

LOP | Laser & Optoelectronics Progress



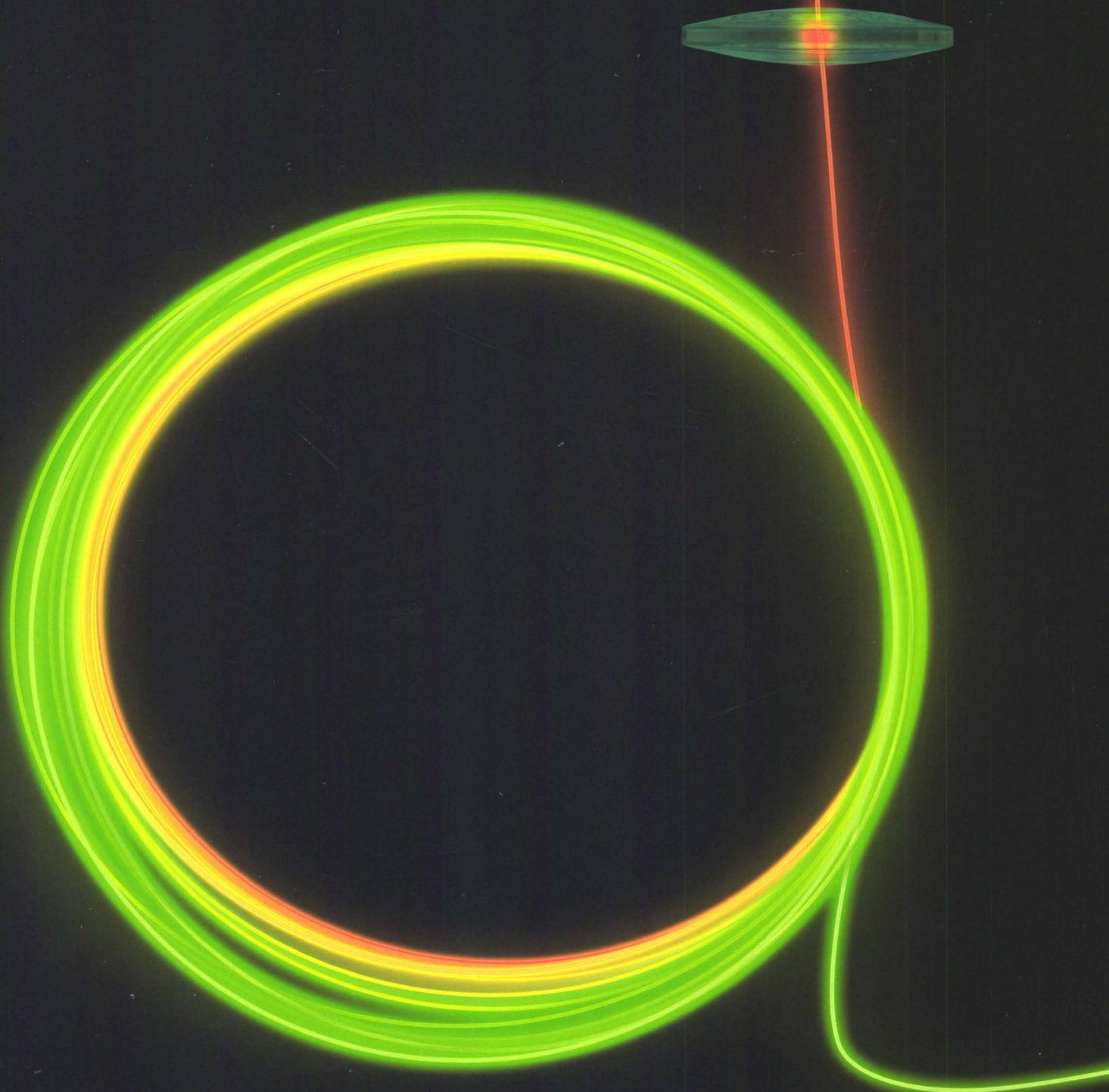
QK1820242

中文核心期刊
中国科技核心期刊

第55卷 VOL. 55 第4期 NO. 4 [总第627期]

