

目次

(加★文章为本期推荐优秀论文)

❖ 特约专栏 ❖

远距离物质拉曼光谱探测系统·····姚齐峰,王 帅,夏嘉斌,等 1103001

❖ 激光器技术 ❖

- ★1.35 GHz 线性调频 Nd:YVO₄ 激光器·····徐新瑞,樊荣伟,陈兆东,等 1105001
- 基于波长锁定泵浦单振荡级千瓦光纤激光器·····马建立,姜诗琦,于 森,等 1105002
- 30 W 输出的 Yb³⁺: KGd(WO₄)₂ 激光系统的理论设计·····高 明,王 洙,蒋志刚,等 1105003
- 基于 REC 技术的激光器阵列光源模块设计·····倪 屹,刘 森,陆 骏,等 1105004
- 激光复合损伤机理与效应研究·····程 勇,朱孟真,马云峰,等 1105005
- 红外波长的随机激光器设计及 FDTD 软件特性验证(英文)·····张伟杰,宋开山 1105006
- 采用数模混合双闭环方法的 DFB 激光器驱动电源·····曲世敏,王 明,李 楠 1105007
- 基于内腔的调 Q 锁模光参量振荡器的研究·····王 静,梁 健,宋 朋,等 1105008

❖ 高能激光技术 ❖

- ★激光等离子体点火在航空航天动力系统的应用·····李晓晖,于 欣 1136001
- 变形镜在激光辐照下热畸变有限元模拟·····张耀平,樊峻棋,龙国云 1136002
- 用于激光诱导等离子体点火技术的激光源研究进展·····马欲飞,何 应,于 欣 1136003
- 被动锁模掺 Er³⁺氟化物光纤激光器理论研究·····王少奇,邓 颖,李 超,等 1136004

❖ 激光技术及应用 ❖

- 激光间接驱动柱形腔壁辐照特性·····侯鹏程,钟哲强,文 萍,等 1106001
- 纳秒整形激光脉冲波形的高对比度诊断·····夏彦文,郑奎兴,刘 华,等 1106002
- 具有三级放大结构的铷蒸气激光系统的优化设计·····蒋志刚,王 洙,蔡 和,等 1106003
- 激光陀螺捷联惯导系统多位置系统级标定方法·····石文峰,王省书,郑佳兴,等 1106004
- 车载三维激光扫描系统安置参数一站式标定·····王 力,李广云,杨新永,等 1106005
- 激光辅助的大型回转类零件直径实时测量方法·····樊超楠,刘 巍,刘 阳,等 1106006
- 激光干扰 CCD 规则亮点分布原理研究·····陈前荣,亓凤杰,王彦斌,等 1106007
- 激光驱动纳米须靶产生 X 射线转换效率研究(英文)·····王洪建,阳庆国,叶 雁,等 1106008
- 金属零件自动超轻结构化设计及激光增材制造·····吴伟辉,肖冬明,毛 星 1106009

❖ 红外技术及应用 ❖

- 基于方向性模型的红外焦平面阵列混叠效应研究·····郑 博,王 健,许文斌,等 1104001
- 基于最大值投影和快速配准的空间小目标检测·····刘 峰,奚晓梁,沈同圣 1104002
- 分光轴式多源图像融合系统近距离配准方法研究·····王贵圆,常本康,富容国,等 1104003

❖ 光电测量 ❖

- ★采用精确三维控制场的 wMPS 全局组网定向方法·····赵子越,郝继贵,杨凌辉 1117001
- 基于正交柱面成像相机的大尺寸三维坐标测量·····刘海庆,杨凌辉,任永杰,等 1117002
- 可实现多点测量的波分复用光纤氢气传感系统·····李建中,刘振清,雷江波,等 1117003
- 利用游标效应提高微波光子学扫描式频率测量效率·····于 梦,张 勇,靳辰飞,等 1117004
- 基于主动式全景视觉的管道形貌缺陷检测系统·····汤一平,鲁少辉,吴 挺,等 1117005

