

目 次

(全息术与三维成像技术及应用专题)

· 全息术与三维成像技术及应用 ·

结构光三维成像技术	苏昱渝 张启灿 陈文静	0209001
数字全息技术在生物医学成像和分析中的应用	王云新 王大勇 杨怡姝 等	0209002
太赫兹数字全息术的研发与应用	郑显华 王新柯 孙文峰 等	0209003
非相干全息术成像特性及研究进展	万玉红 满天龙 陶世荃	0209004
高速高精度体全息光学相关器	易 瑶 曹良才 郑天祥 等	0209005
同轴数字全息中的相位恢复算法	戎 路 王大勇 王云新 等	0209006
基于人眼视觉特性的三维显示技术	王书路 明 海 王安廷 等	0209007
离轴数字全息波前重建算法讨论	李俊昌 宋庆和 Picart Pascal 等	0209008
基于连续变频技术的三维图像激光打印方法与系统	楼益民 陈林森 魏国军 等	0209009
利用双波长数字全息术测量微小物体表面形貌	寇云莉 李恩普 邱江磊 等	0209010
具有平滑运动视差的三维显示技术	桑新柱 于迅博 赵天奇 等	0209011
计算全息三维显示的信息量及其简化	王 辉 金洪震 毋东元 等	0209012
基于超快液晶薄膜的实时动态全息三维视频显示	高洪跃 于瀛洁 郑华东	0209013
基于相移量提取的两步相移数字全息术	邓丽军 杨 勇 石炳川 等	0209014
基于压缩感知理论的无透镜离轴傅里叶全息编码与重建	韩 超 吴 伟 李蒙蒙	0209015
基于最小范数的四种相位解包裹算法比较	王华英 刘佐强 廖 薇 等	0209016
基于多平面全息成像的三维显示	杨 磊 夏 军 张晓兵 等	0209017
非均匀膨胀与收缩下反射体全息光栅衍射特性分析	何天博 巴音贺希格 齐向东 等	0209018
数字全息显微术用于生物细胞相位重构与补偿的研究	范金坪 张德思 吕晓旭 等	0209019
太赫兹 Gabor 同轴数字全息记录距离实验研究	李 琦 胡佳琦	0209020
结合条纹和伪随机结构光投影的三维成像	何 懂 刘晓利 殷永凯 等	0209021
一种基于集成成像生成计算全息图的方法	唐文华 李述利 王 君 等	0209022
基于空间光调制器的全息透镜记录波前像差优化方法	韩 剑 刘 娟 刘冬梅 等	0209023
基于 SRAD 和 NSCT 的数字全息再现像像质改善方法	吴一全 殷 骏 朱 丽 等	0209024
数字全息显微镜中采用非线性查找表的相位快速展开	李 勇 毛 磊 章海军 等	0209025

· 020 激光器与激光光学 ·

全光子晶体光纤单级直接放大产生 34 W 高功率飞秒脉冲	石俊凯 柴 路 赵晓薇 等	0202001
------------------------------------	---------------	---------

