

光学学报

光学前沿——信息光学专刊

目 次

· 大气与海洋光学 ·

- 光场相机波前传感器性能分析 许洁平 梁永辉 蒋鹏志 s201001
敏捷模式下卫星成像条件变化研究 韩杏子 董小静 朱军 s201002
两种大气相干长度测量方法对比分析 李志朝 宗飞 徐云岫 等 s201003
基于 Kolmogorov 模型的大气湍流对于空间光通信轨道角动量模式间串扰影响的研究
..... 张磊 宿晓飞 张霞 等 s201004

- 长距离非视距大气光散射通信路径损耗和角散射分布 徐智勇 宋超 汪井源 等 s201005

· 衍射与光栅 ·

- 线状点阵分布整形光束研究 聂树真 余锦虞 钢等 s205001

· 光纤光学与光通信 ·

- 基于微纳光纤环形腔的海水与汽油光谱分析 王鑫 王晶 王姗姗 等 s206001
组合光纤光栅掺铒光纤放大增益平坦器研究 布音嘎日迪 张甲笑 潘赫赫 等 s206002
基于光脉冲延迟法的光纤长度测量方法 郑祥亮 孙权社 朱兴邦 s206003
用于空间光信号接收的指数型特种光锥耦合效率分析与测试 付兴虎 高飞龙 郭朋 等 s206004
基于洛伦兹力的光钎电流传感器实验研究 张智 闫海涛 赵晓艳 等 s206005
CO-OFDM 光纤通信系统接收算法中时序同步的研究 田中梦文 张晓光 黄艺驰 等 s206006
基于网格服务的光网络资源定义方式 车雅良 杨君刚 雷开彬 等 s206007
应用于空间激光通信系统的偏瞳天线设计 赵发财 孙权社 陈坤峰 等 s206008
基于收发一体设计的隐蔽式无线光通信系统研究 丁德强 车雅良 李卫 等 s206009
全双工混沌激光保密通信的仿真和实验实现 岳荷荷 王文革 陈晓蕾 等 s206010
224 Gb/s, 640 km 传输实验中 WDM-PM-16QAM 信号载波相位恢复改进算法 王芳 张霞 s206011
光纤陀螺光纤环质量检测评估技术研究 韩正英 高业胜 赵耀 s206012

· 全息 ·

- 2,52 THz 离轴傅里叶数字全息特性仿真研究 崔珊珊 李琦 胡佳琦 s209001
压缩传感无透镜放大全息层析重建 伍小燕 于瀛洁 周文静 等 s209002

· 图像处理 ·

- 基于二元函数拟合的遥感图像配准方法 王晓飞 阎秋静 张钧萍 s210001
彩色交通标志图像二维条形码抗干扰性能分析 王蒙军 郝宁 王霞 s210002
尺度相关系数融合数字半色调算法 何自芬 张印辉 詹肇麟 s210003
基于阈值分割方法的复杂场景激光图像目标提取算法研究 周鑫 孙剑峰 姜鹏 等 s210004
基于 ICCD 的微光图像增强算法研究 苏宇 赵惠 樊学武 等 s210005
基于径向基函数的 ESPI 滤波方法 王琳霖 唐晨 s210006