TM65 m 天线基础和轨道沉降及对天线指向的影响.....付 丽,凌权宝,赵融冰,等 1117006

光谱可调谐式高分辨率光学载荷校准技术.....史朝龙,孙红胜,王加朋,等 1117007

空间调制线偏振光谱测量的波片延迟误差校正.....张 莽,李 双,刘 强,等 1117008

采用小波变换的空间外差光谱仪基线校正.....叶 松,甘永莹,熊 伟,等 1117009

❖ 光学设计及仿真 ❖

基于主动约束阻尼层的次镜支撑结构设计.....田士涛,徐振邦,秦 超,等 1118001

对称棱镜式环形谐振腔结构优化(英文).....姚呈康,李 俊,李 龙 1118002

立方腔平均反射光程的研究刘高佑,安 宁,韩兴伟,等 1118003

大尺寸空间角测量系统光轴指向不确定度评定.....肖文健,马东玺,陈志斌,等 1118004

光全散射法在城市扬尘在线监测系统中的应用.....路 广,李杏华,肖云龙 1118005

离轴三反系统计算机辅助装调.....王 彬,伍 凡,叶玉堂 1118006

基于在线最小二乘支持向量机的变形镜建模与控制.....张东阁,傅雨田 1118007

❖ 激光雷达技术 ❖

差分像移大气湍流廓线激光雷达的研制.....周颖捷,周安然,孙东松,等 1130001

天基合成孔径激光雷达系统分析.....李道京,杜剑波,马 萌,等 1130002

❖ 太赫兹技术及应用 ❖

THz 技术在大气探测领域的应用研究进展.....李书磊,刘 磊,高太长,等 1125001

理想介质中太赫兹波传输过程仿真.....吴建军,尹玉富,刘茂君,等 1125002

太赫兹时域光谱系统静区测试及数据处理.....张旭涛,孙金海,蔡 禾,等 1125003

❖ 光通信与光传感 ❖

保偏光纤侧视光强相关峰锐度的定轴方法.....翁晓泉,冯 迪,黄怀波,等 1122001

光纤环形谐振腔输入功率波动对谐振式光纤陀螺的影响(英文).....郑 华,郑永秋,安盼龙,等 1122002

采用 NPRO 光源的零差相干光通信实验.....王云祥,李庭权,邱 琪,等 1122003

❖ 空间光学 ❖

空间遥感器反射镜组件结构设计方法.....王克军,宣 明,董吉洪,等 1113001

空间调制偏振光谱测量定标方法.....李 双,袁 齐,龚 平 1113002

星敏感器安装误差的三位置法地面标定方法.....王宏力,何贻洋,陆敬辉,等 1113003

❖ 空间碎片探测 ❖

低轨空间碎片弹道系数及应用.....陈俊宇,李 彬,章 品,等 1129001

❖ 前沿光学成像技术 ❖

关联成像的点扩散函数分析法施 展,樊 祥,程正东,等 1124001

❖ 信息获取与识别 ❖

基于可分离模糊核的复合运动模糊星图建模与仿真.....袁洪琳,李 帆,于 涛,等 1126001

基于人工靶标的多光谱遥感图像真彩色合成.....黄红莲,易维宁,杜丽丽,等 1126002

资源限制型可重构并行信息处理方法.....陆智俊,贲 德,毛博年 1126003

Contents

❖ Invited paper ❖

Remote Raman spectrum detection system of material.....Yao Qifeng, Wang Shuai, Xia Jiabing, et al. 1103001

❖ Laser technology ❖

1.35 GHz linearly tunable single-frequency Nd:YVO₄ laser.....Xu Xinrui, Fan Rongwei, Chen Zhaodong, et al. 1105001

KW fiber laser oscillator based on wavelength locking.....Ma Jianli, Jiang Shiqi, Yu Miao, et al. 1105002

Theoretical design of a Yb³⁺:KGd(WO₄)₂ laser system with 30 W output power.....Gao Ming, Wang You, Jiang Zhigang, et al. 1105003

Design of laser array light source module based on REC technology.....Ni Yi, Liu Sen, Lu Jun, et al. 1105004

Mechanism and effects of complex laser ablation.....Cheng Yong, Zhu Mengzhen, Ma Yunfeng, et al. 1105005

