10]2021年，第七届安徽省“互联网+”大学生创新创业大赛**铜奖；**

[11]2021年，安徽省大学生生物标本制作大赛**三等奖；**

[12]2020年，安徽省大学生食品设计创新大赛**三等奖；**

四、学术研究课题

[1] 安徽省重点实验室开发基金，Wz2021003，大别山茶区茶多糖的提取及生物活性分析，2021/1-2021/12，2万元，结题，主持。

[2] 安徽省重点实验室开发基金，Wsz2022006，新型环金属Pt(II)配合物通过抑制NF- κ B介导耐药性的联合抗癌机制研究，2022/1-2023/12，4万元，在研，主持。

[3] 安徽省教育厅自然科学研究重点项目，2022AH051026，皖西南茶多糖调节ROS/NLPR3干预LPS诱导肠道粘膜屏障炎性损伤机制研究，2022/1-2024/12，10万元，在研，主持

五、成果

发表主要科研论文：

[1] Lijun Xiang, Yuqing Sun, Yong Wang*, Lin Sun, Jianan Wu, Kexin Li, Longjiao

Zhou, **Mingzhu Zhang***; Engineered lanthanide-based nanomaterials as a novel bio-probe for *in vivo* dual-modal imaging, *Journal of Luminescence*, 2023, 261,119908. (通讯作者)

[2] **张明珠**, 秦华光, 穆丹, 杨龙宇, 李虎, 岂泽华, 王玉玺, 张永成, 叶利利, 殷文晶, 王树元, 饶玉春*, 吴彦*, 茶多糖的抗氧化活性及对细胞氧化损伤的保护机制, *植物学报* **2022**, 57 (4): 444–456.

[3] **Mingzhu Zhang**, Yu Shen; Xu Cheng, Longyu Yang, Hu Li, Yupeng Tian, Xiaohe Tian*; Engineering a tumor-specific and mitochondria targeted fluorescent probe for modulated autophagy and exploited anti-cancer therapy, *Sensors and Actuators: B. Chemical*, **2022**, 353 131178.

[4] **张明珠**, 穆丹, 吴彦. 课程思政在师范专业生物化学教学中的实施路径探索. *科教文汇*, **2021**, 53: 113-115.

[5] **Mingzhu Zhang**, Xiaohe Tian, Ya Wang, Dandan Wan, Wan Li, Lei Chen, Wenjun Pan, ShomailaMehmood, Yan Chen*, Immunomodulating activity of the polysaccharide TLH-3 from *Tricholomalobayense* in RAW264.7 macrophages. *International Journal Biological Macromolecules* **2018**, 107, 2679–2685.

[6] **Mingzhu Zhang**, Wei Du, Xiaohe Tian, Ruilong Zhang, Meng Zhao, Hongping Zhou, Yaqi Ding, Lin Li, Jieying Wu, Yupeng Tian*, Real-time noninvasive monitoring cell mortality using a two-photon emissive probe based on quaternary ammonium, *Journal of Materials Chemistry B* **2018**, 6, 4417–4421.

[7] **Mingzhu Zhang**, Rin Su, Qiong Zhang, Lei Hu, Xiaohe Tian, Yan Chen, Hongping Zhou, Jieying Wu, Yupeng Tian*, Ultra-bright intercellular lipids pseudo di-BODIPY probe with low molecular weight, high quantum yield and large two-photon action cross-sections, *Sensors and Actuators B: Chemica* **2018**, 261, 161–168.

[8] Yingzhong Zhu†, **Mingzhu Zhang†**, Yupeng Tian, Xiaohe Tian*, NF-κB hijacking theranostic Pt(II) complex: a new avenue in cancer therapy. *Theranostics* **2019**, 9 (8), 2158–2166.

[9] Qiong Zhang#, **Mingzhu Zhang#**, Hui Wang, Xiaohe Tian, Wen Ma, Lei Luo,

Jieying Wu, Hongping Zhou, Shengli Li, Yupeng Tian. A series of two-photon absorption organotin (IV) cyano carboxylated derivatives for targeting nuclear and visualization of anticancer activities. *J. Inorg. Biochem.* **2019**, 192,1 - 6.

