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目 次

· 衍射与光栅 ·

- 高 Q 值、超窄带宽反向耦合型相移光栅 廖莎莎, 黄琮, 冯玉婷, 张伍浩, 赵帅, 刘真伟 0105001
- 应用于 VCSEL 的 GaAs/AlO_x 高折射率对比度亚波长光栅反射镜的设计和制备 罗妍, 郝永芹, 邹永刚 0105002

· 光纤光学与光通信 ·

- 基于保偏光纤双折射特性的函数波形发生器 燕苗霞, 李晶, 裴丽, 宁提纲, 郑晶晶, 王建帅, 王创业 0106001
- 在纤式回音壁模式微球谐振腔及其传感特性 殷琦寓, 蔡露, 李尚文, 赵勇 0106002
- FP 腔与 MZI 级联的三参量同时测量的光纤传感器 彭敏, 鲁志琪, 刘昌宁 0106003
- 高功率掺 Yb³⁺ 石英光纤脉冲单频 MOPA 石争, 盛泉, 史朝督, 付士杰, 邓勳, 田浩, 史伟, 姚建铨 0106004

· 图像处理 ·

- 基于模块化降噪自编码器的视网膜 OCT 图像降噪方法 代豪, 杨亚良, 岳献, 陈燊 0110001
- 基于空谱字典的加权联合稀疏表示高光谱图像分类 陈善学, 何宇峰 0110002

· 成像系统 ·

- 校正光通量变化的定量光声内窥成像 孟琪, 孙正, 侯英飒, 孙美晨 0111001
- 纯随机相位板散斑去相关光学相干层析成像 屈慧, 汪毅, 姜世良, 徐玉帅, 王露桐, 蔡怀宇, 陈晓冬 0111002

· 仪器, 测量与计量 ·

- 极紫外光刻掩模相位型缺陷检测方法 成维, 李思坤, 王向朝 0112001
- 基于双频激光干涉相位检测的高精度波片测量 陈强华, 关裕, 周胜, 丁锦红, 吕洪波, 孙启国, 罗会甫 0112002
- 基于时间复用编码的高速三维形貌测量方法 王浩然, 吴周杰, 张启灿, 陈正东, 李训仁 0112003
- 基于二进制编码条纹的三维测量方法 刘佳, 路长秋, 文杰, 肖雨倩, 严飞, 刘银萍 0112004
- 基于 Mueller 矩阵的目标偏振特性分析 杨志勇, 张志伟, 蔡伟, 李顺 0112005

· 集成光学 ·

- 基于边界逆向优化算法的任意分光比耦合器设计 廖俊鹏, 田野, 杨子荣, 康哲, 郑紫薇, 金庆辉, 张晓伟 0113001
- 氮化硅片上光栅耦合器的优化和实验 冉娜, 陈昕阳, 汪正坤, 张洁 0113002

· 激光器与激光光学 ·

- 超冷原子冷却用集成全光纤 1064 nm 激光系统的研制 (封面文章) 谢昱,梁昂昂,李文文,黄名山,汪斌,刘亮 0114001
- 基于生成对抗网络的混沌激光同步优化 赵安可,江宁,王超,刘世勤,邱昆 0114002
- 可调谐垂直腔面发射激光器支撑结构优化设计 吕家纲,李伟,戚宇轩,潘智鹏,仲莉,刘素平,马骁宇 0114003
- 双折射双频激光器及干涉仪的关键和全链条技术 张书练 0114004

· 非线性光学 ·

- 基于复合旋转光力系统的非线性光学特性研究 陈咏雷,陈华俊,刘云鹤,谢宝豪 0119001

· 光学设计与制造 ·

- 用于小鼠脑皮层双光子成像的大视场弯曲视野离轴三反系统设计 黄剑,周镇乔,李敏,贾宏博 0122001
- 基于深度学习的透射式光学系统初始结构设计 史浩东,何春风,王稼禹,杨帅,徐森,孙洪宇,李英超,付强 0122002

· 表面光学 ·

- 近红外磁表面等离激元单向波导 严金华,王琳萍,邓羽析,刘博云,沈林放 0124001
- 随机微扰表面反射光谱的低角度依赖性 张金英,李世豪,王瑞,王鑫野,李卓,王欣,杨苏辉,高彦泽 0124002

