

## 目 次

### • 020 激光器与激光光学 •

单频光纤激光器抽运的中红外连续单谐振光学参变振荡器 .....	刘 磊 李 霄 肖 虎 等	0102001
磷酸盐双芯光纤的制作和自锁相激光输出 .....	张 光 李科峰 胡丽丽 等	0102002
单反馈 He-Ne 激光器混沌激光产生的理论及实验研究 .....	张元芳 杨玲珍	0102003
两路纳秒脉冲光纤激光相干合成的实验研究 .....	粟荣涛 周 朴 马阎星 等	0102004
部分相干方形平顶电磁脉冲光束经相位调制透镜的聚焦特性 .....	张国文 陶 华 蒲继雄 等	0102005
千瓦级低透射波前畸变端抽运板条增益模块技术研究 .....	胡 浩 唐 淳 雷 军 等	0102006
高功率激光装置主放大器的增益稳定性研究 .....	李 平 梁 樾 徐 冰 等	0102007
基于液晶光阀调制的赝热光源制备技术研究 .....	秦洁心 刘世超 黄庚华 等	0102008
利用耦合时延增强激光混沌系统安全性能研究 .....	张 巧 潘 炜 李念强 等	0102009
GaSb 基半导体激光器功率效率研究 .....	王 跃 刘国军 李俊承 等	0102010

### • 030 激光加工与应用 •

AISI 8620 合金钢激光冲击强化层摩擦学特性 .....	钟俊伟 鲁金忠 罗开玉 等	0103001
激光熔化沉积 Ti60 合金、TiC <sub>p</sub> /Ti60 复合材料的高温拉伸持久寿命及断裂过程 .....	孙景超 张永忠 宫新勇 等	0103002
激光焊接钛合金薄板时的功率控制 .....	张 健 杨 锐	0103003
激光辐照层合板的数值模拟与试验对比 .....	朱 凯 龙连春	0103004
靶材间距对传输中溅射粒子密度和速度分布的影响 .....	丁学成 傅广生 翟小林 等	0103005
激光冲击参数对 2024 铝合金冲击区域的主应力及其方向的影响 .....	聂贵锋 冯爱新 任旭东 等	0103006
激光快速成形 TA15 钛合金热处理组织及其力学性能 .....	席明哲 高士友	0103007
光纤激光入射角对高强度对接焊焊接性能的影响 .....	陈根余 康 斌 张 屹 等	0103008
高体积分 SiC <sub>p</sub> /2024Al 基复合材料添加 Ti-6Al-4V 中间层激光焊接特性 .....	陶 汪 李俐群 王亚松 等	0103009
激光熔化沉积 TC17 钛合金光纤激光焊接特性 .....	李 旭 刘 栋 汤海波 等	0103010

### • 040 激光医学与生物学 •

长焦区光声成像系统中的信号补偿 .....	谢文明 曾志平 李 莉 等	0104001
数字合成 X 线体层成像中轴向强度衰减的校正 .....	缪 辉 赵会娟 高 峰 等	0104002

### • 050 光纤光学与光通信 •

保偏光纤偏振耦合系统的动态色散补偿 .....	张红霞 任亚光 叶雯婷 等	0105001
基于光纤光栅的微波扫描单边带调制法测量光纤布里渊散射特性 .....	刘 玉 任立勇 忽满利 等	0105002
掺钕硫系玻璃光纤的中红外增益特性模拟研究 .....	於杏燕 戴世勋 周亚训 等	0105003
大气无线光通信系统中一种正交空时分组码编译方法 .....	徐建武 王红星 胡 昊 等	0105004

### • 070 薄膜 •

3.5~4.0 μm 低温光谱带通滤光片的设计与研制 .....	蔡 渊 刘定权 罗海瀚	0107001
快速热处理对磁控溅射 VO <sub>2</sub> 薄膜光电特性的影响 .....	后顺保 胡 明 吕志军 等	0107002

### • 080 测量与计量 •

红外硫系玻璃内部宏观缺陷透视成像检测系统 .....	吴礼刚 李祖盼 王训四 等	0108001
线结构光三维测量系统扫描方向的标定 .....	曾祥军 霍金城 吴庆阳	0108002

