

全国中文核心期刊
中国科技核心期刊
中国科学引文数据库（CSCD）核心库期刊
入选《世界期刊影响力指数（WJCI）报告》

ISSN 1000-372X
QK2300371

CN 31-1375/T

应用激光

YINGYONG JIGUANG

APPLIED LASER

王大珩 题

4

2023.4

Vol.43 No.4



ISSN 1000-372X



04>

9 771000 372237

万方数据

上海市激光技术研究所有限公司主办

目 次

增材制造

基于选区激光熔化的钛合金薄壁结构等刚度设计及性能研究

..... 史京帅, 李忠华, 刘斌, 蒋泽宙, 李霍东, 陈彦磊, 温海骏 (1)

激光功率对汽车用巴氏合金涂层组织及性能的影响 朱杰, 崔志华, 王强 (9)

基于 TRIZ 理论解决小模数齿面激光熔覆缺陷的技术研究 刘干成, 黄翔宇, 吴德胜, 刘巧 (16)

随动同步电感辅助直接激光沉积温度分布规律研究 刘晓, 马广义, 宋晨晨, 邱腾达, 牛方勇, 吴东江 (28)

基于响应面的 FeCoCrNi 高熵合金激光定向能沉积工艺参数优化 夏宏伟, 刘国承, 孙明, 刘阳, 周凌云 (39)

激光焊接

铝合金锁底接头一维振荡激光焊接气孔率分析 张登明, 胡佩佩, 欧阳自鹏, 殷伟, 肖翔月 (47)

对接间隙对激光填丝焊接头成形与性能影响 赵士超, 林祖正 (55)

激光加工

基于激光加工的自组装基底润湿性调控研究 韩玺, 王彬开, 冯宇航, 张衡, 曾欣煜, 常博 (61)

304 不锈钢表面激光凹/凸微织构的形貌演变规律 于守银, 刘国东, 武义堂, 翟琦 (73)

硅晶圆激光标识工艺的研究 李国旗, 张玲玲, 陈宇 (80)

高脉冲重复频率小光斑激光扫描冲击渐进成形 李健, 洪伟, 吴晨翔, 金卫凤 (87)

激光弯曲成形机理与翘曲抑制研究 李紫慧, 杨恒峰, 张高磊, 章直凡, 胡晓勇, 沈洪 (94)

基于 1 066 nm 光纤激光对裸硅晶圆与镀膜晶圆的标识工艺研究

..... 舒天娇, 张玲玲, 杜远超, 李国旗, 陈媛, 周伟, 马永新, 高垠芮, 胡豪威, 陈宇 (100)

脉冲激光辐照瓷质绝缘子表面损伤试验研究 许巧云, 覃远铖, 吴昌盛, 田骥, 汤振鹏, 周文创 (106)

激光冲击强化对 AZ31B 镁合金表面耐腐蚀行为的影响

..... 刘朋锴, 全红宇, 欧阳文泰, 原黎明, 黄亿辉, 秦秀, 张文武 (117)

测量检测

燃煤电厂波长调制激光吸收光谱氮逃逸测量系统的参数优化研究 黄思林 (129)

激光光学

相位全息图几何参数变换对艾里光束的影响分析 刘春利, 翟中生, 张骆, 刘顿, 成健, 陶青 (135)

激光医学

铥光纤激光在泌尿系结石治疗中的研究进展 张璐璐, 杨恩广, 王志平 (144)

CONTENTS

Additive Manufacturing

Equal Stiffness Design and Performance Research of Thin-Walled Titanium Alloy Structure Based on Selective Laser Melting	Shi Jingshuai, Li Zhonghua, Liu Bin, Kuai Zehou, Li Huodong, Chen Yanlei, Wen Haijun	(1)
Effect of Laser Power on Microstructure and Properties of Automotive Babbitt Coatings	Zhu Jie, Cui Zhihua, Wang Qiang	(9)
Research on Laser Cladding Defect of Small Modulus Tooth Surface Based on TRIZ Theory	Liu Gancheng, Huang Xiangyu, Wu Desheng, Liu Qiao	(16)
Investigation of Temperature Distribution Behavior in Follow-Up Synchronous Electromagnetic Induction Assisted Directed Laser Deposition ... Liu Xiao, Ma Guangyi, Song Chenchen, Di Tengda, Niu Fangyong, Wu Dongjiang	(28)	
Optimization of Process Parameters of Laser Direct Energy Deposited for FeCoCrNi High-Entropy Alloy Using Surface Methodology	Xia Hongwei, Liu Guocheng, Sun Ming, Liu Yang, Zhou Lingyun	(39)

