

目 次

《红外与激光工程》 创刊 50 周年 特邀报告专辑

❖ 特别推荐 ❖

- 碲镉汞探测器的回顾与展望(特邀) 蔡毅 20210988
现代大气光学及其在光电工程应用中的问题分析与展望(特邀) 饶瑞中 20210818
基于波前编码的无热化红外成像技术综述(特邀) 史泽林, 冯斌, 冯萍 20210454
信息光学成像研究回顾、现状与展望(特邀) 韩申生, 胡晨昱 20220017
高性能单频光纤激光器研究进展: 2017-2021(特邀) 史伟, 付士杰, 盛泉, 等 20210905

❖ 红外技术及应用 ❖

- 基于 InSb 的新型红外探测器材料(特邀) 司俊杰 20210811
数字红外焦平面探测器(特邀) 姚立斌, 陈楠, 胡窦明, 等 20210995
偏振成像技术的发展现状与展望(特邀) 罗海波, 张俊超, 盖兴琴, 等 20210987
微纳结构增强型红外探测器研究进展(特邀) 朱鹏, 肖磊, 孙泰, 等 20210826
短波红外探测器的发展与应用(特邀) 马旭, 李云雪, 黄润宇, 等 20210897
局域场增强石墨烯近红外光电探测器(特邀) 王军, 何美誉, 韩兴伟, 等 20210823
中红外片上集成光电子综述(特邀) 林宏焘, 孙博姝, 马辉, 等 20211111

❖ 激光器与激光光学 ❖

- 拉曼光纤激光: 50 年的历程、现状与趋势(特邀) 周朴, 姚天甫, 范晨晨, 等 20220015
非线性激光制造的进展与应用(特邀) 刘雨晴, 孙洪波 20220005
基于循环神经网络的超短脉冲光纤放大器模型(特邀) 张逸文, 蔡宇, 苑莉薪, 等 20210857
量子激光雷达研究综述(特邀) 张子静, 谢佳衡, 黄明维, 等 20211102
1.7 μm 超快光纤激光器研究进展(特邀) 战泽宇, 陈吉祥, 刘萌, 等 20210850
锁模光纤激光器中隐形孤子脉动演化特性研究(特邀) 黄千千, 黄梓楠, 戴礼龙, 等 20210749
大气探测激光雷达突变信号处理方法研究(特邀) 杨彬, 莫祖斯, 刘海姣, 等 20211117
星载激光测高仪多模式回波参数提取方法(特邀) 朱天豪, 周辉, 石岩, 等 20210836

❖ 光学成像技术 ❖

- 元宇宙中的动态全息三维显示: 发展与挑战(特邀) 曹良才, 何泽浩, 刘珂瑄, 等 20210935

- 三镜反射式光学系统综述(特邀) 孟庆宇 20210986
成像光谱仪的发展与应用(特邀) 于 磊 20210940
滤光片分光型高光谱相机发展现状及趋势(特邀) 刘春雨, 丁 祎, 刘 帅, 等 20210981

❖ 光通信与光传感 ❖

- 基于信息超表面的无线通信(特邀) 梁竟程, 陈伟聪, 程 强, 等 20210797
无机钙钛矿白光 LED 及可见光通信研究进展(特邀) 赵双易, 莫琼花, 汪百前, 等 20210772
片上集成光学传感检测技术的研究进展(特邀) 陈 沁, 南向红, 梁文跃, 等 20210671
光纤氢气传感技术(特邀) 李 慧, 杨远洪 20211114
多芯光纤折射率与内应力分布重构技术(特邀) 解宇恒, 裴 丽, 何 倩, 等 20210758

❖ 光电测量 ❖

- 超大口径平面反射镜的光学检测(特邀) 王孝坤, 戚二辉, 胡海翔, 等 20210953
一种基于自适应差分进化算法的薄膜参数表征方法研究(特邀) 管钰晴, 傅云霞, 邹文哲, 等 20210976
人眼海丁格尔刷效应的偏振感知建模与分析(特邀) 王 祺, 刘智颖, 贾文涛, 等 20210927

Contents

❖ Highlight ❖

Review and prospect of HgCdTe detectors (<i>Invited</i>)	Cai Yi 20210988
Analysis and prospect of modern atmospheric optics and its applications in optoelectronic engineering (<i>Invited</i>)	Rao Ruizhong 20210818
Review on athermalized infrared imaging technology based on wavefront coding (<i>Invited</i>)	Shi Zelin, Feng Bin, Feng Ping 20210454
Review, current status and prospect of researches on information optical imaging (<i>Invited</i>)	Han Shensheng, Hu Chenyu 20220017
Research progress on high-performance single-frequency fiber lasers: 2017-2021 (<i>Invited</i>)	Shi Wei, Fu Shijie, Sheng Quan, et al. 20210905

