教师简介

姓名：文作瑞

学历：博士研究生

职称：讲师（硕士生导师）

研究方向：自供能传感、光电化学传感、
食品安全检测、环境污染物检测、
功能纳米材料、便携式检测器件

通讯方式：wenzr@ahstu.edu.cn

个人学习经历：

博士：江苏大学，农业工程，2018~2022

硕士：海南师范大学，化学，2015~2018

学士：淮北师范大学，材料化学，2011~2015

个人工作经历：

2024.11~至今：安徽科技学院，食品科学与工程学院，讲师

2023.01~2024.11：安徽科技学院，食品科学与工程学院，助教

主讲课程：

《物理化学》、《食品无损检测》、《功能性食品》、《食品前沿技术》、《文献检索与科技写作》

科研项目：

1、国家自然科学基金委员会，青年项目，32402240，多组分光助自供能传感器的构建及在食用菌中农残响应机制，2025.01.01-2027.12.31, 30 万元，在研，主持；

2、安徽科技学院，人才项目，200333，光助-自供能传感平台的开发及在果蔬农残检测中的应用，2023.01.06-2031.01.05, 30 万元，在研，主持；

3、芜湖市绿色食品产业研究院有限公司，横向项目，LSSPCYYJY-2024KF-02，

多目标物自供能传感器构建及在蓝莓农残快检中机制研究，2024.11.01-2026.06.30，8 万元，在研，主持；

4、国家自然科学基金委员会，面上项目，22174055，光-电致变色可视化传感阵列构建及同时检测典型霉菌毒素应用研究，2022.01.01-2025.12.31，60 万元，在研，参与（排名第二）。

5、国家自然科学基金委员会，面上项目，21976071，多色 MXene 量子点标记的磁控荧光适配体传感体系构建及黄曲霉毒素亚型同时检测研究，2020.01-2023.12，65 万元，结题，参与；

6、江苏省财政厅，纵向项目，CX(20)2034，基于微流控系统的非洲猪瘟病毒快速检测技术研究，2020.08-2023.07，130 万元，结题，参与；

7、国家自然科学基金委员会，面上项目，21665007，多维功能化石墨烯复合材料电化学适配体传感器检测海洋致病细菌的研究，2017.01-2020.12，42 万元，结题，参与。

代表性论文：

1. **Wen Zuorui**, Qin Peng, Wan Cheng, Peng Gang, Ding Lijun, Yang Guoqing, Wang Kun*, A novel dual-signal amplification photofuel cells aptasensor for atrazine ultrasensitive detection in grapes and tomatoes, *Sensors and Actuators B: Chemical*, **2024**, 400, 134940. (SCI, 中科院一区)
2. Zhu Weiran, Xiao Liting, Yuan Ruishuang, Lin Yuhang, Wang Tianshuo, **Wen Zuorui**, Ding Lijun, Wang Kun*, Isothermal nucleic acid amplification combined with gold nanoparticles assisted electrochemical impedance for the sensitive and efficient porcine delta coronavirus detection, *Talanta*, **2024**, 266, 125109. (SCI, 中科院一区)
3. **Wen Zuorui**, Ding Lijun, Zhang Meng, You Fuheng, Yuan Ruishuang, Wei Jie, Qian Jing, Wang Kun*, A membrane/mediator-free high-power density dual-photoelectrode PFC aptasensor for lincomycin detection in milk and chicken, *Analytica Chimica Acta*, **2023**, 1245: 340880. (SCI, 中科院一区)
4. Zhu Weiran, **Wen Zuorui**, Wang Tianshuo, Lin Yuhang, Ding Lijun, Wang Kun*, Controllable preparation of photosensitive nanozymes based on metal-organic

frameworks for peroxidase-mimicking activities: Realizing integrated atrazine visual detection and photocatalytic degradation, *ACS Applied Nano Materials*, **2023**, 6, 20052-20061. (SCI, 中科院二区)

