



ISSN 1004-0609
CODEN ZYJXFK

中国有色金属学报

The Chinese Journal of Nonferrous Metals

July 2014

Volume 24 Number 7

中国有色金属学会 主办
科学出版社 出版

目次

结构材料

铝合金双脉冲MIG焊过程的温度及应力变形模拟.....曹淑芬,陈铁平,易杰,郭鹏程,李落星(1685)

2099合金的热变形行为及组织演化.....张飞,沈健,闫晓东,孙建林,陈松,白云峰,周华(1693)

初始取向对大应变轧制AZ31镁合金板材显微组织和力学性能的影响.....董勇,刘吉兆(1700)

基于微/纳二元结构镁合金超疏水膜层的制备.....李杰,刘玉德,黄雅婷,高东明,张会臣,栗苗苗(1707)

2198和C24S异种铝锂合金搅拌摩擦焊接头的显微组织和力学性能.....邢丽,宋骁,柯黎明(1714)

高温合金凸环管件固体颗粒介质成形工艺.....杜冰,赵长财,李雪峰,何昕,董国疆(1721)

$Ni_{74.6}Al_xMo_{25.4-x}$ 合金早期沉淀过程的微观相场模拟.....王新然,赵宇宏,侯华,杨东然,王锐,李海峰(1730)

激光胶接焊镀锌钢/铝合金的显微组织与性能.....周怙武,戴婷,徐少华,刘金水(1736)

7475铝合金阳极氧化膜表面-界面组织与特征.....孔德军,王进春,刘浩(1744)

CDS及导流器对Al-20%Si合金初生硅相的影响.....张心龙,李元东,马颖,周宏伟,刘兴海(1752)

过共晶Al-18%Si合金受控扩散凝固组织与行为.....周宏伟,李元东,马颖,张心龙,刘兴海(1761)

Ti55531合金连续升温过程的相变行为.....王广楠,张晓冰,李志友,周科朝(1771)

定向退火条件下柱状晶形成及连续扩展的相场模拟.....罗志荣,高英俊,邓芊芊,黄礼琳,黄创高(1778)

功能材料

热处理过程中锂离子电池正极材料 $LiNi_{0.5}Co_{0.2}Mn_{0.3}O_2$ 的结构变化及电化学性能
.....李运姣,任苗苗,韩强,明宪权,李普良,许虎,李林(1785)

几何缺陷对Ti-7.5Nb-4Mo-2.5Sn形状记忆合金超弹性能的影响
.....张芸,罗致春,张德闯,丁玎,兰志俊,林建国(1792)

$[Fe_{0.71}(Dy_xNd_{1-x})_{0.05}B_{0.24}]_{96}Nb_4$ ($x=0-1$)块体合金的非晶形成能力和磁性能.....魏珊,徐晖,侯雪玲(1799)

不同纳米氧化铝含量Ni-P- Al_2O_3 化学镀层的高温磨损性能
.....郑晓华,刘辉,章荣,杨芳儿,陈琨,周军(1804)

激光-感应复合熔覆Cu-Fe合金涂层的结构与性能.....周圣丰,戴晓琴,熊征,张天佑,吴超(1812)

石墨烯透明导电薄膜的合成与表征.....王永祯,王勇,刘志涛,蔡晓岚(1817)

圆柱锂离子动力电池电热特性仿真.....杜双龙,赖延清,贾明,程响,张红亮,张凯,刘业翔(1823)

$\beta-NaYF_4:Yb^{3+},Er^{3+}$ 上转换发光材料的可控合成及其发光性能
.....武利民,李瑞霞,付文强,陈研文,杜红丽,郭栋才(1831)

氯化胆碱-乙二醇低共熔溶剂中电沉积纳米晶镍.....李瑞乾,梁军,初青伟(1839)

