



中国科技核心期刊 中文核心期刊

ISSN 1001-5078

CN 11-2436/TN

激光与红外

LASER & INFRARED

07
2023
第53卷 第7期

ISSN 1001-5078

9 771001 507232 07

中国光学光电子行业协会
电子工业激光与红外专业情报网
中国电子学会量子电子学与光电子学分会

联合刊物

目次

综述与评论

- 高能激光系统试验机建设关键技术研究 杜梓冰(979)
视觉对比度机制小目标增强与背景抑制综述 李刚 刘京生 耿蕊(987)

激光应用技术

- 激光投影显示色均问题的仿真计算和实验研究 李克强 郭宇杰 谭桂林等(996)
基于目标结构和运动的船舶激光点云配准算法 吴应睿 张文楷 于天琪等(1004)
基于不同材质气溶胶下激光回波特性研究 李婷 赵旭 李连鹏(1010)
基于量子级联激光的机动车尾气遥测系统设计 刘硕 路兴杰 吴才章等(1019)
基于三维激光扫描仪的无序工件精准定位 黄磊 朱秀敏 石雨婷等(1026)

激光器技术

- HPVB 法 $Fe^{2+}:ZnSe$ 激光晶体生长及激光输出特性 夏士兴 谢文强 付秋月等(1033)
宽谱平面阵列激光器的设计与实现 闫立华 程义涛 张厚博(1037)

红外技术及应用

- 一种基于 YOLOv5s 的红外图像目标检测改进算法 李晓佩 张寅宝 李严培等(1043)
引入特征交互的红外与可见光图像自适应融合 陈从平 闫焕章 郁春明等(1052)
提高空间红外点目标探测系统探测能力的方法 杨小乐 史漫丽 周峰等(1060)

光纤传感及光通讯技术

- 无人机全光中继系统误码率性能分析 唐翰玲 李勇军 邵龙等(1066)
基于 VMD 与 MFE 的光纤周界安防入侵事件识别 江虹 曾庆龙 李家成(1073)

光电对抗

- 阳光反射对空地成像设备干扰影响分析 邹前进 陆静 陆洪涛等(1081)

光学技术

- 微透镜阵列扫描成像系统的衍射分析与研究 陈卉(1087)
集束实验针孔成像与仿真分析 李颖洁 董建军 朱京涛等(1095)

光子晶体

- 金属银对光子晶体光吸收的增强效应 赵宏斌 苏安 邹秒宏等(1103)

图像与信号处理

- 基于多波段激光数据聚类的电力屏柜压板状态图像位姿解算方法 张笑迪 刘吉昀 韦鸣月等(1110)
地面红外目标数据联合增强方法 赵晓枫 夏玉婷 徐叶斌等(1117)
一种基于深度和局部特征的分布式光电图像配准方法 陈晓露 刘奕(1125)
结合局部增强与反向残差的点云语义分割网络 温智成 王蕾 冯锦梁等(1131)

LASER & INFRARED

(Monthly, Publication Started in 1971)

Vol. 53 No. 7

(Series No. 538)

July 2023

JOINT JOURNAL of
China Optics & Opto-Electronics
Manufactures Association
Laser & Infrared Technology Information
Exchange Organization, CEI
Quantum Electronics & Opto-
Electronics Society, CIE

CONTENTS

Overview & Comment

- (979) Research on key technologies for the construction of high energy laser system testing machines *DU Zi-bing*
(987) Review of small target enhancement and background suppression based on human visual contrast mechanism
..... *LI Gang et al*

Laser Application Technology

- (996) Simulation calculation and experimental study of the colour homogeneity problem of laser projection displays
..... *LI Ke-qiang et al*
(1004) Ship laser point cloud registration algorithm based on structural features and motion *WU Ying-rui et al*
(1010) Study on laser echo characteristics based on aerosol of different materials *LI Ting et al*
(1019) Design of vehicle exhaust remote sensing system based on quantum cascade lasers *LIU Shuo et al*
(1026) Accurate localization of disordered workpieces based on 3D laser scanner *HUANG Lei et al*

Laser Technology

- (1033) Growth and laser output properties of $\text{Fe}^{2+}:\text{ZnSe}$ laser crystal by HPVB method *XIA Shi-xing et al*
(1037) Design and fabrication of wide-spectrum diode array *YAN Li-hua et al*

Infrared Technology & Application

- (1043) An improved method of infrared image target detection based on YOLOv5s *LI Xiao-pei et al*
(1052) Adaptive fusion of infrared and visible light images with introduction of feature interaction *CHEN Cong-ping et al*
(1060) Methods for improving the detection ability of space infrared point target detection system *YANG Xiao-le et al*

Optical Fiber Sensing & Optical Communication

- (1066) BER analysis of UAV all-optical relay *TANG Han-ling et al*
(1073) Intrusion event identification for fiber optic perimeter security based on VMD and MFE *JIANG Hong et al*

O - E Countermeasure

- (1081) Analysis of effect of sunlight reflection on interference of air-ground imaging equipment *ZOU Qian-jin et al*

Optical Technology

- (1087) Diffraction analysis and research of microlens array scanning imaging system *CHEN Hui*
(1095) Simulation and analysis of pinhole imaging in first laser plasma interaction experiments *LI Ying-jie et al*

Photonic Crystal

- (1103) Enhancement effect of metallic silver on optical absorption of photonic crystals *ZHAO Hong-bin et al*

Image & Signal Processing

- (1110) Method for calculating the state image pose of the power panel cabinet pressing plate based on multi-band
laser data clustering *ZHANG Xiao-di et al*
(1117) Joint data augmentation method for ground infrared target *ZHAO Xiao-feng et al*
(1125) A distributed electro-optical image registration method based on deep and local features *CHEN Xiao-lu et al*
(1131) Combining local augmentation and reverse residual for point cloud semantic segmentation network ... *WEN Zhi-cheng et al*