

光学学报 第六卷 1986年

总 目 录

第 一 期

对撞脉冲锁模 Nd:YAG 激光器的实验研究	刘一光等	(1)
光学共振反射器及其在激光技术中的应用	朱智敏等	(6)
通过钠分子 $4^1\Sigma_u^+$ 或 $6^1\Pi_u$ 态的两步混合共振受激辐射	秦莉娟等	(12)
纯氩空心阴极放电中 Ar^+4p-4s 态的粒子数反转	李世芳等	(17)
电子束干涉和非涅耳衍射	陈建文等	(23)
变束棱镜的色散理论	张国威	(29)
二次型径向折射率和增益分布介质中高阶高斯光束模式的严格解析解	张瑞林	(34)
纤芯拼接区的传输特性及其在单模定向耦合器中的应用	方锡生等	(42)
折射率中心凹陷对 W 型单模光纤传输特性的影响	蒋明俊等	(49)
$LiNbO_3$ 晶体的布里渊散射与弹性常数和压电常数的测定	周伟庆等	(57)
低温光致发光研究硅单晶中杂质和缺陷	宗祥福等	(63)
几种掺杂氧化物薄膜的特性测试及分析	陈宇明等	(70)

简 讯

非均匀增益介质中的三模激光运转	李孝申等	(76)
PBD 系列紫外激光染料的光谱和激光特性	邵子文等	(83)
计算全息术中的空间域滤波	陆 达等	(87)
1.56 米天体测量望远镜主镜的剪切干涉检验	徐德行	(93)

第 二 期

一种新型的振荡腔——球体谐振腔(I)球体谐振腔的基本性质	钱士雄	(97)
对撞脉冲锁模 Nd:YAG 激光器的若干运转特性	盛国平等	(104)
主动锁模铜蒸气激光器	张桂燕等	(110)
具有导向磁场可变摆荡器自由电子激光器及其设计方法	陈建文	(114)
双滤波产生相位体的等位线条纹	刘立人	(122)
相衬显微镜中的部分相干光成像	马长明等	(129)
光学系统的测不准关系式和等效带宽	宋菲君	(137)
用于混合处理 X 光层析术的胶片特性研究	吕精林等	(143)
$NaF:Mg^{2+}$ 晶体中 $(F_2)^{\bullet-}$ 心的研究	于意仙等	(149)
Cr^{3+} 在 $Y_3Ga_5O_{12}$ 晶体中的能级和光谱特性	汤洪高等	(155)
XeCl 激光诱导的 CS_2 多光子电离质谱	关一夫等	(162)

简 讯

由部分相干场驱动的吸收型光学系统的统计性质	王 立等	(169)
渐变折射率光纤内的光线轨迹	王 安等	(176)
若丹明 R560 的光谱和激光性能研究	吴正亮等	(181)
$Na_2O-Al_2O_3-B_2O_3-P_2O_5$ 玻璃中铝和硼配位的 Raman 光谱研究	金宜芬等	(185)
渐变单模光纤之间的能量耦合	王子华	(189)
中国光学学会第二届理事会召开第二次全体理事扩大会议	乙 民	(109)
首届全国干涉测量学术交流会在西安召开	徐德行	(113)

第 三 期

图像识别的干涉方法	卢振武等	(193)
球面波全息微粒测量系统性能的研究	吕迺光等	(199)
条形散斑屏用于彩虹全息记录系统	于美文	(207)
偏振调制双光子光谱理论计算	蔡继光等	(212)
共振荧光中的量子拍	柳 梁等	(220)
压缩态产生机制和量子标度演化	范洪义	(227)
有正向散射反馈的背向喇曼放大器理论	钟立星	(233)
双频光子回波	黄化宏等	(240)
喇曼自由电子激光器的耦合频率	褚 成	(243)
大速率半径球形光学列阵成像质量的方和裴衍射分析	周国生等	(250)
电子束干涉和电子干涉仪	傅淑芬等	(257)
随机耦合对人为反向耦合的影响	张中如	(262)

简 讯

凝聚相中血卟啉分子的激光选择激发	陈述春等	(266)
用紫外准分子激光器进行接触式光刻的初步研究	迟祺洪等	(274)
血卟啉衍生物和核黄素生物分子吸附膜的非线性增强效应	邱佩华等	(277)
用像全息和光电检测实时测量振动	王 策	(281)
大口径等厚条纹型 F-P 干涉仪	贺安之等	(284)
信息		(198), (239)

