

目 次

❖ 红外技术及应用 ❖

- 多孔径分布式视场部分重叠仿生热成像理论与技术 罗琳, 杨建国, 裴溯, 等 20210062
零件表面钝化处理对杜瓦放气率的影响 张亚平, 张绍裕, 刘炼, 等 20200321
透射式低温光学红外相机全光路冷链热设计 王阳, 孟庆亮, 赵振明, 等 20200345
低温红外镜头设计仿真方法及试验验证 高有道, 李福东, 沈正祥, 等 20200397
无扫描宽范围多波长成像测温技术 孙红胜, 梁新刚, 马维刚, 等 20200394

❖ 激光器与激光光学 ❖

- 用于无线能量传输的高效率半导体激光器设计 李娟, 俞浩, 虞天成, 等 20210147
受激布里渊散射相位共轭镜在高功率纳秒激光器中的应用进展 王天齐, 樊仲维, 康治军, 等 20211024
一种跨介质的空中-水下激光致声探测技术研究 李鹏, 赵扬, 周志权, 等 20200310
CdTe/CdS、CdTe/ZnS 核壳结构半导体量子点制备及荧光特性(英文) 常青, 孟天明, 檀恒宇 20200287
脉冲激光引信烟尘环境回波模拟计算方法 包家倩, 查冰婷, 张合, 等 20200319
实时感知型激光雷达多通道数据采集系统设计 刘汝卿, 蒋衍, 李锋, 等 20200291

❖ 光学器件 ❖

- 电磁超表面透镜的前沿成像应用进展 王艺霖, 范庆斌, 徐挺 20211026
基于电介质超表面的双频带双偏振通道波前调控 刘淇, 刘文玮, 程化, 等 20211027
采用红外快速热退火的晶体管 TED 效应与沟道尺寸的关系研究 任梦远, 陈霏 20200306
引入曲率与角度校正的柔性机构三维形状多芯光纤重构方法 吕佳豪, 董明利, 何彦霖, 等 20200453
飞秒等离子体间非线性作用对超高频电磁波影响的研究 赵骥, 杜晓琳, 聂秀丽, 等 20210108
基于 AlGaN/GaN HEMT 太赫兹探测器的 340 GHz 无线通信接收前端 廉宇轩, 冯伟, 丁青峰, 等 20210202

❖ 光学设计 ❖

- 宽视场航天相机像面测量技术 胡凯, 丛海佳, 陈凡胜, 等 20200336
某低轨倾斜轨道相机热控系统设计与验证 于志, 孟庆亮, 于峰, 等 20200332
机载双波段共口径光电瞄准光学系统设计 陈晓阳, 高明 20200322
柔性支撑快速反射镜伺服机构的参数辨识 方连伟, 史守峡, 蒋志勇 20200303
大口径离轴反射镜四点热锁辅助支撑设计与验证 王春雨, 伏瑞敏, 王聪, 等 20210007
帧间角点匹配的积分时间实时测算方法 王旭明, 黄伟, 张炳先, 等 20200492

❖ 光电测量 ❖

- 基于激光位移传感器圆径测量的角度安装误差研究(英文) 马金钰, 陈欣, 丁国清, 等 20200316

- 浮空器柔性复合蒙皮形变光纤布拉格光栅传感器应变传递特性 刘炳锋, 董明利, 孙广开, 等 20200315
基于高频方差熵清晰度评价函数的聚焦三维测量方法 刘 斌, 谢 倩, 赵 静, 等 20200326
超连续谱激光-单色仪在偏振遥感器定标中的影响因素分析 谢臣瑜, 翟文超, 郝小鹏, 等 20200313

❖ 光通信与光传感 ❖

- 相位敏感光时域反射系统相位模糊及解卷绕 于 森, 孙铭阳, 张耀鲁, 等 20200437
XY-2 号卫星激光通信载荷 PAT 在轨测试 余辉龙, 鲍智康, 王 璇, 等 20200327

❖ 图像处理 ❖

- 复数二维经验模态分解在 SAR 目标识别中的应用 刘志超, 屈百达 20200309
采用卷积神经网络的红外和可见光图像块匹配 (英文) 毛远宏, 马 钟, 贺占庄 20200364

❖ 光谱学 ❖

- 基于时序 Sentinel-2 影像的现代农业园区作物分类研究 张东彦, 戴 震, 徐新刚, 等 20200318
机器学习结合激光诱导击穿光谱技术铁矿石分类方法 杨彦伟, 张丽丽, 郝晓剑, 等 20200490

❖ 简讯 ❖

- 新型功能化光纤微腔光频梳 谭 腾, 姚佰承 20211025
基于全局拓扑优化深度学习模型的超构光栅分束器 邓人隽, 史 坦, 李向平, 等 20211028

Contents

❖ Infrared technology and application ❖

Theory and technology of bionic thermal imaging with multi-aperture distributed and partially overlapped field of view	Luo Lin, Yang Jianguo, Qiu Su, et al. 20210062
Effect of part surface passivation on Dewar outgassing rate	Zhang Yaping, Zhang Shaoyu, Liu Lian, et al. 20200321
Thermal design of all-optical path cold chain based on transmission-type cryogenic optical infrared camera	Wang Yang, Meng Qingliang, Zhao Zhenming, et al. 20200345
Simulation method and its test verification of cryogenic infrared lens design	Gao Youdao, Li Fudong, Shen Zhengxiang, et al. 20200397
Non-scanning wide range multi-wavelength imaging temperature measurement technology	Sun Hongsheng, Liang Xingang, Ma Weigang, et al. 20200394

