

ISSN 1007-2276 http://www.irla.cn

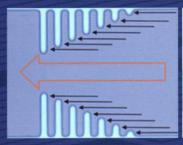
2017

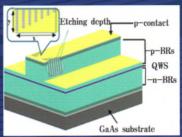
Vol.46 No.4





INFRARED AND LASER ENGINEERING





本期院士报告

高功率高亮度半导体激光器合束进展

王立军

中国科学院长春光学精密机械与物理研究所王立 军院士团队设计和实现了高亮度半导体激光单元器 件,并通过光谱合束技术实现了高光束质量输出, 解决了困扰半导体激光器光束质量的核心问题,为 实现大功率半导体激光光源的近衍射极限输出奠定 了基础。

> 中国航天科工集团公司 《红外与激光工程》编辑部

目 次

(加★文章为本期推荐优秀论文)

❖院士报告❖
高功率高亮度半导体激光器合束进展 王立军,彭航宇,张 俊,等 0401001
❖专家报告❖
一种大尺寸微通道板型光电倍增管
❖激光技术及应用❖
★稳恒磁场设计及电流强度对激光熔覆 Fe55 涂层微结构的影响 ····································
熔石英亚表面杂质对激光损伤概率的影响
0.53μm 全固态激光器热效应及其补偿技术研究 ······ 王 磊,聂劲松,叶 庆,等 0406003
高稳定紧凑型内腔连续光参量振荡器 李宇昕,李世凤,居盼盼,等 0406004
双色探测激光引信抗海浪技术 谢绍禹,赵毅强,王金花,等 0406005
液体中激光声传输特性 李胜勇,吴荣华,王晓宇,等 0406006
变焦彩色 CCD 成像系统的激光外场干扰实验 汤 伟,王 锐,王挺峰,等 0406007
青铜金刚石砂轮的激光整形与修锐 蔡 颂,熊 彪,陈根余,等 0406008
❖红外技术及应用❖
★硅基中长波红外减反微结构研究 ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・
有罩雷达目标表面温度场求解方法
高帧频 DMD 红外景象仿真设备电路与光学系统设计 ····································
微偏振片阵列成像的非均匀校正研究 彭 勇,冯 斌,史泽林,等 0404004
不同形式喷管红外抑制特性试验研究 张 勃,李经警,袁 帅,等 0404005
◆光电器件与微系统◆
大口径倍频晶体高精度温控装置的研制
用响应和串音识别焦平面探测器相连缺陷元研究 侯治锦,傅 莉,王 巍,等 0420002
基于太赫兹超材料的微流体折射率传感器 郑 伟,范 飞,陈 猛,等 0420003
0.1 THz 鳍线单平衡式基波混频电路研究 ····································
某大视场机载摆扫红外扫描仪几何成像仿真与误差分析 叶思熔, 江万寿, 李金龙,等 0420005
❖视觉深度学习❖
基于双线投影与线面约束的 3D 扫描测量系统研究 ·······王鹏,史瑞泽,钟小峰,等 0427001
基于 Stocks 矢量测量与干涉法的径向偏振光束重建(英文)
基于单目视觉和固定靶标的位姿测量系统 王天宇,董文博,王震宇 0427003
❖光电测量❖
双光路互参考高精度 AOTF 衍射效率测试方法及装置 ················秦侠格, 姬忠鹏, 徐映宇, 等 0417001