Laser Welding

Analysis of Porosity Rate in Beam One-Dimensional Weaving Laser Welding of Aluminum Alloy Bottom-Locking Joint	Zhang Dengming, Hu Peipei, Ouyang Zipeng, Yin Wei, Xiao Xiangyue	(47)
Effect of Butt Gap on the Formation and Performance of Laser Wire Filling Welding Joints	Zhao Shichao, Lin Zuzheng	(55)

Laser Processing

Wettability Control of Substrates for Self-Assembly Using Laser Fabrication Technology	Han Xi, Wang Binkai, Feng Yuhang, Zhang Heng, Zeng Xinyu, Chang Bo	(61)
Morphology Evolution of Laser-Induced Concave/Convex Micro-Textures on 304 Stainless Steel	Yu Shouyin, Liu Guodong, Wu Yitang, Zhai Qi	(73)
Study on the Laser Marking Process of Silicon Wafer	Li Guoqi, Zhang Lingling, Chen Yu	(80)
Scanning Laser Shock Incremental Forming Using Laser Beam with Both High Repetition Rate and Small Beam Diameter	Li Jian, Hong Wei, Wu Chenxiang, Jin Weifeng	(87)
Study on Mechanism of Laser Forming and Edge Effect Suppression	Li Zihui, Yang Hengfeng, Zhang Gaolei, Zhang Zhifan, Hu Xiaoyong, Shen Hong	(94)
Research on the Identification Process of Bare Silicon Wafers and Coated Wafers Based on 1 066 nm Fiber Laser	Shu Tianjiao, Zhang Lingling, Du Yuanchao, Li Guoqi, Chen Yuan, Zhou Wei, Ma Yongxin, Gao Yinrui, Hu Haowei, Chen Yu	(100)
Experimental Study on Surface Damage of Ceramic Insulators Irradiated by Pulsed Laser	Xu Qiaoyun, Qin Yuancheng, Wu Changsheng, Tian Ji, Tang Zhenpeng, Zhou Wenchuang	(106)
Effect of Laser Shock Strengthening on Corrosion Resistance of AZ31B Magnesium Alloy Surface	Liu Pengkai, Quan Hongyu, Ouyang Wentai, Yuan Liming, Huang Yihui, Qin Xiu, Zhang Wenwu	(117)

Measurement and Detection

Parameter Optimization Study of Wavelength Modulation Spectroscopy Ammonia Escape Measurement System for Power Plants	Huang Silin	(129)
---	-------------	---------

Laser Optics

Analysis of the Influence of Phase Hologram Geometric Parameter Transformation on Airy Beam	Liu Chunli, Zhai Zhongsheng, Zhang Luo, Liu Dun, Cheng Jian, Tao Qing	(135)
---	---	---------

Laser Medicine

Research Progress of Thulium Fiber Laser in Urolithiasis	Zhang Luyang, Yang Enguang, Wang Zhiping	(144)
--	--	---------

上海市激光技术研究所有限公司 地址：上海市宜山路770号（漕河泾380号） 电话：021-64700560

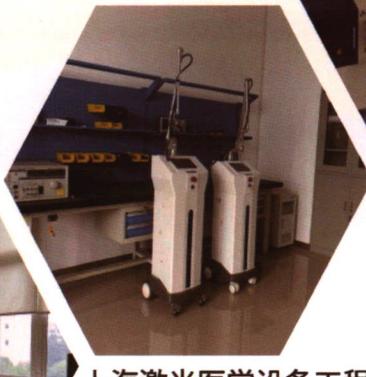
研发平台



上海激光智能制造工程技术研究中心



上海激光直接物标溯源工程技术研究中心



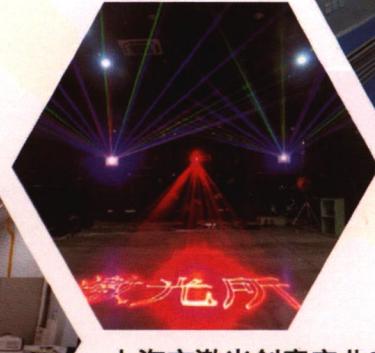
上海激光医学设备工程技术研究中心



上海市激光束精细加工重点实验室



上海先进激光探测工程技术研究中心



上海科学院激光探测技术研究中心



上海测试中心激光行业测试点

上海市激光创意产业专业技术服务平台

广告