



ISSN 1003-6326
CN 43-1239/TG
CODEN TNMCEW

Transactions of Nonferrous Metals Society of China

中国有色金属学报(英文版)

August 2022

Volume 32 Number 8

目次

材料科学与工程

- 基于同步辐射成像技术的原位观察装置及金属凝固过程原位表征研究进展
..... 卢温泉, 张乃方, 丁宗业, 胡侨丹, 李建国 (2451)
- 转速对商业纯铝基体上摩擦堆焊制备铝化镍增强铝基复合材料涂层的影响
..... Mobina YOUSEFI, Hamed JAMSHIDI AVAL (2480)
- 稀土 Gd 对均匀化态 Mg–8Li–3Al–2Zn–0.2Zr 合金显微组织、力学性能和腐蚀行为的影响
..... 孙月花, 王日初, 彭超群, 王小锋 (2494)
- 钇和钙的添加对镁–空气电池阳极材料 AZ80 电化学行为和放电性能的影响
..... 张钰雯茜, 韩璐, 任凌宝, 范玲玲, 郭阳阳, 周明扬, 权高峰 (2510)
- 含 Al₂Ca 相和 Mg₂Ca 相 Mg–Al–Ca–Mn 合金经等通道转角挤压加工后的腐蚀性能
..... 何书恒, 王策, 孙超, 张越, 严凯, 江静华, 白晶, 薛烽, 刘欢 (2527)
- 等通道侧向挤压和板材挤压法制备细晶 ZK60 镁合金板材的热剪切变形本构分析
..... N. FAKHAR, M. SABBAGHIAN (2541)
- 镁合金交互式交替正向挤压成形过程中显微组织演变及增塑机制
..... 杜华秋, 李峰, 霍鹏达, 王宇 (2557)
- 一种 AZ31 镁合金管材挤压–剪切–扩径成形工艺
..... 田野, 胡红军, 赵辉, 张威, 梁鹏程, 蒋斌, 张丁非 (2569)
- 电脉冲处理对激光沉积 Ti–6Al–4V 合金强度各向异性的影响
..... 王福斌, 刘宇珂, 佟运祥, 张翀, 姜风春, 王建东 (2578)
- 退火温度对冷轧商业纯钛板材组织和力学性能的影响
..... 赵帅, 王洋, 彭琳, 张元祥, 冉蓉, 袁国 (2587)
- 波纹辊和平辊轧制 Ti/Cu/Ti 层压复合材料的显微组织与力学性能
..... 刘竹波, 王昕玥, 刘名硕, 刘元铭, 刘江林, A. V. IGNATOV, 王涛 (2598)
- Nb/NiTi 复合材料预变形过程中变形行为的原位同步辐射 X 射线衍射研究
..... 郭顺, 张慧慧, Min-kyung KWAK, 丁旺, 刘光磊, 马雯, 刘海霞, 孟庆坤, 赵新青 (2609)
- 高硼/钇合金化提高 FeAl 基金属间化合物多孔材料的抗氧化性能
..... 张惠斌, 余航, 马俊良, 王龙飞, 徐圣航, 郑国渠 (2620)
- 工艺参数对激光选区熔化成形纯镍表面质量及致密化行为的影响
..... 岳天洋, 张升, 王超越, 徐伟, 徐一镝, 史玉升, 臧勇 (2634)
- 添加 Si/Ti 对粉末冶金 NiCrCo 高熵合金物理力学和化学性能的影响
..... Sarah HEDYA, Lamiaa MOHAMED, Ghalia GABER, Omayma ELKADY, Hassan MEGAHEDE, Shimaa ABULKASSEM (2648)

不同稀土氧化物对 ODS-W 和 ODS-Mo 合金粉末形貌和尺寸的影响

.....张 和, 李志博, 邓孝纯, 陈 奔, 张国华, 周国治 (2665)

操作次数对 Ag/Ni 电触头材料电弧侵蚀行为的影响.....黄润章, 徐国富, 吴 琼, 元 梦, 吴春萍 (2681)

