



中国科技核心期刊

ISSN 1672-9870

CN 22-1364/TH

长春理工大学学报

JOURNAL OF CHANGCHUN UNIVERSITY OF
SCIENCE AND TECHNOLOGY

自然科学版

NATURAL SCIENCE EDITION

长春理工大学学报

第四十一卷 第六期

二〇一八年十二月



2018 6

第41卷 第6期

目 次

二维圆柱形亚波长结构集成芯片的设计方法 王加科,张雷梦婷,郑阳,何峰,邱伟(1)

基于图像处理和最小二乘法的原子力显微镜光路自动调整方法 程利群,曲英敏,杨焕洲,孙佰顺(6)

基于加速引导滤波的图像像素级融合 陈洋,王世峰,都凯悦,王锐(11)

车载激光通信技术研究与试验 赵洪刚,孟立新,张立中,李小明,白杨杨(16)

一种新型折反式光学定心系统设计 李响,白素平,王赫,闫钰锋(21)

激光固化壳体成型残余应力的模拟及实验研究 李世涛,田明,高雪峰,杜欣阳,汤寒宇(26)

用于工业测量中变倍双远心光学系统设计 郭金明,向阳,李琦,高丰,李京蔓(31)

光固化壳体成型工艺参数仿真分析及实验研究 高雪峰,景文博,李世涛,田明(36)

无人机载长波摄远型红外物镜设计 宁旭,向阳,李琦,高丰(40)

双波长视网膜血氧饱和度测量仪光学系统设计与仿真 郑田莉,罗春华,朱海龙,付威威(45)

衍射多焦点人工晶体的设计 李季,霍富荣(50)

边界条件对相干光位相恢复的影响研究 赵致远,景文博,邹欢欢(55)

Fe₃O₄纳米晶体的制备及磁学性质研究 韩东来,李博珣,司振君,左青卉(59)

TiO₂纳米材料的制备及其乙醇气敏性能研究 王浩浩,冯进良,孙铭,曹晨鸣,李世涛(62)

一个铜掺杂的缺位 Keggin 型链状杂化材料的合成与表征 刘亚冰,李明阳,裴桐鹤(65)

基于PID控制的磨粒流机床液压缸压力变化的研究 盛亮,李俊焯,张红伟,孟文卿,何洋,李丹妮(71)

枪口角模拟转台结构设计与结构特性分析 刘建华,张雷,柳鸣,刘永志,姜会林(76)

弹性支撑式高精度凝血动态检测传感器 王哲,于源华,陈启梦,李健,张震(81)

基于偏振信息的激光水下目标探测技术研究 牟畅,王彩霞,段可,刘鹏(86)

基于偏振信息的癌变细胞特征提取技术 赵冰玉,宋正勋,于森,张丹丽(90)

基于FPGA的图像拼接技术研究与实现 徐扬,王晓曼,朱佳,刘鹏,姜浩(94)

基于特征融合的目标检测技术研究 孙铭镭,杨波,韩立园(99)

基于Retinex改进的夜间图像增强算法 李宏宇,朱一峰,黄怡(104)

基于D2D分组的二次选择资源分配算法 孙琦,陈桂芬(109)

基于单片机的直流稳压电源检定装置 戴军(114)

基于面光源可见性空间复用的3D场景柔和阴影绘制算法 周文言,陈纯毅(118)

基于扩大搜索邻域A*算法的平滑路径规划 张敬寒,陶兆胜,彭澎,王丽华(124)

基于出口选择概率的修正社会力模型的行人疏散研究 霍富昌,姜志侠,谢继轩,张时赫,薛天坤(128)

基于大数据技术的高校校友信息整合分析平台开发及应用 谭保华,任志鹏,王鹏,赵建平(132)

百草枯致SD大鼠中毒生理研究 刘传志,汪路涵,王越,赵天阔,侯玥(137)

醛糖还原酶 AKR1B1 与肺癌的相关性研究 孙基丰,孙婷婷,李超,金秀妍,张昊(141)

CONTENTS

Design Method of Two-dimensional Cylindrical Subwavelength Integrated Chip
..... WANG Jiake,ZHANG Leimengting,ZHENG Yang,HE Feng,QIU Wei(1)

AFM Optical Path Automatic Alignment Based on the Image Processing
and Least Square..... CHENG Liqun,QU Yingmin,YANG Huanzhou,SUN Baishun(6)

A Image Pixel Level Fusion Based on Fast Guided Filter
..... CHEN Yang,WANG Shifeng,DU Kaiyue,WANG Rui(11)

Research and Test of Vehicle-mounted Laser Communication
..... ZHAO Honggang,MENG Lixin,ZHANG Lizhong,LI Xiaoming,BAI Yangyang(16)

