



中国光学工程学会会刊

ISSN 1007-2276

CN 12-1261/TN

第47卷 | 第5期

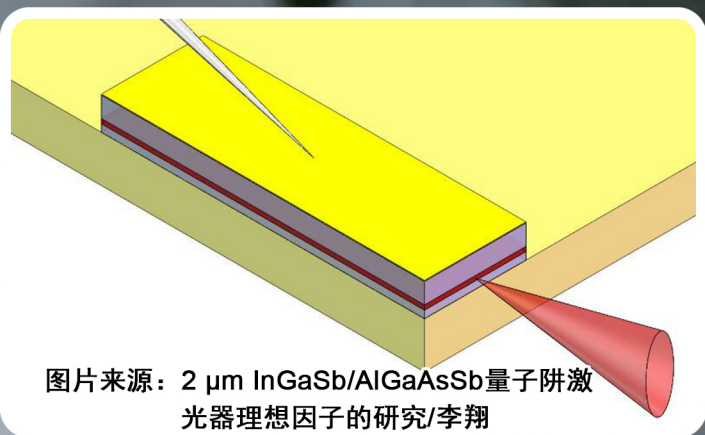
Vol.47 | No.5

2018.05



红外与激光工程

INFRARED AND LASER ENGINEERING



图片来源: 2 μm InGaSb/AlGaAsSb量子阱激光
器理想因子的研究/李翔



天津津航技术物理研究所
《红外与激光工程》编辑部

目次

❖ 特约专栏—“红外半导体激光器” ❖

2 μm InGaSb/AlGaAsSb 量子阱激光器理想因子的研究	李翔,汪宏,乔忠良,等	0503001
碲化物中红外单模半导体激光器研究进展	杨成奥,谢圣文,黄书山,等	0503002
2 μm GaSb 基大功率半导体激光器研究进展	谢圣文,杨成奥,黄书山,等	0503003

❖ 邀请报告 ❖

空间编码复用散斑多信息融合关联成像(特邀)	时东锋,黄见,苑克娥,等	0502001
-----------------------------	--------------	---------

❖ 红外技术及应用 ❖

甚高灵敏度长波红外相机测试技术	龙亮,张丽莎,吴立民	0504001
涡流脉冲热像检测中疲劳裂纹的检出概率	孙吉伟,冯辅周,闵庆旭,等	0504002
舰船湍流尾迹红外发射率计算方法	金方圆,王运鹰,郭媛媛,等	0504003
正照射延伸波长 $\text{In}_{0.8}\text{Ga}_{0.2}\text{As}$ 红外焦平面探测器	邓洪海,杨波,邵海宝,等	0504004
红外光强与偏振图像多类拟态变元组合融合	吕胜,杨风暴,吉琳娜,等	0504005

❖ 激光器技术 ❖

高功率窄谱宽 1 915 nm 掺铥光纤激光器研究	张伟,吴闻迪,余婷,等	0505001
双 SESAM 被动锁模超短脉冲光纤激光器	何广龙,徐莉,金亮,等	0505002
2 μm 波段 $\text{Tm}:\text{YAP}$ 晶体半导体可饱和吸收镜连续波锁模激光器	张海鹏,黄继阳,周城,等	0505003
用于红外气体检测的高稳定性 DFB 激光器驱动电源	蒋荣秋,邓伟芬,汪倩倩,等	0505004

❖ 激光技术及应用 ❖

单结 GaAs 太阳能电池连续激光辐照热损伤机理	李云鹏,张检民,窦鹏程,等	0506001
云雾后向散射激光回波特性的研究	王凤杰,陈慧敏,马超,等	0506002
电调谐波长移相干涉术	丁煜,陈磊,王志华,等	0506003
金属复合板激光弯曲过程中翘曲变形数值模拟	李紫慧,王续跃	0506004
基于半解析模型的激光测高回波海水海冰波形分类方法	马跃,张文豪,张智宇,等	0506005

❖ 光通信与光传感 ❖

采用后向瑞利散射空间差分的周界安防分布式振动监测(英文)	尚盈,王晨,王昌,等	0522001
IMDD OFDM 无源光网中的非线性分析和信号失真消除(英文)	白光富,胡林,江阳,等	0522002
改进支持向量机的光纤陀螺温度漂移补偿方法	吴军伟,缪玲娟,李福胜,等	0522003

❖ 信息获取与辨识 ❖

基于深度学习物体检测的视觉跟踪方法	唐聪,凌永顺,杨华,等	0526001
多参数亮度值重映射的颜色传递方法	仲红玉,尹丽菊,高明亮,等	0526002
红外与激光融合目标识别方法	仝选悦,吴冉,杨新锋,等	0526003

基于误差分析的岩芯高光谱数据几何校正方法 姜宇,李娜,孟令杰,等 0526004

❖光学设计及仿真❖

激光引信大视场小型化发射光学系统设计 高洁,张大庆,陆长平,等 0518001

空间相机次镜调整机构的改进布谷鸟标定方法 王瀚,曹小涛,赵伟国,等 0518002

❖光电器件与应用❖

用于高速 CIS 的 12-bit 紧凑型多列共享并行 pipeline-SAR ADC(英文) 郭志强,刘力源,吴南健 0520001

频率可调太赫兹微结构光电导天线 夏祖学,刘发林,邓琥,等 0520002

双层石墨烯电控开关设计 史叶欣,李九生 0520003

❖光谱探测与分析❖

Relief-F 筛选波段的小麦白粉病早期诊断研究 黄林生,张庆,张东彦,等 0523001

❖光电导航与控制❖

基于寄生回路的导引头传递函数及测试方法 刘石祥,尹健,杜肖,等 0531001

Contents

❖Invited column—"Infrared semiconductor laser"❖

Investigation on ideality factor of 2 μm InGaSb/AlGaAsSb quantum well laser	Li Xiang, Wang Hong, Qiao Zhongliang, et al. 0503001
Research progress of antimonide infrared single mode semiconductor laser	Yang Cheng'ao, Xie Shengwen, Huang Shushan, et al. 0503002
Research progress of 2 μm GaSb-based high power semiconductor laser	Xie Shengwen, Yang Cheng'ao, Huang Shushan, et al. 0503003