第 四 期

Weigert 效应的理论分析	张春平等	(289)
吸附于银胶体颗粒表面的邻菲罗啉, 2, 2'-联吡啶分子及其亚铁络离子的表面增强喇曼光谱实验研究	张春平等	(298)
用 Judd-Ofelt 理论计算 YAG:Er ³⁺ 晶体中 Er ³⁺ 的光谱参数	王庆元等	(307)
激光等离子体中调制的光电自生磁场	朱蔚通等	(314)
脉冲碰撞锁模环形染料激光器的研究	王清月等	(320)
准连续泵浦 KTP 内腔倍频 YAG 激光器及其热效应分析	魏建铨等	(326)
短耦合腔半导体激光器单纵模工作特性	周炳琨等	(332)
高阶非线性极化率图示法的化简研究	吴 群等	(339)
编码光栅滤波及其应用	康 辉等	(348)
用全息错位干涉计量术判别物体变形方向	邢英杰等	(355)
应用全息位相补偿检测球面的干涉法	邹振书等	(360)
成像光学系统总性能的单一评价指标	姜会林	(365)
湍流大气中激光束的漂移	张逸新等	(373)

简 讯

工作口径为 100mm 的磷酸盐钽玻璃片状放大器的的工作特性	郑玉霞等	(381)
首次观察到铀原子共振三步光电离	乙 民	(297)
第五届国际颜色学术大会和我国颜色光学	束越新	(354)

第 五 期

用空心阴极放电管研究金属原子的光离化过程(I)——铀原子的共振三步光电离实验	胡金铨等	(385)
LiZnTa ₃ O ₉ 晶体的喇曼光谱及其对称性	蓝国祥等	(391)
轴空心阴极放电中的光电流谱	景基阳等	(396)
具有侧反射面的光学谐振腔(II)——对称球面谐振腔	方洪烈等	(402)
高功率巨脉冲输出可调谐金绿宝石激光器及其倍频研究	张希星等	(408)

1.06 μm 激光的高效率三倍频	尤夏年等	(413)
在 GaAs-Al 矩形光栅界面上表面增强二次谐波产生	崔大复等	(420)
多光子光学双稳性的研究	翁光恒等	(427)
大场景全息照相	李良梁等	(433)
提高一步彩虹全息水平视差的像散方法	厉志明等	(440)
大角孔径声光可调滤波器设计	莫服勤	(446)
微分追迹公式在自动设计中的应用	徐福侯	(450)
四包层光纤的归一化截止频率	蒋时俊	(456)

简 讯

用 GaAs 光电子开关驱动的亚毫秒电光开关	朱鑫铭等	(461)
TGS 类铁电晶体的红外反射光谱研究	李世纯等	(465)
Sr 原子的 $5s_{1/2}$ 及 $5s_{3/2}$ 里德堡系列能谱	陆 杰等	(469)
全全息透镜做散斑码的图像处理技术	母国光等	(476)
学术讨论		(479)

第 六 期

宽带多层高反射膜相位色散的干涉法测量	沃敏政等	(481)
偏振全息干涉术测量多层介质膜的反射相位畸变	李庆熊等	(487)
软 X 光滤光片的研制	李恩康等	(493)
混合型 TEA CO_2 激光器工作特性的研究	徐华乐等	(501)
二重筒并前向相干多光子散射	吴 斌等	(506)
应用“离轴的”F-P 扫描干涉仪对快束光谱线的都普勒展宽进行补偿	叶 慧等	(515)
f^N 组态谱项能计算的 U 群方法	张思远	(521)
计算 SnO 分子振动光谱的一种新方法	胡承正等	(528)
一个通用激光波长测量系统	梁培辉等	(532)
光栅-三平板干涉仪及其应用	徐毓光等	(537)
弱磁场下法拉第效应的实验研究及可能应用讨论	张书练等	(543)
光纤-反射器耦合的后向反射功率耦合系数	王效敬	(549)

简 讯

全息分路器的二维像差平衡和相位补偿函数的计算	徐大雄等	(558)
彩色印相用颜色测量探测器的光谱匹配	朱德魁	(562)
迭代法在高效等强多光束分光光栅设计中的应用	吴周令等	(567)
光学玻璃的热光常数 γ' 与温度和波长的关系	潘新唐等	(573)

第 七 期

多模热不灵敏腔	吕百达等	(577)
高增益脉冲激光器中的一种快速振荡过程及引起的自锁模现象	李世芳等	(585)
16 μm 连续波 PbSnSe 半导体激光器的调谐特性及其在高分辨率光谱中的应用	王海龙等	(592)
相同参考光非相关多重近配空间滤波器的研究	何刚等	(598)
通过雾成像的全息技术的进一步研究	李在春等	(606)
单模光纤等色散系数分布的图解	张申如	(612)
非对称平板波导的弯曲损耗	曹庄琪等	(620)
紫外准分子激光通过光纤传输触发低抖动球隙开关	楼祺洪等	(625)
光纤陀螺中瑞利噪声抑制的新方法	曹雪龙等	(630)
用 ATR 方法研究 LB 单分子膜层的等温热脱附过程	王宙杭等	(637)
锥形光入射到多层介质膜上的反射波分析	钱秋明等	(644)

锗上等离子体氧化膜的红外吸收光谱	刘春荣等	(650)
CH ₃ I 分子多光子电离和碎裂的机理	韩景该等	(655)
简 讯		
连续脉冲氯化亚铜激光过程的计算机模拟研究	史斌星等	(660)
癌细胞荧光像增强仪	夏爱琳	(667)
评《非线性光学原理》	潘忠汉	(534)

