

发光学报



www.fgxb.org



科学出版社



中国科学院长春光学精密机械与物理研究所
中国物理学会发光分会
科学出版社

主办
出版



发 光 学 报

FAGUANG XUEBAO

第 43 卷 第 1 期 2022 年 1 月

目 次

· 封面文章 ·

量子垒高度对深紫外 LED 调制带宽的影响

..... 郭 亮, 郭亚楠, 羊建坤, 闫建昌, 王军喜, 魏同波 (1)

· 特邀综述 ·

稀土离子掺杂钙钛矿纳米晶的光学性质和应用

胡 强, 白 雪, 宋宏伟 (8)

荧光粉中激活剂离子掺杂格位分析

姬海鹏 (26)

· 材料合成及性能 ·

Yb:LuAG 单晶光纤的连续及脉冲激光性能

..... 马晓斐, 王 涛, 张 健, 尹延如, 张百涛, 贾志泰 (42)

碲掺杂钙-铝-锗酸盐玻璃宽带近红外发光及其调控机理

..... 周港杰, 胡艺莹, 谭林玲, 康世亮, 林常规 (51)

新型植物补光用远红光(La,Gd,Y)₂MgTiO₆:Cr³⁺荧光粉的光谱调控

..... 高培鑫, 董 鹏, 周泽云, 张晓娟, 李亚男, 杨建奎,
黎 倩, 陈 可, MOLOKEEV Maxim S, 周 智, 夏 茂 (58)

Ba²⁺ 离子掺杂 CsPbBr₃ 蓝光量子点合成及其光学性能

..... 曾凡菊, 谭永前, 胡 伟, 唐孝生, 荆 涛, 尹海峰 (69)

· 器件制备及器件物理 ·

超低效率滚降顶发射白光有机电致发光器件

于荣梅, 濮春英, 殷复荣, 纪文字 (77)

激基复合物和磷光超薄层相结合的高效率非掺杂白光有机发光二极管

..... 王 超, 李向峰, 刘泽美, 赵 波 (85)

零维铋基有机-无机杂化氯化物的自陷态激子发光及其发光二极管

... 蔡培庆, 滕嵘取, 张 帝, 王 淞, 占宇鑫, 王祥夫, 司俊杰, 姚 鑫, 艾 琦, 刘祖刚 (94)

基于电场调控的高性能紫外无机-有机复合结构光电探测器

..... 王建彬, 唐孝生, 周 笔, 曾夏辉, 余华梁, 周赢武 (103)

带有非吸收窗口的高性能 InGaAs/AlGaAs 量子阱激光二极管

..... 刘翠翠, 林 楠, 马骁宇, 井红旗, 刘素平 (110)

基于宇称时间对称结构实现石墨烯光增强吸收

易凌俊, 李长红 (119)

双电层氧化锌薄膜晶体管偏压应力稳定性

王 聪, 刘玉荣, 彭 强, 黄 荷 (129)

· 发光学应用及交叉前沿 ·

pH 响应型碳点的荧光机制和生物医学应用

..... 何松杰, 张清梅, 张路鹏, 杜秀娟, 陈峰华, 李 冰 (137)

期刊基本参数: CN 22-1116/O4 * 1980 * m * A4 * 152 * zh + en * P * ¥100.00 * 800 * 15 * 2022-01 责任编辑: 王淑平

CHINESE JOURNAL OF LUMINESCENCE

Vol. 43 No. 1

January 2022

CONTENTS

· Cover Story ·

Effect of Barrier Height on Modulation Characteristics of AlGaIn-based Deep Ultraviolet Light-emitting Diodes
..... GUO Liang, GUO Ya-nan, YANG Jian-kun, YAN Jian-chang, WANG Jun-xi, WEI Tong-bo (1)

· Invited Review ·

Rare Earth Ion Doped Perovskite Nanocrystals HU Qiang, BAI Xue, SONG Hong-wei (8)
Analysis of Site-occupation of Activator in Phosphors JI Hai-peng (26)

· Synthesis and Properties of Materials ·

Continuous-wave and Pulsed Laser Performance of Yb:LuAG Single Crystal Fiber
..... MA Xiao-fei, WANG Tao, ZHANG Jian, YIN Yan-ru, ZHANG Bai-tao, JIA Zhi-tai (42)
Broadband Near-infrared Luminescence and Regulation Mechanism of Tellurium-doped Calcium-Aluminum-germanate Glass
..... ZHOU Gang-jie, HU Yi-xuan, TAN Lin-ling, KANG Shi-liang, LIN Chang-gui (51)
Novel Far-red Phosphors (La,Gd,Y)₂MgTiO₆:Cr³⁺ with Tunable Luminescence Spectra for Grow Light
..... GAO Pei-xin, DONG Peng, ZHOU Ze-yun, ZHANG Xiao-juan, LI Ya-nan,
YANG Jian-kui, LI Qian, CHEN Ke, MOLOKKEEV Maxim S, ZHOU Zhi, XIA Mao (58)
Synthesis and Optical Properties of Barium Doped CsPbBr₃ Blue Luminescence Quantum Dots
..... ZENG Fan-ju, TAN Yong-qian, HU Wei, TANG Xiao-sheng, JING Tao, YIN Hai-feng (69)

· Device Fabrication and Physics ·

Ultra-low Efficiency Roll-off Top-emitting White Organic Light-emitting Diodes
..... YU Rong-mei, PU Chun-ying, YIN Fu-rong, JI Wen-yu (77)
High Efficiency Doping-free White Organic Light Emitting Diodes by Combining Exciplex and Phosphorescent Ultrathin
Layer WANG Chao, LI Xiang-feng, LIU Ze-mei, ZHAO Bo (85)
Self-trapped Exciton Luminescence and Light-emitting-diodes Based on Zero-dimensional Organic-inorganic Hybrid
Antimony Chloride CAI Pei-qing, TENG Rong-yu, ZHANG Di, WANG Song, ZHAN Yu-xin,
WANG Xiang-fu, SI Jun-jie, YAO Xin, AI Qi, LIU Zu-gang (94)
High-performance Ultraviolet Inorganic-organic Composite Structure Photodetectors Based on Electric Field Control
..... WANG Jian-bin, TANG Xiao-sheng, ZHOU Bi, ZENG Xia-hui, YU Hua-liang, ZHOU Ying-wu (103)
High Performance InGaAs/AlGaAs Quantum Well Semiconductor Laser Diode with Non-absorption Window
..... LIU Cui-cui, LIN Nan, MA Xiao-yu, JING Hong-qi, LIU Su-ping (110)
Light Enhanced Absorption of Graphene Based on Parity-time Symmetry Structure YI Ling-jun, LI Chang-hong (119)
Bias Stress Stability of Electric-double-layer ZnO Thin-film Transistor
..... WANG Cong, LIU Yu-rong, PENG Qiang, HUANG He (129)

· Luminescence Applications and Interdisciplinary Fields ·

Fluorescence Mechanism and Biomedical Applications of pH-responsive Carbon Dots
..... HE Song-jie, ZHANG Qing-mei, ZHANG Lu-peng, DU Xiu-juan, CHEN Feng-hua, LI Bing (137)

Editorial Board of Chinese Journal of Luminescence

(3888 Dongnanhu Rd., Changchun 130033, P. R. China)