

目次

光学元件激光损伤·专栏主编: 郑万国

KDP类晶体的激光损伤研究 赵元安, 连亚飞, 李 婷, 等 071001 (15)
熔石英等光学材料激光损伤疲劳效应 朱景国, 田 野, 杨 英, 等 071002 (9)
355 nm 和 1064 nm 激光辐照下 DKDP 晶体的表面损伤特性 史晋芳, 邱 荣, 郭德成, 等 071003 (8)
单晶硅材料强激光损伤吸收波前模型的理论研究 王毕艺, 赵万利, 向 霞, 等 071004 (7)

强激光物理与技术

基于光纤激光倍频的高功率绿光光源研究进展 马 天, 李富全, 林宏奕 071005 (8)
100 kHz 高功率高光束质量纳秒激光振荡器 杨天利, 杨 晶, 周王哲, 等 071006 (7)
2.94 μm 室温连续 Er:YAG 激光器的研制 刘政邑, 叶先林, 张 淞, 等 071007 (6)
基于神经网络的消色差旋转双棱镜反向解算 罗昊鑫, 姚宇翔, 潘文武, 等 071008 (7)

惯性约束聚变物理与技术

激光-等离子体相互作用正电子发射研究进展 蔡达锋, 王 剑, 谷渝秋, 等 072001 (6)
基于低秩约束和全变分正则化的 CUP-VISAR 压缩图像重构算法 郑铨涛, 李海艳, 甘华权, 等 072002 (9)

高功率微波技术

高功率超宽带组合天线的设计与实验 吴 昊, 屈 劲, 陈世韬, 等 073001 (6)
E 型波导振荡器反转永磁引导系统初步设计 曾彩萍, 薛宇哲, 杜创洲, 等 073002 (7)

粒子束及加速器技术

多胞超导射频腔整腔调谐场平坦度模拟研究 王 岩, 马震宇, 徐 凯, 等 074001 (9)
高能同步辐射光源快速轨道反馈系统数据分发方案设计与实现 (英) 王道远, 金大鹏, 朱 鹏, 等 074002 (7)

脉冲功率技术

基于 AC-Link 的高增益 AC-DC 变换器拓扑设计及控制算法 李伯堂, 刘庆想, 李 伟 075001 (7)
高鲁棒性双极性高压隔离采样电路设计 李 波, 马 勋, 赵 娟, 等 075002 (7)
纳秒脉冲电压下两种自触发开关的设计与实验研究 崔光曦, 李俊娜, 王海洋, 等 075003 (8)

核科学与工程

铜金属氢损伤的分子动力学模拟 闫鹏辉, 张宝玲, 时永兴, 等 076001 (5)
基于 ARCON 方法的先进小堆燃料操作事故放射性后果分析 王韶伟, 王一川, 巩建业, 等 076002 (5)
铅铋堆系统分析程序开发初步研究 罗 勇, 潘麒文, 杨尚东, 等 076003 (10)

前沿技术与交叉科学

复杂背景下的低空无人机检测与跟踪算法 汪建伟, 游 疆, 万 敏, 等 079001 (12)
基于 VMD-OptShrink 的增强型电磁轨道炮炮口电压噪声压制及应用 闫 杰, 李菊香, 陈 毅, 等 079002 (7)

CONTENTS

• **Special Column on Laser Damage of Optical Elements** •

Laser damage of KDP crystals and their analogues	Zhao Yuanan, Lian Yafei, Li Ting, et al. 071001(15)
Review on laser damage fatigue effects of fused silica and other optical materials	Zhu Jingguo, Tian Ye, Yang Ying, et al. 071002(9)
Investigating surface damage characteristics in DKDP crystals by laser irradiation at 355 nm and 1064 nm	Shi Jinfang, Qiu Rong, Guo Decheng, et al. 071003(8)
A theoretical study on intense laser induced damage of monocrystalline silicon by absorption front model	Wang Biyi, Zhao Wanli, Xiang Xia, et al. 071004(7)

• **High Power Laser Physics and Technology** •

Recent progress of high power green laser based on frequency doubling technology for fiber laser	Ma Tian, Li Fuquan, Lin Honghuan 071005(8)
100 kHz high power high beam quality nanosecond laser oscillator	Yang Tianli, Yang Jing, Zhou Wangzhe, et al. 071006(7)
Development of 2.94 μm room temperature CW Er:YAG laser technology	Liu Zhengyi, Ye Xianlin, Zhang Song, et al. 071007(6)
Inverse calculation of achromatic Risley prism based on neural network	Luo Haoxin, Yao Yuxiang, Pan Wenwu, et al. 071008(7)

• **Inertial Confinement Fusion Physics and Technology** •

Research evolution of the positron jet generated by intense laser interaction with the plasmas	Cai Dafeng, Wang Jian, Gu Yuqiu, et al. 072001(6)
CUP-VISAR image reconstruction based on low-rank prior and total-variation regularization ...	Zheng Kaitao, Li Haiyan, Gan Huaquan, et al. 072002(9)

• **High Power Microwave Technology** •

Design and experiment of ultra-wideband combined antenna for high-power microwave	Wu Hao, Qu Jin, Chen Shitao, et al. 073001(6)
Preliminary design of reverse permanent magnet guidance system for E-type waveguide oscillator	Zeng Caiping, Xue Yuzhe, Du Chuangzhou, et al. 073002(7)

• **Particle Beams and Accelerator Technology** •

Simulation studies on the field flatness tuning of multi-cell superconducting radio-frequency cavities ...	Wang Yan, Ma Zhenyu, Xu Kai, et al. 074001(9)
Design and implementation of data transmission of fast orbit feedback system for HEPS	Wang Daoyuan, Jin Dapeng, Zhu Peng, et al. 074002(7)

• **Pulsed Power Technology** •

Topological design and control algorithm for AC-Link high gain series resonant AC-DC converter	Li Botang, Liu Qingxiang, Li Wei 075001(7)
Design of a high voltage isolated bipolar sampling circuit with high robustness	Li Bo, Ma Xun, Zhao Juan, et al. 075002(7)
Design and experimental study of two types of low jitter self-triggered switches under nanosecond pulse voltage	Cui Guangxi, Li Junna, Wang Haiyang, et al. 075003(8)

• **Nuclear Science and Engineering** •

Molecular dynamics simulation of helium damage in copper	Yan Penghui, Zhang Baoling, Shi Yongxing, et al. 076001(5)
Analysis on radiological consequence in fuel handling accident for advanced small reactor based on ARCON methodology	Wang Shaowei, Wang Yichuan, Gong Jianye, et al. 076002(5)
Preliminary study of lead-bismuth reactor system analysis code development	Luo Yong, Pan Qiwen, Yang Shangdong, et al. 076003(10)

• **Advanced Interdisciplinary Science** •

Low-altitude UAV detection and tracking algorithms in complex backgrounds	Wang Jianwei, You Jiang, Wan Min, et al. 079001(12)
Muzzle voltage noise suppression and application for augmented electromagnetic railgun based on VMD-OptShrink	Yan Jie, Li Juxiang, Chen Yi, et al. 079002(7)