



EI 中文核心期刊



ISSN 1000-7032

CN 22-1116/O4

CODEN FAXUEW

发光学报

CHINESE JOURNAL OF LUMINESCENCE

第 41 卷

Vol. 41

2020

第 11 期

No. 11



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

主办

科学出版社 出版

发 光 学 报

FAGUANG XUEBAO

第 41 卷 第 11 期 2020 年 11 月

目 次

· 特邀综述 ·

白光照明用 YAG: Ce 荧光薄膜研究进展

····· 吕清洋, 薛秉国, 王婷婷, 刘丽娜, 王世立, 朱海澄, 刘绍宏, 孙旭东 (1323)

· 创刊 40 周年特别专栏——青稞论道 ·

钙钛矿发光: 多学科深度交叉融合 ····· 王建浦, 彭其明 (1335)

光功能纳米材料与肿瘤光学治疗展望 ····· 刘 庄, 冯良珠 (1339)

· 材料合成及性能 ·

Pr³⁺ 掺杂 Ge-Ga-Se-CsI 硫卤玻璃性能及光纤制备

····· 汪 俊, 冯 赞, 吴国林, 汪金晶, 焦 凯, 王弦歌, 刘 佳, 梁晓林,
徐铁松, 钟明辉, 肖 晶, 赵浙明, 刘自军, 刘永兴, 王训四 (1343)

碱金属共掺 MgSc₂O₄: Er³⁺/Yb³⁺ 纳米晶的上转换发光性能

····· 袁美娟, 李 静, 秦慧连, 彭亚茹, 黄宇欣, 陈 力 (1351)

808 nm 激发的 NaYF₄: Yb/Tm/Ca@ NaGdF₄: Nd/Yb 上转换纳米粒子的制备及其发光性质

····· 林少伟, 赵 婧, 法信蒙, 欧 俊 (1358)

醋酸铯合成 CsPbBr₃ 全无机钙钛矿量子点及薄膜发光特性

····· 韩丽锦, 马 雪, 张源涛, 董 鑫, 吴国光, 张宝林 (1367)

不同溶剂中 CsPbBr₃ 钙钛矿纳米晶的制备及性能 ····· 方 骏, 陈泽廷, 沈江荣, 林鹏程 (1376)

新型高效双极性磷光主体材料的合成及光电性能

····· 刘凯鹏, 孙 军, 张宏科, 田 密, 何海晓, 胡华院, 杨丹丹, 李江楠 (1383)

· 器件制备及器件物理 ·

硒纳米花/聚苯胺异质结型宽光谱自驱动探测器的制备及性能 ····· 于平平, 段 伟, 姜岩峰 (1391)

倒置结构白光有机电致发光器件 ····· 张小亮, 徐亚楠, 陈月花 (1397)

· 理论计算及光谱分析 ·

CuInS₂/ZnS 量子点光纤发光性质的理论计算 ····· 李 帅, 张 蕾 (1403)

· 发光产业及技术前沿 ·

基于 Ce³⁺: YAG 透明陶瓷的大功率 LED 和 LD 照明原型器件的发光性能: 厚度和表面粗糙度的影响

····· 郑哲涵, 张 翔, 徐小科, 刘 茜, 石 云, 李 茹, 王 欢, 王 飞, 刘光辉 (1411)

共晶芯片数及芯片位置对陶瓷共晶封装 LED 发光性能的影响

····· 王世龙, 熊传兵, 汤英文, 李晓珍, 刘 倩 (1421)

GaN 基白光二极管漏电失效分析 ····· 左文财, 文尚胜, 周 悦, 王翌鑫, 于婧雅, 方 方 (1431)

CHINESE JOURNAL OF LUMINESCENCE

Vol. 41 No. 11

November 2020

CONTENTS

• Invited Review •

Research Progress of YAG: Ce Fluorescent Films for White Lighting

..... *LYU Qing-yang, XUE Bing-guo, WANG Ting-ting, LIU Li-na, WANG Shi-li, ZHU Hai-cheng, LIU Shao-hong, SUN Xu-dong* (1323)