第 八 期

用于自由电子激光器的双绕螺线波荡器	褚 成等	(673)
$\Delta r_2 F^*$ 形成过程的通道特性研究	顾之玉等	(679)
光泵远红外激光中的偏频泵交流斯塔克效应	林貽坤等	(688)
连续激光作用下 Cu 和 Ne 的光电流效应的研究	李世芳等	(695)
氙光电流效应中的反常信号与尾部小峰	朱祝彪等	(704)
共振双光子吸收光谱的一种新方法	朱振和	(708)
用四波混频对反射型物体进行消畸变成像	林 红等	(714)
用三基色荧光粉改善荧光灯的光学特性	周雄豪等	(719)
板筒复合镜电子能量分析器的设计计算	王良国等	(725)
翡翠宝石(BeAl ₂ O ₄ :Cr ³⁺)晶体生长与质量	马笑山等	(734)

简 讯

微微秒 GaAs 光电闸门	朱世栋等	(744)
由光学表面上吸附分子的二次谐波研究 DASPI 和 PIC 分子的取向	邱佩华等	(748)
稀土元素 Ac, Th, Pa, 和 U 原子的单电子能量本征值以及 X 射线能量的相对论计算	赵永芳等	(753)
抽样成像系统的混淆效应评价	张保民	(759)
地震发光成因的一种新假设	郑联达	(763)

第 九 期

用于激光核聚变的可长时间单纵模稳定运转的 Nd:YAG 和 Nd:YLF 激光振荡器的研究	曹渭楼等	(769)
用于自由电子激光器的铁环波荡器	褚 成等	(776)
考虑相干作用的碰撞锁模性质的研究	陈钰涛等	(781)
瞬态同步泵浦锁模若丹明染料激光的模拟分析及相应实验结果	罗宁一等	(789)
小型封高式 TEA CO ₂ 激光器	过 振等	(796)
光学数据处理的傅里叶变换分光光度计	母国光等	(801)
平面物体的 Lau 效应理论	刘立人	(807)
金属包复四层波导结构中的长程表面模	杨傅子等	(815)
幅度调制的脉冲光激发受激喇曼效应的时间特性	孟绍贤等	(824)
PrP ₅ O ₁₄ 晶体中 Pr ³⁺ 离子的晶场参数和能级	张思远等	(828)
提高球面曲率半径测量精度的方案探讨	杨 力	(834)

简 讯

非线性光学耦合模	廖常俊等	(842)
新型 X-射线分光晶体——三羟甲基甲胺晶体	苏根博等	(848)
最低成本的光学公差优化法探讨	唐九华等	(854)
非均匀强激光在等离子体中的细丝不稳定性	季忻磷等	(859)
中国光学学会第二届科技情报专业委员会委员名单		(封三)
中国光学学会第一届全息术光信息处理专业委员会委员名单		(封三)

第 十 期

对撞脉冲锁模染料激光器产生 75 fs 光脉冲	孙选镜等	(865)
-------------------------------	------	-------

铜蒸气激光器黄、绿光脉冲与管温关系的研究应锡雄等 (870)

氩离子激光器的二次谐波锁模鲍晓毅等 (875)

XeCl 准分子激光在铅蒸气中的受激喇曼散射霍芸生等 (880)

激光热自散焦的远场环形结构李淳飞等 (885)

非简并双光子光学双稳态理论研究郑 杭等 (894)

Sr 原子自由离谱线的观察和分析胡素芬等 (902)

钠双原子分子 $b^3\Sigma_g^- - X^3\Sigma_g^+$ 跃迁激光振荡探索及几个新谱区观察王 骥等 (908)

饱和吸收光谱中相干效应的矢量模型理论王庆吉 (913)

Talbot 干涉仪: Moiré 条纹方法和双光束剪切方法廖江红等 (921)

条形介质波导导模的近似分析*乔 力等 (930)

透射宽带通滤光片研究杨树梅 (936)

对称膜系的复数等效折射率吴启宏 (943)

用双介质法测定金属薄膜的厚度和光学常数杨傅子等 (948)

对两种薄膜材料构成的典型周期膜系特性的全面探讨何兆麟等 (954)

高功率金铜混合蒸气白光激光器张斌伟等 (960)

第 十 一 期

投影光学系统方角图形传递特性邹海兴 (961)

转置光轴渥拉斯顿棱镜及其在多重成像技术中的应用边少平等 (966)

外色散腔半导体激光器的调谐特征许知止等 (974)

BSO 晶体中的两波相互作用严 瑾等 (981)

几何近似傅里叶计算全息衍射干涉法刘立人等 (988)

用于探测 Rydberg 态原子的热电二极管——实验观察和理论分析何恩麒等 (997)

用法布里-珀罗谐振腔法测定光波导的损耗H. F. Chlaak et al. (1005)

GaP:N 光致发光的脉冲测量董瑞璋等 (1012)

变折射率球的折射率分布无损测量: 大口径交流谐波剪切干涉仪 耶青·T·莫尔等 (1018)