激光与光电子学进展

2018.4



中国激光杂志社
CHINESE LASER PRESS

中国科学院上海光学精密机械研究所 主办

目 次

· 综述 ·

光纤飞秒激光抽运的非线性光学频率变换研究进展(封面文章) 赵君, 胡明列, 范锦涛, 等 040001

· 大气光学与海洋光学 ·

拉盖尔-高斯光束在凸台周围的气动光学效应 蒋倩雯, 辛煜, 张洪博, 等 040101

小型化空气折射率测量装置的精度修正 吴炳阳, 于晋龙, 王菊, 等 040102

· 原子与分子物理学 ·

应用于芯片原子钟的微碱金属气室制备与研究 汤跃, 任子明, 李云超, 等 040201

· 相干光学与统计光学 ·

基于相干偏振统一理论的 Schmidt 棱镜衍射特性 孙雪平, 刘卫国, 卢进军 040301

· 探测器 ·

夏克-哈特曼波前探测器的距离-幂指数加权质心探测算法 葛睿, 申文, 刘超, 等 040401

· 衍射与光栅 ·

基于轴棱锥的衍射光学元件设计及其光场分析 刘晓庆, 薛常喜 040501

· 光纤光学与光通信 ·

相干光通信中载波频率稳定控制 杨尚君, 柯熙政 040601

低温敏 FBG 应变传感器在静压 PHC 管桩贯入实验中的应用 王永洪, 张明义, 张春巍, 等 040602

激光器线宽对空间相干光通信链路传输误码率研究 孔英秀, 柯熙政, 杨媛, 等 040603

应用于光纤复合架空地线的光纤分布式振动的测量 苗春生 040604

密集波分复用器慢光效应仿真研究 吴蓉, 胡延伟, 岳云龙 040605

基于表面等离子体共振的微粒移光纤传感器 魏勇, 苏于东, 刘春兰, 等 040606

输水管道预警与泄漏定位中 Φ -OTDR 技术信号处理方法 杨洋, 沙洲, 封皓, 等 040607

· 图像处理 ·

基于优化核函数支持向量机在行人检测中的应用 杨萌, 张葆, 宋玉龙 041001

基于原始-对偶算法的自适应加权广义全变差图像去模糊 杨爱萍, 张越, 王金斌, 等 041003

基于聚类三维块匹配的合成孔径雷达影像滤波算法 詹云军, 代腾达, 黄解军, 等 041004

基于特征点的秦俑断裂面匹配方法 赵夫群, 耿国华 041005

基于阴影概率约束的遥感影像建筑物阴影检测 葛乐, 钟兴 041006

结合主成分分析的四维块匹配协同滤波三维地震信号去噪 张欢, 池越, 周亚同, 等 041007

基于正交梯度差局部方向模式的人脸识别算法 杨恢先, 刘建, 张孟娟, 等 041008

基于自适应流形滤波的高光谱图像分类方法 廖建尚, 王立国, 郝思媛 041010

基于区域全卷积网络结合残差网络的火焰检测方法 洪伟, 李朝锋 041011

基于 X 射线的复杂结构件内部零件装配正确性检测 吴桐, 陈平 041012

基于 AR-WLD 和分块相似度加权的遮挡表情识别 王晓华, 陈影, 胡敏, 等 041013

一种基于多层伽马变换融合的高动态范围图像生成方法 陈小楠, 张淑芳, 雷志春 041014

基于 l_1/l_2 的高低阶全变差运动模糊图像盲复原方法 王灿, 杨帆, 李靖 041015

· 成像系统 ·

数字减影血管造影的影像血管狭窄亚像素级自动检测算法 张帆, 陈相廷, 张新红 041101

基于自由曲面光学的双模态生物医学成像研究 王涛, 张明皓, 郭玲, 等 041102

· 仪器,测量与计量 ·

基于投影条纹级次识别的发动机叶片三维测量方法 马龙,徐泓悦,胡艳敏,等 041201

· 集成光学 ·

偏振无关多齿谐振光栅反射镜的参数分析 吴华明,肖文波,肖永生,等 041301

TE 振荡模在左手材料劈形平面波导中的传输 沈陆发,谢建平,王子华 041302

一种硅基二氧化硅结构的超快全光开关 吴永宇,张小平,单欣岩,等 041303

· 激光器与激光光学 ·

