

目 次

(加★文章为本期推荐优秀论文)

❖专家报告❖

- 硝基苯超快非线性折射效应及机理研究 宋瑛林,李中国 0502001
基于深度学习的目标跟踪方法研究现状与展望 罗海波,许凌云,惠 斌,等 0502002

❖光学工程优秀博士论文❖

- 二维金纳米阵列制备及其光学响应 白正元,张 龙,王康鹏 0534001

❖激光技术及应用❖

- ★Tm:YLF 激光器温度场分布计算与实验 李 岩,张艺轩,纳全鑫,等 0506001
★中层顶准单色重力波特性的钠荧光多普勒激光雷达观测分析 王 博,胡 雄,闫召爱,等 0506002
相位调制激光雷达成像设计及仿真 黄宇翔,张鸿翼,李 飞,等 0506003
激光沉积修复 ZL114A 铝合金的显微组织及显微硬度研究 钦兰云,庞 爽,杨 光,等 0506004
激光熔覆再制造复杂轴类零件的轨迹规划 黄 勇,孙文磊,陈 影 0506005
准连续调制激光吸收谱测量 CO 气体系统研究 邵 欣,王 峰,张兴会,等 0506006

❖红外技术及应用❖

- 32×32 甚长波红外 HgCdTe 焦平面器件(英文) 郝立超,黄爱波,解晓辉,等 0504001
MOS 电阻阵下红外诱饵模拟仿真 宋敏敏,唐善军,王碧云,等 0504002
红外搜索跟踪系统测试 吴学铭,王海晏,寇 添,等 0504003
一种适用于红外制导弹药的变增益比例导引律 臧路尧,侯 淼,王 辉,等 0504004
采用长波红外高光谱偏振技术的目标探测实验 徐文斌,陈伟力,李军伟,等 0504005
用于长波红外目标模拟器的 DMD 衍射特性分析 韩 庆,王 健,熊 峥,等 0504006

❖光电测量❖

- ★多特征点拓扑确定位姿测量算法研究 王 鹏,周权通,孙长库 0517001
★浦江一号卫星星敏感器在轨测量精度分析 毛晓楠,周 琦,马英超,等 0517002
利用恒星对天文观测系统光轴平行性检校 王 阳,黄 煜,李占峰,等 0517003
阻尼比连续可调的捷联惯性姿态测量系统内阻尼技术 顾鹏飞,王省书,郑佳兴,等 0517004
小波变换实现的光电编码器精确实时测速 杜颖财,宋 路,万秋华,等 0517005
分振幅光偏振探测系统多点定标方法 汪方斌,刘 涛,洪 津,等 0517006

❖光学设计及仿真❖

- 采用衍射主镜的大口径激光雷达接收光学系统 朱进一,谢永军 0518001
基于带状弹簧的空间望远镜自展开机构设计 左玉弟,金 光,谢晓光,等 0518002

折/衍射双波段共光路齐焦光学系统设计 高 明,许黄蓉,刘 钧,等 0518003

❖光电器件与微系统❖

星敏感器支撑结构多目标拓扑优化设计与试验 程 龙,王 栋,谷 松,等 0520001

双磁透镜与单磁透镜分幅变像管空间分辨特性的比较 廖昱博,龙井华,蔡厚智,等 0520002

❖先进光学材料❖

不同工艺制备的人工节瘤的损伤生长特性 马宏平,程鑫彬,张锦龙,等 0521001

❖光通信与光传感❖

★金属修饰的微结构光纤偏振分束器 严世博,娄淑琴,赵彤彤,等 0522001

❖太赫兹技术及应用❖

碳类烟幕材料对太赫兹波的衰减特性 王启超,汪家春,赵大鹏,等 0525001

太赫兹高斯光束整形环形光束 马 学,李 琦,鲁建业 0525002

太赫兹时域光谱技术用于准确快速地提取薄片的光学参数(英文) 韩晓惠,崔洪亮,张 瑾,等 0525003

❖高光谱成像遥感❖

非线性变换和信息相邻相关的高光谱自适应波段选择 张爱武,杜 楠,康孝岩,等 0538001

机载紫外 DOAS 成像光谱仪 CCD 成像电路的设计及实施 邱晓晗,王 煜,常 振,等 0538002

❖景象信息处理❖

基于 DBSCAN 聚类算法的异常轨迹检测 周培培,丁庆海,罗海波,等 0528001

Contents

❖ Invited paper ❖

- Ultrafast of nonlinear refractive effect and mechanism of solvent nitrobenzene Song Yinglin, Li Zhongguo 0502001
Status and prospect of target tracking based on deep learning Luo Haibo, Xu Lingyun, Hui Bin, et al. 0502002

❖ Outstanding doctoral dissertation in optical engineering ❖

- Fabrication and optical responses of 2D Au nano array Bai Zhengyuan, Zhang Long, Wang Kangpeng 0534001

