



姓名 王逸超

教学职位 副教授

学院职位 硕士/博士生导师

邮箱 wangyc2020@dlmu.edu.cn

## 教育背景

兰州大学 博士学位

兰州大学 学士学位

## 研究领域

照明、显示用发光材料

第一性原理计算、密度泛函理论计算

纳米发光材料、稀土掺杂发光材料

## 代表性成果

近十年，在 Adv. Funct. Mater., Light: Science & Applications, Laser & Photonics Rev., Chem. Eng. J., ACS Sustain. Chem. Eng., Adv. Opt. Mater., J. Mater. Chem. C, Inorg. Chem., Ceram. Int., J. Phys. Chem. C, Dalton Trans. 等期刊发表学术论文 40 余篇，部分第一作者/通讯作者成果如下：

(1) Interstitial Solid Solution Design Breaks the Property Ceiling: Cr<sup>3+</sup> Doped Near-Infrared Phosphors with EQE Exceeding 50% and Zero-Thermal-Quenching Characteristics Adv. Funct. Mater. 2025, e08254.

(2) Pressure-Driven Eu<sup>2+</sup> Doped BaLi<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>N<sub>6</sub>: A New Color Tunable Narrow-Band Emission Phosphor for Spectroscopy and Pressure Sensor Applications, Advanced Functional Materials, 2001384, 2020.

(3) Customizable Superior Performance via Managing Defect and Self-Trapped Exciton Interactions in Zinc-Based Metal Halides for Multifunctional Applications Adv. Funct. Mater. 2025, e04715

(4) Promotion of efficiency and thermal stability by restraining dynamic energy migration based on the highly symmetric rigid structure in the n-UV excitation green emission garnet phosphors, Chemical Engineering Journal 381, 122528, 2020.

(5) Cr<sup>3+</sup>-Cr<sup>3+</sup> Ion Pair Induced Fast Energy Migration in Cr<sup>3+</sup> Doped Na-β-Al<sub>2</sub>O<sub>3</sub> Ultra-Wide Near-Infrared Phosphors for NIR Spectroscopy Application, Laser Photonics Rev. 2023, 2301039.

(6) A Cerium Doped Scandate Broad Orange-Red Emission Phosphor and its Energy Transfer-Dependent Concentration and Thermal Quenching Character, Inorganic Chemistry, 57, 14542-14553, 2018.

(7) Enhancing stability of  $\text{Eu}^{2+}$  in  $\text{La}_{10-x}\text{Sr}_x(\text{Si}_{6-x}\text{P}_x\text{O}_{22}\text{N}_2)\text{O}_2$  phosphors by the design of apatite structures with an  $([\text{Si}/\text{P}][\text{O}/\text{N}]_4)$  framework and tunable luminescence properties, J. Mater. Chem. C. 5, 985, 2017.

(8) Defect Engineering in a  $\text{Eu}^{2+}$ -Doped  $\beta$ - $\text{Al}_2\text{O}_3$  Structure Blue Phosphor and Its Controllable Zero-Thermal Quenching Luminescence ACS Sustainable Chem. Eng. 2021, 9, 7882–7890

#### 代表性项目

国家自然科学基金青年基金项目 2021–2024 年

国家自然科学基金面上项目 2025–2028 年

多项省级项目以及青年教师科技创新项目

#### 荣誉奖励

#### 社会兼职

《稀土学报》编委  
JMCC, AOM 等期刊审稿人

**其他** 本人所从事的研究工作以实验研究和理论计算为主，欢迎具有物理、化学、材料及相关学科背景的同学加入本课题组攻读硕士学位