

No. 5

October 2020

Vol. 39



### 目次

533	基于石墨烯/砷化镓异质结构的毫米波/太赫兹探测器	徐凯琦 吴向东	徐 煌 杨露寒	张家振 等
540	基于肖特基二极管的宽带低本振功率太赫兹四次谐波混频器	杨益林 王依伟	张 波 赵向阳	纪东峰 等
547	双共焦波导回旋行波管高频结构的电磁特性研究	张 晨 黄 杰	王 维 曹毅超	宋 韬 等
553	小鼠在体皮下乳腺癌的太赫兹波成像检测研究	武丽敏 王与焜	廖 彬 葛梅兰	徐德刚 等
561	基于二维光子晶体的光控分光比可调Y型太赫兹波分束器	姜宗丹	李培丽	张元方
567	太赫兹宽带 Denisov 型准光模式变换器的设计分析	边慧琦 刘濮鲲	杜朝海	潘 石
576	在 800~1100nm 范围内实现基于狄拉克半金属的多波段超材料波导	钟 敏	史先春	
583	室温半导体红外光电探测器研究进展	谢 天 李菊柱	叶新辉 张帅君	夏 辉 等
595	Au/Cd 复合电极沉积方法对其与(111)面 CdZnTe 衬底接触性能的影响	师好智 王振辉	张继军 穆成阳	王淑蕾 等
601	室温 350~850 nm ZnSe 晶体生长及阴极荧光光谱图谱分析	王 仍 霍 勤	焦翠灵 乔 辉	陆 液 等
605	高功率激光单模光纤远距离传输实验研究	禹化龙	薛海中	
610	3.66 $\mu\text{m}$ 激光外差光谱仪设计与水汽柱浓度反演	黄 俊 曹振松	黄印博 谈 图	卢兴吉 等
619	MEMS 红外探测器响应时间测量方法研究	张琛琛 熊继军	毛海央 王玮冰	白乐乐 等
626	基于多时相 Sentinel-1 SAR 数据的喀斯特石漠化区地表土壤水分反演研究	陈 全 但雨生	周忠发 汤云涛	王玲玉
635	矿业开发密集区地表热环境分异效应遥感评价模型构建研究	侯春华 谷海红	李富平 宋 文	何宝杰
650	基于方向梯度直方图和局部对比度特征的海面背景红外图像分类	董丽丽 许文海	张 彤	马冬冬
660	双模型空中目标红外谱段的联合 SNCR 评估方法	张 磊 饶 鹏	陈 略	朱含露

第 5 期

2020 年 10 月

第 39 卷

ISSN 1001-9014



中国光学学会主办  
科学出版社出版



**CONTENTS**

- 533** Graphene/GaAs heterostructure based Millimeter/Terahertz wave photodetector .....  
..... XU Kai-Qi, XU Huang, ZHANG Jia-Zhen, WU Xiang-Dong, YANG Lu-Han,  
ZHOU Jie, LIN Fang-Ting, WANG Lin, CHEN Gang
- 540** A wideband terahertz planar Schottky diode fourth-harmonic mixer with low LO power requirement .....  
..... YANG Yi-Lin, ZHANG Bo, JI Dong-Feng, WANG Yi-Wei, ZHAO Xiang-Yang, FAN Yong
- 547** Detailed investigations on double confocal waveguide for a gyro-TWT .....  
..... ZHANG Chen, WANG Wei, SONG Tao, HUANG Jie, CAO Yi-Chao, LIU Di-Wei, HU Min,  
ZHANG Kai-Chun, WU Zhen-Hua, ZHOU-Jun, ZHONG Ren-Bin, ZHAO Tao, GONG Seng, LIU Sheng-Gang
- 553** Study of in-vivo breast cancer in a subcutaneous xenograft mouse model using terahertz imaging .....  
..... WU Li-Min, LIAO Bin, XU De-Gang, WANG Yu-ye, GE Mei-Lan, ZHANG Chao-Nan, LI Jia-Hua,  
SUN Zhong-Cheng, CHEN Tu-Nan, FENG Hua, YAO Jian-Quan
- 561** Light-control splitting ratio tunable Y-type Terahertz waves to beam splitter based on two-dimensional photonic crystal .....  
..... JIANG Zong-Dan, LI Pei-Li, ZHANG Yuan-Fang
- 567** Design and analysis of a broadband quasi-optical mode converter with a Denisov launcher .....  
..... BIAN Hui-Qi, DU Chao-Hai, PAN Shi, LIU Pu-Kun
- 576** Realization of a multiband metamaterial waveguide based on dirac semimetal in the 800~1100nm range .....  
..... ZHONG Min, SHI Xian-Chun
- 583** Research progress of room temperature semiconductor infrared photodetectors .....  
..... XIE Tian, YE Xin-Hui, XIA Hui, LI Ju-Zhu, ZHANG Shuai-Jun, JIANG Xin-Yang, DENG Wei-Jie,  
WANG Wen-Jing, LI Yu-Ying, LIU Wei-Wei, LI Xiang, LI Tian-Xin
- 595** The effect of deposition methods on the contact properties between Au/Cd electrodes and (111) CdZnTe wafers .....  
..... SHI Hao-Zhi, ZHANG Ji-Jun, WANG Shu-Lei,  
WANG Zhen-Hui, MU Cheng-Yang, XUE Ming-Yan, CAO Meng, HUANG Jian, WANG Ling-Jun
- 601** Cathodoluminescence (CL) analysis of ZnSe crystal from 350 nm to 850nm at room temperature .....  
..... WANG Reng, JIAO Cui-Ling, LU Ye, HUO Qin, QIAO Hui, LI Xiang-Yang
- 605** Experimental study on long-distance transmission of high-power laser over single-mode fiber .....  
..... YU Hua-Long, XUE Hai-Zhong
- 610** Design of 3.66  $\mu\text{m}$  laser heterodyne spectrometer and retrieval of water vapor column concentration .....  
..... HUANG Jun, HUANG Yin-Bo, LU Xing-Ji, CAO Zhen-Song, TAN Tu, LIU Dan-Dan
- 619** A response time measurement method for MEMS IR detectors .....  
..... ZHANG Chen-Chen, MAO Hai-Yang, BAI Le-Le, XIONG Ji-Jun, WANG Wei-Bing, CHEN Da-Peng
- 626** Surface soil moisture retrieval using multi-temporal Sentinel-1 SAR data in karst rocky desertification area .....  
..... CHEN Quan, ZHOU Zhong-Fa, WANG Ling-Yu, DAN Yu-Sheng, TANG Yun-Tao
- 635** Study on surface thermal environment differentiation effect in mining intensive area through developing remote sensing assessment model .....  
..... HOU Chun-Hua, LI Fu-Ping, HE Bao-Jie, GU Hai-Hong, SONG Wen
- 650** Maritime background infrared imagery classification based on histogram of oriented gradient and local contrast features .....  
..... DONG Li-Li, ZHANG Tong, MA Dong-Dong, XU Wen-Hai
- 660** Combining-SNCR evaluation of dual-models aerial targets' infrared bands .....  
..... ZHANG Lei, CHEN Lue, ZHU Han-Lu, RAO Peng