· 成像系统 ·

- 太赫兹双轴共焦扫描显微成像轴向特性分析 杨永发 李琦 s211001
基于集成学习的高光谱图像一类分类算法 王晓飞 阎秋静 s211002

石墨烯结构特征偏振参数非直观超显微的初步研究	黄孜诚 刘学峰 周丽娟 等	s211003
基于阿尔法均值滤波和信息散度的图像滤波研究	常丽萍 李伽 施朝霞 等	s211004
· 仪器、测量与计量 ·		
大口径大偏离量非球面反射镜复合检测技术	王孝坤	s212001
低照度空间目标激光主动增亮技术实验研究	张海峰 吴志波 秦思 等	s212002
光栅型光谱仪光辐射测试能力研究	孙权社 王少水 朱兴邦 等	s212003
用于 4 m 量级反射镜检测的摆臂轮廓仪系统误差分析与数据处理	张忠玉	s212004
150 mm 口径 SiC 双曲面的检测和对准方法研究	陈新东 张斌智	s212005
基于现场可编程门阵列的联合变换相关器稳像系统研究	杨文才 樊学武 王锋涛 等	s212006
五棱镜扫描测量非球面二次系数方法研究	徐洪艳 吴时彬 杨伟 等	s212007
· 激光器与激光光学 ·		
金属钨的激光冲击强化研究	杨灏 赵吉宾 乔红超 等	s214001
用于 CO 气体检测的近红外分布式反馈激光器温控系统	李彬 何启欣 付洋 等	s214002
一种改进的全局耦合的随机并行梯度下降算法	蒋鹏志 梁永辉 许洁平 等	s214003
基于 T 矩阵双光束光阱的模拟仿真与优化设计	张尧楷 陈鑫麟 肖光宗 等	s214004
温度辅助的金属箔板激光冲击微成形性能	戴磊 周建忠 黄舒 等	s214005
激光驱动飞片加载软模微弯曲成形方法	张迪 王霄 顾春兴 等	s214006
大口径钕玻璃多程激光系统饱和放大特性研究	王文义 赵军普 陈林 等	s214007
低温漂高稳定性量子级联激光器驱动电源	李春光 王一丁 高宗丽 等	s214008
Al ₂ O ₃ 陶瓷激光铣削有限元模拟与实验研究	许兆美 洪宗海 蒋素琴 等	s214009
高功率 980 nm 半导体激光器波导结构优化	吴丽娜 李特 李再金 等	s214010
· 材料 ·		
一种微波多频段负折射材料的设计	李晋英 杨荣草 郭淑琴 等	s216001
硅胶改性纤维素膜	顾文娟 顾文超 李莹 等	s216002
一种应用于紫外成像系统的紫外可见转换膜测试研究	赵发财 杨小虎 孙权社	s216003
· 医用光学与生物技术 ·		
基于相位显微下均质细胞三维形态 180° 旋转重构方法	张琳琳 王亚伟 徐媛媛 等	s217001
基于双入射角度的反射率差分型生物传感器	王佳伟 冯莹 魏立安	s217002
· 非线性光学 ·		
铌酸锂波导对光整流相位匹配的增强作用研究	吴斌 刘红博 赵发财 等	s219001
拉曼效应对基态孤子传输特性的影响	贾维国 乔丽荣 乔海龙	s219002
光纤非线性效应估计模型的研究	乔耀军 李明 杨秋虹 等	s219003
· 光学设计与制造 ·		
柔性环片结构的光学元件轴向调节机构设计	郭抗 陈华男 倪明阳 等	s222001
一种新型单色面阵均匀光源定标方法	刘红元 王恒飞 应承平 等	s222002
高灵敏宽谱段星敏感器系统的光学设计	巩盾	s222003
锥状 GaAs 纳米线阵列太阳能电池的光伏特性研究	王思佳 张辰 颜鑫 等	s222004
· 光学器件 ·		
基于均匀光辐射法测量 CCD 器件量子效率	刘红元 王恒飞 王洪超 等	s223001
方形孔径平面微透镜阵列的二维叠栅条纹理论和实验研究	殷贵坤 周素梅 张宝昊	s223002

马赫-曾德尔电光调制器产生等幅光频梳的工作点控制研究	樊理文 胡晓阳 孙 乔 等	s223003
基于直接耦合结构的光子晶体光开关	卫晓颖 陈鹤鸣	s223004
基于双层石墨烯波导的可调谐布拉格光栅滤波器	冯 霞 闫连山 王鲁俊 等	s223005
基于 PPLN 的 Solc 型平顶滤波器温度与电场调谐研究	郑国梁 陈新乐 徐世祥 等	s223006
· 遥感与传感器 ·		
基于二维激光扫描的三维信息获取与重建技术研究	张尧楷 雷 兵 韩 翔 等	s228001
回波信噪比对激光雷达测绘精度的影响	董志伟 郑立威 范国祥 等	s228002
· 光谱学 ·		
静态偏振光谱成像技术研究	张华良 谢永杰 周国强 等	s230001
· 薄 膜 ·		
不同沉积温度下单纯蒸镀二氧化硅薄膜的光学特性研究	罗海瀚 蔡清元 李耀鹏 等	s231001
退火对 PLD 方法制备的 ZnO 薄膜紫外发光特性的影响	王兆阳 王宏伟 徐世峰	s231002
· 超快光学 ·		
色散与啁啾对飞秒艾里脉冲传输性质的影响研究	林俞先 宋振明	s232001
· 视觉,颜色与视觉光学 ·		
基于 R 矩阵法光谱反射率重建研究	邹纪平 杨 菲 李宏宁 等	s233001
一种色域校准方法的研究	王国权 孙权社 赵发财	s233002