Design of random laser and feature verification of FDTD software with the infrared wavelengths... Zhang Weijie, Song Kaishan 1105006

DFB laser driving power using hybrid digital-analog closed loop.....Qu Shimin, Wang Ming, Li Nan 1105007

Q-switched mode-locking optical parametric oscillator with intra-cavity.....Wang Jing, Liang Jian, Song Peng, et al. 1105008

❖ High energy laser technology ❖

Application of laser plasma ignition in aerospace propulsion systems.....Li Xiaohui, Yu Xin 1136001

Finite element simulation of thermal distortions of deformable mirror with laser irradiation...Zhang Yaoping, Fan Junqi, Long Guoyun 1136002

Research progress of laser source used in laser induced plasma ignition.....Ma Yufei, He Ying, Yu Xin, et al. 1136003

Theory study on passively mode-locked Er³⁺-doped fluorine fiber laserWang Shaoqi, Deng Ying, Li Chao, et al. 11360044

❖ Laser technology and application ❖

Irradiation characteristics of laser quads on cylindrical hohlraum wall in indirect-drive facility.....
.....Hou Pengcheng, Zhong Zheqiang, Wen Ping, et al. 1106001

High contrast temporal shape diagnostics for nanosecond laser reshaping pulse.....Xia Yanwen, Zheng Kuixing, Liu Hua, et al. 1106002

Optimization design of a power-scaled rubidium laser with a 3-stage amplification configuration.....
.....Jiang Zhigang, Wang You, Cai He, et al. 1106003

Multi-position systematic calibration method for RLG-SINS.....Shi Wenfeng, Wang Xingshu, Zheng Jiaying, et al. 1106004

One-site calibration of mounted parameter method for 3D mobile laser scanning.....Wang Li, Li Guangyun, Yang Xinyong, et al. 1106005

On-line measurement method for diameters of large rotatory parts based on laser-assisted technology.....
.....Fan Chaonan, Liu Wei, Liu Yang, et al. 1106006

Distribution theory study of CCD regular periodical spots jammed by laser.....Chen Qianrong, Qi Fengjie, Wang Yanbin, et al. 1106007

Multi-keV X-ray conversion efficiencies of laser-irradiated nano-velvet Cu targets...Wang Hongjian, Yang Qingguo, Ye Yan, et al. 1106008

Automatic design and laser additive manufacturing of super-light structure of metal part...Wu Weihui, Xiao Dongming, Mao Xing 1106009

❖ Infrared technology and application ❖

Aliasing effect of the IR focal plane arrays based on angular-dependence model.....Zheng Bo, Wang Jian, Xu Wenbin, et al. 1104001

Space small targets detection based on maximum projection and quick registration.....Liu Feng, Xi Xiaoliang, Shen Tongsheng 1104002

Close range image registration of multi-source image fusion system with a separate optical axis structure.....
.....Wang Guiyuan, Chang Benkang, Fu Rongguo, et al. 1104003

❖ Photoelectric measurement ❖

Orientation parameters calibration of wMPS by using precise 3D coordinate control network...Zhao Ziyue, Zhu Jigui, Yang Linghui 1117001

Large-scale 3D coordinate measurement based on orthogonal cylindrical imaging cameras.....
.....Liu Haiqing, Yang Linghui, Ren Yongjie, et al. 1117002

Wavelength Division Multiplexed optical fiber hydrogen sensing system for multi-point measurement.....
.....Li Jianzhong, Liu Zhenqing, Lei Jiangbo, et al. 1117003

Improving the efficiency of microwave photonics scanning frequency measurement based on vernier effect.....
.....Yu Meng, Zhang Yong, Jin Chenfei, et al. 1117004

