



表面

BIAOMIAN

目

次

试验研究

莫来石/SiO ₂ 复合涂层的制备及微观组织研究	安宇龙, 陈建敏, 周惠娣等(1)
等离子喷涂纳米与微米 YSZ 热障涂层的孔隙结构比较	张红松, 刘振启, 关绍康(4)
镁合金微弧氧化陶瓷层表面化学镀镍研究	刘向艳, 郭锋, 李鹏飞等(8)
AZ31B 镁合金表面 SHS 反应热喷涂陶瓷涂层研究	时海芳, 李松湖, 魏丽凤等(11)
电流密度对电镀铁-钨非晶合金镀层的影响	侯婷, 周海红, 郭志猛等(15)
热浸镀镍基合金涂层组织及腐蚀行为	王立生, 林涛, 侯婷等(19)
Zn-3%Al-RE 合金机械镀层的电化腐蚀行为研究	常发, 彭增华, 何明奕等(22)
镍铁钨合金的电沉积行为研究	徐超, 陈范才, 吴道明等(26)
新型二氧化铅电极的制备及其性能研究	孙凤梅, 曾明敏(30)
离子交换膜及电流密度对电渗析法再生化学镀镍废液的影响	赵雨, 何湘柱, 赵国鹏等(32)
三维多粗糙峰涂层等效应力分析与表征	徐中, 王岳峰, 仲强等(35)
Ti8LC 钛合金与主要结构材料的电偶腐蚀及防护研究	苏艳, 朱玉琴, 康凤(39)
钢桁架桥梁杆件摩擦面防腐涂层抗滑移性能研究	梁涛, 杨笑宇, 王延东等(42)
6063 铝合金着色钛锆转化膜结构和耐蚀性能的研究	刘宁华, 李文芳, 杜军(45)
酸洗缓蚀剂对冷轧钢板磷化处理的影响	许斌, 刘春明, 郝建军等(48)

隐身材料专题

掺锰氧化锌的制备及其吸波性能的研究	赵伟, 吴起白, 曾国勋等(55)
掺杂碳化硅对纳米炭黑导电和吸波性能的影响	吴友朋, 刘祥莹, 张泽洋(58)

【编者按】隐身技术是全世界的重大军事技术之一,它在提高武器装备和人员的生存能力方面占有重要地位,对军事装备具有重要的特殊作用,从而成为高新技术的研究热点。世界各发达国家都投入了大量经费进行研究开发,相继研制出隐身飞机、战舰、导弹、作战服等一系列隐身武器装备和防护装备。我国对隐身技术的研究与应用也方兴未艾。为促进广大隐身技术研究者之间的相互交流,推动国内隐身技术的发展,本刊开辟“隐身材料专题”栏目,针对当前国内隐身技术研究领域的热点问题(如涂料涂层、多元材料、遮障材料、表面技术等)进行专题报道。

技 术

JISHU

2010 年第 39 卷第 5 期

总第 189 期

双月刊 10 月 10 日出版

1972 年 2 月创刊

橡胶基复合吸波贴片的电磁性能研究

..... 段海平,李国防,段玉平等(61)

高温热处理对镀镍碳纳米管电磁性能的影响

..... 张泽洋,刘祥莹,吴友朋等(65)

硅烷偶联剂对羰基铁粉电磁性能的影响

..... 谭延江,邓爱明,吴茜等(68)

功能纤维织物的制备及其吸波性能 ... 蒋洪晖,顾兆梅,于富强等(72)

工艺研究

PP 塑料化学镀铜的工艺研究

..... 王喜然,张英伟(77)

pH 值对 AZ91D 镁合金表面植酸转化膜的影响

..... 陈言坤,杜仕国,鲁彦玲等(80)

镁合金铈基转化膜研究

..... 谢昭明,邹勇,高焕方等(84)

微弧氧化电流密度对 ZL205A 铝合金氧化膜层性能的影响

..... 高广睿,奚正平,李争显等(88)

磁控溅射中溅射电流对 Ti 薄膜膜基结合性能的影响

..... 李丽,吴卫,张尧成(92)

综述·专论

冷喷涂技术的最新研究现状..... 李文亚,余敏(95)

制品表面毛刺去除技术综述..... 刘斌,彭满华,邹仕放(100)

绿色达克罗技术的研究进展..... 柯昌美,周黎琴,汤宁等(103)

应用技术

影响低浓度亚铜测定的因素..... 王寅初,李德良,董明琪等(107)

超疏水性薄膜在 QCM 传感器中的应用

..... 吴云影,陈桐滨(111)

名企风采

麦德美公司 (51—54)

信 息

《电镀与精饰》征订启事..... (7)