光线在非均匀折射率介质中传播的一种研究方法张为俊等 (1026)

$n^+InSb/PHg_{1-x}Cd_xTe$ 异质结的液相处延生长及红外探测器吴长树等 (1032)

简 讯

用于弱光光谱测量的压电扫描 E-P 干涉仪系统]翁台蒙等 (1039)

火焰中 N_2 分子 CARS 谱及温度测量王大地等 (1043)

剪切干涉图处理(波差计算)刘书钢等 (1050)

喇曼自由电子激光器辐射规律的实验研究诸 成等 (1055)

第 十 二 期

金属表面吸附有机分子的红外激光光声光谱研究陆惠宗等 (1057)

由双光子共振激发钾蒸气产生红外受激辐射以及紫外和可见相干辐射王祖贻等 (1063)

$KTiOPO_4$ 单晶的偏振喇曼散射谱杨华光等 (1071)

宽波段范围内双光子泵浦钠分子产生的紫外和紫区漫射带受激辐射王祖贻等 (1081)

表面增强喇曼散射(SERS)光谱中影响增强效应因素的实验研究(II)凌德洪等 (1086)

用于 LAGEOS 测距的超短脉冲激光系统何慧娟等 (1092)

大口径 KDP 晶体高效率串接倍频蔡希洁等 (1098)

偏硼酸钡晶体本征吸收边的实验研究杨延勇等 (1105)

湍流大气中激光束传播方向起伏张逸新等 (1111)

镀银标准具厚度和反射相位的精密测定吴瑞昆等 (1118)

简 讯

双指数荧光衰减动力学模型分析陈文驹 (1124)

点衍射全息干涉仪	周万治等	(1130)
国际全息术应用会议在北京召开	乙 民	(1152)
《光学学报》第六卷(1986)总目录和作者索引		(1136)

ACTA OPTICA SINICA, Vol. 6, 1986

CONTENTS

No. 1

Experimental study of colliding pulse mode locking of a Nd:YAG laser	Liu Yixian et al.	(1)
Optical resonant reflectors and their application in laser technique	Zhu Zhiming et al.	(6)
Stimulated emission based on two-step hybrid resonance via $A^2\Sigma_u$ or $B^2\Pi_u$ state of Na_2	Qin Lijuan et al.	(12)
Population inversion between Ar^+ 4p and 4s levels in HCD of pure argon	Li Shifang et al.	(17)
Electron-beam interference and Fresnel diffraction	Chen Jianwen et al.	(23)
Dispersion theory of variable beam prisms	Zhang Guowei	(29)
Exact analytic solutions of high-order Gaussian beam modes in media with quadratic radial refractive index and gain profiles	Zhang Eulin	(34)
Propagation characteristics of guided modes on fiber-core spliced section and application to monomode fiber directional coupler	Fang Xisheng et al.	(42)
Effects of central dip in refractive index on propagation characteristics of W-type single-mode fibers	Jiang Mingjun et al.	(49)
Brillouin scattering in LiNbO_3 crystals and measurements of elastic and piezoelectric constants	Zhou Weiqing et al.	(57)
Photoluminescence investigation of impurities and defects in silicon crystals at low temperature	Zong Xiangfu et al.	(63)
Measurement and analysis of properties of films doped with oxides	Chen Yuming et al.	(70)

Research Notes

Three-mode laser action in an inhomogeneously broadened medium	Li Xiaoshen et al.	(76)
Spectral and lasing characteristics of PBD series of UV laser dyes	Shao Zhen et al.	(82)
Space-domain filtering for computer generated hologram	Lu Da et al.	(87)
Shearing interferometric testing of an astronomical telescope with aperture of 1.55 m	Xu Deyan	(93)

No. 2

A new type resonator—spherical resonant cavity (I) Basic characteristics	Qian Shirong	(97)
Some operating characteristics of a colliding pulse mode-locked Nd:YAG laser	Sheng Guoping et al.	(104)
An active mode-locked Cu vapor laser	Zhang Guiyan et al.	(110)
The design method for variable-wiggler FEL with gradient axial magnetic field	Chen Jianwen	(114)
Double filtering for mapping phase objects	Liu Liren	(122)
Imaging of phase contrast microscopes under partially coherent illumination	Ma Chanming et al.	(129)
The uncertainty relationship for the optical system and the equivalent bandwidth	Song Feijung	(137)
Investigation on film characteristics for hybrid processing X-ray tomography	Lü Gan'en et al.	(143)
Study of $(F_2^+)^*$ centers in NaF:Mg^{2+} crystals	Yu Yishong	(149)
Energy levels and spectroscopic characteristics of Cr^{3+} in $\text{Y}_3\text{Ga}_5\text{O}_{12}$ crystal	Tang Honggao et al.	(155)
CS_2 multiphoton ionization mass spectra induced by a XeCl laser	Guan Yifu et al.	(162)

Research Notes

Statistical properties of an absorptive optical system driven by a partially coherent field	Wang Li et al.	(169)
---	----------------	-------

