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**教育经历：**

2008.9–2014.6, 武汉大学 化学与分子科学学院, 分析化学, 博士

2004.9–2008.6, 中国海洋大学 化学化工学院, 海洋化学 (基地班), 学士

**社会兼职：**

湖北省回国科技人员创业促进会理事、中国生物材料学会会员、纳米生物材料学会会员、Materials Science and Engineering 等多个 SCI 杂志的审稿专家

**招收研究生学科及方向：**生物学学术型硕士、生物与医药工程硕士

**从事研究的学科专业领域及主要研究方向：**

(1) 面向肿瘤等重大疾病的细胞与基因治疗药物递送体系、诊疗一体化纳米生物医用材料构建及研究；(2) 生物医学微流控芯片技术的研究与应用；(3) 细胞免疫治疗与肠道微生态

**主持或参加科研项目：**

(1) 主持国家自然科学基金青年项目 (抗活性氧自由基的载白藜芦醇  $\text{TiO}_2$  纳米管促进骨修复研究, 31700824)。

(2) 主持湖北省自然科学基金青年项目 (钛表面具有促进骨修复功能的药物纳米涂层的构建及机制研究, 2017CFB191)。

(3) 主持湖北省教育厅中青年人才项目 (负载干细胞外泌体的水凝胶用于治疗子宫内膜炎及分子机制研究, Q20201110)。

(4) 主持武汉大学生物医学分析化学教育部重点实验室开放课题 (基于镍掺杂  $\text{TiO}_2$  纳米管阵列复合电极构建无酶葡萄糖传感器及其应用, ACBM2017007)。

(5) 主持中国博士后科学基金面上项目 (钛表面负载双元素的纳米线阵列的构建及生物性能研究, 2015M572211)

(6) 参与国家自然科学基金面上项目 (RGD 多肽水凝胶的研制及其在青光眼滤过术后抗瘢痕化的作用机制, 81770920)

已发表的主要论文:

- (1) Rui Yang<sup>#</sup>, Yurong Yan<sup>#</sup>, Zheng Wu, Yong Wei, Hao Song, Lian Zhu, Chenchen Zhao, **Na Xu\***, Jijiang Fu\*, Kaifu Huo\*, Resveratrol-loaded titania nanotube coatings promote osteogenesis and inhibit inflammation through reducing the reactive oxygen species production via regulation of NF- $\kappa$ B signaling pathway, *Materials Science & Engineering C*, 2021,131, 112513.(通讯作者)
- (2) Baoji Chen, Ping Wu, Liang Liang\*, Chenchen Zhao, Zheng Wang, Liye He, Ran Zhang, **Na Xu\***. Inhibited effect of an RGD peptide hydrogel on the expression of  $\beta$ 1-integrin, FAK, and Akt in Tenon's capsule fibroblasts. *J Biomed Mater Res*. 2021; 1-9. (通讯作者)
- (3) Juncheng He, Lirong Zeng, Junan Gong, Yalun He, Xiong Liu, Ling Zhang, **Na Xu\***, Qiong Wang\*. Effects of two contrasting dietary polysaccharides and tannic acid on the digestive and physicochemical properties of wheat starch, *Food Sci Nutr*. 2021;9:5800-5808.(通讯作者)
- (4) Chenchen Zhao, Lian Zhu, Zheng Wu, Rui Yang, Liang Liang, **Na Xu\***. Resveratrol-loaded peptide-hydrogels inhibit scar formation in wound healing through suppressing inflammation. *Regenerative Biomaterials*, 2020, 7(1): 99-107. (通讯作者)
- (5) **Na Xu**, Jijiang Fu, Lingzhou Zhao,\* Paul K. Chu, and Kaifu Huo\*. Biofunctional Elements Incorporated Nano/Microstructured Coatings on Titanium Implants with Enhanced Osteogenic and Antibacterial Performance, *Advanced Healthcare Materials*. 2020, 9(23):2000681. (第一作者)
- (6) Ting Zhou, Yurong Yan, Chenchen Zhao, Yao Xu, Qiong Wang\*, **Na Xu\***. Resveratrol improves osteogenic differentiation of senescent bone mesenchymal stem cells through inhibiting endogenous reactive oxygen species production via AMPK activation. *Redox Report*, 2019, 24(1):62-69. (通讯作者)
- (7) Yurong Yan, Yong Wei, Rui Yang, Lu Xia, Chenchen Zhao, Biao Gao, Xuming Zhang, Jijiang Fu, Qiong Wang\*, **Na Xu\***. Enhanced osteogenic differentiation of bone mesenchymal stem cells on magnesium-incorporated titania nanotube arrays. *Colloids and Surfaces B: Biointerfaces*, 2019 (179): 309-316. (通讯作者)
- (8) **Na Xu**<sup>#</sup>, Hao Cheng<sup>#</sup>, Jiangwen Xu, Feng Li, Biao Gao, ZiLi, Chenghao Gao, Kaifu Huo, Jijiang Fu\*, Wei Xiong\*. Silver-loaded nanotubular structures enhanced bactericidal efficiency of antibiotics with synergistic effect in vitro and in vivo, *International Journal of Nanomedicine*, 2017, 12: 731-743. (第一作者)

(9) Jiangwen Xu, **Na Xu\***, Ting Zhou, Xiang Xiao, Biao Gao, Jijiang Fu\*, Tongcun Zhang, Polydopamine coatings embedded with silver nanoparticles on nanostructured titania for long-lasting antibacterial effect, *Surface & Coatings Technology*, 2017, 320: 608-613. (通讯作者)

(10) Jiangwen Xu<sup>#</sup>, **Na Xu<sup>#</sup>**, Xuming Zhang, Ping Xu, Biao Gao\*, Xiang Peng, Sivaprasad Mooni, Yong Li, Jijiang Fu\*, Kaifu Huo, Phase separation induced rhizobia-like Ni nanoparticles and TiO<sub>2</sub> nanowires composite arrays for enzyme-free glucose sensor, *Sensors and Actuators B: Chemical*, 2017, 244: 38-46. (共第一作者)

(11) Jiangwen Xu<sup>#</sup>, **Na Xu<sup>#</sup>**, Xuming Zhang\*, Biao Gao, Ben Zhang, Xiang Peng, Jijiang Fu\*, Paul K. Chu, Kaifu Huo. In situ fabrication of Ni nanoparticles on N-doped TiO<sub>2</sub> nanowire arrays by nitridation of NiTiO<sub>3</sub> for highly sensitive and enzyme-free glucose sensing, 2017, *Journal of Materials Chemistry B*, 2017, 5, 1779-1786. (共第一作者)

(12) Min Xiao<sup>#</sup>, **Na Xu<sup>#</sup>**, Cheng Wang, Dai-Wen Pang, Zhi-Ling Zhang\*, Dynamic monitoring of membrane nanotubes formation induced by vaccinia virus on a high throughput microfluidic chip, *Scientific Reports*, 2017, 7: 44835. (共第一作者)

(13) **Na Xu**, Ji Wang, Zhen-Feng Zhang, Dai-Wen Pang, Han-Zhong Wang, Zhi-Ling Zhang\*, Anisotropic cell-to-cell spread of vaccinia virus on microgrooved substrate, *Biomaterials*, 2014, 35(19): 5049-5055. (第一作者)

3. **Na Xu**, Zhen-Feng Zhang, Li Wang, Bo Gao, Dai-Wen Pang, Han-Zhong Wang, Zhi-Ling Zhang\*, A microfluidic platform for real-time and in situ monitoring of virus infection process, *Biomicrofluidics*, 2012, 6 (3): 034122. (共第一作者)

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