基于液晶相控阵高精度高效率光束偏转数值仿真	师宇斌	马浩统	马阎星等	0202002
基于反馈光纤环的可调多波长布里渊掺铒光纤激光器	刘毅	于晋龙	王红杰等	0202003
皮秒参数测量系统中聚焦特性的在线诊断方法	欧阳小平	华能	杨琳等	0202004
• 030 激光加工与应用 •				
激光烧蚀玻璃纤维/环氧树脂复合材料的能量耦合率模拟研究	彭国良	杜大焦	刘峰等	0203001
船用高强钢 E36 激光焊接接头组织和性能的研究	贾进	杨尚磊	倪维源等	0203002
AZ91D 变形镁合金激光焊接头的微观组织与机械性能	丁文兵	童彦刚	邓德安等	0203003
激光选区熔化成型免组装机机构间隙设计及工艺优化	王迪	刘睿诚	杨永强	0203004
• 040 激光医学与生物学 •				
正弦相位调制全深度频域多普勒光学相干层析成像技术	南楠	步鹏	李中梁等	0204001
谱域光学相干层析成像中深度分辨相位误差提取及补偿	张仙玲	高万荣	陈朝良等	0204002
激光照射对脊髓损伤大鼠 TNF- α 、IL-6 和 IL-10 表达的影响	王继猛	梁卓文	胡学昱等	0204003
• 050 光纤光学与光通信 •				
基于两种光纤介质模型的长周期光纤光栅传感特性分析	曹洪星	白育堃	李敬辉等	0205001
准互易反射式数字闭环光波导电压传感器	刘汐敬	杨德伟	于佳等	0205002
基于波分复用的长周期光纤光栅化学多参量传感技术研究	陈海云	顾铮无	高侃	0205003
基于多波长光纤激光器和色散器件级联的微波光子带通滤波器	张丽丽	童峥嵘	曹晔等	0205004
• 060 材料 •				
掺杂 LiYF ₄ : Er, Yb 纳米晶的聚合物平面光波导放大器	陈曦	王天娇	刘树森等	0206001
NaGdF ₄ : Nd ³⁺ 纳米球和纳米棒的热淬灭特性	代江云	冯国英	陈蛟等	0206002
• 070 薄膜 •				
不同气氛下 ZnO 薄膜的准分子激光辐照效应	曾勇	赵艳	蒋毅坚	0207001
• 080 测量与计量 •				
新型正交消隐点的摄像机标定方法	卢津	孙惠斌	常智勇	0208001
影响基于 CCD 相机激光光束宽度精确测量的因素	王艳萍	王茜蓓	马冲	0208002
• 140 遥感与传感器 •				
车载三波束多普勒激光雷达波束配置研究	范哲	张春熹	欧攀等	0214001
基于双振镜的多元并扫成像激光雷达的扫描特性分析与系统误差标定	徐卫明	刘军	姜紫庆等	0214002
基于重叠航带的机载激光雷达系统检校	王致华	张爱武	王书民等	0214003
• 150 光谱学 •				
基于激光拉曼光谱的氯苯低浓度探测			马靖	0215001
利用拉曼光谱原位定量检测技术筛选红酵母类胡萝卜素高产突变株	蒋玉凌	刘军贤	陈越等	0215002
• 简讯 •				
高功率 2.97 μm 中红外被动调 Q 掺钕 ZBLAN 光纤激光器	罗鸿禹	李剑峰	何雨莲等	0202003-5

CONTENTS

(Special Issue on Holography and 3D Imaging Technology and Applications)