矿业工程 • 冶金工程

饱和含水量下三维高应力圆形隧道的破坏过程及特征.....司雪峰, 黄麟淇, 宫凤强, 李夕兵 (2696)
新型铜硫浮选分离硫氨基捕收剂的合成及吸附机理

.....曹 飞, 孙德四, 邱仙辉, 周德志, 张行荣, 孙传尧 (2709)

金银合金真空分离的理论研究.....王双平, 赵晋阳, 徐宝强, 孔令鑫, 蒋文龙, 杨 斌 (2719)
低分子比 NaF-KF-LiF-AlF₃ 体系电解质在石墨阴极中的渗透行为

.....陈炳旭, 彭建平, 王耀武, 狄跃忠 (2727)

添加氟对 LiCl-KCl 熔盐中钒离子电化学行为的影响

.....苑 锐, 吕 成, 万贺利, 李少龙, 车玉思, 何季麟, 宋建勋 (2736)

废旧锂离子电池火法冶炼富锰渣中锰和锂的提取.....任国兴, 廖财斌, 刘志宏, 肖松文 (2746)
多巯基磁性生物竹炭纳米复合材料的化学共沉积制备及其高效去除水溶液中的 As(III)

.....罗铁维, 万 斯, 肖疆俊, 吴代赦 (2757)

一种 MAL 改性水凝胶球珠对铅离子的吸附.....郑春莉, 王巧蕊, 耿国庆, 王振兴, 卓 恒 (2770)

责任编辑：杨 兵

[期刊基本参数] CN43—1239/TG*1991*m*A4*336*en*P*¥100.00*1000*25*2022-08

CONTENTS

Materials Science and Engineering

- Recent progress on apparatus development and in situ observation of metal solidification processes via synchrotron radiation X-ray imaging: A review Wen-quan LU, Nai-fang ZHANG, Zong-ye DING, Qiao-dan HU, Jian-guo LI (2451)
- Influence of rotational speed in friction surfacing of nickel-aluminide reinforced aluminum matrix composite on commercially pure aluminum Mobina YOUSEFI, Hamed JAMSHIDI AVAL (2480)
- Effect of Gd on microstructure, mechanical properties, and corrosion behavior of as-homogenized Mg–8Li–3Al–2Zn–0.2Zr alloy Yue-hua SUN, Ri-chu WANG, Chao-qun PENG, Xiao-feng WANG (2494)
- Effect of yttrium and calcium additions on electrochemical behaviors and discharge performance of AZ80 anodes for Mg–air battery Yu-wen-xi ZHANG, Lu HAN, Lin-bao REN, Ling-ling FAN, Yang-yang GUO, Ming-yang ZHOU, Gao-feng QUAN (2510)
- Corrosion properties of ECAP-processed Mg–Al–Ca–Mn alloys with separate Al₂Ca and Mg₂Ca phases Shu-heng HE, Ce WANG, Chao SUN, Yue ZHANG, Kai YAN, Jing-hua JIANG, Jing BAI, Feng XUE, Huan LIU (2527)
- Hot shear deformation constitutive analysis of fine-grained ZK60 Mg alloy sheet fabricated via dual equal channel lateral extrusion and sheet extrusion N. FAKHAR, M. SABBAGHIAN (2541)
- Microstructure evolution and ductility improvement mechanisms of magnesium alloy in interactive alternating forward extrusion Hua-qi DU, Feng LI, Peng-da HUO, Yu WANG (2557)
- An extrusion–shear–expanding process for manufacturing AZ31 magnesium alloy tube Ye TIAN, Hong-jun HU, Hui ZHAO, Wei ZHANG, Peng-cheng LIANG, Bin JIANG, Ding-fei ZHANG (2569)
- Effect of electropulsing on anisotropy in strength of laser metal deposited Ti–6Al–4V alloy Fu-bin WANG, Yu-ke LIU, Yun-xiang TONG, Chong ZHANG, Feng-chun JIANG, Jian-dong WANG (2578)
- Effect of annealing temperature on microstructure and mechanical properties of cold-rolled commercially pure titanium sheets Shuai ZHAO, Yang WANG, Lin PENG, Yuan-xiang ZHANG, Rong RAN, Guo YUAN (2587)
- Microstructure and mechanical behavior of Ti/Cu/Ti laminated composites produced by corrugated and flat rolling Zhu-bo LIU, Xin-yue WANG, Ming-shuo LIU, Yuan-ming LIU, Jiang-lin LIU, A. V. IGNATOV, Tao WANG (2598)
- In-situ synchrotron X-ray diffraction investigation on deformation behavior of Nb/NiTi composite during pre-straining process Shun GUO, Hui-hui ZHANG, Min-kyung KWAK, Wang DING, Guang-lei LIU, Wen MA, Hai-xia LIU, Qing-kun MENG, Xin-qing ZHAO (2609)
- Improving oxidation resistance of porous FeAl-based intermetallics with high boron/yttrium alloying Hui-bin ZHANG, Hang YU, Jun-liang MA, Long-fei WANG, Sheng-hang XU, Guo-qu ZHENG (2620)
- Effects of selective laser melting parameters on surface quality and densification behaviours of pure nickel Tian-yang YUE, Sheng ZHANG, Chao-yue WANG, Wei XU, Yi-di XU, Yu-sheng SHI, Yong ZANG (2634)