《表面工程资讯》征订启事..... (115)

《现代涂料与涂装》征订启事 (115)

社 长: 吴护林

副 社 长: 张伦武(兼)

李文涛(常务)

主 编: 吴护林(兼)

执行主编: 奚愚生

责任编辑: 李继红

奚愚生

赵立津

发展企划部: 钟克萍

李 颖

李 伏

冯利军

版权声明

凡投稿本刊或允许本刊登载的文章,均视为已同意本刊授权的合作媒体使用。本刊支付的稿酬已包含授权费用。

SURFACE

CONTENTS

ISSN 1001-3660

Oct.10, 2010 Volume 39 Number 5

Initial Issue Feb. 1972 bimonthly

Chief Editor: Wu Hu-lin

Executive Editor: Xi Yu-sheng

THIS PUBLICATION IS

Approved by the General Administration of Press and Publication of the P. R. China (CN 50-1083/TG, issued publicly at home and abroad).

In charge of the China Ordnance Industry Group.
Sponsored by No. 59 Institute of China Ordnance Industry, the Anti-corrosion & Packaging Branch of COS, the Information Network for Anti-corrosion & Packaging of the China Ordnance Industry.

Edited by the Editorial Office for

SURFACE TECHNOLOGY

P. O. Box 2331, Chongqing,

P. R. China

Postcode: 400039

Tel: (023) 68792193

Fax: (023) 68792396

<http://www.bmjs2007.com>

E-mail: wjqkbm@163.com

Published by Chongqing Wujiu Periodicals Press.

Printed by Chongqing Shuzhixing Printing Plant.

Post Issue No. 78-31

Experimental Research

- Preparation and Microstructure of Mullite/SiO₂ Composite Coating
..... AN Yu-long, CHEN Jian-min, ZHOU Hui-di, *et al.* (1)
- Comparison of Pore Structure between Plasma-sprayed Nano-YSZ and Micron-YSZ Thermal Barrier Coatings
..... ZHANG Hong-song, LIU Zhen-qi, GUAN Shao-kang (4)
- Study on Electroless Nickel Plating on Micro-arc Oxidation Ceramics Layer of Magnesium Alloy
..... LIU Xiang-yan, GUO Feng, LI Peng-fei, *et al.* (8)
- Research on SHS Thermal Spray Coating Ceramics on Surface of Magnesium Alloy
..... SHI Hai-fang, LI Song-hu, WEI Li-feng, *et al.* (11)
- Effects of Current Density on Electroplating Fe-W Amorphous Alloy Coatings ...
..... HOU Ting, ZHOU Hai-hong, GUO Zhi-meng, *et al.* (15)
- Microstructure and Corrosion Behavior of Hot Dipping Ni-based Alloy Coating ...
..... WANG Li-sheng, LIN Tao, HOU Ting, *et al.* (19)
- Electrochemical Corrosion Behavior of Zn-3%Al-RE Alloy by Mechanical Plating
..... CHANG Fa, PENG Zeng-hua, HE Ming-yi, *et al.* (22)
- A Study on the Electrodeposition Behaviors of Nickel-iron-tungsten Alloy
..... XU Chao, CHEN Fan-cai, WU Dao-ming, *et al.* (26)
- Preparation of Novel Lead Dioxide Electrodes and Study on its Characteristics ...
..... SUN Feng-mei, ZENG Ming-min (30)
- Effect of Iron Exchange Membranes and Current Density on the Regeneration of Spent Electroless Nickel Plating Bath by Electrodialysis
..... ZHAO Yu, HE Xiang-zhu, ZHAO Guo-peng, *et al.* (32)
- Analysis and Characterization of Three-dimensional Multi-asperity Coatings Equivalent Stress
..... XU Zhong, WANG Yue-feng, ZHONG Qiang, *et al.* (35)
- The Study on Galvanic Corrosion and Surface Protection between Ti8LC Titanium Alloy and Central Structural Material
..... SU Yan, ZHU Yu-qin, KANG Feng (39)
- Anti-slipping Property Research on Anti-corrosion Coating of Friction Surface of Steel Truss Bridge Bars
..... LIANG Tao, YANG Xiao-yu, WANG Yan-dong, *et al.* (42)
- Study on the Structure and Corrosion Resistance of Chromatic Ti-Zr Based Conversion Layer on 6063 Aluminum Alloy
..... LIU Ning-hua, LI Wen-fang, DU Jun (45)
- The Influence of Corrosion Inhibitor for Pickling on Phosphating of Cold-roll Steel Sheets
..... XU Bin, LIU Chun-ming, HAO Jian-jun, *et al.* (48)