Pipe morphology defects inspection system with active stereo omnidirectional vision sensor·····	Tang Yiping, Lu Shaohui, Wu Ting, et al. 1117005
Settlements of foundation and track of TM65 m and its effect on antenna pointing·····	Fu Li, Ling Quanbao, Zhao Rongbing, et al. 1117006
Calibration technology for high-resolution optical load by spectrally tunable source·····	Shi Chaolong, Sun Hongsheng, Wang Jiapeng, et al. 1117007
Calibration of retardance deviation for DOLP measurement based spatial modulating spectropolarimeter·····	Zhang Qiao, Li Shuang, Liu Qiang, et al. 1117008
Baseline correction of spatial heterodyne spectrometer using wavelet transform·····	Ye Song, Gan Yongying, Xiong Wei, et al. 1117009

❖ Optical design and simulation ❖

Support design of secondary mirror based on active constrained layer damping treatments·····	Tian Shitao, Xu Zhenbang, Qin Chao, et al. 1118001
Structural optimization of ring resonant cavity consisted with symmetry prisms·····	Yao Chengkang, Li Jun, Li Long 1118002
Study on average reflex optical path length of cubic cavity·····	Liu Gaoyou, An Ning, Han Xingwei, et al. 1118003
Pointing uncertainty evaluation of optical axis in large-scale spatial angle measuring system·····	Xiao Wenjian, Ma Dongxi, Chen Zhibin, et al. 1118004
Application of total light scattering in city dust on-line monitoring system·····	Lu Guang, Li Xinghua, Xiao Yunlong 1118005
Computer aided alignment for off-axis TMA system·····	Wang Bin, Wu Fan, Ye Yutang 1118006
Deformable mirror modeling and control based on on-line least square support vector machine·····	Zhang Dongge, Fu Yutian 1118007

❖ Laser radar technology ❖

Development of differential image motion LiDAR for profiling optical turbulence·····	Zhou Yinjie, Zhou Anran, Sun Dongsong, et al. 1130001
System analysis of spaceborne synthetic aperture lidar·····	Li Daojing, Du Jianbo, Ma Meng, et al. 1130002

❖ Terahertz technology and application ❖

Research progress of THz technology application in the atmospheric sounding field·····	Li Shulei, Liu Lei, Gao Taichang, et al. 1125001
Transmission procedure simulation of THz wave through idea medium·····	Wu Jianjun, Yin Yufu, Liu Maojun, et al. 1125002
Quiet zone measurements and data processing of THz-TDS experiment system·····	Zhang Xutao, Sun Jinhai, Cai He, et al. 1125003

❖ Optical communication and optical sensing ❖

Alignment method based on peak's sharpness degree of correlation coefficient profile of side-view images for polarization maintaining fibers·····	Weng Xiaoquan, Feng Di, Huang Huaibo, et al. 1122001
Effect of input intensity fluctuation of fiber ring resonator on resonator fiber optic gyroscope·····	Zheng Hua, Zheng Yongqiu, An Panlong, et al. 1122002
Experiments on homodyne coherent optical communication with NPRO as light sources·····	Wang Yunxiang, Li Tingquan, Qiu Qi, et al. 1122003

❖ Space optics ❖

Design method of reflector component structure of space remote sensor·····	Wang Kejun, Xuan Ming, Dong Jihong, et al. 1113001
Calibration method of spatial modulation spectropolarimetry·····	Li Shuang, Yuan Qi, Gong Ping 1113002
Ground calibration method of installation error for star sensor based on three positions method·····	Wang Hongli, He Yiyang, Lu Jinghui, et al. 1113003

❖ Space debris detection ❖

Low earth orbit space debris ballistic coefficients and their applications·····	Chen Junyu, Li Bin, Zhang Pin, et al. 1129001
---	---

❖ Advanced optical imaging technology ❖

PSF analysis of Correlated Imaging·····	Shi Zhan, Fan Xiang, Cheng Zhengdong, et al. 1124001
---	--

❖ Information acquisition and identification ❖

Modeling and simulation of blurred star images by the complicated motion based on the separable kernel·····	Yuan Honglin, Li Fan, Yu Tao, et al. 1126001
Multi-spectral remote sensing image true color synthesis technique based on artificial target·····	Huang Honglian, Yi Weining, Du Lili, et al. 1126002
Resource-constrained parallel information processing methods based on reconfigurable technology·····	Lu Zhijun, Ben De, Mao Bonian 1126003