• 40th Anniversary Special Column—Young Scientist on The Road •

Perovskite Luminescence: In-depth Multidisciplinary Integration *WANG Jian-pu, PENG Qi-ming* (1335)

Perspectives on Photo-functional Nanomaterials and Cancer Phototherapy *LIU Zhuang, FENG Liang-zhu* (1339)

• Synthesis and Properties of Materials •

Pr³⁺ Doped Ge-Ga-Se-CsI Chalcogenide Glass and Fiber Preparation

..... *WANG Jun, FENG Zan, WU Guo-lin, WANG Jin-jing, JIAO Kai, WANG Xian-ge, LIU Jia, LIANG Xiao-lin, XU Tie-song, ZHONG Ming-hui, XIAO-Jing, ZHAO Zhe-ming, LIU Zi-jun, LIU Yong-xing, WANG Xun-si* (1343)

Upconversion Luminescence of MgSc₂O₄: Er³⁺/Yb³⁺ Nanocrystals Co-doped Alkali Ions

..... *YUANG Mei-juan, LI Jing, QIN Hui-lian, PENG Ya-ru, HUANG Yu-xin, CHEN Li* (1351)

Preparation and Luminescent Properties of NaYF₄: Yb/Tm/Ca@NaGdF₄: Nd/Yb Up-conversion Nanoparticles

Excited at 808 nm *LIN Shao-wei, ZHAO Jing, FA Xin-meng, OU Jun* (1358)

Luminescence Properties of all Inorganic Perovskite CsPbBr₃ Quantum Dots and Film Synthesized by Cesium Acetate

..... *HAN Li-jin, MA Xue, ZHANG Yuan-tao, DONG Xin, WU Guo-guang, ZHANG Bao-lin* (1367)

Property of CsPbBr₃ Perovskite Nanocrystals Prepared in Different Solvents

..... *FANG Jun, CHEN Ze-ting, SHEN Jiang-rong, LIN Peng-cheng* (1376)

Synthesis and Photoelectronic Properties of Novel High-efficiency Bipolar Phosphorescent Host Material

..... *LIU Kai-peng, SUN Jun, ZHANG Hong-ke, TIAN Mi, HE Hai-xiao, HU Hua-yuan, YANG Dan-dan, LI Jiang-nan* (1383)

• Device Fabrication and Physics •

Fabrication and Photoelectric Properties of Self-powered Photodetectors Based on Se Nanoflower/Polyaniline

Heterojunctions *YU Ping-ping, DUAN Wei, JIANG Yan-feng* (1391)

Inverted White Light Organic-emitting Diodes *ZHANG Xiao-liang, XU Ya-nan, CHEN Yue-hua* (1397)

• Theoretical Calculation and Spectral Analysis •

Theoretical Calculation of Emission Properties of CuInS₂/ZnS Quantum Dot Fiber *LI Shuai, ZHANG Lei* (1403)

• Luminescence Industry and Technology Frontier •

Thickness and Surface Roughness Effect on Lighting Performance of Ce³⁺: YAG Transparent Ceramics Based High

Power LED and LD Lighting Prototype Devices *ZHENG Zhe-han, ZHANG Xiang, XU Xiao-ke, LIU Qian, SHI Yun, LI Ru, WANG Huan, WANG Fei, LIU Guang-hui* (1411)

Effect of Number and Location of Eutectic Chips on Luminescent Properties of Ceramic Eutectic Packaged LED

..... *WANG Shi-long, XIONG Chuan-bing, TANG Ying-wen, LI Xiao-zhen, LIU Qian* (1421)

Failure Mechanism Analysis of Reverse Leakage in GaN-based White LED

..... *ZUO Weng-cai, WEN Shang-sheng, ZHOU Yue, WANG Yi-xin, YU Jing-ya, FANG Fang* (1431)

Editorial Board of Chinese Journal of Luminescence

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