Ray traces in graded-index optical fibers	<i>Wang An et al.</i>	(176)
Study on the spectral and lasing characteristics of R560	<i>Wu Zhengliang et al.</i>	(181)
Raman spectroscopic study of coordinations of aluminium and boron in $\text{Na}_2\text{O}-\text{Al}_2\text{O}_3-\text{B}_2\text{O}_3-\text{P}_2\text{O}_5$ glasses...	<i>Jin Yifen et al.</i>	(185)
Power coupling between two neighboring graded-index single-mode fibers	<i>Wang Zihua</i>	(189)
The Second Council of the Optical Society of China held Enlarged Plenary Council meeting.....		
<i>Pi Ming</i>		(109)
The First National Symposium on Interference Measurements held in Xian		
<i>Xu Deyia</i>		(113)

No. 3

An interference method for pattern recognition	<i>Lu Zhenru et al.</i>	(193)
Study of the holographic optical system using sphere wave illumination for measurement of particulates	<i>Lü Naiguang et al.</i>	(199)
Striped-speckle screen used in a rainbow hologram recording system	<i>Yu Meiwen</i>	(207)
Theoretical calculation of polarization modulated two-photon spectroscopy	<i>Cai Jiguang et al.</i>	(212)
Quantum beat in resonance fluorescence.....	<i>Liu Liang et al.</i>	(220)
Generation of squeezed state and quantum scaling evolution	<i>Fan Hongyi</i>	(227)
Theory of a backward Raman amplifier with forward scattering feedback.....	<i>Zhong Lichen</i>	(233)
Double frequency photon echo.....	<i>Huang Youhong et al.</i>	(240)
Coupling-frequencies of Raman free-electron lasers	<i>Chu Cheng</i>	(243)
Fraunhofer diffraction analysis on imaging properties of optical array with a large radius of curvature	<i>Zhou Guosheng et al.</i>	(250)
E-beam interference and electron interferometer	<i>Fu Shufen et al.</i>	(257)
The effect of random mode coupling on intentional inverse mode coupling.....	<i>Zhang Shenru</i>	(262)

Research Notes

Study of laser selective excitations of hematoporphyrin in the condensed phase	<i>Chen Shuchun et al.</i>	(266)
Preliminary research of contact photolithography by using a UV excimer laser	<i>Lou Qihong et al.</i>	(274)
Nonlinear enhancement effect of adsorbed layers of HPD and riboflavin biological molecules	<i>Qiu Peikua et al.</i>	(277)
Real-time vibration measurement by image holography and photodetection	<i>Wang Ce</i>	(281)
A large-aperture equal-thickness-fringe Fabry-Perot interferometer	<i>He Anzhi et al.</i>	(284)
Message		(198), (239)

No. 4

Theoretical investigation of the Weigert effect	<i>Zhang Chunping et al.</i>	(289)
Surface-enhanced Raman spectra of O-phenanthroline, 2, 2'-bipyridine and their complex ions adsorbed on silver colloid.....	<i>Zhang Chunping et al.</i>	(298)
Spectroscopic parameters of Er^{3+} crystals calculated by Judd-Ofelt theory	<i>Wang Qingyuan et al.</i>	(307)
Modulated photoelectric spontaneous magnetic field in a laser plasma.....	<i>Zhu Shitong et al.</i>	(314)
Study of a ring dye laser with colliding pulse mode-locking	<i>Wang Qingyuan et al.</i>	(320)
Analysis of a quasi-CW pumped intracavity frequency doubling YAG laser and its thermal effect	<i>Yao Jianquan et al.</i>	(326)
Single longitudinal mode characteristics of short-coupled-cavity (SCC) semiconductor lasers	<i>Zhou Bingkun et al.</i>	(332)
Investigation of the simplified diagrammatic representation of high-order nonlinear optical susceptibility	<i>Wu Qun et al.</i>	(339)
Coded grating filter and its application	<i>Kang Hui et al.</i>	(348)
Determination of deformation direction by shearing holographic interferometry	<i>Xing Yingjie et al.</i>	(355)
An interferometric method for measuring optical spherical surfaces using holographic phase conjugate compensation.....	<i>Zou Zhenshu et al.</i>	(360)
A unitary evaluation merit for the overall performance of an imaging optical system	<i>Jiang Huijin</i>	(365)
Theory of laser beam displacement in turbulent atmosphere.....	<i>Zhang Faxin et al.</i>	(373)

Research Notes

Operating characteristics of a phosphate-glass disk amplifier with 100 mm clear aperture		
--	--	--

.....	<i>Zheng Yuzia et al.</i>	(381)
Resonant triple-photon ionization of U-atom firstly observed	<i>Yi Min</i>	(297)
The 5th Congress of the International Color Association and the Color Science of China.....	<i>Shu Yuezin</i>	(354)