矿业工程 · 冶金工程 · 化学与化工

- 哈密铜镍矿工艺矿物学特性与影响选矿的因素·····罗立群,李金良,曹佳宏(1846)
- 类砂岩型矿石的浸出特性·····吴爱祥,刘超,尹升华,柯锦福,薛振林(1856)
- 外加电场对细粒散体浸堆渗透性的影响·····王少勇,吴爱祥,尹升华,缪秀秀,胡凯建(1864)
- Si-Sn 合金精炼一定向凝固过程硅的分离和提纯·····巫剑,王志,胡晓军,郭占成,范占军,谢永龙(1871)
- 吉布斯吸附等温式的应用—电解质溶液活度测定新方法·····陈辉煌,陈启元,刘常青,张平民,胡久刚(1878)
- 钨钼冶炼过程中除钒·····陈星宇,肖露萍,赵中伟(1883)
- 煤粉炉高铝粉煤灰碱溶脱硅反应动力学·····贺实月,李会泉,李少鹏,李勇辉,解强(1888)
- 大孔型树脂处理高浓度钨酸钠溶液·····刘旭恒,胡芳,赵中伟(1895)
- Co^{2+} - H_2O 体系羟基配离子配位平衡·····田庆华,辛云涛,郭学益,王恒利,袁廷刚(1901)
- 以 SiHCl_3 和 SiCl_4 的混合物为原料制备多晶硅热力学·····侯彦青,谢刚,俞小花,李荣兴,宋东明(1907)
- 光电化学协同催化降解水中的扑草净·····唐建军,陈益清,李文龙(1915)
- 改性甘蔗渣填充柱对铅离子的吸附·····王丽艳,余军霞,何正艳,徐志高,张越非,池汝安(1921)
- 氨基硫脲改性硅胶对 Pd^{2+} 的动态吸附性能·····杨明珠,李耀威,王刚,刘健(1927)

责任编辑:龙怀中,陈卫萍,李艳红,何学锋

[期刊基本参数] CN43—1238/TG*1991*m*A4*248*zh*P*¥80.0*1400*35*2014-7

The Chinese Journal of Nonferrous Metals

(ZHONGGUO YOUSE JINSHU XUEBAO)

Volume 24 Number 7

(Sum 184)

July 2014

CONTENTS

Structural Materials

- Simulation of temperature, stress and deformation during double pulsed MIG welding of aluminum alloy
.....CAO Shu-fen, CHEN Tie-ping, YI Jie, GUO Peng-cheng, LI Luo-xing(1685)
- Hot deformation behavior and microstructure evolution of 2099 alloy
.....ZHANG Fei, SHEN Jian, YAN Xiao-dong, SUN Jian-lin, CHEN Song, BAI Yun-feng, ZHOU Hua(1693)
- Effects of initial orientation on microstructure and mechanical properties of AZ31 magnesium alloy
sheets fabricated by large strain rolling.....DONG Yong, LIU Ji-zhao(1700)
- Preparation of superhydrophobic film on magnesium alloy surface based on micro-nano binary structure
.....LI Jie, LIU Yu-de, HUANG Ya-ting, GAO Dong-ming, ZHANG Hui-chen, LI Miao-miao(1707)
- Microstructures and mechanical properties of friction stir welding dissimilar 2198 and C24S Al-Li alloys
.....XING Li, SONG Xiao, KE Li-ming(1714)
- Forming technology of high temperature alloy convex ring shaped tube by solid granule medium
.....DU Bing, ZHAO Chang-cai, LI Xue-feng, HE Xin, DONG Guo-jiang(1721)
- Microscopic phase-field simulation for early precipitation process of $Ni_{74.6}Al_xMo_{25.4-x}$ alloy
.....WANG Xin-ran, ZHAO Yu-hong, HOU Hua, YANG Dong-ran, WANG Kun, LI Hai-feng(1730)
- Microstructure and properties of galvanized steel/aluminum alloy laser-adhesive hybrid bonding
.....ZHOU Dian-wu, DAI Ting, XU Shao-hua, LIU Jin-shui(1736)
- Surface-interface structures and characteristics of anodic oxidation film on 7475 aluminium alloy
.....KONG De-jun, WANG Jin-chun, LIU Hao(1744)
- Effect of CDS and cooling channel on primary Si phase of Al-20%Si alloy
.....ZHANG Xin-long, LI Yuan-dong, MA Ying, ZHOU Hong-wei, LIU Xing-hai(1752)
- Microstructure and solidification behavior of Al-18%Si hypereutectic alloy prepared by controlled diffusion
solidification.....ZHOU Hong-wei, LI Yuan-dong, MA Ying, ZHANG Xin-long, LIU Xing-hai(1761)
- Phase transformation of Ti55531 alloy during continuous heating process
.....WANG Guang-nan, ZHANG Xiao-yong, LI Zhi-you, ZHOU Ke-chao(1771)
- Phase field simulation of formation and continuous propagation of columnar grain structure during
directional annealing.....LUO Zhi-rong, GAO Ying-jun, DENG Qian-qian,
HUANG Li-lin, HUANG Chuang-gao(1778)