不	等光程法太赫兹波段材料光学参数的精确测量 季琲琲,李照鑫,周 薇,等 0417002	
基	于扩展卡尔曼滤波器的捷联导引头刻度尺参数辨识(英文) 王 伟,纪 毅,石忠佼,等 0417003	
用	于非均匀条纹的二值时空编码相位展开方法 冀红彬,张慧博,戴士杰,等 0417004	
两	种透明介质微小折射率差高精度测量的新方法	
光	电/红外侦察卫星目标散射特性提取研究 龚俊斌,丁 凡 0417006	
单	圈绝对式光电轴角编码器译码技术 苏小刚,胡晓东,肖茂森,等 0417007	
*	光通信与光传感❖	
光	斑尺寸偏差和光轴偏转对空间光混频器混频效率的影响分析 南 航,张 鹏,佟首峰,等 0422001	
单	根多模光纤数字扫描成像方法	
基	于 SVM 算法的 φ-OTDR 分布式光纤扰动传感系统模式识别研究 ····································	
蒙	特卡洛仿真的水下激光通信信道特性	
*	大气光学*	
★基	于高光谱分辨率激光雷达的气溶胶分类方法研究	
黑	碳-氯化钠内混合气溶胶粒子有效吸收研究(英文) 尹凯欣,王海涛,范承玉 0411002	
兴	隆观测基地的大气色散实测研究	
*	景象信息处理❖	
高	速运动目标的运动模糊图像复原研究张玉叶,周胜明,赵育良,等 0428001	
无	人飞行器基于前视序列图像的地形跟随技术	
*	光学设计及仿真*	
超	音速共形光学系统动态热差实时校正研究李衍璋,黄长春,张运强,等 0418001	
*	光谱探测与分析❖	
弹	光调制干涉图的预处理及相位校正方法 张敏娟,毕满清,郝 骞,等 0423001	
*	生物光子学❖	
乳	.腺癌氧合血红蛋白表面增强拉曼光谱研究	

Contents

* Review * Development of beam combining of high power high brightness diode lasers Wang Lijun, Peng Hangyu, Zhang Jun, et al. 0401001 ❖ Invited paper ❖ Large-area micro-channel plate photomultiplier tube Sun Jianning, Ren Ling, Cong Xiaoqing, et al. 0402001 ❖ Laser technology and application ❖ ★Design of steady-state magnetic field and effect of current intensity on microstructure of Fe55 alloy coating by laser cladding Liu Hongxi, Liu Zifeng, Zhang Xiaowei, et al. 0406001 Effect of subsurface impurities of fused silica on laser induced damage probability Gao Xiang, Qiu Rong, Zhou Guorui, et al. 0406002 Study on thermal effect and compensation technology of 0.53 µm all-solid-state laser Highly stable compact intra-cavity continuous-wave optical parametric oscillator Li Yuxin, Li Shifeng, Ju Panpan, et al. 0406004 Laser fuze anti-surf based on two-wavelength detection Xie Shaoyu, Zhao Yiqiang, Wang Jinhua, et al. 0406005 Properties of laser-induced acoustic signals transmission in liquid Li Shengyong, Wu Ronghua, Wang Xiaoyu, et al. 0406006 Laser jamming experiment of varifocal colour CCD imaging system Tang Wei, Wang Rui, Wang Tingfeng, et al. 0406007 Laser truing and sharpening of bronze-bond diamond grinding wheel Cai Song, Xiong Biao, Chen Genyu, et al. 0406008 ❖ Infrared technology and application ❖ ★Antireflective silicon based microstructures for the mid- and long-wavelength infrared Calculation method of shrouded radar target surface temperature field Circuit and optical system design for high frame rate DMD infrared scene simulation equipment Non-uniformity correction in polarization imaging obtained with integrated microgrid polarimeters Peng Yong, Feng Bin, Shi Zelin, et al. 0404004 Experimental investigation of infrared suppressing characteristics of different nozzles Photoelectric device and microsystem Development of high precision temperature control device for large aperture frequency doubling crystal Liu Baolin, Zhang Peng, Sun Fuzhong, et al. 0420001 Study on connected defective elements in focal plane array identification by response and crosstalk Terahertz refractive index sensing of microfluid based on metamaterials Zheng Wei, Fan Fei, Chen Meng, et al. 0420003 Development of 0.1 THz finline fundamental single-balanced mixer circuit Imaging simulation and error analysis of large field of view airborne infrared scanner ····· Ye Sirong, Jiang Wanshou, Li Jinlong, et al. 0420005 ❖ Visual depth learning ❖ 3D scanning measurement system based on double-line projection and the line-plane constraint