CONTENTS

Atmospheric and Oceanic Optics

- Performance Analysis of Light Field Wave-Front Sensor Xu Jieping Liang Yonghui Jiang Pengzhi s201001
Research on Change of Satellite Imaging Conditions Working in Agile Imaging Mode Han Xingzi Dong Xiaojing Zhu Jun s201002
Comparison and Analysis about Two Measuring Methods of Atmospheric Coherence Length Li Zhichao Zong Fei Xu Yunxiu et al. s201003

- Study of Orbital Angular Momentum Mode Crosstalk Caused by Atmospheric Turbulence Based on Kolmogorov Model in Free Space Optical Communication Zhang Lei Su Xiaofei Zhang Xia et al. s201004
Path Loss and Angular Distribution Evolution of Long-Haul Non-Line-of-Sight Atmospheric Optical Scattering Communication Xu Zhiyong Song Chao Wang Jingyuan et al. s201005

Diffraction and Gratings

- Study on the Shaped Laser Beam with Linear Spot Array Nie Shuzhen Yu Jin Yu Gang et al. s205001

Fiber Optics and Optical Communications

- Spectrum Analysis of Seawater and Gasoline by Microfiber Ring Resonator Wang Xin Wang Jing Wang Shanshan et al. s206001
Gain-Flattening Erbium Doped Fiber Amplifier Based Composite Fiber Gratings Garidi Buyin Zhang Jiaxiao Pan Hehe et al. s206002
Method of Measuring Fiber Length Based on Optical Pulse Delaying Zheng Xiangliang Sun Quanshe Zhu Xingbang s206003
Analysis and Measurement of Coupling Efficiency on Exponential Optical Taper for Receiving the Optical Signal Fu Xinghu Gao Feilong Guo Peng et al. s206004

- Experimental Research of Optical Fiber Current Sensors Based on Loren Magnetic Force Zhang Zhi Yan Haitao Zhao Xiaoyan et al. s206005

- Research on Timing Synchronization Algorithm of Coherent Optical OFDM Systems Tian Zhongmengwen Zhang Xiaoguang Huang Yichi et al. s206006

- Definition Method of Optical Network Resources Based on Grid Services Che Yaliang Yang Jungang Luo Kaibin et al. s206007
Design of Eccentric-Pupil Optical Antenna for Space Laser Communications Zhao Facai Sun Quanshe Chen Kunfeng et al. s206008
Investigation on a Concealed Wireless Optical Communication System Based on Mono-Static Design Ding Deqiang Che Yaliang Li Wei et al. s206009

- Simulation and Experimental Demonstration of Full Duplex Chaotic Optical Secure Communication Yue Hehe Wang Wenge Chen Xiaolei et al. s206010

- Improved Algorithm of Carrier Phase Recovery for 224 Gb/s. WDM-PM-16QAM Signals over 640 km Transmission System Wang Fang Zhang Xia s206011

- Quality Inspection and Assessment Technology of Fiber Optic Gyro Fiber Coil Han Zhengying Gao Yesheng Zhao Yao s206012

Holography

- Simulation Study on Characteristics of 2.52 THz Off-Axis Fourier Digital Holography Cui Shanshan Li Qi Hu Jiaqi s209001
Tomographic Reconstruction of Lensless Amplification Hologram Based on Compressive Sensing Wu Xiaoyan Yu Yingjie Zhou Wenjing et al. s209002

Image Processing

- Registration of Remote Sensing Images Based on Binary Function Fitting Wang Xiaofei Yan Qiuqing Zhang Junping s210001
Anti-Interference Analyzing of Two-Dimensional Barcode for Color Traffic Sign Wang Mengjun Hao Ning Wang Xia s210002
Scale Correlation Coefficient Fusion Digital Halftoning Algorithm He Zifen Zhang Yinhuai Zhan Zhaolin s210003
Research on the Target Extraction Algorithm for Laser Image with Multiple Scene Based on the Threshold Methods for Segmentation Zhou Xin Sun Jianfeng Jiang Peng et al. s210004