扩束镜镜间距和倾斜度对激光聚焦特性的影响 杨亮亮,张珞,朱海红,等 041401

刮板输送机扁平链激光熔覆修复研究 翟建华,张菟麟,许慧印,等 041402

工艺参数对激光快速成型 Fe 基合金组织与晶化行为的影响 王刚,刘亚萍,吕云卓,等 041403

激光重熔轨迹对 Fe 基 Ni/WC 涂层组织和性能的影响 赵运才,杜辉辉,上官绪超,等 041404

工艺参数对 H13 钢激光选区熔化成形缺陷的影响 徐锦岗,陈勇,陈辉,等 041405

· 机器视觉 ·

尺度自适应核相关滤波目标跟踪 高美凤,张晓玄 041501

· 材料 ·

二维 GaAs 电子结构和光学性质的理论计算 褚五金,张晋敏,高廷红,等 041601

基于 L 形超材料的大赫兹宽带偏振转换器 周璐,赵国忠,李永花 041602

一种新型宽频低损左手材料设计 王宝,张正平 041603

· 医用光学与生物技术 ·

基于图形处理器的人体皮肤组织实时成像谱域相干光断层成像系统 朱珊珊,高万荣,史伟松 041701

· 非线性光学 ·

光谱角色散 OPCPA 中啁啾脉冲频谱整形的理论研究 叶荣,阴明,吴显云,等 041901

强非局域非线性介质中两种空间位置相反 Airy 光束产生的脱落孤子演化 文兵,邓杨保,傅喜泉 041902

· 光学设计与制造 ·

大面积高均匀度平行光曝光机用自由曲面复眼透镜设计 陈忠雨,尹韶云,孙秀辉,等 042201

· 光学器件 ·

一维磁光光子晶体多通道非互易传输特性研究 王立松,高永锋,赵舒程,等 042301

· 物理光学 ·

金属纳米表面等离子激元的共振辐射增强研究 马光辉,于贺,刘宇乾,等 042601

· 量子光学 ·

海面泡沫信道的波分复用偏振补偿改进方案研究 徐华彬,周媛媛,周学军,等 042701

· 遥感与传感器 ·

基于多光谱数据指导的偏度平衡点云滤波 韩晓峰,杨风暴,卫红,等 042801

基于球体及平面模型的双 Kinect 空间位置的标定方法 欧攀,周锴,吴帅 042802

融合光谱特征和几何特征的建筑物提取算法 何曼芸,程英蕾,廖湘江,等 042803

· 光谱学 ·

深度学习与激光诱导荧光在假酒识别中的应用 来文豪,周孟然,王亚,等 043001

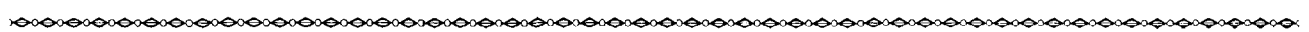
基于双向剪切干涉的光谱分辨率增强 丛麟骁,黄昊,才威胜 043002

法莫替丁与牛血清蛋白相互作用的光谱研究 俞波,兰秀凤,张林,等 043003

· 薄膜 ·

多层薄膜沉积的应力仿真分析 李长安,杨明冬,全本庆,等 043101

脉冲电流对激光熔覆层力学及耐腐蚀性能的影响 西宇辰,朱建波,刘双,等 043102



本刊电子版彩色效果请详见中国光学期刊网 www.opticsjournal.net

CONTENTS

• Reviews •

Research Progress of Nonlinear Frequency Conversion Technology Based on Fiber Femtosecond Lasers(Cover Paper) Zhao Jun, Hu Minglie, Fan Jintao, et al. 040001

• Atmospheric Optics and Oceanic Optics •

Aero-Optical Effect of Laguerre-Gaussian Beams Around Turret Jiang Qianwen, Xin Yu, Zhang Qibo, et al. 040101

Accuracy Correction of Miniaturization Device for Air Refractive Index Measurement Wu Bingyang, Yu Jinlong, Wang Ju, et al. 040102