Wang Peng, Shi Ruize, Zhong Xiaofeng, et al. 0427001

Radially polarized beam restructuring based on Stokes-vector measurement and interferometry
Zhan Xiangkong, Li Zhengyong, Zhang Yi, et al. 0427002
Position and orientation measurement system based on monocular vision and fixed target
* Photoelectric measurement *
High-precision measurement method and device on diffraction efficiency of Acousto-Optic Tunable Filter based on double-
optical-path and cross-references
Accurate optical parameters measurement of different optical path in the terahertz range
EKF-based scaling factor identification for strap-down seeker Wang Wei, Ji Yi, Shi Zhongjiao, et al. 0417003
Binary spatiotemporal encoded method used for uneven fringes phase unwrapping
Novel approach for high-precision measurement of micre refractive index difference of two transparent mediums
Wu Ting, Zou Yan, Li Zhitong, et al. 0417005
Extracting scattering characteristic from photoelectric/IR reconnaissance satellites targets Gong Junbin, Ding Fan 0417006
Decoding techniques of single-ring absolute photoelectric shaft encoder
Su Xiaogang, Hu Xiaodong, Xiao Maosen, et al. 0417007
♦ Optical communication and optical sensing ♦
Analysis of the effect of light spot size and ray axis deflection on heterodyne efficiency of space optical hybrid
Single multi-mode fiber digital scanning imaging method Liu Guodong, Yin Zhe, Liu Bingguo, et al. 0422002
Study of pattern recognition based on SVM algorithm for φ -OTDR distributed optical fiber disturbance sensing system \cdots
Monte Carlo simulation on channel characteristics of underwater laser communications
* Atmospheric optics *
★ Aerosol classification method based on high spectral resolution lidar ·····
Liu Bingyi, Zhuang Quanfeng, Qin Shengguang, et al. 0411001
Effective absorption for Black Carbon-NaCl internal mixed aerosols Yin Kaixin, Wang Haitao, Fan Chengyu 0411002
Experimental study of atmospheric dispersion at Xinglong observatory Xiang E, Wang Huijuan, Xu Kefeng, et al. 0411003
❖ Scene information and processing ❖
Motion-blurred image deblurring of fast moving target Zhang Yuye, Zhou Shengming, Zhao Yuliang, et al. 0428001
Terrain following based on forward-looking image sequences for unmanned air vehicles
♦ Optical design and simulation ♦
Real-time correction of dynamic thermal differential of supersonic conformal optical system
Li Yanzhang, Huang Changchun, Zhang Yunqiang, et al. 0418001
♦ Spectrum detection and analysis ♦
Method of preprocessing and phase correction for photo-elastic modulated interferograms
Zhang Minjuan, Bi Manqing, Hao Qian, et al. 0423001
❖ Biological optics❖
Breast cancer oxyhemoglobin surface enhanced Raman spectroscopy ······ Zhang Ming, Zhu Shaoling, Gao Fei, et al. 0433001



lei.jin@hgh.fr www.hgh-infrared.com.cn

高温扩展面源黑体

绝对温度范围: +50℃到+550





差源低温黑体 L系列 绝对温度: -40℃ 到+150℃





配有防结露、结霜装置的差分低温



绝对温度范围: +50℃到1300℃

★ 整合资源,优化销售渠道,做红外测 试和全景监控系统领域的开拓者! HGH成功收购美国光电工业公司EOI。

★ 全参数测试算法符合国家标准GB/T 17444—2013 《红外焦平面阵列参数测试方法》

HGH Systèmes Infrarouges

10 Rue Maryse Bastié 91430 IGNY - FRANCE Tel: +33 1 69 35 47 70

Fax: +33 1 69 35 47 80

法国HGH红外系统股份公司北京代表处

北京东城区东直门南大街14号

北京保利大厦办公楼974室(100027)

电话: 010-6551 5319 传真: 010-6551 5318

ISSN 1007-2276



ISSN 1007-2276 CN 12-1261/TN

国内 6-133 国外 BM1766

国内定价 45.00元