- Research on the Low Light Level Image Enhancement Algorithm Based on ICCD Su Yu Zhao Hui Fan Xuewu et al. s210005
ESPI Filtering Method Based on Radial Basis Function Wang Linlin Tang Chen s210006

Imaging Systems

- Axial Character Analysis of Terahertz Dual-Axis Confocal Scanning Microscopic Imaging Yang Yongfa Li Qi s211001
An Ensemble Learning Algorithm for One-Class Classification of Hyperspectral Images Wang Xiaofei Yan Qiuqing s211002
Preliminary Study of Grapheme Structure by Indirect Imaging Using Polarization Parameters Huang Zicheng Liu Xuefeng Zhou Lijuan et al. s211003
Filter of the Image Based on Alpha-Trimmed Mean Filter and Information Divergence Chang Liping Li Jia Shi Zhaoxia et al. s211004

Instrumentation, Measurement and Metrology

- Testing of Large Aperture and Large Departure Aspheric Mirror by Compound Method Wang Xiaokun s212001
Experimental Study on Technology of Laser Active Illumination to Dim Light Space Targets Zhang Haifeng Wu Zhibo Qin Si et al. s212002
Research on the Test for Relative Spectral Power of Grating Spectrometer Sun Quanshe Wang Shaoshui Zhu Xingbang et al. s212003
Accuracy Analysis and Data Processing of Swing-Arm Profilometry in the Testing of 4 m Mirror Zhang Zhongyu s212004
Study on Metrology and Alignment of 150 mm SiC Convex Hyperboloidal Mirror Chen Xindong Zhang Binzhi s212005
Research of Joint Transform Correlator Stabilization Image System Based on Field Programmable Gate Array Yang Wencai Fan Xuewu Wang Fengtao et al. s212006
Research of Testing the Conic Constant of Aspheric Surface with Scanning Pentaprisms Xu Hongyan Wu Shabin Yang Wei et al. s212007

Lasers and Laser Optics

- Research of Laser Shock Peening on Tungsten Yang Hao Zhao Jibin Qiao Hongchao et al. s214001
Development of Near Infrared Distributed Feedback Laser Temperature Control System for CO Detection Li Bin He Qixin Fu Yang et al. s214002
Improved Method of Stochastic Parallel Gradient Descent Algorithm with Global Coupling Jiang Pengzhi Liang Yonghui Xu Jieping et al. s214003
Simulation and Optimization Design of Dual Beam Optical Trap Based on T-matrix Zhang Yaokai Chen Xinlin Xiao Guangzong et al. s214004
Formability of Metal Foil by Temperature Assisted Microscale Laser Shock Forming Dai Lei Zhou Jianzhong Huang Shu et al. s214005
Micro Bending Method by Soft Punch under Laser-Driven Flyer Loading Zhang Di Wang Xiao Gu Chunxing et al. s214006
Research on Saturation Amplification Characteristics for Large-Aperture Nd:Glass Multi-Pass Laser System Wang Wenyi Zhao Junpu Chen Lin et al. s214007
Power Supply of Quantum Cascade Laser with Low Temperature Drift and High Stability Li Chenguang Wang Yiding Gao Zongli et al. s214008
Finite Element Simulation and Experimental Research in Laser Milling of Al₂O₃ Ceramic Xu Zhaomei Hong Zonghai Jiang Suqin et al. s214009
High Power 980 nm Semiconductor Laser Waveguide Structure Optimization Wu Lina Li Te Li Zaijin et al. s214010

Materials

- Design of Multi-Band Negative Index Metamaterial at the Microwave Band Li Jinying Yang Rongcao Guo Shuqin et al. s216001
Silica Sol Modified Cellulose Film Gu Wenjuan Gu Wenchao Li Ying et al. s216002
Performance Research on the Ultraviolet Visible Conversion Film for Ultraviolet Imaging System Zhao Facai Yang Xiaohu Sun Quanshe s216003

Medical Optics and Biotechnology

- Three Dimensional Morphology Reconstruction of Homogeneous Cell Based on Orthogonal Phase Microscopy Images by 180° Rotating Zhang Linlin Wang Yawei Xu Yuanyuan et al. s217001
Reflectivity Difference Biosensor Based on Dual Incident Angles Wang Jiawei Feng Ying Wei Li'an s217002