• Atomic and Molecular Physics •

Fabrication and Study of Micro Alkali-Metal Vapor Cell Applied to Chip Scale Atomic Clock Tang Yue, Ren Ziming, Li Yunchao, et al. 040201

• Coherence Optics and Statistical Optics •

Diffraction Property of Schmidt Prism Based on Unified Theory of Coherence and Polarization Sun Xueping, Liu Weiguo, Lu Jinjun 040301

• Detectors •

Distance-Power Index Weighted Centroid Detection Algorithm for Shack-Hartmann Wavefront Sensors Ge Rui, Shen Wen, Liu Chao², et al. 040401

• Diffraction and Gratings •

Design of Diffractive Optical Elements Based on Axicon and Its Light Analysis Liu Xiaoqing, Xue Changxi 040501

• Fiber Optics and Optical Communications •

Carrier Frequency Stability Control in Coherent Optical Communication Yang Shangjun, Ke Xizheng 040601

Application of FBG Strain Sensor with Low Temperature Sensitivity in Static Pressure PHC Pipe Pile Penetration Test Wang Yonghong, Zhang Mingyi, Zhang Chunwei, et al. 040602

Bit Error Rate of Laser Linewidth in Spatial Coherent Optical Communication Link Kong Yingxiu, Ke Xizheng, Yang Yuan 040603

Distributed Optical Fiber Vibration Sensing in Optical Fiber Composite Overhead Ground Wire Miao Chunsheng 040604

Simulation on Slow Light Effect of Dense Wavelength Division Multiplexer Wu Rong, Hu Yanwei, Yue Yunlong 040605

Micro-Displacement Optical Fiber Sensor Based on Surface Plasmon Resonance Wei Yong, Su Yudong, Liu Chunlan, et al. 040606

Signal Processing Method of Φ -OTDR Technology in Early Warning and Leakage Positioning of Water Pipelines Yang Yang, Sha Zhou, Feng Hao, et al. 040607

• Image Processing •

Application of Support Vector Machine Based on Optimized Kernel Function in People Detection Yang Meng, Zhang Bao, Song Yulong 041001

Adaptive Weighted Generalized Total Variation Image Deblurring Based on Primal-Dual algorithm Yang Aiping, Zhang Yue, Wang Jinbin, et al. 041003

Synthetic Aperture Radar Image Filtering Based on Clustering Three-Dimensional Block-Matching Zhan Yunjun, Dai Tengda, Huang Jiejun, et al. 041004

Fracture Surface Matching Method for Terracotta Based on Feature Points Zhao Fuqun, Geng Guohua 041005

Building Shadow Detection of Remote Sensing Images Based on Shadow Probability Constraint Ge Yue, Zhong Xing 041006

Three Dimensional Seismic Signal Denoising Based on Four-Dimensional Block Matching Cooperative Filtering Combined with Principle Component Analysis Zhang Huan, Chi Yue, Zhou Yatong, et al. 041007

Face Recognition Algorithm Based on Orthogonal Gradient Difference Local Directional Pattern Yang Huixian, Liu Jian, Zhang Mengjuan, et al. 041008

Hyperspectral Image Classification Method Based on Adaptive Manifold Filtering Liao Jianshang, Wang Liguo, Hao Siyuan 041010

Flame Detection Method Based on Regional Fully Convolutional Networks with Residual Network Hong Wei, Li Chaofeng 041011

Assembly Correctness Identification of Internal Part of Complex Component Based On X-Ray Wu Tong, Chen Ping 041012

Occluded Facial Expression Recognition Based on Asymmetric Region Weber Local Descriptor and Block Similarity Weighting Wang Xiaohua, Chen Ying, Hu Min, et al. 041013