Functional Materials

- Structural change and electrochemical performance of $LiNi_{0.5}Co_{0.2}Mn_{0.3}O_2$ as cathode material for lithium ion batteries
.....LI Yun-jiao, REN Miao-miao, HAN Qiang, MING Xian-quan, LI Pu-liang, XU Hu, LI Lin(1785)
- Effect of geometric defects on superelasticity of Ti-7.5Nb-4Mo-2.5Sn shape memory alloy
.....ZHANG Yun, LUO Zhi-chun, ZHANG De-chuang, DING Ding, LAN Zhi-jun, LIN Jian-guo(1792)

- Glass-forming ability and magnetic property of $[\text{Fe}_{0.71}(\text{Dy}_x\text{Nd}_{1-x})_{0.05}\text{B}_{0.24}]_{96}\text{Nb}_4(x=0-1)$ bulk alloys
WEI Shan, XU Hui, HOU Xue-ling(1799)
- High-temperature wear properties of electroless Ni-P- Al_2O_3 composite coatings with various contents of nano- Al_2O_3
ZHENG Xiao-hua, LIU Hui, ZHANG Rong, YANG Fang-er, CHEN Li, ZHOU Jun(1804)
- Microstructure and property of Cu-Fe alloy coating prepared by laser-induction hybrid cladding
ZHOU Sheng-feng, DAI Xiao-qin, XIONG Zheng, ZHANG Tian-you, WU Chao(1812)
- Synthesis and characterization of graphene transparent conductive films
WANG Yong-zhen, WANG Yong, LIU Zhi-tao, CAI Xiao-lan(1817)
- Electrothermal characteristics simulation of cylindrical automotive lithium-ion battery.....DU Shuang-long,
 LAI Yan-qing, JIA Ming, CHENG Yun, ZHANG Hong-liang, ZHANG Kai, LIU Ye-xiang(1823)
- Controlled synthesis and up-conversion luminescence properties of $\beta\text{-NaYF}_4: \text{Yb}^{3+}, \text{Er}^{3+}$ nanocrystals
WU Li-min, LI Rui-xia, FU Wen-qiang, CHEN Yan-wen, DU Hong-li, GUO Dong-cai(1831)
- Electrodeposition of nanocrystalline Ni from choline chloride and ethylene glycol deep eutectic solvent
LI Rui-qian, LIANG Jun, CHU Qing-wei(1839)

