

# 激光

(月刊)

第七卷 第九期

(总第 45 期)

一九八〇年九月

编 辑 《激光》编辑委员会  
(上海 8211 邮政信箱)  
(邮政编码: 201849)

出 版 上海科学技术出版社

印 刷 上海商务印刷厂

国内发行 上海市报刊发行处

国内订阅 全国各地邮局

国外发行 中国国际书店  
(北京 399 信箱)

代号: 国内 4-201 定价: 0.33 元  
国外 M159

## 目 录

- 高功率多程放大器 ..... 范滇元 余文炎 (1)
- 强激光场在液晶中引起的负透镜效应及其弛豫行为 ..... 初桂荫等 (7)
- 隐花青染料的温度、溶剂、杂质含量对红宝石激光器输出性能影响的理论分析 ..... 赵燕曾 (12)
- 降低气体激光管着火电压的初步理论分析 ..... 高全生 张玉芳 刘新 (19)
- 气动激光器列阵喷管的研究 ..... 邬传宝 俞刚 (21)
- 流动激光器喷管的无逆压特性曲线及选型 ..... 盛家宁 (27)
- 高功率激光放大器 B 积分值的选取 ..... 赵庆春 (31)
- 用计算全息方法制作的空间滤波器 ..... 叶权书 高文琦 何永蓉 (34)
- 立方晶体非线性折射系数的各向异性 ..... 邓和 (38)
- 激光显微光谱分析中辅助激励延时加压对分析灵敏度的影响 ..... 张国生等 (43)
- 气体的激光光声光谱及其应用 ..... 陈传文等 (48)
- XeCl 准分子激光器和感应辐射谱研究 (52) 泵浦染料激光器的壁消融闪光灯 (53) 汞反射镜在激光作用下的透光问题 (54) 消气剂在氦-氖激光器中的应用 (56) 激光用的 1, 2-二氯乙烷试剂 (57) 脉冲 CO<sub>2</sub> 激光对钟表钻石打孔的影响 (58) 采用激光选出新的恢复系——激光四号 (59) 激光对 <sup>60</sup>Co-γ 射线造成生物损伤的“修复效应”研究 (59) 激光杀虫可能性的探索 (60) 氦-氖激光治疗麦粒肿疗效观察 (61) 氦-氖激光治疗带状疱疹 (62) 氦-氖激光治疗妇产科疾病 200 例 (62) 皮脂腺瘤的激光照射 (51)
- 石榴石单晶薄膜磁光调制器 (63) 高功率连续 Nd: YAG 激光进行人体肝癌手术初步获得成功 (63) 同步泵浦锁模染料激光器 (64) 一机部、四机部分别召开激光器技术标准审定会 (64)

## Contents

High power multi-pass amplifier .....	<i>Fan Dianyuan, Yu Wenyuan</i>	(1)
A negative lens effect induced by strong laser field in liquid crystals and its relaxation behavionurs.....	<i>Chu Guiyin et al.</i>	(7)
Theoretical analysis of effects of temperature, solvent, impurity concentration of cryptocyanine on the output performance of ruby lasers.....	<i>Zhao Yanzeng</i>	(12)
A preliminary theoretical analysis on lowering breakdown voltage in gas laser tubes.....	<i>Gao Quansheng, Chang Yufang, Liu Xin</i>	(19)
Study on the arrayed nozzles for gas-dynamic laser .....	<i>Wu Chuanbao, Yu Gong</i>	(21)
Characteristic curves without reverse pressure gradient and contour selection in flowing laser nozzles	<i>Sheng Jinning</i>	(27)
Selection of the value of <i>B</i> integral for high power laser amplifier.....	<i>Zhao Qingchun</i>	(31)
Fabrication of spatial filter by method of computing holography .....	<i>Ye Quanshu, Gao Wenqi, He Yunrong</i>	(34)
Anisotropy of nonlinear refractive index in a cubic crystal .....	<i>Deng He</i>	(38)
Influence of discharge delay and voltage increase of cross-excitation on analytical sensitivity in laser microspectroscopy.....	<i>Zhang Guosheng et al.</i>	(43)
Laser opto-acoustic spectroscopy of gases and its applications .....	<i>Chen Chuanwen et al.</i>	(48)

**SCIENCE NOTES**

Investigation on Xe Cl excimer laser and its induced radiative spectrum (52) Wall-ablation flash lamps  
for pumping of dye lasers (53) Light transmission of mercury mirrors under the action of laser  
light (54) Application of degasifier in He-Ne lasers (56) 1,2-dichloroethane reagent for lasers (57)  
Effects of pulsed CO<sub>2</sub> laser on the drilling of watch jewels (58) A new restorer line(Laser No. 4) selected  
by means of laser (59) Investigation of laser in repairing effect of biological damage by <sup>60</sup>Co- $\gamma$  ray (59)  
Feasibility exploration of killing insects by laser (60) Effect observation of He-Ne laser treatment of  
stye (61) He-Ne laser treatment of herpes zoster (62) 200 cases in gynaecology and obstetrics treated  
by He-Ne lasers (62) The disappearance of adenoma sebaceum by laser (51)

**LETTERS**

A thin film magneto-optic modulator using garnet single crystal (63) Initial success achieved in the  
operation of human liver cancer by high power CW YAG laser (63) A synchronously-pumped mode-locked  
laser (64) Examination of laser technical standard held by the 1st and 4th Ministry of Machine  
Building respectively (64)