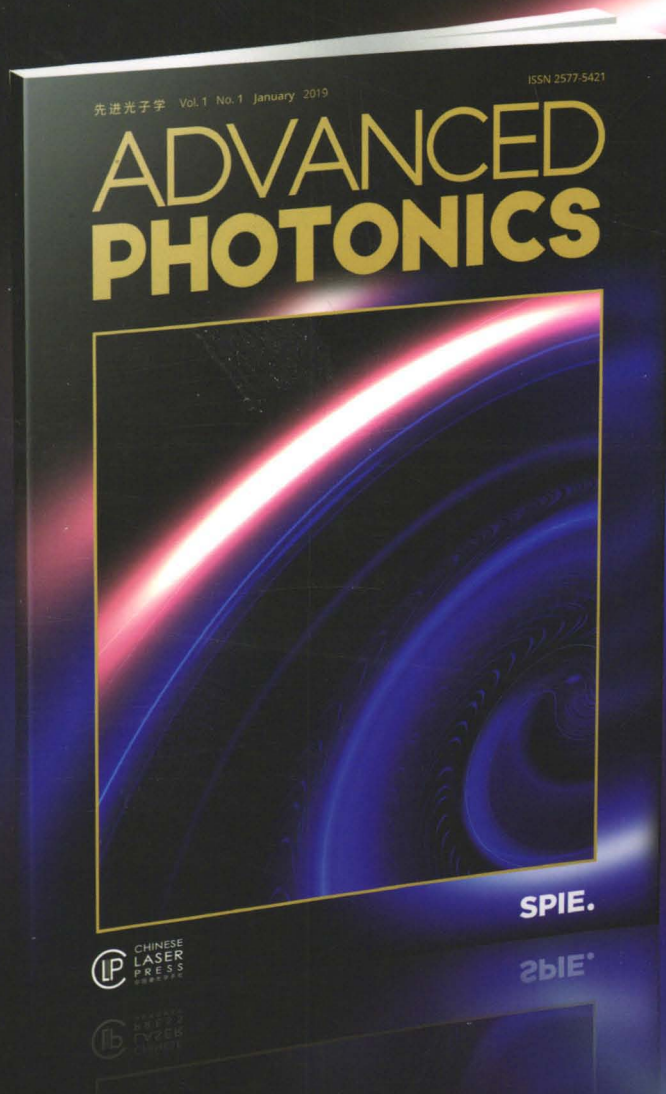
High Dynamic Range Image Generation Method by Fusing Multi-Level Gamma-Transformed Images Chen Xiaonan, Zhang Shufang, Lei Zhichun 041014

Blind Recovery Method of Motion Blurred Image Based on Combining l_1/l_2 Norm with High Order and Low Order Total Variation Wang Can, Yang Fan, Li Jing 041015

• Imaging Systems •

Algorithm of Automatic Detection of Blood Vessel Stenosis with Sub-Pixel Level of Digital Subtraction Angiography Zhang Fan, Chen Xiangting, Zhang Xinhong 041101