5. Zhu Weiran, Chen Chen, **Wen Zuorui**, Ding Lijun, Wei Jie, Qian Jing, Wang Kun*, Coordination construction of the dual superoxide dismutase catalytic center nanozyme: synergistic contribution of the site, structure, and electron transfer pathway, *Inorganic Chemistry*, **2023**, 62, 8960-8968. (SCI, 中科院二区)
6. You Fuheng, **Wen Zuorui**, Yuan Ruishuang, Qian Jing, Long Lingliang, Wang Kun*, Sensitive and stable detection of deoxynivalenol based on electrochemiluminescence aptasensor enhanced by 0D/2D homojunction effect in food analysis, *Food Chemistry*, **2023**, 403, 134397. (SCI, 中科院一区)
7. Ding Lijun, Zhang Zhenzhen, **Wen Zuorui**, You Fuheng, Hao Nan, Wei Jie, Qian Jing, Wang Kun*, 2D/2D heterojunction of $ZnIn_2S_4$/N-doped graphene nanosheets for off-type high-performance photoelectrochemical aptasensor, *Sensors and Actuators B: Chemical*, **2022**, 367, 132033. (SCI, 中科院一区)
8. **Wen Zuorui**, Zhu Weiran, You Fuheng, Yuan ruishuang, Ding Lijun, Hao Nan, Wei Jie, Wang Kun*, Ultrasensitive photoelectrochemical aptasensor for carbendazim detection based on in-situ constructing Schottky junction via photoreducing Pd nanoparticles onto CdS microsphere, *Biosensors and Bioelectronics*, **2022**, 203, 114036. (SCI, 中科院一区)
9. **Wen Zuorui**, Ding Lijun, Zhu Weiran, You Fuheng, Wang Tianshuo, Hao Nan, Wei Jie, Wang Kun*, Enhanced photoelectrochemical aptasensing for sensitive detection of diazinon pesticide used N-hydroxyphthalimide as an effective hole mediator, *Sensors and Actuators B-Chemical*, **2022**, 367, 132101. (SCI, 中科院一区)
10. Zhu Weiran, Chen Chen, **Wen Zuorui**, Ding Lijun, Wei Jie, Qian Jing, Hao Nan, Wang Kun*, Simulation design of a binding-pocket structure of natural enzymes in MOFs for enhanced catalytic activity, *Chemical Communications*, **2022**, 58, 6745-6748. (SCI, 中科院二区)
11. You Fuheng, **Wen Zuorui**, Yuan Ruishuang, Ding Lijun, Wei Jie, Qian Jing,

Long Lingliang, Wang Kun*, Selective and ultrasensitive detection of ciprofloxacin in milk using a photoelectrochemical aptasensor based on $Ti_3C_2/Bi_4VO_8Br/TiO_2$ nanocomposite, *Journal of Electroanalytical Chemistry*, **2022**, 914, 116285. (SCI, 中科院三区)

12. Yuan Ruishuang, Ding Lijun, You Fuheng, **Wen Zuorui**, Liu Qian, Wang Kun*, B, N co-doped graphene synergistic catalyzed ZnO quantum dots with amplified cathodic electrochemiluminescence for fabricating microcystin-LR aptasensor, *Sensors and Actuators B-Chemical*, **2021**, 349, 130795. (SCI, 中科院一区)
13. Liu Qian, Shi Tingyan, Cheng Yong, **Wen Zuorui**, Ding Caifeng, Li Yaqi, Wang Kun*, Amplified photocurrent signal for fabricating photoelectrochemical sulfadimethoxine aptasensor based on carbon nitride photosensitization with visible/near-infrared light responsive zinc phthalocyanine, *Journal of Hazardous Materials*, **2021**, 406, 124749. (SCI, 中科院一区)
14. You Fuheng, Wei Jie, Cheng Yong, **Wen Zuorui**, Ding Caifeng, Hao Nan, Wang Kun*, Selective and sensitive photoelectrochemical aptasensor for streptomycin detection based on Bi_4VO_8Br/Ti_3C_2 nanohybrids, *Journal of Hazardous Materials*, **2021**, 414, 125539. (SCI, 中科院一区)
15. Yuan Ruishuang, **Wen Zuorui**, You Fuheng, Jiang Ding, Wang Kun*, Catalysis-induced performance enhancement of an electrochemical microcystin-LR aptasensor based on cobalt-based oxide on a B, N co-doped graphene hydrogel, *Analyst*, **2021**, 146, 2574-2580. (SCI, 中科院二区)
16. Ding Lijun, Wei Jie, Qiu Yu, Wang Yuan, **Wen Zuorui**, Qian Jing, Hao Nan, Ding Caifeng, Li Yaqi, Wang Kun*, One-step hydrothermal synthesis of telluride molybdenum/reduced graphene oxide with Schottky barrier for fabricating label-free photoelectrochemical profenofos aptasensor, *Chemical Engineering Journal*, **2021**, 407, 127213. (SCI, 中科院一区)
17. Wang Yuan, Liu Qian, Wei Jie, Dai Zhen, Ding Lijun, Yuan Ruishuang, **Wen Zuorui**, Wang Kun*, Visible light-driven photoelectrochemical ampicillin aptasensor based on an artificial Z-scheme constructed from $Ru(bpy)_3^{2+}$-sensitized

BiOI microspheres, *Biosensors and Bioelectronics*, **2021**, 173, 112771. (SCI, 中科院一区)

