



# 安全检测与分析

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## 二、代表性成果 / Representative Achievements

### 1. 项目

国家自然科学基金，

1) 氧化还原电催化

3) 基于单线态氧预氧化转化的氯代芳香化合物化学发光分析方法研究 (20977042)

4) 基于光学的纳米材料生物传感器研制及检测规律及细胞毒性评价体系研究 (22270164)

5) 壳介导银纳米银量子点调控与机制研究 (21703090)

6) 熔融盐法制备室磷光碳聚合物点及其在生物传感中的应用 (51973083)

7) 双发射碳点/铜纳米簇比率荧光探针的制备及其对细胞内温度的测定 (51502115)

### 1. 学术论文

### 3. 专利

1) 王婵, 贺依民, 宋启军, 黄建锋, 徐雅兰, 姜涛, 吴涛, ENHANCED YELLOW-EMITTING CARBON DOTS AND ITS

PREPARATION METHOD AND APPLICATION, US 11760928B2.

2) 宋启军, 余信真, 基于传统光酶选择性的氧化还原转化的方法, 201710067532.7

3) 宋启军, 赵媛, 一种基于氧化还原配合物荧光探针检测葡萄糖的方法, CN201510018165.1

4) C. Wang, Y. He, Y. Xu, L. Sui, T. Jiang, G. Ran, and Q. Song, "Light on" fluorescence carbon dots with intramolecular hydrogen bond-regulated coplanarization for cell imaging and temperature sensing, J. Mater. Chem. A, 2022, 10, 2085-2095.

5) W. Gu, W. Zheng, H. Liu, Y. Zhao, Electroactive Cu2O nanocubes engineered electrochemical sensor for H2S detection, Analytica Chimica Acta, 1150 (2021), 3382-3390.

6) C. Fu, M. Zhao, X. Chen, G. Sun, C. Wang, Q. Song, Unraveling the dual defect effects of ZnO for methyl orange degradation and H2O2 generation, Applied Catalysis B: Environmental 332 (2023) 12275.

7) Y. Zhao, Y. Yang, Y. Sun, L. Cui, F. Jiang, Z. Zheng, J. Zhang, Q. Song, and Chulan Xu, Shell-enclosed Au nanoparticles with tunable electroactivity for specific dual disease biomarkers detection, Biosensors & Bioelectronics, 2018, 99, 193-200.

8) Y. Zhao, Y. Yang, L. Cui, F. Jiang, Z. Zheng, J. Zhang, Q. Song, and Chulan Xu, Shell-enclosed Au nanoparticles with tunable electroactivity for specific dual disease biomarkers detection, Biosensors & Bioelectronics, 2018, 99, 193-200.