

## 目次

### 激光应用技术

- 基于库德光路的小型激光定向发射装置设计 ..... 罗 威 董文锋 霍亮宇(655)
- 脉冲压缩技术在相干激光雷达中的应用研究 ..... 曹昌东 秦 鹏 睦晓林等(659)
- 高空湍流影响下航空激光传输性能分析 ..... 赵 静 赵尚弘 李勇军等(663)
- 激光瑞利波的时间依赖性探测表面缺陷深度 ..... 刘 辉 郑 宾 王召巴等(669)
- 激光诱导 Ti-6Al-4V 钛合金表面着色研究 ..... 李云龙 李建美 王爱群等(674)
- 一种基于飞秒激光白内障手术的碎核轨迹设计 ..... 张来峰 刘思奇 范立成等(680)
- 聚晶金刚石复合片激光切割工艺研究 ..... 郭 强 贾志新 高坚强等(686)

### 激光器技术

- 1645 nm 单纵模 NPRO 激光器短期频率稳定度的测量 ..... 崔春旺 纳全鑫 张艺轩等(693)
- GaAs 基大功率激光器静电失效现象的研究 ..... 黄欣竹 崔碧峰 郭伟玲等(698)
- 一种 8 字腔结构激光器中的双脉冲现象 ..... 王贵兰 许慧娟 李树元(703)
- 二极管抽运 Nd:YAG 薄片激光器研究 ..... 王 超 石晓军 唐晓军等(706)

### 红外技术及应用

- 基于横向热传导的下表面缺陷检测 ..... 邢晓军 左宪章 沈 思(710)
- 红外热像仪的空间噪声和时间噪声分析 ..... 马 宁 刘 莎 李江勇(717)
- 基于空间金字塔匹配的单目热成像深度估计 ..... 单妍妍 谷小婧 顾幸生(722)
- 飞机红外辐射计算及图像仿真 ..... 孙 卫 王 彪(728)

### 红外材料与器件

- 多谱段线列红外探测器读出电路设计优化 ..... 王成刚 刘泽巍 袁 媛等(736)
- 中波红外双通道带通滤光片的研制 ..... 王松林 米高园 张建付等(740)
- 衬底表面状态对碲镉汞薄膜表面起伏的影响 ..... 杨海燕 胡尚正 郭明珠(745)

### 光电技术与系统

- 机载激光通信的重复自抗扰视轴稳定控制 ..... 曹 阳 刘世涛 彭小峰等(750)
- 原子磁力仪系统高增益平衡光电探测器的设计 ..... 张 鹏 陈洪娟 桂永雷等(755)
- 一种全谱段多光谱遥感器的星上信息处理系统 ..... 戴立群 徐丽娜 周建勇(761)

### 光纤及光通讯技术

- 斜端面光纤不同倾斜角度下出射光的研究 ..... 张恩隆 韦 锦 赵 霞等(767)
- 金属化封装光纤光栅传感器超低温特性研究 ..... 丁旭东 张钰民 夏嘉斌等(773)

### 图像与信号处理

- 基于半监督协同训练的无人机对地目标跟踪 ..... 毛 盾 邢昌凤 满 欣等(778)
- 应用空间金字塔池化 LBP 特征的舰船检测识别 ..... 郭少军 陆 斌 娄树理(783)

## CONTENTS

### Laser Application Technology

- (655) Design of a directional laser emitting equipment based on Coude optical system ..... LUO Wei *et al*  
(659) Application of pulse compression technology in coherent laser radar ..... CAO Chang-dong *et al*  
(663) Analysis about the influence of high altitude atmosphere  
turbulence on airborne laser communication ..... ZHAO Jing *et al*  
(669) Time dependence of laser-induced Rayleigh wave for detecting surface defect depth ..... LIU Hui *et al*  
(674) Study of laser-induced color marking on Ti-6Al-4V titanium alloy ..... LI Yun-long *et al*  
(680) Design of lens fragmentation path based on femtosecond  
laser cataract surgery ..... ZHANG Lai-feng *et al*  
(686) Technological study on laser cutting of polycrystalline diamond compact ..... GUO Qiang *et al*

### Laser Technology

- (693) Short-term frequency stability measurement of 1645 nm single longitudinal-mode NPRO laser ..... CUI Chun-wang *et al*  
(698) Study on static electric shoke failure of GaAs based high power laser ..... HUANG Xin-zhu *et al*  
(703) Double-pulse phenomenon in a figure -8 cavity laser ..... WANG Gui-lan *et al*  
(706) Study on laser diode-pumped Nd : YAG disk laser ..... WANG Chao *et al*

### Infrared Technology & Application

- (710) Detection of subsurface defects based on lateral heat conduction ..... XING Xiao-jun *et al*  
(717) Analysis on spatial noise and temporal noise of IR thermal imager ..... MA Ning *et al*  
(722) Depth estimation of monocular thermal images based on spatial pyramid matching ..... SHAN Yan-yan *et al*  
(728) Calculation and image simulation of aircraft infrared radiation ..... SUN Wei *et al*

### Infrared Material & Device

- (736) Optimization and design of ROIC for multispectral linear infrared detector array ..... WANG Cheng-gang *et al*  
(740) Study and preparation of mid-infrared dual channel band-pass filter ..... WANG Song-lin *et al*  
(745) Influence of surface state of CdZnTe substrate on the surface fluctuation of HgCdTe film ..... YANG Hai-yan *et al*

### O - E Technology & System

- (750) Active disturbance rejection control of optical axis for airborne laser communication system ..... CAO Yang *et al*  
(755) Design of a high gain balanced photoelectric detecor for atomic magnetometer system ..... ZHANG Peng *et al*  
(761) Signal process system for space-borne multi-spectral sensor ..... DAI Li-qun *et al*

### Optical Fiber & Optical Communication

- (767) Research on emitted light of fiber with tilted end at different tilt angles ..... ZHANG En-long *et al*  
(773) Study on ultralow temperature characteristics of metallic packaging FBG sensor ..... DING Xu-dong *et al*

### Image & Signal Processing

- (778) UAV's ground target tracking based on semi-supervised co-training framework ..... MAO Dun *et al*  
(783) Ship detection and recognition based on spatial pyramid pooling LBP feature ..... GUO Shao-jun *et al*