18. You Fuheng, Wei Jie, Cheng Yong, **Wen Zuorui**, Ding Caifeng, Guo Yingshu, Wang Kun*, A sensitive and stable visible-light-driven photoelectrochemical aptasensor for determination of oxytetracycline in tomato samples, *Journal of Hazardous Materials*, 2020, 398, 122944. (SCI, 中科院一区)
19. Xu Yuhuan, **Wen Zuorui**, Wang Tianshuo, Zhang Meng, Ding Caifeng, Guo Yingshu, Jiang Ding, Wang Kun*, Ternary Z-scheme heterojunction of Bi SPR-promoted $BiVO_4$/g-C_3N_4 with effectively boosted photoelectrochemical activity for constructing oxytetracycline aptasensor, *Biosensors and Bioelectronics*, **2020**, 166, 112453. (SCI, 中科院一区)
20. Zhan Zhenzhen, Zhang Meng, Xu Yuhuan, **Wen Zuorui**, Ding Caifeng, Guo Yingshu, Hao Nan, Wang Kun*, Bi^{3+} engineered black anatase titania coupled with graphene for effective tobramycin photoelectrochemical detection, *Sensors and Actuators B-Chemical*, **2020**, 321, 128464. (SCI, 中科院一区)
21. Zhang Meng, Zhang Zhenzhen, Xu Yuhuan, **Wen Zuorui**, Ding Caifeng, Guo Yingshu, Wang Kun*, A novel self-powered aptasensor for digoxin monitoring based on the dual-photoelectrode membrane/mediator-free photofuel cell, *Biosensors and Bioelectronics*, **2020**, 156, 112135. (SCI, 中科院一区)
22. Xu Yuhuan, Ding Lijun, **Wen Zuorui**, Zhang Meng, Jiang Ding, Ding Caifeng, Wang Kun*, Core-shell $LaFeO_3$@g-C_3N_4 p-n heterostructure with improved photoelectrochemical performance for fabricating streptomycin aptasensor, *Applied Surface Science*, **2020**, 511, 145571. (SCI, 中科院一区)
23. Ding Lijun, Jiang Ding, **Wen Zuorui**, Xu Yuhuan, Guo Yingshu, Ding Caifeng, Wang Kun*, Ultrasensitive and visible light-responsive photoelectrochemical aptasensor for edifenphos based on Zinc phthalocyanine sensitized MoS_2 nanosheets, *Biosensors and Bioelectronics*, **2020**, 150, 111867. (SCI, 中科院一区)
24. Shi Tingyan, **Wen Zuorui**, Ding Lijun, Liu Qian, Guo Yingshu, Ding Caifeng, Wang Kun*, Visible/near-infrared light response VOPc/carbon nitride nanocomposites: VOPc sensitizing carbon nitride to improve photo-to-current

conversion efficiency for fabricating photoelectrochemical diclofenac aptasensor, *Sensors and Actuators B-Chemical*, **2019**, 299, 126834. (SCI, 中科院一区)

25. Ge Lan, Liu Qian, Jiang Ding, Ding Lijun, **Wen Zuorui**, Guo Yingshu, Ding Caifeng, Wang Kun*, Oxygen vacancy enhanced photoelectrochemical performance of Bi_2MoO_6/B, N co-doped graphene for fabricating lincomycin aptasensor, *Biosensors and Bioelectronics*, **2019**, 135, 145-152. (SCI, 中科院一区)
26. Niu Xueliang, **Wen Zuorui**, Li Xiaobao, Zhao Wenshu, Li Xiaoyan, Huang Yaqi, Li Qiutong, Li Guangjiu, Sun Wei*, Fabrication of graphene and gold nanoparticle modified acupuncture needle electrode and its application in rutin analysis, *Sensors and Actuators B-Chemical*, **2018**, 255, 471-477. (SCI, 中科院一区)
27. **Wen Zuorui**, Niu Xueliang, Li Xiaoyan, Zhao Wenshu, Li Xiaobao, Ma Dongxue, Deng Ying, Sun Xiaohuan, Sun Wei*, Application of nanosized $LiFePO_4$ modified electrode to electrochemical sensor and biosensor. *Current Analytical Chemistry*, **2018**, 14, 452-457.
28. **Wen Zuorui**, Li Xiaoyan, Niu Xueliang, Zhao Wenshu, Cheng Yong, Ma Qianwen, Li Xiaobao, Li Guangjiu, Sun Wei*, Application of gold nanoparticle and three-dimensional graphene based electrode for sensitive voltammetric analysis of luteolin. *International Journal of Electrochemical Science*, **2017**, 12, 4847-4855.

代表性著作：

授权专利：

1、王坤，朱巍然，陈晨，文作瑞，一种具有光调节类过氧化物酶活性MOFs的制备方法及应用，2024.06.07，授权。

获奖情况：