

## 目 录

闪耀光栅对厄米-高斯光束的衍射	郑辉	(1)
光传输模拟计算	王桂英 范滇元	(8)
相干反斯托克斯喇曼散射光谱方法的化学应用研究	高振 刘殿友 华峦 郭础	(13)
OMA-2 快速测定微秒级脉冲灯的光谱分布和光谱效率		
..... 卫禹洲 黄润兰 黄瑞平 董子丰 陈锡荣 张存浩		(17)
激光脉冲超声调制打孔的研究	富崇大 孙堃 李维君	(20)
ThF <sub>4</sub> 保护膜镀制与防护技术的实验研究		
..... 隋振东 吴滨江 马明春 王海全 康桂兰		(26)
硅对 CO <sub>2</sub> 激光的增强吸收	李元恒 李春金	(28)
CO 激光器的光栅色散腔选支	归振兴 张顺怡	(30)
波导染料激光器中的波导效应	刘力 易国光 黄瑞如	(32)
多模 TEA CO <sub>2</sub> 激光位相复共轭的实验研究	邹海兴 陈兰英 张宝富	(38)
氙离子激光石墨及其处理	赵继彦 贾廷奎 李绍武	(42)
热锻红外激光窗口材料 KCl 的显微结构	邓珮珍 乔景文 钱振英 陈德敏	(45)
液面法超声全息	姜锦虎 陈炳泉	(49)

### 问题讨论

对激光管着火电压降低的实验探讨	高全生 张玉芳 刘新	(53)
关于气体激光管着火电压机理的讨论	马有年	(56)

### 科学札记

直角棱镜-四面镜谐振腔的失调灵敏度	黄维刚 洪熙春 王绍民	(58)
苯的受激喇曼散射频移及位相匹配	孟绍贤 张伟清 康玉英 汪宏	(60)
激光显微光谱分析中的辅助激励延时技术	潘志强	(61)
YAG 激光短脉冲的产生	支婷婷 陈兰荣 顾敏	(62)

### 简 讯

喷油嘴激光打孔科研鉴定会在吉林省长春市举行	李冠冰	(57)
输出功率稳定的光抽运远红外激光器	王忠志 屠世谷 廖世强	(64)
V 形折迭腔浸没式 600 瓦 CO <sub>2</sub> 激光器	许士伟	(64)

## CONTENTS

- Diffraction of a blazed grating illuminated with a Hermit-Gaussian beam .....Zheng Hui ( 1 )
- Simulation calculation of light propagation..... Wang Guiying, Fan Dianyuan ( 8 )
- Study of CARS application in chemistry.....Gao Zheng, Liu Dianyou, Hua Luan, Guo Chu (13)
- Quick measurement of spectral distribution and efficiency of  $\mu\text{s}$  level flash-lamp using OMA-2 system  
.....Wei Yuzhou, Huang Runlan, Huang Ruiping, Dong Zhifong, Chen Xirong, Zhang Cunhao (17)
- Investigation on drilling by ultrasonic modulation of laser pulse spikes  
.....Fu Chongda, Sun Kun, Li Weijun (20)
- Experimental study on the deposition of  $\text{ThF}_4$  protective film and its radioactive protection  
.....Sui Zhendong, Wu Binjiang, Ma Minchun, Wang Haiquan, Kang Guilan (26)
- Enhanced absorption of  $\text{CO}_2$  laser by silicon..... Li Yuanheng, Li Chunjin (28)
- Grating dispersion cavity for CO lasers..... Gui Zhenxing, Zhang Shunyi (30)
- Waveguide effects in the waveguide dye laser..... Liu Li, Yi Guoguang, Huang Ruiyu (32)
- Experimental study on phase conjugate of multimode TEA  $\text{CO}_2$  lasers  
..... Zou Haixin, Chen Lanyin, Zhang Baofu (38)
- Graphite for  $\text{Ar}^+$  lasers and its treatment..... Zhao Jiyan, Jia Tingkui, Li Shaowu (42)
- Microstructure of hot-forged infrared laser window material KCl  
..... Deng Peizhen, Qiao Jingwen, Qian Zhenying, Chan Demin (45)
- Liquid-surface ultrasonic holography.....Jiang Jinhui, Chen Bingquan (49)

## DISCUSSION

- Experimental study on lowering the breakdown voltage for laser tubes  
..... Gao Quansheng, Zhang Yufang, Liu Xin (53)
- On the mechanisms of breakdown voltage of gas laser tubes..... Ma Younian (56)

## SCIENCE NOTES

- Misalignment sensitivity of cube corner reflector-concave mirror resonators  
..... Huang Weigang, Hong Xichun, Wang Shaomin (58)
- Frequency shift of SRS in benzene and phase matching  
..... Meng Shaoxian, Zhang Weiqing, Kang Yuying (60)
- Discharge delay of cross-excitation in laser microspectroscopy..... Pan Zhiqiang (61)
- Generation of short pulses in Nd: YAG lasers..... Zhi Tingting, Chen Lanrong, Gu Min (62)

## LETTERS

- Evaluation meeting on laser drilling of oil nozzle held in Changchun, Jilin Province...Li Guanbing (57)
- An optically-pumped FIR laser with stable output power  
..... Wang Zhongzhi, Tu Shigu, Liao Shinqiang (64)
- A 600W immersed a  $\text{CO}_2$  laser with V-shaped folded cavity..... Xu Shiwei (64)