No. 5

Study on three-step photoionization of U atoms using a hollow cathode discharge tube ...	<i>Hu Qiqian et al.</i>	(385)
Raman spectra and symmetry of $\text{LiZnTa}_2\text{O}_6$ crystal.....	<i>Lan Guoxiang et al.</i>	(391)
Optogalvanic spectroscopy in an Eu hollow cathode discharge	<i>Jing Chunyang et al.</i>	(396)
Resonators with side reflectors (II)—symmetric spheric mirror resonators.....	<i>Fang Honglie et al.</i>	(402)
High power tunable alexandrite laser with giant pulse output and its SHG.....	<i>Zhang Bangzong et al.</i>	(408)
High-efficiency frequency tripling of $1.06\mu\text{m}$ laser radiation	<i>You Chenhua et al.</i>	(413)
Surface-enhanced second harmonic generation at GaAs-Al interface on a rectangular grating	<i>Cui Dafu et al.</i>	(420)
Studies on multi-photon optical bistability	<i>Weng Zhaocheng et al.</i>	(427)
Holography of wide angle and great scene	<i>Xing Liangting et al.</i>	(433)
Improvement of the stereoscopic feature of one-step rainbow holography by method of astigmatism	<i>Li Zhiming et al.</i>	(440)
Design of a large angular aperture TeO_2 acousto-optic tunable filter.....	<i>Mo Fuqin</i>	(446)
Application of differential ray tracing equations in automatic design	<i>Xu Fuhou et al.</i>	(450)
Normalized cutoff frequencies of quadruple-clad fibers	<i>Jiang Shijun</i>	(456)

Research Notes

A subnanosecond electro-optical switch driven by an optoelectronic GaAs switch	<i>Zhu Xinming et al.</i>	(461)
Study of infrared reflection spectra of TGS-family ferroelectric crystals.....	<i>Li Shichun et al.</i>	(465)
Energy levels of $5sns$ and $5snd$ Rydberg series of Sr	<i>Ju Sie et al.</i>	(469)
A new technique of image processing with speckle encoding using a holographic lens ...	<i>Mu Guoguang et al.</i>	(476)
<i>Learned discussion</i>		(479)

No. 6

Measurement of the phase dispersion of wide-band multi-layer high reflective coatings by using multi-beam interference	<i>Wu Mingzheng et al.</i>	(481)
Measurement of reflective phase distortion of multi-layer thin films by using polarization holographic interferometry.....	<i>Li Qingxiang et al.</i>	(487)
Preparation of soft X-ray filters	<i>Li Maobian et al.</i>	(493)
Study of the performance of a hybrid TEA CO_2 laser.....	<i>Xu Huaie et al.</i>	(501)
Double degenerate forward coherent multiphoton scattering.....	<i>Wu Bin et al.</i>	(506)
Application of an off-axis Fabry-Perot scanning interferometer for compensating Doppler broadening in fast-beam spectroscopy	<i>Ye Hui et al.</i>	(515)
Unitary group method for calculating spectral term energies of f^N configuration.....	<i>Zhang Siyuan</i>	(521)
A new method for calculating vibrational spectra of diatomic molecule SnO	<i>Hu Chengzheng et al.</i>	(528)
A general system for laser wavelength measurement.....	<i>Liang Peihui et al.</i>	(532)
A grating-triangle interferometer and its applications	<i>Xu Yuguang et al.</i>	(537)
Experimental research of Faraday effect in a weak magnetic field and its possible applications.....	<i>Zhang Shuliang et al.</i>	(543)
Retroreflective power coupling coefficients of fiber coupled with a reflector.....	<i>Wang Xiaojing</i>	(549)

Research Notes

Two-dimensional aberration-balancing and computation of phase compensation function for holographic wavelength demultiplexer	<i>Xu Daxiong et al.</i>	(558)
Spectral matching of color measurement detectors for color printing	<i>Zhu Dekui</i>	(562)
Application of iterative method in the design of high-efficiency multi-beam gratings.....	<i>Wu Zhouling et al.</i>	(567)
Dependence of thermo-optic coefficients of glasses on temperature and wavelengths ...	<i>Pan Xintang et al.</i>	(573)

No. 7

Thermally insensitive resonators for multimode operation	<i>Lu Baida et al.</i>	(577)
A new-type rapid oscillation and self-mode-locking phenomenon in a high-gain laser ...	<i>Li Shifang et al.</i>	(585)
16 μ m CW PbSnSe semiconductor tunable lasers and their uses in high-resolution spectroscopy	<i>Wang Hailong et al.</i>	(592)
Study of same-reference-beam noncoherent multiple matched spacial filters	<i>He Gang et al.</i>	(598)
Further studies of holographic techniques for imaging through fog	<i>Li Zaichun et al.</i>	(606)
A graphic method for determining distributions of isodispersion coefficients of single-mode fibers	<i>Zhang Shenru</i>	(612)
Bending losses of asymmetric slab waveguides	<i>Gao Zhangqi et al.</i>	(620)
UV excimer laser used in triggering low-jitter spark gaps through fiber	<i>Lou Qihong et al.</i>	(625)
A new method for suppressing Rayleigh noise in an optical fiber gyroscope	<i>Cao Xuelong et al.</i>	(630)
Study on isothermal desorption of Langmuir-Blodgett multilayers with attenuated total reflection method	<i>Wang Zhoukang et al.</i>	(637)
Analysis of the reflection wave of cone beam from a multilayer thin film	<i>Qian Qiuming et al.</i>	(644)
Infrared absorption spectra of plasma-anodized germanium dioxide film on a monocrystal wafer	<i>Liu Chunrong et al.</i>	(650)
Mechanism of multiphoton ionization and fragmentation of CH ₃ I	<i>Han Jingcheng et al.</i>	(655)

