目　次

（加★文章为本期推荐优秀论文）

❖特约专栏–“超分辨成像技术”❖

从实验室到市场：光声成像的产业化进程 ······ Yasha　Saxena，Chulhong Kim，Yao Junjie 1103001
超分辨显微技术在活细胞中的应用与发展 ······ 胡春光，查日东，凌秋雨，等 1103002
扫描近场圆偏振光学显微镜 ······ 金　涛，谢孟宇，冀胡东，等 1103003
数字图像相关用于印刷电路板全场微应变的测量 ······ 杨　靖，吴思进，郑伟巍，等 1103004
选择型照明傅里叶叠层成像提取粒子尺度 ······ 李生福，赵　宇，陈光华，等 1103005
基于插值的共焦显微镜非线性畸变失真图像校正 ······ 鲍雪晶，戴仕杰，郭　澄，等 1103006
采用双目立体相机的实时集成成像拍摄系统 ······ 赵　敏，熊召龙，邢　妍，等 1103007
随机光学重构显微术及其应用研究进展 ······ 杨建宇，潘雷霆，胡　芬，等 1103008

❖红外技术及应用❖

★自适应积分时间改变的红外焦平面非均匀校正方法 ······ 崔　坤，陈凡胜，苏晓锋，等 1104001
紧凑型大变倍比红外光学系统设计 ······ 曲　锐，梅　超，杨洪涛，等 1104002
像素融合方法的红外双波段目标模拟器设计 ······ 王治乐，周程灏，林　菲，等 1104003
Offner 型消热差中波红外成像光谱仪设计 ······ 罗刚银，王弼陡，陈玉琦，等 1104004

❖激光技术及应用❖

大口径钕玻璃坯片中铂金颗粒的强激光辐照检测 ······ 程继萌，周秦岭，陈　伟，等 1106001
ICF 装置光束定位的结构稳定性设计 ······ 朱明智，陈学前，吴文凯，等 1106002
HY–2 卫星激光反射器理论分析及激光测距实验 ······ 罗青山，郭唐永，邹　彤，等 1106003
基于叶片含水量的激光偏振成像模型研究 ······ 李小路，李昀晔，谢鑫浩，等 1106004
飞秒激光作用下啁啾镜膜层内损伤相关动力学 ······ 邢　昕，袁　伟，李泽汉，等 1106005
用于半导体激光器的高效率复合波导结构 ······ 陈琦鹤，范　杰，马晓辉，等 1106006
多色相干光学烧孔的动态生成与调控 ······ 李东康，刘玉娟，田杏霞，等 1106007

❖太赫兹技术及应用❖

170 GHz 和 340 GHz CSMRs 滤波器选频网络研究 ······ 蒋　均，陆　彬，田遥岭，等 1125001
太赫兹安检系统人体图像边缘物体识别 ······ 王林华，袁明辉，黄　慧，等 1125002
0.22 THz 宽带混频电路研究 ······ 王俊龙，杨大宝，邢　东，等 1125003
基于太赫兹时域光谱技术与 PCA–SVM 的转基因大豆油鉴别研究 ······ 张文涛，李跃文，占平平，等 1125004
不同粗糙度抛物面的 2.52 THz 后向散射测量 ······ 樊长坤，李　琦，赵永蓬，等 1125005

❖光电器件与微系统❖

GaN 基紫外探测器读出电路注入效率 ······ 马　丁，刘福浩，李向阳，等 1120001

万方数据

Sun-flower 型渐变光子晶体自聚焦透镜 …… 刘　薇,孙晓红,王　帅,等 1120002
宽波段凸面闪耀光栅优化设计 …… 朱嘉诚,靳阳明,黄绪杰,等 1120003

❖光电测量❖

全捷联导引头视线角速度 STCKF 提取技术 …… 白　瑞,夏群利,张道驰 1117001
一种适用于涂层的双高斯偏振 BRDF 模型 …… 张　颖,宋　平,赵慧洁 1117002
应用 T 矩阵法对大气灰霾简单非球形粒子散射特性的计算与分析 …… 徐　强,王东琴,王　旭,等 1117003
基于地面红外探测器的星载激光测高仪在轨几何定标 …… 李国元,唐新明,樊文锋,等 1117004
针对机器人位姿测量立体标靶的单目视觉标定方法 …… 张　旭,魏　鹏 1117005