· 物理光学 ·

- 双层花状光学涡旋晶格产生及特性研究 韩冰,樊海豪,凡梦然,景晓楠,温冰艳,李新忠 0126001

· 量子光学 ·

- 基于量子照明的导航测距方案 惠俊,柴洪洲 0127001
- 面向 CVQKD 量子-经典信号共纤传输技术研究 刘旭超,孙时伦,李少波,温佳旭,李华贵 0127002

· 视觉,颜色与视觉光学 ·

- 广色域多基色显示系统的驱动图像生成方法 李亚生,廖宁放,李玉梅,李松霖,吴文敏,范秋梅 0133001



封 面 解 读

本封面生动地展示了中国空间站梦天实验舱超冷原子物理实验平台进行全光两级深度冷却实验制备极低温超冷原子的实验过程。主体结构为本文研究的全光纤激光器提供的两对波长为 1064 nm 的交叉光阱激光,正中心的红色圆形气团代表着被冷却的超冷原子气体,在斜向上的淡蓝色通道内,三团密度逐渐提高、温度逐渐降低的粒子团代表着超冷气体冷却时的密度和温度的变化,通道中轴线上,淡蓝色的曲线则是代表了实验验证阶段中粒子团所经历的超冷相变过程(注:为使封面整体美观,两对同心的交叉光阱的颜色和尺寸未严格按实际实验情况来展示)。

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CONTENTS

Diffraction and Gratings

- Contra-Directional Coupling Phase-Shifted Grating with High Q -Factor and Ultra-Narrow Bandwidth
.....*Liao Shasha, Huang Cong, Feng Yuting, Zhang Wuhao, Zhao Shuai, Liu Zhenwei* 0105001
- Design and Fabrication of GaAs/AlO_x High-Index-Contrast Sub-Wavelength Grating Reflector for VCSEL
.....*Luo Yan, Hao Yongqin, Zou Yonggang* 0105002

Fiber Optics and Optical Communications

- Function Waveform Generator Based on Birefringence Characteristics of Polarization-Maintaining Fiber
.....*Yan Miaoxia, Li Jing, Pei Li, Ning Tigang, Zheng Jingjing, Wang Jianshuai, Wang Chuangye* 0106001
- An In-Fiber Whispering-Gallery-Mode Microsphere Resonator and Its Sensing Characteristics
.....*Yin Qiyu, Cai Lu, Li Shangwen, Zhao Yong* 0106002
- Fiber Optic Sensor for Simultaneous Measurement of Three Parameters in FP Cavity and MZI Cascade
.....*Peng Min, Lu Zhiqi, Liu Changning* 0106003
- High-Peak-Power Pulsed Single-Frequency Fiber MOPA Based on Yb³⁺-Doped Silica Fiber
.....*Shi Zheng, Sheng Quan, Shi Chaodu, Fu Shijie, Deng Xun, Tian Hao, Shi Wei, Yao Jianquan* 0106004

Image Processing

- Denoising Method of Retinal OCT Images Based on Modularized Denoising Autoencoder
.....*Dai Hao, Yang Yaliang, Yue Xian, Chen Shen* 0110001
- Weighted Joint Sparse Representation Hyperspectral Image Classification Based on Spatial-Spectral Dictionary
.....*Chen Shanxue, He Yufeng* 0110002

Imaging Systems

- Quantitative Photoacoustic Endoscopic Imaging for Correcting Light Fluence Variation
.....*Meng Qi, Sun Zheng, Hou Yingsa, Sun Meichen* 0111001
- Speckle Decorrelation Optical Coherence Tomography Using Pure Random Phase Plate
.....*Qu Hui, Wang Yi, Lou Shiliang, Xu Yushuai, Wang Lutong, Cai Huaiyu, Chen Xiaodong* 0111002

