

Contents

Volume 87 2009

- 4 **Vitreous Enamel – one of the original metal finishes, now part of the 21st century**
M. Collins
- 6 **Surface preparation and pretreatment prior to surface finishing**
C. Larson
- 7 **Daresbury, a commemoration**
P. Farr
- 8 **Optimisation of nickel electrodeposition solutions for power usage**
D. R. Gabe and L. Chen
- 11 **Samuel Field – founding father of the IMF**
D. R. Gabe
- 14 **Minutes of the 2008 AGM**
- 16 **Report of the Council October 2008**
- 21 **Financial accounts**
- 23 **Corrosion characteristics in concrete environment of hot dip galvanised steel and Zn alloy hot dip coated steel**
K. Murakami, H. Kanematsu and K. Nakata
- 28 **Electrodeposition of iron films from an ionic liquid (ChCl/urea/FeCl₃ deep eutectic mixtures)**
R. Böck and S.-E. Wulf
- 33 **Producing fine pitch substrate of COF by semiadditive process and pulse reverse plating of Cu**
W. He, H. Cui, Y. Q. Mo, S. X. Wang, B. He, K. Hu, J. Guan, S. L. Liu and Y. Wang
- 38 **Effect of pretreatment on anticorrosive phosphating conversion coating of sintered NdFeB magnets**
Q. Li, H. Gao, J. P. Wang and S. Y. Zhang
- 45 **Texture and morphology development in zinc–cobalt electrodeposition**
A. Tufani, K. Raeissi, A. Saatchi and J. A. Szpunar
- 51 **Effect of UV irradiation on Electroless Cu–Ni–P Plating on Cycloolefin Polymer**
K. U. Inoue, K. Matsui, M. Watanabe and H. Honma
- 60 **Walter Hermann Nernst**
D. R. Gabe
- 64 **Influence of additives and plating parameters on morphology and mechanical properties of copper coatings obtained by pulse electrodeposition**
N. Imaz, E. García-Lecina, C. Suárez, J. A. Díez, J. Rodríguez, J. Molina and V. García-Navas
- 72 **Pulse reversal plating of nickel–cobalt alloys**
P. T. Tang, M. Jaskula, M. Kubiczek, I. Mizushima, K. Pantleon and M. Arentoft
- 78 **Implementation of gold deposition by pulse currents for optoelectronic devices**
S. Roy and S. Caprodossi
- 85 **Electrodeposition of zinc–nickel alloy by pulse plating using non-cyanide bath**
S. Mohan, V. Ravindran, B. Subramanian and G. Saravanan
- 90 **Influence of process parameters on crack formation in direct current and pulse reversal plated hard chromium**
P. Leisner and I. Belov
- 97 **Effect of frequency on pulse electrolytic colouring process of anodised aluminium**
M. Zemanová, M. Gál and M. Chovancová
- 102 **Comparison of simulated pulse plating processes to practical experiments**
S. Hansal, L. Linauer and W. E. G. Hansal
- 116 **Rebekah's 5p: A case study from Surface Analytics**
M. Petty
- 118 **Simulation and modelling in metal finishing. Electrochemistry and electrochemical reactors for microfabrication**
S. Roy
- 122 **Plasma electrolytic oxidation (PEO) for production of anodised coatings on lightweight metal (Al, Mg, Ti) alloys – Review**
F. C. Walsh, C. T. J. Low, R. J. K. Wood, K. T. Stevens, J. Archer, A. R. Poeton and A. Ryder
- 136 **Investigations of new anodic materials for zinc electrowinning**
T. Dobrev, I. Valchanova, Y. Stefanov and S. Magaeva
- 141 **Nanocrystalline electrochemical composite coatings with nickel matrix and boron**
A. Gajewska-Midzialek, B. Szeptycka and A. Nakonieczny
- 145 **Nanocrystalline zinc-nickel alloy deposition using pulse electrodeposition**
M. Ilayaraja, S. Mohan, R. M. Gnanamuthu and G. Saravanan
- 149 **Electroplating of anticorrosive Ni-TiO₂ composite coatings on sintered NdFeB permanent magnets**
Q. Li, H. Gao, J. P. Wang and B. Chen
- 155 **Electrodeposition and properties of Zn, Zn-Ni, Zn-Fe and Zn-Fe-Ni alloys from acidic chloride-sulphate electrolytes**
İ. H. Karahan and H. S. Güder