❖光学设计及仿真❖

单透镜高分辨成像系统的研究和设计 …… 徐　宁,付跃刚,浦　东 1118001
多角度偏振成像光谱仪的光学设计 …… 黄绪杰,靳阳明,潘　俏,等 1118002
非球面技术在浸没式光刻照明系统中的应用 …… 李美萱,王　丽,董连和,等 1118003

❖光通信与光传感❖

室内 VLC 系统光源布局设计 …… 赵　黎,彭　恺,焦晓露 1122001
APD 检测 Golay 编码 BOTDR 系统的建模分析与优化设计 …… 李永倩,王文平,李晓娟,等 1122002
拉曼增益对回音壁模式光学微腔的全光调制 …… 杨　旭,李亚明,郭肃丽,等 1122003
液晶光学相控技术在卫星通信多接入中的应用 …… 张天一,汪相如,黄子强,等 1122004

❖光谱探测与分析❖

参麦注射液与人血清白蛋白相互作用的多光谱研究 …… 林晓钢,翁凌冬,朱　濠,等 1123001
QuEChERS-拉曼光谱法测定黄瓜上的吡虫啉残留量 …… 刘翠玲,赵　琦,孙晓荣,等 1123002

❖信息获取与辨识❖

一种新型VLC 高精度混合定位算法的实现 …… 吴志豪,施安存,孙　悦,等 1126001
太赫兹成像质量提升方法 …… 张　智,林栩凌,张建兵,等 1126002

万方数据

Contents

❖ Invited paper– Super–resolution imaging technology ❖

From bench to market: commercialization of photoacoustic imaging ………… Yasha Saxena, Chulhong Kim, Yao Junjie 1103001
Super–resolution microscopy applications and development in living cell ……………………………………………………………
……………………………………………………………………………… Hu Chunguang, Zha Ridong, Ling Qiuyu, et al. 1103002
Scanning near–field circular polarization optical microscope …………………… Jin Tao, Xie Mengyu, Ji Hudong, et al. 1103003
Full–field measurement of micro strain of printed circuit board assembly using digital image correlation ………………………
………………………………………………………………………………… Yang Jing, Wu Sijin, Zheng Weiwei, et al. 1103004
Extraction of particle size via Fourier ptychography with selective illuminations
…………………………………………………………………………… Li Shengfu, Zhao Yu, Chen Guanghua, et al. 1103005
Nonlinear distortion image correction from confocal microscope based on interpolation ……………………………………………
………………………………………………………………………………… Bao Xuejing, Dai Shijie, Guo Cheng, et al. 1103006
Real–time integral imaging pickup system based on binocular stereo camera ……………………………………………………
……………………………………………………………………………… Zhao Min, Xiong Zhaolong, Xing Yan, et al. 1103007
Stochastic Optical Reconstruction Microscopy and its application ………… Yang Jianyu, Pan Leiting, Hu Fen, et al. 1103008

❖ Infrared technology and application ❖

Adaptive non–uniformity correction method for IRFPA with integration time changing ……………………………………………
……………………………………………………………………………… Cui Kun, Chen Fansheng, Su Xiaofeng, et al. 1104001
Design of compact high zoom ratio infrared optical system ………………… Qu Rui, Mei Chao, Yang Hongtao, et al. 1104002
Design of infrared dual–band target simulator based on pixel fusion method ……………………………………………………
……………………………………………………………………………… Wang Zhile, Zhou Chenghao, Lin Fei, et al. 1104003
Design of athermal mid–infrared imaging spectrometer based on Offner scheme ………………………………………………
……………………………………………………………………………… Luo Gangyin, Wang Bidou, Chen Yuqi, et al. 1104004

❖ Laser technology and application ❖

Detection of platinum particles in large diameter Nd:glass blank by high power laser radiation …………………………………
……………………………………………………………………………… Cheng Jimeng, Zhou Qinling, Chen Wei, et al. 1106001
Structure stability design of beam positioning in ICF facility ……………………………………………………………………
……………………………………………………………………………… Zhu Mingzhi, Chen Xueqian, Wu Wenkai, et al. 1106002
Theoretical analysis of laser retro–reflectors and experiment of laser ranging for HY–2 satellites ………………………………
……………………………………………………………………………… Luo Qingshan, Guo Tangyong, Zou Tong, et al. 1106003
Laser polarization imaging models based on leaf moisture content ………………………………………………………………
………………………………………………………………………………………… Li Xiaolu, Li Yunye, Xie Xinhao, et al. 1106004
Pre–damage dynamics of dielectric chirped mirror film layer excited by femtosecond laser ……………………………………
……………………………………………………………………………………………… Xing Xin, Yuan Wei, Li Zehan, et al. 1106005
High efficiency composite waveguide structure for semiconductor laser …… Chen Qihe, Fan Jie, Ma Xiaohui, et al. 1106006
Dynamic generation and manipulation of multi–color coherent hole–burnings ………………………………………………………
……………………………………………………………………………… Li Dongkang, Liu Yujuan, Tian Xingxia, et al. 1106007