Nonlinear Optics

- Study on the Enhancement of Phase Matching in Optical Rectification by Using LiNbO₃ Waveguide Structure Wu Bin Liu Hongbo Zhao Facai et al. s219001
Raman Effect on the Characteristic of Fundamental Soliton Transmission Jia Weiguo Qiao Lirong Qiao Hailong s219002

- Research on Estimation Model of Fiber Non-Linearity Qiao Yaojun Li Ming Yang Qiuuhong et al. s219003

Optical Design and Fabrication

- Design of an Axial Adjusting Mechanism using Flexible Ring for Optical Element Guo Kang Chen Huanan Ni Mingyang et al. s222001
A New Calibration Method for Monochromatic Uniform Planar Source Liu Hongyuan Wang Hengfei Ying Chengping et al. s222002
Optical Design of High Sensitive Star Sensor with Wide Spectrum Gong Dun s222003
Research on the Photovoltaic Performance of the Tapered GaAs Nanowire Array Solar Cell Wang Sijia Zhang Chen Yan Xin et al. s222004

Optical Devices

Research on Measuring Quantum Efficiency of CCD Based on the Method of Uniform Optical Radiation	<i>Liu Hongyuan Wang Hengfei Wang Hongchao et al.</i>	s223001
Theoretical and Experimental Study of Two-Dimensional Moire Fringe of Square Aperture Planar Microlens Array	<i>Yin Guikun Zhou Sumei Zhang Baohao</i>	s223002
Study of Operating Points Control for MZ Electro-Optic Moudulator in Generating Equal-Amplitude Optical Frequency Comb	<i>Fan Liwen Hu Xiaoyang Sun Qiao et al.</i>	s223003
Photonic Crystal Optical Switch Based on Direct Coupling Structure	<i>Wei Xiaoying Chen Heming</i>	s223004
Tunable Bragg Grating Filter Based on the Double Graphene Layer Waveguides	<i>Feng Xia Yan Lianshan Wang Lujun et al.</i>	s223005
Temperature Tuning and Electrical Tuning of Flat-Top Solc-Type Filter Based on PPLN	<i>Zheng Guoliang Chen Xinle Xu Shixiang et al.</i>	s223006

Remote Sensing and Sensors

Research of Three-Dimensional Information Acquisition and Reconstruction Based on Two-Dimensional Laser Scanning Technology	<i>Zhang Yaokai Lei Bing Han Xiang et al.</i>	s228001
-----------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------	---------

Impaction of Signal Noise Ratio for Mapping Accuracy of LIDAR	<i>Dong Zhiwei Zheng Liwei Fan Guoxiang et al.</i>	s228002
---------------------------------------------------------------------	----------------------------------------------------	---------

Spectroscopy

Study of Static Spectropolarimetric Imaging Technique	<i>Zhang Hualiang Xie Yongjie Zhou Guoqiang et al.</i>	s230001
-------------------------------------------------------------	--------------------------------------------------------	---------

Thin Films

Study on the Optical Characteristic of Silicon Dioxide Thin Films Deposited in Different Temperatures	<i>Luo Haihan Cai Qingyuan Li Yaopeng et al.</i>	s231001
-------------------------------------------------------------------------------------------------------------	--------------------------------------------------	---------

Effect of Annealing on Ultraviolet Emission Characteristics of ZnO Films by PLD	<i>Wang Zhaoyang Wang Hongwei Xu Shifeng</i>	s231002
---------------------------------------------------------------------------------------	----------------------------------------------	---------

Ultrafast Optics

Study on the Influence of Dispersion and Chirp on Femtosecond Airy Pulse Propagation	<i>Lin Yuxian Song Zhenming</i>	s232001
--------------------------------------------------------------------------------------------	---------------------------------	---------

Vision, Color, and Visual Optics

Study of Spectral Reflectance Reconstruction Based on Matrix R Method	<i>Zou Jiping Yang Jia Li Hongning et al.</i>	s233001
-----------------------------------------------------------------------------	-----------------------------------------------	---------

Research on Color Gamut Calibration Method	<i>Wang Guoquan Sun Quanshe Zhao Facai</i>	s233002
--------------------------------------------------	--------------------------------------------	---------