❖Invited paper❖

Multi-information fused correlated imaging based on space-coded multiplexing speckles(<i>Invited</i>)	Shi Dongfeng, Huang Jian, Yuan Kee, et al. 0502001
---	--

❖Infrared technology and application❖

Testing technique of ultra-high sensitivity long-wave infrared camera	Long Liang, Zhang Lisha, Wu Limin 0504001
Probability of detection for fatigue crack in eddy current pulsed thermography	Sun Jiwei, Feng Fuzhou, Min Qingxu, et al. 0504002
A method for calculating IR emissivity of ship turbulent trailing wake	Jin Fangyuan, Wang Yunying, Guo Yuanyuan, et al. 0504003
Extended-wavelength $\text{In}_{0.8}\text{Ga}_{0.2}\text{As}$ IRFPA detector arrays for front-illumination	Deng Honghai, Yang Bo, Shao Haibao, et al. 0504004
Combination fusion of multi-types mimic variables infrared intensity and polarization image	Lv Sheng, Yang Fengbao, Ji Linna, et al. 0504005

❖Laser technology❖

Study on high-power narrow-bandwidth 1 915 nm thulium-doped fiber laser	Zhang Wei, Wu Wendi, Yu Ting, et al. 0505001
Double SESAM passively mode-locked ultrashort pulse fiber laser	He Guanglong, Xu Li, Jin Liang, et al. 0505002
CW mode-locked Tm:YAP laser with semiconductor saturable-absorber mirror at around 2 μm	Zhang Haikun, Huang Jiyang, Zhou Cheng, et al. 0505003
High stability DFB laser driving power supply utilized in infrared gas detection	Jiang Rongqiu, Deng Weifen, Wang Qianqian, et al. 0505004

❖Laser technology and application❖

Thermal damage mechanism of single junction GaAs solar cells irradiated by continuous wave laser	Li Yunpeng, Zhang Jianmin, Dou Pengcheng, et al. 0506001
Research on the characteristics of fog backscattering laser echo	Wang Fengjie, Chen Huimin, Ma Chao, et al. 0506002
Wavelength phase shifting interferometry based on current modulation	Ding Yu, Chen Lei, Wang Zhihua, et al. 0506003
Numerical simulation of warping deformation on metal composite plate during laser bending	Li Zihui, Wang Xuyue 0506004
Sea and sea-ice waveform classification for the laser altimeter based on semi-analytic model	Ma Yue, Zhang Wenhao, Zhang Zhiyu, et al. 0506005

❖ Optical communication and optical sensing ❖

- Distributed vibration sensing of perimeter security based on space difference of Rayleigh backscattering Shang Ying, Wang Chen, Wang Chang, et al. 0522001
- Nonlinearity analysis and signal distortion cancelation in IMDD OFDM PON Bai Guangfu, Hu Lin, Jiang Yang, et al. 0522002
- Compensation method of FOG temperature drift with improved support vector machine Wu Junwei, Miao Lingjuan, Li Fusheng, et al. 0522003

❖ Information acquisition and identification ❖

- A visual tracking method via object detection based on deep learning Tang Cong, Ling Yongshun, Yang Hua, et al. 0526001
- Color transfer method of luminance remapping with multi-parameters Zhong Hongyu, Yin Liju, Gao Mingliang, et al. 0526002
- Fusion target recognition method of infrared and laser Tong Xuanyue, Wu Ran, Yang Xinfeng, et al. 0526003
- Geometric correction method of core hyperspectral data based on error analysis Jiang Yu, Li Na, Meng Lingjie, et al. 0526004

❖ Optical design and simulation ❖

- Design of emission optical system for laser fuze with large FOV and miniaturization Gao Jie, Zhang Daqing, Lu Changping, et al. 0518001
- Improved cuckoo calibration method of space telescope secondary mirror adjusting mechanism Wang Han, Cao Xiaotao, Zhao Weiguo, et al. 0518002

❖ Photoelectric device and application ❖

- 12-bit compact multiple-columns-shared-parallel pipeline-SAR ADC for high speed CIS Guo Zhiqiang, Liu Liyuan, Wu Nanjian 0520001
- Frequency adjustable THz microstructured photoconductive antennas Xia Zuxue, Liu Falin, Deng Hu, et al. 0520002
- Design of double layer graphene electronic controlled switch Shi Yexin, Li Jiusheng 0520003

❖ Spectrum detection and analysis ❖

- Early diagnosis of wheat powdery mildew based on Relief-F band screening Huang Linsheng, Zhang Qing, Zhang Dongyan, et al. 0523001

❖ Photoelectric navigation and control ❖

- Transfer function and test method of seeker based on parasitic loop Liu Shixiang, Yin Jian, Du Xiao, et al. 0531001