[10]Xiao Sun#, **Mingzhu Zhang**#, Ruohong Due, Xiaojia Zheng, Caiguo Tang, Yiqun Wu, Jiakai He, Wei Huang, Yuanyin Wang, Zhiyuan Zhang. A polyethyleneimine-driven self-assembled nanoplatforM for fluorescence and MR dual-mode imaging guided cancer chemotherapy. *Chem. Eng. J.* **2018**, 350, 69 - 78.

[11]Shuyi Chen#, **Mingzhu Zhang**#, Chuanzhen Zhu, Huanxuan Lu, Meng Zhao, Xiaohe Tian, Qiong Zhang, Senio Campos De Souza, Fang Rong, Hongping Zhou, Jieying Wu , Yupeng Tian. Rational design of two-photon absorbing dicyanomethylene-4H-chromene derivatives and their application in bioimaging. *Dyes Pigments*, **2018**, 148, 429-436.

[12]Dandan Liu#, **Mingzhu Zhang**#, Wei Du, Lei Hu, Fei Li, Xiaohe Tian,* Aidong Wang, Qiong Zhang, Zhongping Zhang, Jieying Wu, and Yupeng Tian. A Series of Zn(II) Terpyridine-Based Nitrate Complexes as Two-Photon Fluorescent Probe for Identifying Apoptotic and Living Cells via Subcellular Immigration. *Inorg. Chem.* **2018**, 57 (13), 7676 - 7683.

[13]Jiaxi Xu, Ting Hu, **Mingzhu Zhang**, Pei Feng, Xin Wang, Xu Cheng*, Rupei Tang. A sequentially responsive nanogel via Pt(IV) crosslinking for overcoming GSH-mediated platinum resistance. *J. Colloid Interf. Sci.* **2021**, 601 85–97

[14]Xiaohe Tian, Yingzhong Zhu, **Mingzhu Zhang**, Lei Luo, Jieying Wu, Hongping Zhou, Lijuan Guan, Giuseppe Battaglia, Yupeng Tian. Localization Matters: A Nuclear Targeting Two-Photon Absorption Iridium Complex Induced Intracellular Immigration and Dual-damage in Photon Dynamic Therapy. *Chem. Commun.* **2017**, 53, 3303-3306.

[15]Yingzhong Zhu, Wei Du, **Mingzhu Zhang**, Ying Xu, Leilei Song, Qiong Zhang, Xiaohe Tian, Hongping Zhou, Jieying Wu and Yupeng Tian. A series of water-soluble A- π -A typological indolium derivatives with two-photon properties for rapidly detecting HSO₃⁻/SO₃²⁻ in living cells, *J. Mater. Chem. B*, 2017, 5, 3862-3869

[16]Xiaohe Tian, Yingzhong Zhu, **Mingzhu Zhang**, Jingyun Tan, Qiong

Zhang, Xingyu Wang, Jiayang Yang, Hongping Zhou, Jieying Wu, Yupeng Tian. Mild acidic-enhanced mitochondrial-targeting by a neutral thiophene based terpyridine molecule with large two-photon action cross-section. *Dyes and Pigments*. 2017, 139, 431-439.

[17] Lei Hu, Hui Wang, Xin Xu, **Mingzhu Zhang**, Xiaohe Tian, Jieying Wu, Hongping Zhou, Jiayang Yang, Yupeng Tian. A small-molecule with large two-photon action cross-section serves as the membrane-permeable probe for live cells imaging and bacteria viability. *Sens. Actuators B-Chem.* 2017, 241, 1082-1089.

[18] Rongting Guan, Ziqi Zhou, **Mingzhu Zhang**, Hui Liu, Wei Du, Xiaohe Tian, Qiong Zhang, Hongping Zhou, Jieying Wu and Yupeng Tian. Organotin(IV) carboxylate complexes containing polyether oxygen chains with two-photon absorption in the near infrared region and their anticancer activity. *Dyes and Pigments*, 2018, 158, 428–437.