大口径平板中频波前均方根的测量方法 .....	柴立群 石琦凯 魏小红 等	0108003
基于数字图像相关的刚体面内微小转动测量及转动中心定位 .....	顾国庆 王开福 许 星	0108004
基于交比不变性的广角成像系统几何失真校正 .....	艾赛江 王 翔	0108005
• 110 太赫兹技术 •		
消色差复合宽带太赫兹波片的优化设计 .....	张鹏程 任国斌	0111001
光抽运石墨烯太赫兹负动态电导率的理论研究 .....	张玉萍 张 晓 刘陵玉 等	0111002
• 130 大气与海洋光学 •		
激光引信在降雨中的光束扩展特性 .....	郭 婧 张 合 王晓锋	0113001
非科尔莫戈罗夫湍流下望远镜的分辨力分析 .....	彭 起 陈洪斌 王继红 等	0113002
• 140 遥感与传感器 •		
2 $\mu\text{m}$ 双平衡式外差探测 IQ 解调与信噪比研究 .....	庞亚军 高 龙 王春晖	0114001
• 160 光学设计与制造 •		
光机结构的轴向一致性可控方法研究 .....	孙向阳 张国玉 段 洁	0116001
提高激光束整形质量的新方法 .....	于晓晨 胡家升 王连宝	0116002
基于频域分析的光学相干显微镜中的色散补偿 .....	董敬涛 卢荣胜	0116003
• 170 光电子学 •		
宽微带 X 射线分幅相机的研制 .....	蔡厚智 刘进元 彭 翔 等	0117001
波导参数和传播常数对光折变表面波的影响 .....	田 宁 卢克清 张先锋 等	0117002

## CONTENTS

• 020 LASERS AND LASER OPTICS •		
Mid-Infrared, Singly Resonant and Continuous-Wave Optical Parametric Oscillator Pumped by a Single-Frequency Fiber Laser .....	<i>Liu Lei Li Xiao Xiao Hu et al.</i>	0102001
Self-Phase-Locking Action in a Phosphate Twin-Core Fiber and Its Fabrication .....	<i>Zhang Guang Li Kefeng Hu Lili et al.</i>	0102002
Theoretical and Experimental Study of Chaos Generation with Single Optical Feedback in the He-Ne Laser .....	<i>Zhang Yuanfang Yang Lingzhen</i>	0102003
Coherent Beam Combining of Two Nanosecond Fiber Pulse Lasers .....	<i>Su Rongtao Zhou Pu Ma Yanxing et al.</i>	0102004
Focusing Characteristics of Partially Coherent Square Flat-Topped Electromagnetic Pulsed Beams Focused by a Phase Modulated Lens .....	<i>Zhang Guowen Tao Hua Pu Jixiong et al.</i>	0102005
Study on kW-Class Small Wavefront Distortion End Pumped Slab Gain Module .....	<i>Hu Hao Tang Chun Lei Jun et al.</i>	0102006
Study on Gain Stability of Main Amplifier in High Power Laser Facility .....	<i>Li Ping Liang Yue Xu Bing et al.</i>	0102007
Research on the Pseudo-Thermal Light Made by Liquid Crystal Spatial Light Modulation .....	<i>Qin Jiexin Liu Shichao Huang Genghua et al.</i>	0102008
Investigation on Security Enhancement of Chaotic Optical Communication Systems via Coupling Delay .....	<i>Zhang Qiao Pan Wei Li Nianqiang et al.</i>	0102009
Study of the Ohmic Contact of GaSb-Based Semiconductor Laser .....	<i>Wang Yue Liu Guojun Li Juncheng et al.</i>	0102010
• 030 LASER PROCESSING AND APPLICATIONS •		
Tribological Behaviors of Laser Shock Processing AISI 8620 Steel .....	<i>Zhong Junwei Lu Jinzhong Luo Kaiyu et al.</i>	0103001
High-Temperature Tensile Rupture Life and Fracture Procedure of Laser Direct Deposited Ti60 Alloy and TiC <sub>p</sub> /Ti60 Composites .....	<i>Sun Jingchao Zhang Yongzhong Gong Xinyong et al.</i>	0103002
Control of Laser Power During Titanium Alloy Thin Plate Welding .....	<i>Zhang Jian Yang Rui</i>	0103003
Numerical Simulation and Experiment Contrast about Laminated Plate under Laser Irradiation .....	<i>Zhu Kai Long Lianchun</i>	0103004
Influence of Target-to-Substrate Distance on Velocity and Density Distributions of Ablated Particles during Their Propagations .....	<i>Ding Xuecheng Fu Guangsheng Zhai Xiaolin et al.</i>	0103005
Effect of Laser Shock Processing Parameters on Residual Principal Stresses and Its Directions of 2024 Aluminum Alloy .....	<i>Nie Guifeng Feng Aixin Ren Xudong et al.</i>	0103006
Heat-Treated Microstructures and Mechanical Properties of TA15 Titanium Alloy Fabricated by Laser Rapid Forming .....	<i>Xi Mingzhe Gao Shiyou</i>	0103007
Effects of Incident Angle on Welding Performance of Fiber Laser Butt Welding of High-Strength Automobile Steel .....	<i>Chen Genyu Kang Bin Zhang Yi et al.</i>	0103008
Study on Welding Process and Microstructure of Laser Welding High Volume Fraction SiC <sub>p</sub> /2024Al Matrix Composite with Ti-6Al-4V Filler .....	<i>Tao Wang Li Liqun Wang Yasong et al.</i>	0103009
Fiber Laser Welding Characteristics of Laser Melting Deposited TC17 Alloy .....	<i>Li Xu Liu Dong Tang Haibo et al.</i>	0103010