❖ Laser technology and application ❖

- ★ Temperature distribution calculation and experiments of Tm:YLF laser
..... Li Yan, Zhang Yixuan, Na Quanxin, et al. 0506001
★ Observational study of quasi-monochromatic gravity waves characteristics in mesopause region with sodium fluorescence
Doppler lidar Wang Bo, Hu Xiong, Yan Zhaoai, et al. 0506002
Phase modulated lidar imaging design and simulation Huang Yuxiang, Zhang Hongyi, Li Fei, et al. 0506003
Microstructure and micro-hardness of laser deposition repair ZL114A aluminum alloy
..... Qin Lanyun, Pang Shuang, Yang Guang, et al. 0506004
Trajectory planning of laser cladding remanufacturing for complex shaft shaped part
..... Huang Yong, Sun Wenlei, Chen Ying 0506005
CO gas system of quasi-continuous laser modulation absorption spectroscopy
..... Shao Xin, Wang Feng, Zhang Xinghui, et al. 0506006

❖ Infrared technology and application ❖

- 32×32 very long wave infrared HgCdTe FPAs Hao Lichao, Huang Aibo, Xie Xiaohui, et al. 0504001
Infrared decoy simulation based on MOS resistance array Song Minmin, Tang Shanjun, Wang Biyun, et al. 0504002
Test of infrared search and track system Wu Xueming, Wang Haiyan, Kou Tian, et al. 0504003
A switched-gain proportional navigation applicable for infrared guidance munitions
..... Zang Luyao, Hou Miao, Wang Hui, et al. 0504004
Experiment of target detection based on long-wave infrared hyperspectral polarization technology
..... Xu Wenbin, Chen Weili, Li Junwei, et al. 0504005
Diffraction characteristics analysis for DMD-based scene projectors in the long-wave infrared
..... Han Qing, Wang Jian, Xiong Zheng, et al. 0504006

❖ Photoelectric measurement ❖

- ★ Study of pose estimation based on multiple feature points topological determination
..... Wang Peng, Zhou Quantong, Sun Changku 0517001
★ Star tracker accuracy analysis of PuJiang Satellite-1 in orbit Mao Xiaonan, Zhou Qi, Ma Yingchao, et al. 0517002
Calibration of optical axis parallelism by using star for astronomical observation system
..... Wang Yang, Huang Yu, Li Zhanfeng, et al. 0517003
Internal horizontal damping network of SAMS by applying adaptively adjustable damping ratio
..... Gu Pengfei, Wang Xingshu, Zheng Jiaying, et al. 0517004
Accurate real-time velocity measurement of photoelectric encoder based on wavelet transform
..... Du Yingcai, Song Lu, Wan Qiuhua, et al. 0517005
Multi-point calibration method for division-of-amplitude photopolarimetric detection system
..... Wang Fangbin, Liu Tao, Hong Jin, et al. 0517006

❖ **Optical design and simulation** ❖

- Large aperture lidar receiver optical system based on diffractive primary lens Zhu Jinyi, Xie Yongjun 0518001
Design of the spontaneous deployable mechanism for space telescope based on lenticular tape springs
..... Zuo Yudi, Jin Guang, Xie Xiaoguang, et al. 0518002
Design of diffractive–refractive dual–band co–path parfocal optical system
..... Gao Ming, Xu Huangrong, Liu Jun, et al. 0518003

❖ **Photoelectric device and microsystem** ❖

- Multi–objective topology optimization design and test for support structure of star sensor
..... Cheng Long, Wang Dong, Gu Song, et al. 0520001
Spatial resolution performance comparison of magnetic double–lens and single–lens framing tubes
..... Liao Yubo, Long Jinghua, Cai Houzhi, et al. 0520002

❖ **Advanced optical materials** ❖

- Damage growth characteristics of artificial nodules prepared by different processes
..... Ma Hongping, Cheng Xinbin, Zhang Jinlong, et al. 0521001

❖ **Optical communication and optical sensing** ❖

- ★ Polarization splitter based on metal–decorated microstructure fiber
..... Yan Shibo, Lou Shuqin, Zhao Tongtong, et al. 0522001

❖ **Terahertz technology and application** ❖

- Extinction characteristic of terahertz wave by carbon smoke materials
..... Wang Qichao, Wang Jiachun, Zhao Dapeng, et al. 0525001
Gaussian beam shaping terahertz Gaussian beam to ring beam Ma Xue, Li Qi, Lu Jianye 0525002
Accurate and rapid extraction of optical parameters for thin plates with terahertz time domain spectroscopy technology
..... Han Xiaohui, Cui Hongliang, Zhang Jin, et al. 0525003

❖ **Hyperspectral imaging remote sensing** ❖

- Hyperspectral adaptive band selection method through nonlinear transform and information adjacency correlation
..... Zhang Aiwu, Du Nan, Kang Xiaoyan, et al. 0538001
Design and implementation of CCD imaging circuit for airborne ultraviolet DOAS imaging spectrometer
..... Qiu Xiaohan, Wang Yu, Chang Zhen, et al. 0538002

❖ **Scene information and processing** ❖

- Trajectory outlier detection based on DBSCAN clustering algorithm
..... Zhou Peipei, Ding Qinghai, Luo Haibo, et al. 0528001