[19] Dajun Wu, Bin Fang, **Mingzhu Zhang**, Wei Du, Jun Zhang, Xiaohe Tian, Qiong Zhang, Hongping Zhou, Jieying Wu, Yupeng Tian. D-A type phenanthridine derivatives with aggregation-induced enhanced emission and third-order nonlinear optical properties for bioimaging. *Dyes and Pigments*, **2018**, 159, 142–150.

[20] Xiaohe Tian, Hui Wang, Qiong Zhang, **Mingzhu Zhang** et al.. Double labelling of intracellular mitochondria and nucleolus using thiophene pyridium salt with high quantum yield as biosensor and its application in stimulated emission depletion nanoscopy. *Anal. Chim. Acta.* **2018**, 1008, 82-89.

[21] Sajid Hussain, Wei Du, **Mingzhu Zhang**, Bin Fang, Guocui Zhang, Su Rina, Nan Keqiana, Qiong Zhang, Xiaohe Tian, Yan Chen, Yupeng Tian. A series of two-photon absorption pyridinium sulfonate inner salts targeting endoplasmic reticulum (ER), inducing cellular stress and mitochondria-mediated apoptosis in cancer cells. *J. Mater. Chem. B*, 2018, 6, 1943-1950.

[22] Yu Shen, Tao Shao, Bin Fang, Wei Du, **Mingzhu Zhang**, Jiejie Liu, Tianyan Liu, Xiaohe Tian, Qiong Zhang, Aidong Wang, Jiayang Yang, Jieying Wu

and Yupeng Tian. Visualization of mitochondrial DNA in living cells with super-resolution microscopy using thiophene-based terpyridine Zn(II) complexes. Chem. Commun. 2018, 54, 11288 - 11291.

[23] Xiaohe Tian, Tianyan Liu, Bing Fang, Aidong Wang, **Mingzhu Zhang**, Sajid Hussain, Lei Luo, Ruilong Zhang, Qiong Zhang, Jieying Wu , Giuseppe B, Lin Li , Zhongping Zhang, Yupeng Tian. NeuN-Specific Fluorescent Probe Revealing Neuronal Nuclei Protein and Nuclear Acids Association in Living Neurons under STED Nanoscopy. ACS Appl. Mater. Interfaces, 2018, 10, 31959 - 31964.

[24] Wei Du, Hui Wang, Yingzhong Zhu, Xiaohe Tian, **Mingzhu Zhang**, Qiong Zhang, Senio Campos De Souza, Aidong Wang, Hongping Zhou, Zhongping Zhang, Jieying Wu, and Yupeng Tian. Two-photon Fluorescent Terpyridine Derivatives Containing Quaternary Ammonium for Specific Recognizing Ribosome RNA in Living Cells. ACS Appl. Mater. Interfaces, 2017, 9, 31424 - 31432.

授权专利:

- [1] 田肖和; **张明珠**; 沙基德·侯赛因; 祝英忠; 李飞; 李胜利; 吴杰颖; 周虹屏; 田玉鹏; 一种线粒体双光子荧光粘度探针及其制备方法, 2017-3-15, 中国, ZL 2016 1 0927295.6 (专利)
- [2] 田肖和; 祝英忠; **张明珠**; 罗坤; 吴杰颖; 田玉鹏; 周虹屏; 杨家祥; 李飞; 李胜利; 一种环金属铂配合物及其制备方法, 2016-5-31, 中国, ZL 2016 1 0389730.4(专利)
- [3] 田肖和; **祝英忠**; 张明珠; 吴杰颖; 田玉鹏; 周虹屏; 杨家祥; 李胜利; 一种具有双重光动力治疗效果的光敏剂及其制备方法, 2016-12-20, 中国, ZL 2016 1N1181323.0(专利)