Research Notes

Computer simulated rate processes in continuously pulsed CuCl lasers	<i>Shi Binxiang et al.</i>	(660)
Design of a fluorescence image multiplier used for examining carcinomas	<i>Xia Aidi</i>	(667)
Y. R. Shen; «The Principles of Nonlinear Optics»	<i>Pan Zhonghan</i>	(584)

No. 8

A bifilar-helix wiggler used in a free-electron laser	<i>Chu Cheng et al.</i>	(673)
Study of the characteristics of paths Ar ₂ F* formation processes	<i>Gu Zhiyu et al.</i>	(679)
Off-resonant-pumping AC Stark effect in an optically pumped FIR laser	<i>Lin Yicun et al.</i>	(688)
Study on optogalvanic effects of Cu and Ne by CW laser irradiation	<i>Li Shifang et al.</i>	(695)
Anomalous signal and small tail peak observed in neon optogalvanic effect	<i>Zhu Zhubiao et al.</i>	(704)
A new method for on-resonant two-photon absorption spectroscopy	<i>Zhu Zhenhe</i>	(708)
Imaging of reflection-type objects through distorting media via four-wave mixing	<i>Lin Hong et al.</i>	(714)
Improvement of optical characteristics of fluorescent lamps with prime color blend of phosphors	<i>Zhou Xionghao et al.</i>	(719)
Calculation on Plane-cylindrical mirror energy analyzer	<i>Wang Liangguo et al.</i>	(725)
Growth and characteristics of alexandrite crystals	<i>Ma Xiaoshan et al.</i>	(734)

Research Notes

A picosecond GaAs photoconductive switch	<i>Zhu Shidong et al.</i>	(744)
Study of the orientation of molecules DASPI and PIC adsorbed on an optical surface	<i>Qiu Peihua et al.</i>	(748)
Relativistic calculations of single-electron energy eigenvalues and X-ray energies of rare earth elements Ac, Th, Pa and U	<i>Zhao Yongfang et al.</i>	(753)
Evaluation of aliasing for sampled imaging systems	<i>Zhang Baomin</i>	(759)
A new hypothesis for origin of light formation during earthquake	<i>Zheng Lianda</i>	(763)

No. 9

Investigation of a single-axial-mode Nd:YLF oscillator for laser fusion system	<i>Cao Weidou et al.</i>	(769)
An iron-ring wiggler used in a free-electron laser	<i>Chu Cheng et al.</i>	(776)
The properties of colliding pulse mode-locking in consideration of coherent interaction	<i>Chen Jutao et al.</i>	(781)
Model analysis and experimental study of a synchronously pumped transient mode-locked rhodamine dye laser	<i>Luo Ningyi et al.</i>	(789)
A compact sealed-off TEA CO ₂ laser	<i>Guo Zhen et al.</i>	(796)

Optical data processed Fourier transform spectrometer	<i>Mu Guoguang et al.</i>	(801)
Theory for Lau effect of plane objects	<i>Liu Liren</i>	(807)
Long-range surface modes of metal-clad four-layer waveguides	<i>Yang Fuxi et al.</i>	(815)
Temporal behavior of stimulated Raman scattering excited by amplitude modulating pump		(824)
Calculations of crystal field parameters and energy levels of a Pr^{3+} ion in $\text{PrP}_5\text{O}_{14}$ crystals		
.....	<i>Zheng Siyuan et al.</i>	(828)
Investigation on increasing measurement accuracy of radius of spherical curvature	<i>Yang Li</i>	(834)

Research Notes

Nonlinear optical coupling modes	<i>Liao Changjun et al.</i>	(842)
A new X-ray analyzer crystal-trihydroxymethylaminomethane	<i>Su Genbo et al.</i>	(848)
An approach to optimization of optical tolerance for minimum cost	<i>Tang Jinhua et al.</i>	(854)
Filamentation instability of nonuniform intense laser light in plasmas	<i>Li Xintan et al.</i>	(859)