Topics of Stealth Materials

- Preparation and Microwave Absorption Properties of Mn-doped Zinc Oxide
..... ZHAO Wei, WU Qi-bai, ZENG Guo-xun, *et al.* (55)

TECHNOLOGY

Effect of Addition of Carborundum on Conductive and Radar Absorbing Property of Nano-carbon Black WU You-peng, LIU Xiang-xuan, ZHANG Ze-yang (58)

Electromagnetic Properties of Silicone Rubber Composites Absorbing Sheet
..... DUAN Hai-ping, LI Guo-fang, DUAN Yu-ping, et al. (61)

The Influence of Heat Treatment on Electromagnetic Property of Nickel Coated Carbon Nanotubes
..... ZHANG Ze-yang, LIU Xiang-xuan, WU You-peng, et al. (65)

Effect of Silane Coupling Agent on Electromagnetic Property of Carbonyl Iron Powder
..... TAN Yan-jiang, DENG Ai-ming, WU Qian, et al. (68)

Preparation and Absorption Properties of Fabric Made of Functional Fiber
..... JIANG Hong-hui, GU Zhao-zhan, YU Fu-qiang, et al. (72)

Technological Study

Investigation of Process for Electroless-Cu-plating on PP Plastic
..... WANG Xi-ran, ZHANG Ying-wei (77)

Influence of pH Value on Phytic Acid Conversion Coating on AZ91D Magnesium Alloy
..... CHEN Yan-kun, DU Shi-guo, LU Yan-ling, et al. (80)

Study on Ce Based Conversion Coating of Magnesium Alloy
..... XIE Zhao-ming, ZOU Yong, GAO Huan-fang, et al. (84)

Effects of Current Density on Micro-arc Oxidation Coatings of ZL205A Alloy
..... GAO Guang-rui, XI Zheng-ping, LI Zheng-xian, et al. (88)

Effect of Sputtering Current on Adhesion Strength of Ti Film Deposited by Magnetron Sputtering
..... LI Li, WU Wei, ZHANG Yao-cheng (92)

Overview

The Latest Development State of the Cold Spraying Technique
..... LI Wen-ya, YU Min (95)

Overview of Burr Removing Techniques
..... LIU Bin, PENG Man-hua, ZOU Shi-fang (100)

The Progress of Study on Environmentally-Friendly Dacromet Technology
..... KE Chang-mei, ZHOU Li-qin, TANG Ning, et al. (103)

Applied Technology

Influencing Factors of Low Concentration Cuprous' Measure
..... WANG Yin-chu, LI De-liang, DONG Ming-qi, et al. (107)

The Application of Hydrophobic Thin Film to QCM Sensor
..... WU Yun-ying, CHEN Tong-bin (111)

Famous Enterprise

MacDermid (51—54)

Special Advisor
(In Alphabetical Order)
KE Wei Academician of Chinese Academy of Engineering
TU Ming-jing Academician of Chinese Academy of Engineering
XU Bin-shi Academician of Chinese Academy of Engineering
CAO Chu-nan Academician of Chinese Academy of Sciences
Honorary Advisor BAI Yu-long
Chairman WU Hu-lin
Vice Chairman
(In Alphabetical Order)
QIU Jia-wen YU Zu-zhan
YAO Su-wei TU Zhen-mi YU Qi
Members (In Alphabetical Order)
MA Shi-ning WANG Hua ming
FANG Jing-li ZUO Zheng zhong
BAI Yu long AN Cheng-qiang
ZHU Li qun LIU Chang-sheng
SONG Shi-zhe LI Ning
WU Hu-lin ZHANG Jin
ZHANG Sheng-tao QIU Jia-wen
LIN Chang-jian YU Zu-zhan
SHAO Feng-chang KE Wei
HU Ru-nan OU Zhong-wen
YAO Su-wei XU Bin-shi
GUO He-tong GUO Zhong-cheng
TU Ming-jing CAO Chu-nan
TU Zhen-mi YU Qi
PAN Feng PAN Fu-sheng
WEI Zi-dong
Win J. Van Ooij (Professor of University of Cincinnati)
Domestic Quotation
Chinese Core Journal
China Scientific Core Journal
Source Periodical for Scientific Citation Database
Verbatim Quoted Journal of China Journal Verbatim Database
Periodical Quoted in China Core Journal (Select) Database
Source Periodical for China Academic Journal
Comprehensive Evaluation Database Statistics
Selected Periodical for China Learned Periodical (CDVersion)
Verbatim Quoted Journal of China Periodical Network
Periodical Quoted in Chinese Scientific Periodical Database
External Quotation
《CA》(American)
《CSA》;MI (American)