- Effect of Si/Ti additions on physico-mechanical and chemical properties of FeNiCrCo high entropy alloys manufactured by powder metallurgy technique.....Sarah HEDYA, Lamiaa MOHAMED, Ghalia GABER, Omayma ELKADY, Hassan MEGAHEDE, Shimaab ABOLKASSEM (2648)
- Effects of various rare earth oxides on morphology and size of oxide dispersion strengthening (ODS)-W and ODS-Mo alloy powdersHe ZHANG, Zhi-bo LI, Xiao-chun DENG, Ben CHEN, Guo-hua ZHANG, Kuo-Chih CHOU (2665)
- Influence of operation number on arc erosion behavior of Ag/Ni electrical contact materialsRun-zhang HUANG, Guo-fu XU, Qiong WU, Meng YUAN, Chun-ping WU (2681)

Mining, Minerals Processing and Metallurgical Engineering

- Failure process and characteristics of three-dimensional high-stress circular tunnel under saturated water content.....Xue-feng SI, Lin-qi HUANG, Feng-qiang GONG, Xi-bing LI (2696)
- Synthesis of novel thionocarbamate for copper–sulfur flotation separation and its adsorption mechanismFei CAO, De-si SUN, Xian-hui QIU, De-zhi ZHOU, Xing-rong ZHANG, Chuan-yao SUN (2709)
- Theoretical research on vacuum separation of Au–Ag alloy.....Shuang-ping WANG, Jin-yang ZHAO, Bao-qiang XU, Ling-xin KONG, Wen-long JIANG, Bin YANG (2719)
- Penetration behavior of electrolyte into graphite cathode in NaF–KF–LiF–AlF₃ system with low cryolite ratios.....Bing-xu CHEN, Jian-ping PENG, Yao-wu WANG, Yue-zhong DI (2727)
- Effect of fluoride addition on electrochemical behaviors of V(III) in molten LiCl–KClRui YUAN, Cheng LÜ, He-li WAN, Shao-long LI, Yu-si CHE, Ji-lin HE, Jian-xun SONG (2736)
- Lithium and manganese extraction from manganese-rich slag originated from pyrometallurgy of spent lithium-ion battery.....Guo-xing REN, Cai-bin LIAO, Zhi-hong LIU, Song-wen XIAO (2746)
- High-rate removal of As(III) from aqueous system with sulfhydryl magnetic biological bamboo charcoal nanocomposites prepared by chemical co-precipitation methodYi-wei LUO, Si WAN, Jiang-jun XIAO, Dai-she WU (2757)
- Adsorption of lead ions by a kind of MAL modified hydrogel beadsChun-li ZHENG, Qiao-rui WANG, Guo-qing GENG, Zhen-xing WANG, Heng ZHUO (2770)

Managing Editor: Bing YANG

Serial parameter: CN43—1239/TG*1991*m*A4*336*en*P*¥100.00*1000*25*2022—08