• HOLOGRAPHY AND 3D IMAGING TECHNOLOGY AND APPLICATIONS •

Three-Dimensional Imaging Based on Structured Illumination	<i>Su Xianyu Zhang Qican Chen Wenjing</i>	0209001
Application and Analysis in the Biomedicine Field Using Digital Holographic Technology .....	.....	.....
.....	<i>Wang Yunxin Wang Dayong Yang Yishu et al.</i>	0209002
Developments and Applications of the Terahertz Digital Holography	<i>Zheng Xianhua Wang Xinke Sun Wenfeng et al.</i>	0209003
Imaging Characteristics and Research Progress of Incoherent Holography	<i>Wan Yuhong Man Tianlong Tao Shiquan</i>	0209004
High-Speed and High-Accuracy Volume Holographic Optical Correlator	<i>Yi Yao Cao Liangcai Zheng Tianxiang et al.</i>	0209005
Phase Retrieval Methods in in-Line Digital Holography	<i>Rong Lu Wang Dayong Wang Yunxin et al.</i>	0209006
Three-Dimensional Display Based on Human Visual Perception	<i>Wang Shulu Ming Hai Wang Anting et al.</i>	0209007
Discussion of Wavefront Reconstruction Algorithm of Off-Axis Digital Holography .....	.....	.....
.....	<i>Li Junchang Song Qinghe Picart Pascal et al.</i>	0209008
Method and System of Three-Dimensional Laser Printing Based on Consecutive Spatial Frequency Modulation .....	.....	.....
.....	<i>Lou Yimin Chen Linsen Wei Guojun et al.</i>	0209009
Surface Morphology Measurement of Tiny Object Based on Dual-Wavelength Digital Holography .....	.....	.....
.....	<i>Kou Yunli Li Enpu Di Jianglei et al.</i>	0209010
Three-Dimensional Display with Smooth Motion Parallax	<i>Sang Xinzhu Yu Xunbo Zhao Tianqi et al.</i>	0209011
Information Capacity and Reduction in Computing Holographic Three-Dimensional Display .....	.....	.....
.....	<i>Wang Hui Jin Hongzhen Wu Dongyuan et al.</i>	0209012
Real-Time Dynamic Holographic Three-Dimensional Video Display Based on a Super Fast Response Liquid Crystal Thin Film .....	.....	.....
.....	<i>Gao Hongyue Yu Yingjie Zheng Huadong</i>	0209013
Two-Step Phase-Shifting Digital Holography Based on Extraction of Phase Shift .....	.....	.....
.....	<i>Deng Lijun Yang Yong Shi Bingchuan et al.</i>	0209014
Encoding and Reconstruction of Lensless Off-Axis Fourier Hologram Based on the Theory of Compressed Sensing .....	.....	.....
.....	<i>Han Chao Wu Wei Li Mengmeng</i>	0209015
Comparison of Four Phases Unwrapping Algorithm Based on Method of Minimum Norm .....	.....	.....
.....	<i>Wang Huaying Liu Zuoqiang Liao Wei et al.</i>	0209016
Three-Dimensional Display by Holographic Imaging on Multiple Focal Planes	<i>Yang Lei Xia Jun Zhang Xiaobing et al.</i>	0209017
Diffraction Characteristic Analysis of Reflection Volume Holographic Gratings at Non-Uniform Swelling or Shrinking .....	.....	.....
.....	<i>He Tianbo Bayanheshig Qi Xiangdong et al.</i>	0209018
Phase Reconstruction and Compensation of Biological Cell with Digital Holographic Microscopy .....	.....	.....
.....	<i>Fan Jinping Zhang Desi Lü Xiaoxu et al.</i>	0209019
Experimental Investigation on Recording Distance of Terahertz Gabor in-Line Digital Holography	<i>Li Qi Hu Jiaqi</i>	0209020
Three-Dimensional Imaging Based on Combination Fringe and Pseudorandom Pattern Projection .....	.....	.....
.....	<i>He Dong Liu Xiaoli Yin Yongkai et al.</i>	0209021
A Method of Computer-Generated Hologram Based on Integral Imaging	<i>Tang Wenhua Li Shuli Wang Jun et al.</i>	0209022
Optimizing Approach of Wavefront Aberration in the Recording of Holographic Lens Based on Spatial Light Modulator .....	.....	.....
.....	<i>Han Jian Liu Juan Liu Dongmei et al.</i>	0209023
Method for Improving Reconstructed Image Quality of Digital Hologram Based on SRAD and NSCT .....	.....	.....
.....	<i>Wu Yiquan Yin Jun Zhu Li et al.</i>	0209024
Fast Phase Unwrapping Based on Nonlinear Look-up Table in Digital Holographic Microscopy .....	.....	.....
.....	<i>Li Yong Mao Lei Zhang Haijun et al.</i>	0209025

• 020 LASERS AND LASER OPTICS •

Generation of 34 W High Power Femtosecond Pulses by Single-Stage Direct Amplification in an All-Photonic-Crystal-Fiber Laser System	<i>Shi Junkai Chai Lu Zhao Xiaowei et al.</i>	0202001
Numerical Simulation of High Accuracy and High Efficiency Beam Steering Based on Liquid Crystal Optical Phase Array .....	.....	.....
.....	<i>Shi Yubin Ma Haotong Ma Yanxing et al.</i>	0202002