❖ Terahertz technology and application ❖

170 GHz and 340 GHz frequency selective network based on CSMRs filter …… Jiang Jun, Lu Bin, Tian Yaoling, et al. 1125001
Recognition of edge object of human body in THz security inspection system ……………………………………………………
……………………………………………………………………………… Wang Linhua, Yuan Minghui, Huang Hui, et al. 1125002

万方数据

Research of 0.22 THz wide-band mixing circuit …… Wang Junlong, Yang Dabao, Xing Dong, et al. 1125003

Recognition of transgenic soybean oil based on terahertz time-domain spectroscopy and PCA-SVM …… Zhang Wentao, Li Yuewen, Zhan Pingping, et al. 1125004

Measurement of 2.52 THz back scattering in different roughness paraboloid …… Fan Changkun, Li Qi, Zhao Yongpeng, et al. 1125005

❖ Photoelectric device and microsystem ❖

Injection efficiency of GaN based ultraviolet detector readout circuit …… Ma Ding, Liu Fuhao, Li Xiangyang, et al. 1120001

Self-focusing lens in Sun-flower graded photonic crystal …… Liu Wei, Sun Xiaohong, Wang Shuai, et al. 1120002

Design and optimization of broadband convex blazed grating …… Zhu Jiacheng, Jin Yangming, Huang Xujie, et al. 1120003

❖ Photoelectric measurement ❖

Technology of line-of-sight rate estimation using STCKF for strapdown seeker …… Bai Rui, Xia Qunli, Zhang Daochi 1117001

Double-Gauss polarimetric BRDF model of painted surfaces …… Zhang Ying, Song Ping, Zhao Huijie 1117002

Computation and analysis on scattering characteristics of single nonspherical particles of atmospheric haze by *T* matrix algorithm …… Xu Qiang, Wang Dongqin, Wang Xu, et al. 1117003

On-orbit geometric calibration of satellite laser altimeter using ground-based IR detectors …… Li Guoyuan, Tang Xinming, Fan Wenfeng, et al. 1117004

Monocular vision calibration method of the stereo target for robot pose measurement …… Zhang Xu, Wei Peng 1117005

❖ Optical design and simulation ❖

Research and design of single lens high resolution imaging system …… Xu Ning, Fu Yuegang, Pu Dong 1118001

Optical design of multi-angle imaging spectropolarimeter …… Huang Xujie, Jin Yangming, Pan Qiao, et al. 1118002

Application of aspheric technique in immersion lithography lighting system …… Li Meixuan, Wang Li, Dong Lianhe, et al. 1118003

❖ Optical communication and optical sensing ❖

Design of the layout of lighting for indoor VLC system …… Zhao Li, Peng Kai, Jiao Xiaolu 1122001

Modeling analysis and optimization design of a Golay coding Brillouin Optical Time Domain Reflectometer system with APD detector …… Li Yongqian, Wang Wenping, Li Xiaojuan, et al. 1122002

All optical modulation of whispering-gallery-mode optical micro-cavities with Raman gain …… Yang Xu, Li Yaming, Guo Suli, et al. 1122003

Application of liquid crystal optical phasing technique in multi-access of satellite communication …… Zhang Tianyi, Wang Xiangru, Huang Ziqiang, et al. 1122004

❖ Spectrum detection and analysis ❖

Multi-spectral analysis of interaction between Shenmai injection and human serum albumin …… Lin Xiaogang, Weng Lingdong, Zhu Hao, et al. 1123001

QuEChERS-Raman spectroscopy method for detecting imidacloprid residue in cucumbers …… Liu Cuiling, Zhao Qi, Sun Xiaorong, et al. 1123002

❖ Information acquisition and identification ❖

Realization of a new VLC hybrid location algorithm with high accuracy …… Wu Zhihao, Shi Ancun, Sun Yue, et al. 1126001

Improvement method for terahertz imaging quality …… Zhang Zhi, Lin Xuling, Zhang Jianbing, et al. 1126002

万方数据