<b>• 040 LASER MEDICINE AND BIOLOGY •</b>	
Signal Compensation in Long-Focal-Zone Photoacoustic Imaging Systems .....	<i>Xie Wenming Zeng Zhiping Li Li et al.</i> 0104001
Correction of Axial Intensity Drop for Digital Tomosynthesis Reconstructed Image .....	<i>Miao Hui Zhao Huijuan Gao Feng et al.</i> 0104002
<b>• 050 FIBER OPTICS AND OPTICAL COMMUNICATIONS •</b>	
Dynamic Dispersion Compensation for the Polarization Coupling Measurement System of Polarization Maintaining Fiber .....	<i>Zhang Hongxia Ren Yaguang Ye Wenting et al.</i> 0105001
Characteristic Measurements of Fiber Brillouin Scattering Using Fiber Bragg Grating Based Microwave-Sweeping Single Sideband Modulation .....	<i>Liu Yu Ren Liyong Hu Manli et al.</i> 0105002
Theoretical Studies on Mid-Infrared Gain Characteristics of Erbium-Doped Chalcogenide Glass Fibers .....	<i>Yu Xingyan Dai Shixun Zhou Yaxun et al.</i> 0105003
Encoding and Decoding Method of Orthogonal Space Time Block Code in Free Space Optical Communication Systems .....	<i>Xu Jianwu Wang Hongxing Hu Hao et al.</i> 0105004
<b>• 070 THIN FILMS •</b>	
Design and Fabrication of 3.5~4.0 $\mu\text{m}$ Band-Pass Filter Working at Cryogenic Temperature .....	<i>Cai Yuan Liu Dingquan Luo Haihan</i> 0107001
Influence of Rapid Thermal Process Conditions on Electrical and Optical Properties of VO <sub>2</sub> Thin Film .....	<i>Hou Shunbao Hu Ming Lü Zhijun et al.</i> 0107002
<b>• 080 MEASUREMENT AND METROLOGY •</b>	
Internal Macroscopic Defects Perspective Imaging Detection System for Infrared Chalcogenide Glasses .....	<i>Wu Ligang Li Zupan Wang Xunsi et al.</i> 0108001
Calibrate Method for Scanning Direction of 3D Measurement System Based on Linear-Structure Light .....	<i>Zeng Xiangjun Huo Jincheng Wu Qingyang</i> 0108002
Testing of Root Mean Square of Mid-Spatial-Frequency Wavefront for Large Flat .....	<i>Chai Liqun Si Qikai Wei Xiaohong et al.</i> 0108003
Measurement of in-Plane Micro-Rotations and Rotation-Center Location of a Rigid Body by Using Digital Image Correlation .....	<i>Gu Guoqing Wang Kaifu Xu Xing</i> 0108004
Correction of Geometric Distortion of Wide-Angle Imaging System by Cross Ratio Invariability .....	<i>Ai Saijiang Wang Xiang</i> 0108005
<b>• 110 TERAHERTZ TECHNOLOGY •</b>	
Optimization and Design of Composite Terahertz Achromatic Wave Plate .....	<i>Zhang Pengcheng Ren Guobin</i> 0111001
Theoretical Research of Terahertz Negative Dynamic Conductivity in Optically Pumped Graphene .....	<i>Zhang Yuping Zhang Xiao Liu Lingyu et al.</i> 0111002
<b>• 130 ATMOSPHERIC AND OCEANIC OPTICS •</b>	
Beam Spread Characteristics of Laser Fuze in the Rain .....	<i>Guo Jing Zhang He Wang Xiaofeng</i> 0113001
Analysis of Scattering Power of Telescopes for Non-Kolmogorov Turbulence .....	<i>Peng Qi Chen Hongbin Wang Jihong et al.</i> 0113002
<b>• 140 REMOTE SENSING AND SENSORS •</b>	
Analysis of IQ Demodulation and Signal Noise Ratio for 2 $\mu\text{m}$ Dual-Balanced Heterodyne Detection .....	<i>Pang Yajun Gao Long Wang Chunhui</i> 0114001
<b>• 160 OPTICAL DESIGN AND FABRICATION •</b>	
Investigation of Controllable Axial Conformity for Opto-Mechanical Structure .....	<i>Sun Xiangyang Zhang Guoyu Duan Jie et al.</i> 0116001
New Methods for Improving the Quality of Laser Beam Shaping .....	<i>Yu Xiaochen Hu Jiasheng Wang Lianbao</i> 0116002
Dispersion Compensation Based on Frequency Domain Analysis in Optical Coherence Microscopy .....	<i>Dong Jingtao Lu Rongsheng</i> 0116003
<b>• 170 OPTOELECTRONICS •</b>	
Design of an X-Ray Framing Camera with Wide Microstrip Line .....	<i>Cai Houzhi Liu Jinyuan Peng Xiang et al.</i> 0117001
Influence of Guiding Parameters and Propagation Constants on Photorefractive Surface Waves .....	<i>Tian Ning Lu Keqing Zhang Xianfeng et al.</i> 0117002