- 159 **Effect of heat treatment on promoting zinc whisker growth from bright zinc electrodeposited coatings**
R. Chapaneri, A. J. Ebbage, G. D. Wilcox, G. W. Critchlow, A. Chojnicki, T. Pearson and A. J. Rowan
- 170 **What the new EU REACH Regulation means for your business**
K. Hoare
- 173 **The evaluation of sonochemical techniques for sustainable surface modification in electronic manufacturing**
A. J. Cobley
- 178 **Characterisation and analysis of surface engineered thin films – Review**
A. D. Trigg
- 193 **Investigation into dynamics of Au electrodeposition based on analysis of SERS spectral time series**
B. Bozzini, L. D'Urzo, D. Lacitignola, C. Mele, I. Sgura and E. Tondo
- 201 **Electrolytic deposition of Zn coatings from ionic liquids based on choline chloride**
A. P. Abbott, J. C. Barron and K. S. Ryder
- 208 **Electrodeposition and corrosion behaviour of some Zn–Fe group metal alloys by pulsed current**
V. Thangaraj
- 217 **Hole metallisation technology for microwave printed circuit board**
Y. Ye and T. L. Guo
- 221 **Corrosion resistance of electroless Ni–low B coatings**
I. Baskaran, T. S. N. Sankara Narayanan and A. Stephen
- 229 **Dr. Abner Brenner**
D. R. Gabe
- 231 **International development of the IMF**
H. Williams
- 233 **Ecological prepaint treatment of aluminium alloys**
P. Wynn
- 239 **Influence of Cs⁺ ions on codeposition of SiC particles with Ni–Co alloy**
E. Rudnik
- 246 **Tribological properties of pulse plated nanocrystalline nickel coatings as environmentally accepted alternative to conventional chromium coatings**
P. Najafi Sayar and M. E. Bahrololoom
- 254 **Influence of ammonium selenate and thiourea mixture on mechanical properties and morphology of Zn–Mn alloy coatings electrodeposited from sulphate–citrate bath**
A. Sulcius, E. Griskonis, P. Diaz-Arista and G. Trejo
- 259 **Fabrication of three-dimensional microstructure by nickel plating and photolithography**
Y. Nakamaru and H. Honma
- 264 **Fused deposition process combining electrochemical discharge with high speed selective jet electrodeposition**
M. Karnik, A. Ghosh and R. Shekhar
- 272 **Effect of voltammetric parameters on fabrication of highly ordered nanoporous alumina structures**
V. Raj and M. Mubarak Ali
- 284 **Hot and cold cleaning methods: CO₂ and Nd:YAG laser ablation, sodium hydride immersion and CO₂ cryoblasting**
G. W. Critchlow, R. Litchfield, C. Curtis and M. Owen
- 287 **Abrasives selection for surface pretreatment**
P. Longstaff
- 290 **Influence of shielded insoluble anode layout on the consumption of bath additives**
S. Menard and J. Wurm
- 293 **Finishing clinic, exhibition and tour**
C. Arnold
- 295 **Short review of changes in the surface finishing industry – threats and innovation**
C. Larson
- 303 **Study of bismuth sulphide films in Ni²⁺ containing solution using electrochemical quartz crystal microbalance**
L. Naruskevicius, B. Simkunaite-Stanyniene, G. Valiuliene, A. Zieliene, L. Tamašauskaitė-Tamašiūnaitė and A. Sudavicius
- 309 **Corrosion process in NaCl/Na₂SO₄ solutions of AISI 316L stainless steel treated by ionic nitriding**
C. B. Santos, M. Metzner, C. F. Malfatti and J. Zoppas Ferreira
- 315 **Polyaniline and nanoparticle containing anodic films for corrosion protection of 2024T3 aluminium alloy**
O. Zubillaga, F. J. Cano, I. Azkarate, G. Imbuluzqueta and M. Insausti
- 320 **Simultaneous determination of multibrighteners in Ni plating electrolytes by HPLC-DAD-ELSD method: a comparative study with potentiometric titration method**
H.-Y. Shen, L.-Y. Ying, M.-Q. Hu and H.-L. Jiang
- 325 **Materials properties of electrodeposited NiFe and NiCoFe coatings**
B. Subramanian, K. Govindam, V. Swaminathan and M. Jayachandran
- 330 **Annual Indexes**