Mine Engineering, Metallurgical Engineering, Chemistry and Chemical Engineering

- Process mineralogy and factors affecting mineral processing for copper-nickel ore in Hami
LUO Li-qun, LI Jin-liang, CAO Jia-hong(1846)
- Leaching properties of quasi-sandstone type ore
WU Ai-xiang, LIU Chao, YIN Sheng-hua, KE Jing-fu, XUE Zhen-lin(1856)
- Effect of applied electric field on permeability of fine granules heap
WANG Shao-yong, WU Ai-xiang, YIN Sheng-hua, MIAO Xiu-xiu, HU Kai-jian(1864)
- Separation and purification of silicon by combined Si-Sn alloy refining and directional solidification process
WU Jian, WANG Zhi, HU Xiao-jun, GUO Zhan-cheng, FAN Zhan-jun, XIE Yong-long(1871)
- Application of Gibbs adsorption isotherm—A new method to measure activity of electrolyte solutions
CHEN Hui-huang, CHEN Qi-yuan, LIU Chang-qing, ZHANG Ping-min, HU Jiu-gang(1878)
- V removal in tungsten or molybdenum smelting process.....CHEN Xing-yu, XIAO Lu-ping, ZHAO Zhong-wei(1883)
- Kinetics of desilication process of fly ash with high aluminum from pulverized coal fired boiler in alkali solution
HE Shi-yue, LI Hui-quan, LI Shao-peng, LI Yong-hui, XIE Qiang(1888)
- Treatment of high concentration sodium tungstate with macroporous resin
LIU Xu-heng, HU Fang, ZHAO Zhong-wei(1895)
- Thermodynamic equilibrium of hydroxyl complex ions in $\text{Co}^{2+}\text{-H}_2\text{O}$ system
TIAN Qing-hua, XIN Yun-tao, GUO Xue-yi, WANG Heng-li, YUAN Ting-gang(1901)
- Thermodynamic simulation of polysilicon production with mixture of SiHCl_3 and SiCl_4 as precursor
HOU Yan-qing, XIE Gang, YU Xiao-hua, LI Rong-xing, SONG Dong-ming(1907)
- Synergetic degradation of prometryn by photo-electro-chemical catalytic method
TANG Jian-jun, CHEN Yi-qing, LI Wen-long(1915)
- Dynamic adsorption of lead ion on modified bagasse fixed bed
WANG Li-yan, YU Jun-xia, HE Zheng-yan, XU Zhi-gao, ZHANG Yue-fei, CHI Ru-an(1921)
- Dynamic adsorption behavior of Pd^{2+} on silica gel functionalized with thiosemicarbazide
YANG Ming-zhu, LI Yao-wei, WANG Gang, LIU Jian(1927)

(Managing Editors: LONG Huai-zhong, CHEN Wei-ping, LI Yan-hong, HE Xue-feng)

中国有色金属学报

(ZHONGGUO YOUSE JINSHU XUEBAO)

(月刊, 1991年创刊)

第24卷第7期(总第184期)2014年7月出版

The Chinese Journal of Nonferrous Metals

(Monthly, Started in 1991)

Volume 24 Number 7 (Sum 184), July 2014

主管: 中国科学技术协会

主办: 中国有色金属学会

承办: 中南大学

主编: 黄伯云

副主编: 邱冠周, 彭超群

编辑: 《中国有色金属学报》编辑部

410083 湖南省长沙市中南大学内

电话: (0731)88876765, 88877197

传真: (0731)88877197

E-mail: f-ysxb@mail.csu.edu.cn

http://www.ysxbcn.com

http://www.tnmsc.cn

出版: **科学出版社**

100717 北京东黄城根北街16号

印刷: 湖南农科院印刷厂

国内发行: 长沙市报刊发行局

邮发代号: 42-218

国外发行: 中国国际图书贸易总公司

(北京399信箱)

Superintended by China Association for Science and
Technology

Sponsored by The Nonferrous Metals Society of China

Managed by Central South University

Chief Editor: HUANG Bai-yun

Deputy Chief Editors: QIU Guan-zhou

PENG Chao-qun

Edited by Editorial Office of

The Chinese Journal of Nonferrous Metals

(Central South University,

Changsha, Hunan 410083, China)

Fax: +86-731-88877197

E-mail: f-ysxb@mail.csu.edu.cn

http://www.ysxbcn.com

http://www.tnmsc.cn

Published by Science Press

(16 Donghuangchenggen North Street,

Beijing 100717, China)

Distributed abroad by

China International Book Trading Corporation

(P. O. Box 399, Beijing, China)

ISSN 1004-0609

80元/册

CN 43-1238/TG

国内定价:

960元/年

国内外公开发行

ISSN 1004-0609

