

1956年创刊

EI 收录期刊

中文核心期刊

ISSN 1001-4381

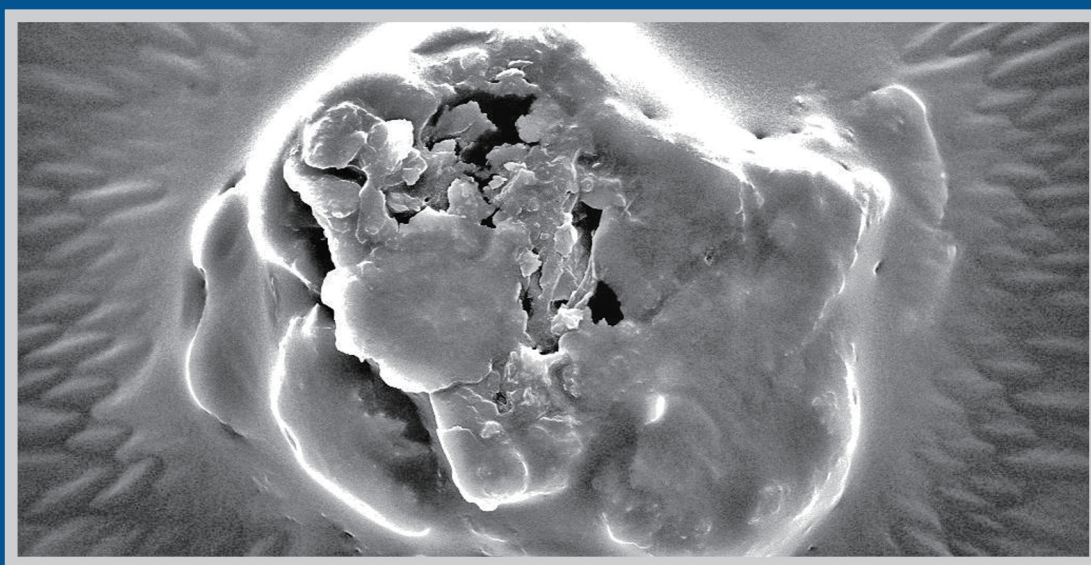
CODEN CAGOEW

# 材料工程

# 4 2016

JOURNAL OF MATERIALS ENGINEERING

第44卷 | Vol.44



ISSN 1001-4381



中国航空工业集团公司北京航空材料研究院 主办

2016 年第 44 卷第 4 期 (总第 395 期)

## 目 次

### 材料与工艺

- AZ31 镁合金室温拉伸微观变形机制 EBSD 原位跟踪研究 ..... 宋广胜, 陈强强, 徐 勇, 李 娟, 张士宏 (1)
- 流动温压成型黏结钨铁硼/锆铁氧体复合磁体的研究 ..... 钟喜春, 胡 庚, 郭兴家, 刘仲武 (9)
- 高分子中空微球的制备及其在聚硫密封剂中的应用  
..... 王忠兵, 洪 强, 罗小杰, 章谏正, 宋英红, 吴松华, 杨保俊 (14)
- 多壁碳纳米管增强铝基复合材料的高温力学性能 ..... 刘 强, 柯黎明, 刘奋成, 黄春平 (20)
- SUS304 不锈钢板点焊接头超声成像及力学性能 ..... 张 龙, 曾 凯, 何晓聪, 邢保英, 孙鑫宇, 胡 伟 (26)
- 低碳硅锰钢 I&Q&P 处理中 C, Mn 元素配分综合作用  
..... 田亚强, 张宏军, 陈连生, 宋进英, 魏英立, 张健杨 (32)
- 固相剪切碾磨制备铝粉填充聚乙烯基高性能导热复合材料的研究 ..... 吴贺君, 卢灿辉, 李庆业, 胡 彪 (39)
- 一种碳纤维/环氧预浸料的微波固化特性及其层合板的微波固化工艺研究  
..... 陈 萍, 徐学宏, 李振忠, 闫 超, 王世杰, 王小群 (45)
- 激光淬火后 Cr12MoV 渗铬层的摩擦与磨损性能 ..... 付贵忠, 孔德军, 张 垒 (51)
- 消除法制备低氯漂白紫胶及机理 ..... 廖亚龙, 杨功舜, 周 娟 (59)
- Al 元素对 Al<sub>x</sub>FeCrCoCuV 高熵合金组织及摩擦性能的影响  
..... 谢红波, 刘贵仲, 郭景杰, 周 敏, 刘德飘, 毛炜乾 (65)

### 测试与表征

- 5083 铝合金扭动微动磨损实验研究 ..... 伍 灿, 沈火明, 邓莎莎, 刘 娟, 彭金方 (71)
- 纤维缠绕复合材料起伏区域残余应力 ..... 和欣辉, 韩小平 (76)
- T700/5224 复合材料在湿热环境和化学介质中的老化行为 ..... 张晓云, 曹 东, 陆 峰, 刘建华 (82)
- 辐照过程中 He 对 ODS 合金中氧化物的影响 ..... 贺建超, 高 进, 邓 东, 万发荣 (89)

