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教育背景及
工作经历

2006.09-2010.06 吉林大学，生物医学工程专业，工学学士
2010.09-2015.06 吉林大学，物理电子学，工学博士
2015.08-2017.12 大连海事大学，物理系，讲师
2018.01 至今 大连海事大学，理学院，副教授/硕士生导师
2018.09-2019.09 美国加州大学河滨分校，化学系，访问学者

研究领域

稀土纳米光转换材料的光学性质及应用研究

代表性成果

论文类:

(1) Fabrication, photothermal conversion and temperature sensing of novel nanoplatform-hybrid nanocomposite of $\text{NaYF}_4:\text{Er}^{3+}, \text{Yb}^{3+}@\text{NaYF}_4$ and Au nanorods for photothermal therapy, *Mater. Res. Bull.*, 2019, 114, 148 (SCI)

(2) Mesoporous silica coating $\text{NaYF}_4:\text{Yb}, \text{Er}@\text{NaYF}_4$ upconversion nanoparticles loaded with ruthenium(II) complex nanoparticles: Fluorometric sensing and cellular imaging of temperature by upconversion and of oxygen by downconversion, *Microchim. Acta*, 2018, 185, 454 (SCI)

(3) A universal approach for calculating the Judd-Ofelt parameters of RE^{3+} in powdered phosphors and its application for the $\beta\text{-NaYF}_4:\text{Er}^{3+}/\text{Yb}^{3+}$ phosphor derived from auto-combustion-assisted fluoridation, *Phys.Chem.Chem.Phys.*, 2018, 20, 15876 (SCI)

- (4) Improved LRET-based detection characters of Cu^{2+} using sandwich structured $\text{NaYF}_4@\text{NaYF}_4:\text{Er}^{3+}/\text{Yb}^{3+}@\text{NaYF}_4$ nanoparticles as energy donor, *Sensors and Actuators B*, 2018, 257, 829 (SCI)
- (5) Temperature sensing, excitation power dependent fluorescence branching ratios, and photothermal conversion in $\text{NaYF}_4:\text{Er}^{3+}/\text{Yb}^{3+} @\text{NaYF}_4:\text{Tm}^{3+}/\text{Yb}^{3+}$ core-shell particles, *Opt. Mater.*, 2018, 8, 2 (SCI)
- (6) Concentration quenching of blue upconversion luminescence in $\text{Tm}^{3+}/\text{Yb}^{3+}$ co-doped $\text{Gd}_2(\text{WO}_4)_3$ phosphors under 980 and 808 nm excitation, *J. Alloy. Compd.* 2017, 709, 147 (SCI)
- (7) 808 nm laser induced photothermal effect on $\text{Sm}^{3+}/\text{Nd}^{3+}$ doped $\text{NaY}(\text{WO}_4)_2$ microstructures , *Sensors and Actuators B*, 2017, 240, 386 (SCI)
- (8) Remarkable fluorescence enhancement of upconversion composite film and its application on mercury sensing, *J. Rare. Earth.*, 2017, 35, 460 (SCI)
- (9) Paper-based upconversion fluorescence resonance energy transfer biosensor for sensitive detection of multiple cancer biomarkers, *Sci. Rep.*, 2016, 6, 23406 (SCI)
- (10) A novel upconversion, fluorescence resonance energy transfer biosensor (FRET) for sensitive detection of lead ions in human serum, *Nanoscale*, 2014, 6, 12573 (SCI)
- (11) $\text{NaYF}_4:\text{Yb},\text{Tm}$ nanocrystals and TiO_2 inverse opal composite films: A novel device for upconversion enhancement and solid-based sensing of avidin, *Nanoscale*, 2014, 6, 5859 (SCI)
- (12) A strategy for calibrating the actual quantum efficiency of quantum cutting in $\text{YVO}_4:\text{Bi}^{3+}(\text{Nd}^{3+}), \text{Yb}^{3+}$, *J. Appl. Phys.*, 2013, 113, 073101 (SCI)
- (13) Downconversion from visible to near infrared through multi-wavelength excitation in $\text{Er}^{3+}/\text{Yb}^{3+}$ co-doped NaYF_4 nanocrystals, *J. Appl. Phys.*, 2011, 110, 113113 (SCI)

代表性项目

- (1) 国家自然科学基金青年项目，11704056，基于局域场增强稀土上转换荧光探针的肿瘤标志物可视化检测研究，2018/01-2020/12，主持。
- (2) 中国博士后科学基金特别资助，2018T110212，高灵敏度上转换荧光微阵列探针在肺癌早期诊断中的应用，2018/06-2019/12，主持。
- (3) 辽宁省自然科学基金项目，2019MS029，基于多色荧光微流控装置的船舶压载水中细菌检测研究，2019/10-2021/9, 主持。
- (4) 中国博士后科学基金面上资助，2016M591420，增强型固态上转换荧光探针的制备及生物检测应用研究，2016/06-2018/12，主持。

其他