❖ Lasers & Laser optics ❖

Design of high efficiency diode laser module for wireless power transmission	Li Juan, Yu Hao, Yu Tiancheng, et al. 20210147
Application progress of the stimulated Brillouin scattering phase conjugate mirror in high power nanosecond lasers	Wang Tianqi, Fan Zhongwei, Kang Zhijun, et al. 20211024
Research on laser induced acoustic detection of trans-media aerial-underwater	Li Peng, Zhao Yang, Zhou Zhiqian, et al. 20200310
Preparation and fluorescence characteristics of CdTe/CdS and CdTe/ZnS core-shell semiconductor quantum dots	Chang Qing, Meng Tianming, Tan Hengyu 20200287
Simulation method of pulse laser fuze echo in dust environment	Bao Jiaqian, Zha Bingting, Zhang He, et al. 20200319
Design of multi-channel data acquisition system for real-time perception lidar	Liu Ruqing, Jiang Yan, Li Feng, et al. 20200291

❖ Optical devices ❖

Progress of advanced imaging applications based on electromagnetic metalens	Wang Yilin, Fan Qingbin, Xu Ting 20211026
Dual-wavelength and dual-polarization wavefront manipulation based on dielectric metasurfaces	Liu Qi, Liu Wenwei, Cheng Hua, et al. 20211027
Channel size-dependent TED effect in MOSFETs with infrared rapid thermal anneal	Ren Mengyuan, Chen Fei 20200306
Three-dimensional shape multi-core fiber reconstruction method of flexible mechanism by introducing curvature and angle correction	Lv Jiahao, Dong Mingli, He Yanlin, et al. 20200453
Influence of nonlinear interaction between femtosecond plasmas on ultra-high frequency electromagnetic waves	Zhao Ji, Du Xiaolin, Nie Xiuli, et al. 20210108
340 GHz wireless communication receiving front-ends based on AlGaN/GaN HEMT terahertz detectors	Lian Yuxuan, Feng Wei, Ding Qingfeng, et al. 20210202

❖ Optical design ❖

Measurement technology of image plane of wide-field space camera	Hu Kai, Cong Hajia, Chen Fansheng, et al. 20200336
Thermal design and test for space camera on inclined-LEO orbit	Yu Zhi, Meng Qingliang, Yu Feng, et al. 20200332
Design of airborne dual-band common aperture photoelectric aiming optical system	Chen Xiaoyang, Gao Ming 20200322
Servo mechanism parameter identification of fast steering mirror based on flexible supports	Fang Lianwei, Shi Shouxia, Jiang Zhiyong 20200303

Design and verification of four auxiliary support points by heat lock for large aperture off-axis mirror Wang Chunyu, Fu Ruimin, Wang Cong, et al. 20210007

Real-time calculation method of integral time based on interframe angle point matching Wang Xuming, Huang Wei, Zhang Bingxian, et al. 20200492

❖ Photoelectric measurement ❖

Research on angle setting error of diameter measurement based on laser displacement sensors Ma Jinyu, Chen Xin, Ding Guoqing, et al. 20200316

Strain transfer characteristics of fiber Bragg grating sensor in aerostat flexible composite skin deformation Liu Bingfeng, Dong Mingli, Sun Guangkai, et al. 20200315

3D profile measurement based on depth from focus method using high-frequency component variance weighted entropy image sharpness evaluation function Liu Bin, Qiao Qian, Zhao Jing, et al. 20200326

Influencing factors analysis of supercontinuum laser monochromator in calibration of polarization remote sensors Xie Chenyu, Zhai Wenchao, Hao Xiaopeng, et al. 20200313

❖ Optical communication and sensing ❖

Phase ambiguity and unwrapping of phase-sensitive optical time-domain reflectometer Yu Miao, Sun Mingyang, Zhang Yaolu, et al. 20200437

XY-2 satellite laser communication equipment PAT test in orbit Yu Huilong, Bao Zhikang, Wang Xuan, et al. 20200327

❖ Image processing ❖

Application of complex bidimensional empirical mode decomposition in SAR target recognition Liu Zhichao, Qu Baida 20200309

Infrared-visible image patches matching via convolutional neural networks Mao Yuanhong, Ma Zhong, He Zhanzhuang 20200364

❖ Spectroscopy ❖

Crop classification of modern agricultural park based on time-series Sentinel-2 images Zhang Dongyan, Dai Zhen, Xu Xingang, et al. 20200318

Classification of iron ore based on machine learning and laser induced breakdown spectroscopy Yang Yanwei, Zhang Lili, Hao Xiaojian, et al. 20200490

❖ Newsletter ❖

Novel functionalized frequency combs based on fiber microcavities Tan Teng, Yao Baicheng 20211025

Global topology optimized metagrating beam splitter based on deep learning Deng Renjun, Shi Tan, Li Xiangping, et al. 20211028