Design of a New Reflective Optical Centering System
..... LI Xiang,BAI Suping,WANG He,YAN Yufeng(21)

Simulation and Experimental Study of Residual Stress in Laser Curing Shell
..... LI Shitao,TIAN Ming,GAO Xuefeng,DU Xinyang,TANG Hanyu(26)

Optical Design of Zoom Double Telecentric System for Industrial Measurement
..... GUO Jinming,XIANG Yang,LI Qi,GAO Feng,LI Jingman(31)

Simulation Analysis and Experimental Study on Forming Process Parameters
of Laser Shelling..... GAO Xuefeng,JING Wenbo,LI Shitao,TIAN Ming(36)

Optical Design of Infrared Telephoto Lens with Long Waveband used
for Unmanned Aerial Vehicle NING Xu,XIANG Yang,LI Qi,GAO Feng(40)

Design and Simulation of Optical System for Dual wavelength Retinal Oximeter
..... ZHENG Tianli,LUO Chunhua,ZHU Hailong,FU Weiwei(45)

Design of Diffraction Multifocal Intraocular Lens LI Ji,HUO Furong(50)

Research on Influence of Boundary Condition on Phase Recovery of Coherent Light
..... ZHAO Zhiyuan,JING Wenbo,ZOU Huanhuan(55)

Research on Preparation and Magnetic Properties of Fe₃O₄ Nanocrystals
..... HAN Donglai,LI Boxun,SI Zhenjun,ZUO Qinghui(59)

Research on Preparation and Gas Sensing Properties to Alcohol of TiO₂ Nanocrystalline
..... WANG Haohao,FENG Jinliang,SUN Ming,CAO Chenming,LI Shitao(62)

Hydrothermal Synthesis and Characterization of A Hybrid Material with Copper Doped Keggin-type
Lacunary Polyoxometalates LIU Yabing,LI Mingyang,PEI Tonghe(65)

- Research on Pressure Change of Hydraulic Cylinder of Abrasive Flow Machine Based on PID Control
..... SHENG Liang,LI Junye,ZHANG Hongwei,MENG Wenqing,HE Yang,LI Danni(71)
- Structure Design of Pitching Turntable for Elevating Angle Simulation and Mechanical
Performance Analysis..... LIU Jianhua,ZHANG Lei,LIU Ming,LIU Yongzhi,JIANG Huilin(76)
- High Precision Blood Coagulation Dynamic Detection Sensor Based on Spring Support
..... WANG Zhe,YU Yuanhua,CHEN Qimeng,LI Jian,ZHANG Zhen(81)
- Research on Underwater Target Detection Technology
Based on Polarization Information..... MU Chang,WANG Caixia,DUAN Ke,LIU Peng(86)
- Research on the Image Processing of Liver Cancer Cells Based on
Polarization Information ZHAO Bingyu,SONG Zhengxun,YU Miao,ZHANG Danli(90)
- Research and Design of Image Mosaic Technology Based on FPGA
..... XU Yang,WANG Xiaoman,ZHU Ji,LIU Peng,JIANG Hao(94)
- Research on Target Detection Technology Based on Feature Fusion
..... SUN Minglei,YANG Bo,HAN Liyuan(99)
- Improved Night Image Enhancement Algorithm Based on Retinex
..... LI Hongyu,ZHU Yifeng,HUANG Yi(104)
- Two Selection Resource Allocation Algorithm Based on D2D Pairs Grouping
..... SUN Qi,CHEN Guifen(109)
- Verification Device of CD Voltage Stable Source on Single-chip Microcomputer DAI Jun(114)
- Rendering Algorithm of Soft Shadows in 3D Scenes Based on
Spatially Reusing the Visibility of Area Light Source..... ZHOU Wenyan,CHEN Chunyi(118)
- Smooth Path Planning Based on Extended Search Neighborhood A* Algorithm
..... ZHANG Jinghan,TAO Zhaosheng,PENG Peng,WANG Lihua(124)
- Study on Pedestrian Evacuation Based on Modified Social Force Model with Exit
Choice Probability ... HUO Fuchang,JIANG Zhixia,XIE Jixuan,ZHANG Shihe,XUE Tiankun(128)
- Development and Application of Alumni Information Integration and Analysis Platform
Based on Big Data Technology ... TAN Baohua,REN Zhipeng,WANG Peng,ZHAO Jianping(132)
- Physiology Research in Paraquat to SD Rats of Poisoning
..... LIU Chuanzhi,WANG Luhan,WANG Yue,ZHAO Tiankuo,HOU Yue(137)
- Research on Correlation Between Aldose Reductase AKR1B1 and Lung Cancer
..... SUN Jifeng,SUN Tingting,LI Chao,JIN Xiuyan,ZHANG Hao(141)