❖ Infrared technology and application ❖

Novel InSb-based infrared detector materials (<i>Invited</i>)	Si Junjie 20210811
Digital infrared focal plane array detectors (<i>Invited</i>)	Yao Libin, Chen Nan, Hu Douming, et al. 20210995
Development status and prospects of polarization imaging technology (<i>Invited</i>)	Luo Haibo, Zhang Junchao, Gai Xingqin, et al. 20210987
Research progress of micro-nano structures enhanced infrared detectors (<i>Invited</i>)	Zhu Peng, Xiao Lei, Sun Tai, et al. 20210826
Development and application of short wavelength infrared detectors (<i>Invited</i>)	Ma Xu, Li Yunxue, Huang Runyu, et al. 20210897
Localized field enhanced graphene-based near-infrared photodetector (<i>Invited</i>)	Wang Jun, He Meiyu, Han Xingwei, et al. 20210823
Review of mid-infrared on-chip integrated photonics (<i>Invited</i>)	Lin Hongtao, Sun Boshu, Ma Hui, et al. 20211111

❖ Lasers & Laser optics ❖

50 th anniversary of Raman fiber laser: History, progress and prospect (<i>Invited</i>)	Zhou Pu, Yao Tianfu, Fan Chenchen, et al. 20220015
Progress and application of nonlinear laser manufacturing (<i>Invited</i>)	Liu Yuqing, Sun Hongbo 20220005
Ultra-short pulse fiber amplifier model based on recurrent neural network (<i>Invited</i>)	Zhang Yiwen, Cai Yu, Yuan Lixin, et al. 20210857
Overview of quantum LiDAR (<i>Invited</i>)	Zhang Zijing, Xie Jiaheng, Huang Mingwei, et al. 20211102
Recent progress of 1.7 μm ultrafast fiber lasers (<i>Invited</i>)	Zhan Zeyu, Chen Jixiang, Liu Meng, et al. 20210850
Evolution of invisible soliton pulsation in a mode-locked fiber laser (<i>Invited</i>)	Huang Qianqian, Huang Zinan, Dai Lilong, et al. 20210749
Study on abrupt signal processing method of atmospheric lidar (<i>Invited</i>)	Yang Bin, Mo Zusi, Liu Haijiao, et al. 20211117
Parameter extraction method on the multiple mode waveforms of satellite laser altimeter (<i>Invited</i>)	Zhu Tianhao, Zhou Hui, Shi Yan, et al. 20210836

❖ Optical imaging ❖

- Progress and challenges in dynamic holographic 3D display for the metaverse (*Invited*) Cao Liangcai, He Zehao, Liu Kexuan, et al. 20210935
Overview of three-mirror reflective optical system (*Invited*) Meng Qingyu 20210986
Development and application of imaging spectrometer (*Invited*) Yu Lei 20210940
Development status and trend of filter hyperspectral camera (*Invited*) Liu Chunyu, Ding Yi, Liu Shuai, et al. 20210981

❖ Optical communication and sensing ❖

- Wireless communications based on information metasurfaces (*Invited*) Liang Jingcheng, Chen Weicong, Cheng Qiang, et al. 20210797
Research progress in inorganic perovskites white LEDs and visible light communication (*Invited*) Zhao Shuangyi, Mo Qionghua, Wang Baiqian, et al. 20210772
Research progress of on-chip integrated optical sensing technology (*Invited*) Chen Qin, Nan Xianghong, Liang Wenyue, et al. 20210671
Optical fiber hydrogen sensing technology (*Invited*) Li Hui, Yang Yuanhong 20211114
Reconstruction technology of refractive index and internal stress distribution of multi-core fibers (*Invited*) Xie Yuheng, Pei Li, He Qian, et al. 20210758

❖ Photoelectric measurement ❖

- Optical testing of the super-large plane mirror (*Invited*) Wang Xiaokun, Qi Erhui, Hu Haixiang, et al. 20210953
A characterization method of thin film parameters based on adaptive differential evolution algorithm (*Invited*) Guan Yuqing, Fu Yunxia, Zou Wenzhe, et al. 20210976
Modeling and analysis of Haidinger's brushes polarization perception in human eyes (*Invited*) Wang Qi, Liu Zhiying, Jia Wentao, et al. 20210927