Research on Dual-Mode Biomedical Imaging Based on Free-Form Surface Optics	Wang Tao, Zhang Minghao, Guo Ling, et al. 041102
• Instrumentation, Measurement and Metrology •	
Three-Dimensional Measurement Method of Aero-Engine Blades Based on Projected Fringe Order Identification	Ma Long, Xu Hongyue, Hu Yanmin, et al. 041201
• Integrated Optics •	
Parameters Analysis of Polarization Independent Reflector with Multi-Subpart Profile Resonant Grating	Wu Huaming, Xiao Wenbo, Xiao Yongsheng, et al. 041301
Propagation of TE Oscillating Guided Modes in a Taper Slab Waveguide with Metamaterials	Shen Lufa, Xie Jianping, Wang Zihua 041302
An Ultrafast All-Optical Switch with Silicon-Based Silica Structure	Wu Yongyu, Zhang Xiaoping, Shan Xinyan, et al. 041303
• Lasers and Laser Optics •	
Influences of Lens Distance and Tilt Angle Between Beam Expanders on Laser Focusing Characteristics	Yang Liangliang, Zhang Luo, Zhu Haihong, et al. 041401
Study on Laser Cladding Repair of Flat Chain of Scraper Conveyor	Zhai Jianhua, Zhang Wanlin, Xu Huiyin, et al. 041402
Influence of Process Parameter on Microstructure and Crystallization Behavior of Fe-Based Alloy Processed by Laser Rapid Forming	Wang Gang, Liu Yaping, Lu Yunzhuo, et al. 041403
Influences of Laser Remelting Trajectories on Microstructures and Properties of Fe-Based Ni/WC Coatings	Zhao Yuncai, Du Huihui, Shangguan Xuchao, et al. 041404
Influence of Process Parameters on Forming Defects of H13 Steel Processed by Selective Laser Melting	Xu Jingang, Chen Yong, Chen Hui, et al. 041405
• Machine Vision •	
Scale Adaptive Kernel Correlation Filtering for Target Tracking	Gao Meifeng, Zhang Xiaoxuan 041501
• Materials •	
Theoretical Calculation of Electronic Structure and Optical Properties of Two-Dimensional GaAs	Chu Yujin, Zhang Jinmin, Gao Tinghong, et al. 041601
Broadband Terahertz Polarization Converter Based on L-Shaped Metamaterial	Zhou Lu, Zhao Guozhong, Li Yonghua 041602
Design of a Novel Broadband Low Loss Left-Handed Material	Wang Bao, Zhang Zhengping 041603
• Medical Optics and Biotechnology •	
GPU-Based Fourier Domain Optical Coherence Tomography System for Real Time Imaging of Human Skin	Zhu Shanshan, Gao Wanrong, Shi Weisong 041701
• Nonlinear Optics •	
Theoretical Study of Spectrum Shaping of Chirped Pulse in OPCPA with Angular Spectral Dispersion	Ye Rong, Yin Ming, Wu Xianyun, et al. 041901
Evolution of Shedding Soliton Generated by Two Space-Reversed Shapes of Airy Beams in Strongly Nonlocal Nonlinear Medium	Wen Bing, Deng Yangbao, Fu Xiquan 041902
• Optical Design and Fabrication •	
Design of Fly-Eye Lens with Free-Form Surface Used in Parallel Light Exposure Machine with Large Area and High Uniformity	Chen Zhongyu, Yin Shaoyun, Sun Xiuhui, et al. 042201
• Optical Devices •	
Study on Multiple Channel Non-Reciprocal Transmission Characteristics of One-Dimensional Magneto-Optical Photonic Crystal	Wang Lisong, Gao Yongfeng, Zhao Shucheng, et al. 042301
• Physical Optics •	
Resonance Radiation Enhancement of Metal Nanometer Surface Plasmons	Ma Guanghui, Yu He, Liu Yuqian, et al. 042601
• Quantum Optics •	
Wavelength Division Multiplexing Polarization Compensation Improvement Scheme of Sea Foam Channel	Xu Huabin, Zhou Yuanyuan, Zhou Xuejun, et al. 042701
• Remote Sensing and Sensors •	
Point Cloud Filter of Skewness Balance Based on the Guidance of Multispectral Data	Han Xiaofeng, Yang Fengbao, Wei Hong, et al. 042801
Dual-Kinect Spatial Position Calibration Method Based on Sphere and Plane Model	Ou Pan, Zhou Kai, Wu Shuai 042802
Building Extraction Algorithm by Fusing Spectral and Geometrical Features	He Manyun, Cheng Yinglei, Liao Xiangjiang, et al. 042803
• Spectroscopy •	
Application of Counterfeit Liquor Recognition Based on Deep Learning and Laser Induced Fluorescence	Lai Wenhao, Zhou Mengran, Wang Ya, et al. 043001
Spectral Resolution Enhancement Based on Two-Dimensional Shear Interference	Cong Linxiao, Huang Min, Cai Qisheng 043002
Spectroscopic Study on Interaction of Famotidine with Bovine Serum Albumin	Yu Bo, Lan Xiufeng, Zhang Lin, et al. 043003
• Thin Films •	
Stress Simulation Analysis of Multilayer Film Deposition	Li Chang'an, Yang Mingdong, Quan Benqing, et al. 043101
Effect of Pulsed Current on Mechanical and Anticorrosion Properties of Laser Cladded Coating	Xi Yuchen, Zhu Jianbo, Liu Shuang, et al. 043102



ADVANCED PHOTONICS

Co-Editors

A highly selective, open access,
international journal publishing
innovative research in all areas of
optics and photonics



Xiao-Cong (Larry) Yuan
Shenzhen University, China



Anatoly Zayats
King's College London, UK

The journal will be launched in **January 2019**