

材料科学与工程

MATERIALS SCIENCE AND TECHNOLOGY

第28卷 第3期 Vol.28 No.3



1920-2020
哈工大百年校庆专刊



中国材料研究学会 (C-MRS) 主办
哈尔滨工业大学 (HIT)

2020.3

材料科学与工程

第 28 卷 第 3 期 2020 年 6 月

目 次

我国压水堆用材料与异材焊接

..... 李依依,陆善平(1)

温和条件下氧化铜纳米片层的制备与电化学催化性质研究

..... 张 媛,冯守华(9)

地外人工光合成材料研究进展

..... 姚颖方,张 策,吴聪萍,罗文俊,姚 伟,邹志刚(14)

三级硅基填料的构筑及其对牙科复合树脂性能的影响

..... 王瑞莉,朱美芳(24)

铀钼合金结构及性能调控研究进展

..... 蒙大桥,陈向林,陈 冬,赵雅文,黄 河,法 涛(31)

金刚石光学窗口相关元件的研究进展 王伟华,代 兵,

王 杨,舒国阳,姚凯丽,刘本建,赵继文,刘 康,杨 磊,朱嘉琦,韩杰才(42)

核壳结构纳米镁基复合储氢材料研究进展

..... 张秋雨,邹建新,任 莉,马哲文,朱 文,丁文江(58)

深度学习在材料显微图像分析中的应用与挑战

..... 班晓娟,宿彦京,谢建新(68)

碳纳米管增强镁基复合材料制备及界面研究进展

..... 张 乾,齐乐华,李贺军(76)

不同应力水平下 SiC_f/SiC 复合材料的损伤行为和机制研究

..... 薛玉冬,胡建宝,杨金山,周海军,张翔宇,丁玉生,董绍明(89)

钛及钛合金粉末制备与近净成形研究进展

..... 陈 刚,路 新,章 林,秦明礼,郭志猛,曲选辉(98)

铜基复合材料的构型多功能化

..... 张 荻,熊定邦,李志强(109)

电冲击处理(EST)对 TC11 钛合金微结构和力学性能的影响研究

..... 谢乐春,刘 畅,华 林(116)

高氮过饱和奥氏体表面改性层结构研究进展

..... 车宏龙,王克胜,梁 健,雷明凯(130)

无机全固态电致变色器件研究进展

..... 张 翔,李文杰,李 垚,赵九蓬(140)

加载条件对内高压成形管件尺寸精度的影响

..... 崔晓磊,韩 聪,苑世剑(150)

形状记忆聚合物材料及其在航天器新型锁紧释放机构中的应用

..... 赵寒星,兰 鑫,冷劲松(157)

MATERIALS SCIENCE AND TECHNOLOGY

Vol. 28 No. 3 Feb. 2020

CONTENTS

- Materials for pressurized water reactors and dissimilar materials welding in China
..... *LI Yiyi, LU Shanping*(1)
- Facile and mild synthesis of CuO nanosheets and their application as electrochemical catalyst
..... *ZHANG Yuan, FENG Shouhua*(9)
- Research progress of extraterrestrial artificial photosynthetic materials
..... *YAO Yingfang, ZHANG Ce, WU Congping, LUO Wenjun, YAO Wei, ZOU Zhigang*(14)
- Construction of trimodal silica-based filler and its effects on properties of dental resin composites
..... *WANG Ruili, ZHU Meifang*(24)
- Research progress in control of structure and performance of uranium-niobium alloys
..... *MENG Daqiao, CHEN Xianglin, CHEN Dong, ZHAO Yawen, HUANG He, FA Tao*(31)
- Recent progress of diamond optical window-related components *WANG Weihua, DAI Bing, WANG Yang, SHU Guoyang, YAO Kaili, LIU Benjian, ZHAO Jiwen, LIU Kang, YANG Lei, ZHU Jiaqi, HAN Jiecai*(42)
- Research development of core-shell nanostructured Mg-based hydrogen storage composite materials
..... *ZHANG Qiuyu, ZOU Jianxin, REN Li, MA Zhewen, ZHU Wen, DING Wenjiang*(58)
- Applications and challenges of deep learning in material microscopic image analysis
..... *BAN Xiaojuan, SU Yanjing, XIE Jianxin*(68)
- Research progress on manufacture processes and interface of CNTs/Mg composites: a review
..... *ZHANG Qian, QI Lehua, LI Hejun*(76)

Study on damage behavior and mechanism of SiC_f/SiC composites subjected to different stress levels

..... XUE Yudong,

HU Jianbao, YANG Jinshan, ZHOU Haijun, ZHANG Xiangyu, DING Yusheng, DONG Shaoming(89)

Research progress in powder production and near-net-shape manufacturing of titanium and its alloys

..... CHEN Gang, LU Xin, ZHANG Lin, QIN Mingli, GUO Zhimeng, QU Xuanhui(98)

Multifunctional copper matrix composites by architecture design

..... ZHANG Di, XIONG Dingbang, LI Zhiqiang(109)

Investigation on microstructure variation and mechanical properties of TC11 titanium alloy after electroshocking treatment (EST)

XIE Lechun, LIU Chang, HUA Lin(116)

State of the art for microstructure of surface layer composed of high-nitrogen supersaturated austenite

..... CHE Honglong, WANG Kesheng, LIANG Jian, LEI Mingkai(130)

Research progress of inorganic all-solid-state electrochromic devices

..... ZHANG Xiang, LI Wenjie, LI Yao, ZHAO Jiupeng(140)

Effect of loading conditions on dimension accuracy of hydroformed tubular parts

..... CUI Xiaolei, HAN Cong, YUAN Shijian(150)

Shape memory polymer materials and their applications in releasing devices of spacecraft

..... ZHAO Hanxing, LAN Xin, LENG Jinsong(157)