



# CORROSION SCIENCE

The Journal on Environmental Degradation of Materials and its Control

Editor-in-Chief: G. T. BURSTEIN, University of Cambridge, U.K.

An Official Journal of the Institute of Corrosion

## CONTENTS

### Letter

J.-S. HAN and J.-H. PARK

787 Detection of corrosion steel under an organic coating by infrared photography

### Papers

J. GALLARDO, A. DURÁN and J. J. DE DAMBORENEA

795 Electrochemical and in vitro behaviour of sol-gel coated 316L stainless steel

J.-D. KIM and J.-H. MOON

807 C-ring stress corrosion test for Inconel 600 and Inconel 690 sleeve joint welded by Nd:YAG laser

S. M. A. SHIBLI, V. S. GHREESH and S. GEORGE

819 Surface catalysis based on ruthenium dioxide for effective activation of aluminium sacrificial anodes

S. PIAZZA, M. SPERANDIO, C. SUNSERI and F. DI QUARTO

831 Photoelectrochemical investigation of passive layers formed on Fe in different electrolytic solutions

Y. S. ZHANG, X. M. ZHU and S. H. ZHONG

853 Effect of alloying elements on the electrochemical polarization behavior and passive film of Fe-Mn base alloys in various aqueous solutions

M. GEETHA, U. KAMACHI MUDALI, A. K. GOGIA, R. ASOKAMANI and B. RAJ

877 Influence of microstructure and alloying elements on corrosion behavior of Ti-13Nb-13Zr alloy

S. L. WINKLER, M. P. RYAN and H. M. FLOWER

893 Pitting corrosion in cast 7XXX aluminium alloys and fibre reinforced MMCs

S. L. WINKLER and H. M. FLOWER

903 Stress corrosion cracking of cast 7XXX aluminium fibre reinforced composites

A. FOSSATI, F. BORGIOI, E. GALVANETTO and T. BACCI

917 Corrosion resistance properties of plasma nitrided Ti-6Al-4V alloy in nitric acid solutions

*Contents continued on outside back cover*

*Continued from front cover*

- G. P. CICLEO, M. A. CRESPO and  
B. M. ROSALES 929 Comparative study of patinas formed on statuary alloys by  
G. SONG, B. JOHANNESSEN, means of electrochemical and surface analysis techniques.  
S. HAPUGODA and D. SJÖHN 955 Galvanic corrosion of magnesium alloy AZ91D in contact  
K. OGLE, A. TOMANDL, N. MIRDAHAI with an aluminum alloy, steel and zinc  
and M. WOLPERS 979 The alkaline stability of phosphate coatings I: ICP atomic  
A. TOMANDL, M. WOLPERS and emission spectroelectrochemistry  
K. OGLE 997 The alkaline stability of phosphate coatings II: in situ Raman  
X. Q. WU, H. M. JING, Y. G. ZHENG, spectroscopy  
Z. M. YAO and W. KE 1013 Resistance of Mo-bearing stainless steels and Mo-bearing  
M. A. ARENAS, I. GARCIA and stainless-steel coating to naphthenic acid corrosion and  
J. DE DAMBORENEA 1033 erosion corrosion  
X-ray photoelectron spectroscopy study of the corrosion  
behaviour of galvanised steel implanted with rare earths  
I. Corrosion diary  
V. Keywords for *Corrosion Science*

## CONTENTS Direct

This journal is part of **ContentsDirect**, the *free* alerting service which sends tables of contents by e-mail for Elsevier books and journals. You can register for **ContentsDirect** online at: <http://contentsdirect.elsevier.com>

*Indexed/Abstracted in Current Contents, Engng Ind Monthly & Author Index, PASCAL/CNRS Database, Corrosion Abstracts, Metals Abstracts, Chemical Abstracts, INSPEC Database, BMT Abstracts, Petroleum Abstracts, Aqua Abstr, Cam Sci Abstr, Chem Eng Abstr, Chem Haz in Indus, Edi Metal Abstr, Environ Per Bibl, Materials Science Citation Index, Applied Science & Technology Index, Wilson Applied Science & Technology Abstracts, Current Technology Index (CTI)*

ISSN 0010-938X

Also available on

SCIENCE  DIRECT®

[www.sciencedirect.com](http://www.sciencedirect.com)



0010-938X(200404)46:4;1-P