

## 目次

### • 超快光学 •

阿秒脉冲产生和测量技术研究进展(特邀)(封面论文) .....王虎山,曹华保,皮良文,等 0132001

### • “二维光功能材料与器件”专题 •

有机-无机杂化卤化物钙钛矿材料稳定性及其在光电探测器方面的研究进展(特邀) .....姚丽娟,方铤,房丹,等 0150001

二维光催化材料的电子结构调控与应用研究进展(特邀) .....张文林,许春花,孙萌飞,等 0150002

光子晶体红外隐身薄膜在车辆引擎舱表面应用研究 .....刘彪,时家明,吕相银,等 0150003

异质结型 CuO/ZnO 复合纳米线的制备及光催化性能 .....贾哲,任帅,张洁静,等 0150004

### • 光纤光学与光通信 •

基于粗锥结构级联 LPFG 的双包层光纤多参量传感器 .....付兴虎,黄书铭,李东姝,等 0106001

伽马射线辐照增益光纤对光纤放大器低频噪声特性的影响 .....马承启,张雅婷,金露凡,等 0106002

基于光纤过耦合器结构的温度应变传感器 .....江升旭,柳春郁,冷硕,等 0106003

### • 仪器,测量,度量学 •

大视场偏振成像仪的相对辐射校正研究 .....涂碧海,姚萍萍,韦玮,等 0112001

基于改进网格运动统计特征的在线三维测量 .....吴海涛,曹益平,李洋,等 0112002

基于自准直原理的空间光学成像系统在轨几何定标技术 .....赵珩翔,李立波,冯玉涛,等 0112003

### • 材料 •

基于电磁场作用增强的超材料吸收体太赫兹微流传感器 .....陈涛,黄锋宇,钟鑫,等 0116001

基于透射型几何相位编码超表面的太赫兹波束自由操控 .....唐小燕,柯友煌,井绪峰,等 0116002

### • 光学器件 •

基于原子层沉积技术的高精度多层膜 X 射线非涅尔波带片的制备研究 .....吴鹿杰,文庆涛,高雅增,等 0123001

用于数据中心发射端的同侧阵列波导光栅复用器 .....王亮亮,张家顺,安俊明,等 0123002

### • 图像处理 •

基于视觉注意机制的红外弱小目标检测 .....危水根,王程伟,陈震,等 0110001

基于语义分割的城区激光点云与光学影像配准 .....朱颖,赵明 0110002

• 大气与海洋光学 •

|                                      |                  |         |
|--------------------------------------|------------------|---------|
| 浑浊介质中激光侧向散射实验与仿真研究 .....             | 贺文迪, 胡森, 李鹏, 等   | 0101001 |
| 基于 MAX-DOAS 淮北地区疫情前后 HCHO 观测研究 ..... | 齐贺香, 郭映映, 牟福生, 等 | 0101002 |

(专题特邀组稿专家: 张晗, 张梦, 郭志男)

(本期责编: 艾云)

## Contents

### • Ultrafast Optics •

Research Progress of Attosecond Pulse Generation and Characterization (Invited)(Cover Paper)

.....WANG Hushan, CAO Huabao, PI Liangwen, *et al* 0132001

### • Special Issue on Two-dimensional Optical Functional Materials and Devices •

Research Progress of the Stability and Photodetectors Applications of Organic-inorganic Hybrid

Halide Perovskite Materials (Invited) .....YAO Lijuan, FANG Xuan, FANG Dan, *et al* 0150001

Progress on Electronic Structure Control and Application of Two Dimensional Photocatalytic Materials (Invited)

.....ZHANG Wenlin, XU Chunhua, SUN Mengfei, *et al* 0150002

Application of Photonic Crystalline Infrared Stealth Films on Surface of Vehicle Engine Compartments

.....LIU Biao, SHI Jiaming, LÜ Xiangyin, *et al* 0150003

Fabrication and Photocatalytic Activity of Heterojunction Type CuO/ZnO Composite Nanowires

.....JIA Zhe, REN Shuai, ZHANG Jiejing, *et al* 0150004

### • Fiber Optics and Optical Communications •

Multi-parameter Sensor Based on Waist-enlarged Taper with Double Cladding Fiber Cascade LPFG

.....FU Xinghu, HUANG Shuming, LI Dongshu, *et al* 0106001

Investigation on Low Frequency Noise Characteristics of Fiber Amplifier Influenced by Gamma-Ray Irradiated Gain Fiber

.....MA Chengqi, ZHANG Yating, JIN Lufan, *et al* 0106002

Temperature and Strain Sensor Based on Fiber Optic Overcoupler Structure

.....JIANG Shengxu, LIU Chunyu, LENG Shuo, *et al* 0106003

### • Instrumentation, Measurement and Metrology •

Relative Radiometric Correction of Polarization Imager with Large Field of View

.....TU Bihai, YAO Pingping, WEI Wei, *et al* 0112001

Online Three-dimension Measurement Based on Improved Grid Motion Statistical Features

.....WU Haitao, CAO Yiping, LI Yang, *et al* 0112002

Techniques for On-orbit Calibration of Space Optical Imaging Systems Based on Auto-collimation

.....ZHAO Hengxiang, LI Libo, FENG Yutao, *et al* 0112003

### • Materials •

Terahertz Microfluidic Sensor Based on Metamaterial Absorbers with Enhanced Electromagnetic Field Interaction

.....CHEN Tao, HUANG Fengyu, ZHONG Xin, *et al* 0116001

Free Manipulation of Terahertz Wave Based on the Transmission Type Geometric Phase Coding Metasurface

.....TANG Xiaoyan, KE Youhuang, JING Xufeng, *et al* 0116002

• Optical Devices •

- Investigation on the Preparation of High Precision Multilayer X-ray Fresnel Zone Plates Based on Atomic Layer Deposition Technology .....WU Lujie, WEN Qingtao, GAO Yazeng, et al 0123001
- Same Side Arrayed Waveguide Grating Multiplexer for Data Center Transmitter .....WANG Liangliang, ZHANG Jiashun, AN Junming, et al 0123002

• Image Processing •

- Infrared Dim Target Detection Based on Human Visual Mechanism .....WEI Shuigen, WANG Chengwei, CHEN Zhen, et al 0110001
- Registration of Laser Point Cloud and Optical Image in Urban Area Based on Semantic Segmentation .....ZHU Ying, ZHAO Ming 0110002

• Atmospheric and Oceanic Optics •

- Experimental and Simulation Study of Laser Side Scattering in Turbid Media .....HE Wendi, HU Miao, LI Peng, et al 0101001
- Observation of HCHO before and after Epidemic in Huaibei Area Based on MAX-DOAS .....QI Hexiang, GUO Yingying, MOU Fusheng, et al 0101002