No. 10

A 75-fs optical pulse generated by CPM dye laser	<i>Sun Diechi et al.</i>	(865)
Investigation on temperature dependence of yellow-green light pulses of CVL	<i>Ying Xirong et al.</i>	(870)
Second harmonic mode-locking of an Ar^+ laser	<i>Bao Xiao Yi et al.</i>	(875)
Stimulated Raman scattering of XeCl excimer laser radiation in Pb vapor	<i>Huo Yunsheng et al.</i>	(880)
Far-field ring pattern of laser-induced thermal self-defocusing	<i>Li Chunfei et al.</i>	(885)
Theoretical study of nondegenerate two-photon optical multistability	<i>Zheng Hang et al.</i>	(894)
Observation and analysis of autoionizing spectra of Sr	<i>Hu Sufen et al.</i>	(902)
Investigation of laser oscillation on $\text{Na}_2b^3\Sigma_g^- - X\Sigma_g^+$ transition and observation of several spectral regions	<i>Wang Qi et al.</i>	(908)
Vector-model theory of coherence effects in saturated spectroscopy	<i>Wang Qingji</i>	(913)
Talbot interferometry: method of Moiré fringe and double-beam shearing interferometer		
.....	<i>Liao Jianghong et al.</i>	(921)
Approximate analysis of guided modes in strip waveguides	<i>Qiao Li et al.</i>	(930)
Study of broad-bandpass filters with induced transmission	<i>Yang Shumei</i>	(936)
Complex equivalent index of symmetrical periods	<i>Wu Qihong</i>	(943)
Method of two-dielectric coating for determination of thicknesses and optical constants of thin metallic films	<i>Yang Fuxi et al.</i>	(948)
A comprehensive investigation on characteristics of typical periodic film systems consisting of two thin-film materials	<i>He Zhao Lin et al.</i>	(954)
High power white light from gold-copper mixed vapor laser	<i>Zhang Zhiwei et al.</i>	(960)

No. 11

Transmission characteristics of corner pattern through a projective optical system	<i>Zou Hairong</i>	(961)
Wollaston prism with rotated optical axis and its application in multiple imaging technique		
.....	<i>Bian Shaoping et al.</i>	(966)
Tuning characteristics of a semiconductor laser with an external dispersive cavity	<i>Xu Zhizhi et al.</i>	(974)
Two-wave interaction BSO crystals	<i>Yan Yuan et al.</i>	(981)
Diffraction interferometry with computer-generated interferograms in geometric approach of Fourier transformation	<i>Liu Liren et al.</i>	(988)
Thermoelectronic diode used to detect Rydberg states in atoms-experimental observation and theoretical analysis	<i>He Maoqi et al.</i>	(997)
Loss measurement of optical waveguides by using Fabry-Perot resonator	<i>H. F. Schlaak et al.</i>	(1005)
Pulsed measurement of GaP:N photoluminescence	<i>Dong Mianyu et al.</i>	(1012)
Nondestructive index profiling of a GRIN sphere: large aperture shearing harmonic interferometer		
.....	<i>Duncan T. Moore et al.</i>	(1018)
A new method to study optical ray propagations in media with ununiform refractivity		
.....	<i>Zhang Weijun et al.</i>	(1026)
LPE growth of $n^+\text{InSb}/\text{Pb}_{51-x}\text{Cd}_x\text{Te}$ heterojunction	<i>Wu Changshu et al.</i>	(1032)

Research Notes

- An optical system of PZT scanning Fabry-Perot interferometer for measuring weak optical spectra *Wang Taineng et al.* (1039)
- CARS spectrum of N_2 and temperature measurement in C_2H_2 /air flame *Wang Dade et al.* (1043)
- Processing of lateral shear interferograms *Liu Shugang et al.* (1050)
- Experimental study of parametric dependence of radiation from a Raman free-electron laser *Chu Cheng et al.* (1055)

No. 12

- Study of the IR laser photoacoustic spectra of organic molecules adsorbed on the surface of metal *Lu Huizong et al.* (1057)
- Generation of IR stimulated radiation and UV violet coherent radiation by two-photon resonance pumping in K vapor *Wang Zugeng et al.* (1068)
- The polarized Raman spectra for single crystal $KTiOPO_4$ *Yang Huaquang et al.* (1071)
- Stimulated radiation of UV and violet diffuse bands by two-photon pumping covering a wide wavelength region in Na_2 *Wang Zugeng et al.* (1081)
- Experimental study of factors affecting enhancement of SERS spectra (II) *Ling Dehong et al.* (1086)
- Ultra-short pulse laser system used for ranging LAGEOS *He Huijuan et al.* (1090)
- Large-aperture high-efficiency frequency doubling using tandem KDP crystals *Cai Xi'ie et al.* (1093)
- Experimental investigation of the intrinsic absorption edge for barium molybdate crystals *Yang Fanyong et al.* (1105)
- Direction fluctuation of laser beam propagation in turbulent atmosphere *Zhang Yixin et al.* (1111)
- The measurement of cavity spacing for Fabry-Perot interferometers with high accuracy *Wu Baikun et al.* (1118)

Research Notes

- Analysis of kinetic model of double exponential fluorescence decay *Chen Wenju et al.* (1124)
- A point-diffraction holographic interferometer *Zhou Wankai et al.* (1130)
- International Conference on Holography Applications held in Beijing *Fu Min* (1152)
- Vol. 6, 1986, Contents and Authors Index (1136)