Instrumentation, Measurement and Metrology

- Method for Inspection of Phase Defects in Extreme Ultraviolet Lithography Mask
.....*Cheng Wei, Li Sikun, Wang Xiangzhao* 0112001
- High-Accuracy Wave Plate Measurement Based on Dual-Frequency Laser Interferometry and Phase Detection
.....*Chen Qianghua, Guan Yu, Zhou Sheng, Ding Jinhong, LüHongbo, Sun Qiguo, Luo Huiyu* 0112002
- High-Speed Three-Dimensional Morphology Measurement Based on Time Multiplexing Coding
.....*Wang Haoran, Wu Zhoujie, Zhang Qican, Chen Zhengdong, Li Xunren* 0112003
- Three-Dimensional Measurement Method Based on Binary Coded Fringes
.....*Liu Jia, Lu Changqiu, Wen Jie, Xiao Yuqian, Yan Fei, Liu Yinpeng* 0112004
- Analysis of Polarization Characteristics of Targets Based on Mueller Matrix
.....*Yang Zhiyong, Zhang Zhiwei, Cai Wei, Li Shun* 0112005

Integrated Optics

Inverse Design of Optical Couplers with Arbitrary Splitting Ratio Based on Boundary Inverse Optimization Algorithm

.....*Liao Junpeng, Tian Ye, Yang Zirong, Kang Zhe, Zheng Ziwei, Jin Qinghui, Zhang Xiaowei* 0113001

Optimization and Experiments of On-Chip Silicon Nitride Grating Couplers

.....*Ran Na, Chen Xinyang, Wang Zhengkun, Zhang Jie* 0113002

Lasers and Laser Optics

Development of Integrated All-Fiber 1064 nm Laser System for Ultracold Atomic Cooling (**Cover paper**)

.....*Xie Yu, Liang Ang'ang, Li Wenwen, Huang Mingshan, Wang Bin, Liu Liang* 0114001

Synchronization Optimization of Chaotic Laser Based on Generative Adversarial Network

.....*Zhao Anke, Jiang Ning, Wang Chao, Liu Shiqin, Qiu Kun* 0114002

Design Optimization of Mechanical Support Structures in Tunable Vertical Cavity Surface Emitting Lasers

.....*Lü Jiagang, Li Wei, Qi Yuxuan, Pan Zhipeng, Zhong Li, Liu Suping, Ma Xiaoyu* 0114003

Key and Whole-Chain Technologies for Birefringent Dual-Frequency Lasers and Interferometers

.....*Zhang Shulian* 0114004

Nonlinear Optics

Nonlinear Behavior Research Based on Hybrid Spinning Optomechanical System

.....*Chen Yonglei, Chen Huajun, Liu Yunhe, Xie Baohao* 0119001

Optical Design and Fabrication

Design of Off-Axis Three-Mirror System with Large Curved Field of View for Two-Photon Imaging of Cerebral Cortex of Mice

.....*Huang Jian, Zhou Zhenqiao, Li Min, Jia Hongbo* 0122001

Initial Structure Design for Refractive Optical System Based on Deep Learning

.....*Shi Haodong, He Chunfeng, Wang Jiayu, Yang Shuai, Xu Miao, Sun Hongyu, Li Yingchao, Fu Qiang* 0122002

Optics at Surfaces

Near-Infrared Unidirectional Waveguide Based on Surface Magnetoplasmons

.....*Yan Jinhua, Wang Linping, Deng Yuxi, Liu Boyun, Shen Linfang* 0124001

Low Angular Dependence Characteristic of Reflection Spectra of Random Perturbation Surfaces

.....*Zhang Jinying, Li Shihao, Wang Rui, Wang Xinye, Li Zhuo, Wang Xin, Yang Suhui, Gao Yanze* 0124002

Physical Optics

Generation and Characteristics of Double-Layer Flower-Shaped Optical Vortex Lattice

.....*Han Bing, Fan Haihao, Fan Mengran, Jing Xiaonan, Wen Bingyan, Li Xinzhong* 0126001

Quantum Optics

Navigation Ranging Scheme Based on Quantum Illumination

.....*Hui Jun, Chai Hongzhou* 0127001

Co-Fiber Quantum-Classical Signal Transmission Technology for CVQKD

.....*Liu Xuchao, Sun Shilun, Li Shaobo, Wen Jiaxu, Li Huagui* 0127002

Vision, Color, and Visual Optics

Production of Driven Images for Wide-Color-Gamut Multi-Primary Display Systems

.....*Li Yasheng, Liao Ningfang, Li Yumei, Li Songlin, Wu Wenmin, Fan Qiumei* 0133001



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