### 综 述

- 航空发动机可磨耗封严涂层技术研究及性能评价 ..... 张俊红, 鲁 鑫, 何振鹏, 王志平 (94)
- Zr-Sn-Nb-Fe 系钎合金中第二相粒子研究进展 ..... 范清松, 杨忠波, 周 军, 石明华, 陈 鑫, 李中奎 (110)
- 冷压焊界面结合机理与结合强度研究现状 ..... 王艳松, 李文亚, 杨夏炜, 付 颖 (119)

封面照片: 固相剪切碾磨制备铝粉填充聚乙烯基高性能导热复合材料的研究 (见吴贺君等论文, 第 41 页图 1)

责任编辑 王 晶

## CONTENTS

### MATERIALS & TECHNOLOGY

- Deformation Micro-mechanism of AZ31 Mg Alloy During Tension at Room Temperature by EBSD *In-situ* Tracking ..... SONG Guang-sheng, CHEN Qiang-qiang, XU Yong, LI Juan, ZHANG Shi-hong(1)
- Bonded NdFeB/Sr-ferrite Hybrid Magnets by Warm Flow Compaction Process ..... ZHONG Xi-chun, HU Geng, GUO Xing-jia, LIU Zhong-wu(9)
- Preparation of Hollow Polymer Microsphere and Its Application in Polysulfide Sealant ..... WANG Zhong-bing, HONG Qiang, LUO Xiao-jie, ZHANG Jian-zheng, SONG Ying-hong, WU Song-hua, YANG Bao-jun(14)
- High Temperature Mechanical Properties of Aluminum Matrix Composites Reinforced by Multi-walled Carbon Nanotubes ..... LIU Qiang, KE Li-ming, LIU Fen-cheng, HUANG Chun-ping(20)
- Ultrasonic Imaging and Mechanical Properties of Spot Welds Joint on SUS304 Stainless Steel ..... ZHANG Long, ZENG Kai, HE Xiao-cong, XING Bao-ying, SUN Xin-yu, HU Wei(26)
- Comprehensive Effect of C, Mn Partitioning Behavior on Retained Austenite of Low Carbon Si-Mn Steel in I&Q&P Process ..... TIAN Ya-qiang, ZHANG Hong-jun, CHEN Lian-sheng, SONG Jin-ying, WEI Ying-li, ZHANG Jian-yang(32)
- Aluminum Filled Polyethylene-based Thermally Conductive High Performance Composites Prepared by Solid State Shear Milling ..... WU He-jun, LU Can-hui, LI Qing-ye, HU Biao(39)
- Curing Behavior of a Carbon Fiber/Epoxy Prepreg and Curing Processing of Laminates with Microwave Radiation ..... CHEN Ping, XU Xue-hong, LI Zhen-zhong, YAN Chao, WANG Shi-jie, WANG Xiao-qun(45)
- Friction and Wear Properties of Cr12MoV Chromized Layer After Laser Quenching ..... FU Gui-zhong, KONG De-jun, ZHANG Lei(51)
- Preparation and Mechanism of Low Chlorine Shellac by Means of Elimination Method ..... LIAO Ya-long, YANG Gong-shun, ZHOU Juan(59)
- Effects of Al Addition on Microstructure and Wear Properties of Al<sub>2</sub>FeCrCoCuV High-entropy Alloys ..... XIE Hong-bo, LIU Gui-zhong, GUO Jing-jie, ZHOU Min, LIU De-piao, MAO Wei-qian(65)

### TESTING & CHARACTERIZING

- Torsional Fretting Wear of 5083 Aluminum Alloy ..... WU Can, SHEN Huo-ming, DENG Sha-sha, LIU Juan, PENG Jin-fang(71)
- Residual Stresses in Local Fiber Undulations for Filament-wound Composites ..... HE Xin-hui, HAN Xiao-ping(76)
- Aging Behavior of T700/5224 Composite in Hygrothermal Environment and Chemical Media ..... ZHANG Xiao-yun, CAO Dong, LU Feng, LIU Jian-hua(82)
- Effect of Helium on Oxides in ODS Alloy During Ion Irradiation ..... HE Jian-chao, GAO Jin, DENG Dong, WAN Fa-rong(89)

### REVIEW

- Technique Application and Performance Evaluation for Abradable Coating in Aeroengine ..... ZHANG Jun-hong, LU Xin, HE Zhen-peng, WANG Zhi-ping(94)
- Research Progress of Second Phase Particles on Zr-Sn-Nb-Fe Zirconium Alloys ..... FAN Qing-song, YANG Zhong-bo, ZHOU Jun, SHI Ming-hua, CHEN Xin, LI Zhong-kui(110)
- Research Status on Interface Bonding Mechanisms and Strength of Cold Pressure Welding ..... WANG Yan-song, LI Wen-ya, YANG Xia-wei, FU Ying(119)