

激光

(月刊)

第八卷 第七期

(总第 55 期)

一九八一年七月

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
沪刊第 080 号

目 录

- 三能级激光系统中的非平衡定态问题 李国平 (1)
非稳定共振腔的波型限制特性 赫光生 (4)
气体类透镜效应对 TEA CO₂ 激光器锁模的影响
雷仕湛 周忠益 (7)
光纤传输用的磁光隔离器 关铁梁 何钰泉 (11)
YAG:Nd 晶体中的残余应力和退火
张守都 张克敏 (15)
碱金属蒸汽灯内管壁早期发黑的研究 方无忌等 (21)
两次散斑干涉法 赵晔英 梅家福 (25)
用计算机产生全息图 陈仲裕 施志果 郑 辉 (28)
HCN 激光器及亚毫米波长的测量
林贻堃 丘秉生 郑兴世 (32)
应用光学中几种光路调整的方法
明 海 陈岩松 谢建平 (35)
脉冲激光焊接熔池中的缺陷 曹明翠 (38)
红宝石激光显微照射在细胞生物学中的应用
梁 宏等 (43)
上海的大气闪烁及其对激光应用的影响
温景嵩 魏公毅 (47)

科学札记

掺有某些半导体化合物玻璃的非线性吸收效应(53) N₂ 激光器的紫外光预电离(56) 用重铬酸盐明胶制作白光再现全息图(58)

激光医学

CO₂ 激光治疗鼻内疾患 276 例(60) CO₂ 激光治疗喉癌和喉乳头瘤(60) He-Ne 激光照射治疗 538 例耳鼻咽喉疾患(61) He-Ne 激光治疗白内障一例(61) He-Ne 激光治疗 105 例阿弗它口腔炎(62) He-Ne 激光治愈麦粒肿 120 例(62) He-Ne 激光治疗神经官能症 35 例疗效观察(63) He-Ne 激光照射兔、鼠心前区的实验观察(63) 广州地区激光工作者眼部普查报告(64)

简 讯

四频环形激光陀螺原理样机通过技术鉴定(3) 1982 年第六届全国激光学术报告会征文通知(14) 多功能 YAG 激光器(20)

CONTENTS

- Non-equilibrium steady state in the three-energy-level laser system..... *Li Guoping* (1)
Mode restriction characteristics of unstable optical resonators..... *He Guangsheng* (4)
Influence of gas lenslike effect on mode-locking of TEA CO₂ lasers..... *Lei Shizhan, Zhou Zhongyi* (7)
Magneto-optic isolator for optical fiber transmission..... *Guan Tielian, He Yuquan* (11)
Residual stress in YAG:Nd crystals and its annealing *Zhang Shondu, Zhang Kemin* (15)
Study on early blacking of the internal tube wall of alkali metal vapor lamps..... *Fang Wuji et al.* (21)
Double speckle interferometry *Zhao Yeying, Mei Jiafu* (25)
Computer-generated holograms *Chen Zhongyu, Shi Zhiguo, Zheng Hui* (28)
A HCN laser and the measurement of the submillimeter waves.....
..... *Lin Yikun, Qiu Bingsheng, Zheng Xingshi* (32)
Several methods for adjusting optical systems in applied optics.....
..... *Ming Hai, Chen Yansong, Xie Jianpin* (35)
The defects in melting pool of the pulsed laser welding *Cao Mingcui* (38)
Application of ruby laser microbeam irradiation in cell biology *Liang Hong et al.* (43)
The atmospheric scintillation in Shanghai and its effects on laser engineering.....
..... *Wen Jingsong, Wei Gongyi* (47)

SCIENCE NOTES

Nonlinear optical absorption effects in glasses doped with some semiconductor compounds (53) UV preionization in molecular N₂ laser (56) Fabrication of white light reconstructed holograms using dichromated gelatin (58)

LASER IN MEDICINE

276 cases of intranasal lesion treated with CO₂ laser (60) Throat cancer and papilloma of laryx treated with CO₂ laser (60) 538 cases of otolaryngological deceases cured with He-Ne laser irradiation (61) One case of cataract cured with He-Ne laser (61) 105 cases of Afta stomatitis cured with He-Ne laser (62) 120 cases of sties cured with He-Ne laser (62) Observations of carative effect of 35 cases of neuroses treared by He-Ne laser light (63) Experimental observations of precordial area of rats and cats irradiated with He-Ne laser light (63) General inspection of eyes for laser researchers in Guangzhou area (64)

LETTERS

Technical appraisal of the prototype of four frequency ring laser gyroscope passed (3) The Sixth National Laser Symposium: Call for paper (14) YAG laser with multifunctions (20)

Edited by: *Editorial Board, Laser Journal*

(P. O. Box 8211, Shanghai, China)

Published by: *Shanghai Press of Science and Technology*

Printed by: *Shang Wu Printing House, Shanghai*

Distributed by

Domestic: *Local Post Offices*

Foreign: *GUOZI SHUDIAN (P. O. Box 399, Beijing, China)*

LASER JOURNAL

(Monthly)

Vol. 8 No. 7

July 1981