Tunable Multiwavelength Brillouin-Erbium Fiber Laser Based on Feedback Fiber Loop	<i>Liu Yi Yu Jinlong Wang Hongjie et al.</i>	0202003
A Method of Online Diagnosing for Focusing Performance in Picosecond Parameter Measurement System	<i>Ouyang Xiaoping Hua Neng Yang Lin et al.</i>	0202004
• 030 LASER PROCESSING AND APPLICATIONS •		
Simulation Study of Laser Energy Coupling Coefficient in the Process of Ablating Glass Fiber/Epoxy Composites	<i>Peng Guoliang Du Taijiao Liu Feng et al.</i>	0203001
Study on Microstructure and Properties of Laser Welding Joints of Marine High Strength Steel E36	<i>Jia Jin Yang Shanglei Ni Weiyuan et al.</i>	0203002
Microstructure and Mechanical Properties of Laser Welded AZ91D Wrought Magnesium Alloy	<i>Ding Wenbing Tong Yangang Deng Dean et al.</i>	0203003
Clearance Design and Process Optimization of Non-Assembly Mechanisms Fabricated by Selective Laser Melting	<i>Wang Di Liu Ruicheng Yang Yongqiang</i>	0203004
• 040 LASER MEDICINE AND BIOLOGY •		
Full-Range Fourier Domain Doppler Optical Coherence Tomography Based on Sinusoidal Phase Modulation	<i>Nan Nan Bu Peng Li Zhongliang et al.</i>	0204001
Extraction and Compensation for Depth-Resolved Phase Error in Spectral Domain Optical Coherence Tomography	<i>Zhang Xianling Gao Wanrong Chen Chaoliang et al.</i>	0204002
Effect of Low-Level Laser Irradiation on Expression of TNF- α , IL-6 and IL-10 after Acute Spinal Cord Injury in Rats	<i>Wang Jimeng Liang Zhuowen Hu Xueyu et al.</i>	0204003
• 050 FIBER OPTICS AND OPTICAL COMMUNICATIONS •		
Analysis of Sensing Characteristics of a Long-Period Fiber Grating Based on Two Fiber Analysis Models	<i>Cao Hongxing Bai Yukun Li Jinghui et al.</i>	0205001
Quasi-Reciprocal Reflective Digital Closed-Loop Optical Voltage Sensor	<i>Liu Xijing Yang Dewei Yu Jia et al.</i>	0205002
Multi-Parameter Photochemical Sensing Technology of Long-Period Fiber Grating and Wavelength Division Multiplexing	<i>Chen Haiyun Gu Zhengtian Gao Kan</i>	0205003
Microwave Photonic Bandpass Filter Based on Multi-Wavelength Fiber Lasers and Cascaded Dispersion Devices	<i>Zhang Lili Tong Zhengrong Cao Ye et al.</i>	0205004
• 060 MATERIALS •		
Polymer Planar Waveguide Amplifier Doped with LiYF ₄ : Er,Yb Nanocrystals	<i>Chen Xi Wang Tianjiao Liu Shusen et al.</i>	0206001
Thermal Quenching Characteristics of NaGdF ₄ : Nd ³⁺ Nanoparticles and Nanorods	<i>Dai Jiangyun Feng Guoying Chen Jiao et al.</i>	0206002
• 070 THIN FILMS •		
Effect of Excimer Laser Irradiation for ZnO Thin Films under Different Atmospheres	<i>Zeng Yong Zhao Yan Jiang Yijian</i>	0207001
• 080 MEASUREMENT AND METROLOGY •		
A Novel Method for Camera Calibration with Orthogonal Vanishing Points	<i>Lu Jin Sun Huibin Chang Zhiyong</i>	0208001
Factors Affecting the Accurate Measurement of Laser Beam Width with CCD Camera	<i>Wang Yanping Wang Qianqian Ma Chong</i>	0208002
• 140 REMOTE SENSING AND SENSORS •		
Research on Beam Pointing Angle for Three-Beam Doppler Vehicle Lidar	<i>Fan Zhe Zhang Chunxi Ou Pan et al.</i>	0214001
Scanning Property Analysis and System Error Calibration of Dual Galvanometers Based Multi-Points Parallel Scanning Imaging Lidar	<i>Xu Weiming Liu Jun Jiang Ziqing et al.</i>	0214002
Airborne Radar Calibration System Based on the Overlap Strip	<i>Wang Zhihua Zhang Aiwu Wang Shumin et al.</i>	0214003
• 150 SPECTROSCOPY •		
Low-Concentration Detection of Chlorobenzene Based on Laser Raman Spectroscopy	<i>Ma Jing</i>	0215001
Screening of Carotenoid High-Producing Mutants from <i>Rhodotorula glutinis</i> Using Raman Spectroscopy <i>in Situ</i> Quantitative Detection Technology	<i>Jiang Yuling Liu Junxian Chen Yue et al.</i>	0215002