

发光学报



www.fgxb.org



中国科学院长春光学精密机械与物理研究所 主办
中国物理学会发光分会
科学出版社 出版



发 光 学 报

FAGUANG XUEBAO

第 42 卷 第 12 期 2021 年 12 月(卷终)

目 次

· 封面文章 ·

$\text{Sr}_2\text{LiSiO}_4\text{F}$ 的晶格位点工程调控实现混合价态 $\text{Eu}^{2+/3+}$ 应用于比例型温度传感
..... 黄 帅, 王金迪, 颜 雨, 尚蒙蒙 (1829)

· 特邀综述 ·

红光/近红外发射碳点制备、光学调控与应用 徐冀健, 曲 丹, 安 丽, 汪夏燕, 孙再成 (1837)

· 材料合成及性能 ·

新型中红外激光晶体 $\text{Er}^{3+}/\text{Ho}^{3+}/\text{Eu}^{3+}:\text{PbF}_2$ 的生长和性能
..... 廖家裕, 陈鸿玲, 牛晓晨, 谭慧瑜, 宋家万, 张沛雄, 尹 浩, 李 真, 陈振强 (1852)

白光 LED 用 CsPbBr_3 钙钛矿量子点玻璃制备及其稳定性
..... 王 栋, 兰月梅, 刘 劝, 张国星, 吴 胜, 袁双双, 张学杰, 陈 岩 (1863)

$\text{Tm}^{3+}/\text{Yb}^{3+}$ 共掺 LuYO_3 上转换荧光温度传感特性
..... 张志宏, 周慧丽, 吴 锋, 张 雁, 叶林华 (1872)

$\beta\text{-NaGdF}_4:\text{Yb}^{3+}, \text{Er}^{3+}$ /纤维素纳米晶胆甾型复合膜制备及光学性能
..... 董娅慧, 于佳璐, 王士鹏, 赵浩然, 李 玉, 程 倩 (1882)

高长径比 Eu^{3+} 掺杂 Y_2O_3 荧光陶瓷纤维的制备及其发光性能
..... 张立振, 王子豪, 黄 娇, 唐 飞 (1891)

激光诱导聚二甲基硅氧烷制备石墨烯量子点
..... 刘金萍, 李 欣, 王瑞荣, 郭 浩, 唐 军, 刘 俊, 刘丽双 (1900)

· 器件制备及器件物理 ·

WCl_6 掺杂 PEDOT:PSS 作为空穴注入层的高效率近紫外有机发光器件
..... 王家兴, 姚登莉, 蔡 平, 薛小刚, 刘黎明, 王立惠, 卢宗柳, 张小文 (1906)

复合成核层对 InGaN 基黄光 LED 内量子效率的影响
..... 宫丽艳, 唐 斌, 胡红坡, 赵晓宇, 周圣军 (1914)

侧向耦合分布反馈半导体激光器光栅结构及耦合特性
..... 李瑞冬, 邹永刚, 田 锐, 王 睿, 范 杰, 兰云萍 (1921)

基于啁啾光纤光栅激光器的温度传感特性 罗 章, 何 巍, 董明利, 张 雯 (1928)

$\text{SnO}_2:\text{Zn}$ 纳米晶光阳极对染料敏化太阳能电池光电性能的影响
..... 于翠玲, 朱瑞滨, 林 珊, 武 凤, 乌大坤, 赵海发, 常 亮 (1936)

· 发光学应用及交叉前沿 ·

CdTe 和 CdTe/CdS 量子点与叶酸分子荧光相互作用
..... 李光旻, 刘湫洋, 杨 洋, 刘洪飞, 费学宁, 刘 伟 (1944)

基于类芬顿反应的锌掺杂碳量子点荧光探针测定过氧化氢和胆固醇
..... 孙雪花, 强 瑜, 郝都婷, 田 锐 (1951)

· 发光产业及技术前沿 ·

荧光玻璃封装芯片级白光 LED 光热性能
..... 张稀雯, 余子康, 牟 运, 彭 洋, 李俊杰, 史铁林 (1961)

CHINESE JOURNAL OF LUMINESCENCE

Vol. 42 No. 12

December 2021

CONTENTS

• Cover Story •

- Crystal Site Engineering in $\text{Sr}_2\text{LiSiO}_4\text{F}$ Enabling Mixed-valent Europium Toward Ratiometric Temperature Sensing
..... HUANG Shuai, WANG Jin-di, YAN Yu, SHANG Meng-meng (1829)

• Invited Review •

- Preparation, Optical Control and Application of Red/Near Infrared Emitting Carbon Dots
..... XU Ji-jian, QU Dan, AN Li, WANG Xia-yan, SUN Zai-cheng (1837)

• Synthesis and Properties of Materials •

- Growth and Properties of Novel Mid-infrared Laser Crystal $\text{Er}^{3+}/\text{Ho}^{3+}/\text{Eu}^{3+}:\text{PbF}_2$
..... LIAO Jia-yu, CHEN Hong-ling, NIU Xiao-chen, TAN Hui-yu, SONG Jia-wan, ZHANG Pei-xiong, YIN Hao, LI Zhen, CHEN Zhen-qiang (1852)
- Preparation and Stability of CsPbBr_3 Perovskite Quantum Dots Glass for White LED
..... WANG Dong, LAN Yue-mei, LIU Quan, ZHANG Guo-xing, WU Sheng, YUAN Shuang-shuang, ZHANG Xue-jie, CHEN Yan (1863)
- Temperature Sensing Characteristics of Up-conversion Luminescence in $\text{Tm}^{3+}/\text{Yb}^{3+}$ Co-doped LuYO_3 Phosphor
..... ZHANG Zhi-hong, ZHOU Hui-li, WU Feng, ZHANG Yan, YE Lin-hua (1872)
- Preparation and Optical Properties of $\beta\text{-NaGdF}_4:\text{Yb}^{3+}, \text{Er}^{3+}$ /Cellulose Nanocrystalline Cholesteric Composite Films
..... DONG Ya-hui, YU Jia-ming, WANG Shi-peng, ZHAO Hao-ran, LI Yu, CHENG Qian (1882)
- Fabrication and Photoluminescence Properties of Eu^{3+} Doped Y_2O_3 Ceramic Fiber with High Aspect Ratio
..... ZHANG Li-zhen, WANG Zi-hao, HUANG Jiao, TANG Fei (1891)
- Preparation of Graphene Quantum Dots by Laser-induced Polydimethylsiloxane
..... LIU Jin-ping, LI Xin, WANG Rui-rong, GUO Hao, TANG Jun, LIU Jun, LIU Li-shuang (1900)

• Device Fabrication and Physics •

- Highly Efficient Near Ultraviolet Organic Light-emitting Device Based on WCl_6 Doped PEDOT:PSS as Hole Injection Layer
..... WANG Jia-xing, YAO Deng-li, CAI Ping, XUE Xiao-gang, LIU Li-ming, WANG Li-hui, LU Zong-liu, ZHANG Xiao-wen (1906)
- Effect of Hybrid Nucleation Layer on Internal Quantum Efficiency of InGaN-based Yellow LEDs
..... GONG Li-yan, TANG Bin, HU Hong-po, ZHAO Xiao-yu, ZHOU Sheng-jun (1914)
- Grating Structure and Coupling Characteristics of Laterally-coupled Distributed Feedback Semiconductor Lasers
..... LI Rui-dong, ZOU Yong-gang, TIAN Kun, WANG Rui, FAN Jie, LAN Yun-ping (1921)
- Temperature Sensor Based on Chirped Fiber Bragg Grating Laser
..... LUO Zhang, HE Wei, DONG Ming-li, ZHANG Wen (1928)
- Influence of Zn Doped SnO_2 Nanocrystals as Photoanode Materials on Photoelectric Performance of Dye-sensitized Solar Cells
..... YU Cui-ling, ZHU Rui-bin, LIN Shan, WU Feng, WU Da-kun, ZHAO Hai-fa, CHANG Liang (1936)

• Luminescence Applications and Interdisciplinary Fields •

- Fluorescence Interaction Between Folate Molecules and CdTe and CdTe/CdS Quantum Dots
..... LI Guang-min, LIU Hao-yang, YANG Yang, LIU Hong-fei, FEI Xue-ning, LIU Wei (1944)
- Detection of Hydrogen Peroxide and Cholesterol Based on Zinc Doped Quantum Dots and Fenton-like Reaction
Fluorescent Probe Preparation SUN Xue-hua, QIANG Yu, HAO Du-ting, TIAN Rui (1951)

• Luminescence Industry and Technology Frontier •

- Photothermal Performance of Phosphor-in-glass Packaged Chip-scale White LED
..... ZHANG Xi-wen, YU Zi-kang, MOU Yun, PENG Yang, LI Jun-jie, SHI Tie-lin (1961)

Editorial Board of Chinese Journal of Luminescence
(3888 Dongnanhu Rd., Changchun 130033, P. R. China)