

Table of Contents

Preface

| | |
|--|-----|
| COMBE: A Powerful New Tool for Materials Science | |
| I. Božović and V. Matijašević | 1 |
| Magnetic Force Microscopy: A Powerful Tool to Image Domain Structures in Granular Thin Films | |
| X. Batlle, V. Franco and A. Labarta | 9 |
| Superconducting Thin Tin Film with PSCS and SNS in External Microwave Field | |
| O.B. Agafonov, G.E. Churilov, D.A. Dikin and V.M. Dmitriev | 23 |
| Voltage-Current Characteristics of the Unbalanced Magnetron for Reactive Deposition of Thin Films | |
| M. Zlatanović, M. Gajić, U. Kašćak, I. Popović and V. Godjevac | 29 |
| Structural, Mechanical and Optical Properties of TiN and (Ti,Al)N Coatings | |
| M. Zlatanović, I. Popović and S. Zlatanović | 35 |
| Properties of Tungsten-Titanium Sputtered Coatings | |
| S. Petrović, D. Peruško, Z. Rakočević, B. Gaković and T. Nenadović | 43 |
| Electrodeposition of Cu-Al Alloys and Underpotential Deposition of Al onto Cu Single Crystals from a Room-Temperature Chloroaluminate Molten Salt | |
| G.R. Stafford, V.D. Jović and C.L. Hussey | 49 |
| Electrochemical Formation and Characterization of Silver (I) Oxide | |
| B.M. Jović, V.D. Jović and G.R. Stafford | 57 |
| The Effect of Some Parameters of Electrolysis on Apparent Density of Electrolytic Copper Powder in Galvanostatic Deposition | |
| M.G. Pavlović, L.J. Pavlović, N.D. Nikolić and K.I. Popov | 65 |
| The Preferred Orientation of Bright Copper Deposits | |
| N.D. Nikolić, E.R. Stojilković, D. Djurović, M.G. Pavlović and V.R. Knežević | 73 |
| Nanoengineering of Inorganic and Hybrid Composites | |
| J.M. Nedeljković | 79 |
| Characterization of Nanoparticles | |
| M.D. Lechner and W. Mächtle | 87 |
| Photoinduced Deposition of Copper on Nanocrystalline TiO₂ Films | |
| Z.V. Šaponjić, T. Rajh, J.M. Nedeljković and M.C. Thurnauer | 91 |
| Dispersion Stability of SiC, SiCN and Si₃N₄ Ultrafine Powders in Aqueous and Nonaqueous Media | |
| L.S. Čerović, S.K. Milonjić, D. Bahloul-Hourlier and D.M. Kićević | 97 |
| Synthesis of Ni-Spinel/Aluminosilicate Composite Ceramics Mixed at Nanoscale Level by Using Zeolite Precursors | |
| V. Dondur, S. Marković, M. Mitrović and R. Dimitrijević | 105 |
| Stability of Chromium(III)-Oxide Sol in the Presence of Inorganic Anions | |
| A. Onjia and S.K. Milonjić | 111 |
| The Influence of the Aging Time of RuO₂ Sol on the Electrochemical Properties of the Activated Titanium Anodes Obtained by Sol-Gel Procedure | |
| V. Panić, A. Dekanski, S.K. Milonjić, R. Atanasoski and B. Nikolić | 117 |
| Vibrational Cluster Calculations of Zig-Zag Carbon Single-Wall Nanotubes | |
| M. Grujić-Bročin, R. Kostić, D. Raković and L.A. Gribov | 123 |
| Electron Configuration of Carbon Nanotubes | |
| S.M. Stojković, J.P. Šetračić and I. Vragović | 129 |
| The Electrochemical Behaviour of Carbon Dust, Metals and Fullerenes Present in Carbon Soot | |
| M. Avramov-Ivić, L.R. Matija, D. Antonović, R.O. Loutfy, T. Lowe, P. Rakin and D. Koruga | 135 |
| Analysis of In Vivo Substitution of Bone Tissue by HAp/PLLA Composite Biomaterial with PLLA of Different Molecular Weights Using FTIR Spectroscopy | |
| N. Ignatović, M.B. Plavšić, S. Najman, V. Savić and D.P. Uskokovic | 143 |
| Dental Implants of Complex Form Coated by Nanostructured TiO₂ Thin Films via MOCVD | |
| G.A. Battiston, R. Gerbasi, A. Tiziani, A. Figueras and G. García | 151 |

| | |
|---|-----|
| MOCVD Engineering and Economic Analysis for Biomaterial Coatings | 159 |
| M. Accoroni, G.A. Battiston, R. Gerbasi and A. Tiziani | |
| The Influence of Heat Treatment on Shape Memory Effect | 165 |
| V. Asanović, B. Perović, Z. Marković, I. Vušanović and A. Kostov | |
| Glassy and Elastomeric Polyurethanes Filled with Nano-Silica Particles | 171 |
| Z.S. Petrović and W. Zhang | |
| Stress Field Analysis in Composite Laminates with Embedded Optical Fiber | 177 |
| P.S. Uskoković, I. Balać, M. Rakin, S. Putić, M. Srećković and R. Aleksić | |
| Tensile Characteristics of Carbon Fibres | 183 |
| M.M. Stevanović and D.R. Pešikan-Sekulić | |
| Effect of Fibre Waviness on Compression Failure of Cross-Ply Carbon/Epoxy Laminates | 189 |
| T.B. Stecenko and M.M. Stevanović | |
| Viscoelastic Properties of Polyethylene at Elevated Temperatures on the Basis of Two-Process Model for Stress Relaxation | 195 |
| V. Djoković, M.D. Dramićanin, D. Kostoski and D. Dudić | |
| Influence of the Monomer Mixture Composition on Acrylate Membrane Properties | 201 |
| A. Nastasović, V. Laninović and M. Stanković | |
| The Mechanism of γ_2 Formation Process in Lathy Ferrite Microstructure of Duplex Stainless Steel | 207 |
| V.R. Knežević, Z. Cvijović and D.V. Mihajlović | |
| Surface Melting Effect on the Corrosion Behaviour of Austenitic-Ferritic Stainless Steels Solidified in Various Modes | 213 |
| G. Radenković, Z. Cvijović, S.K. Zečević and D.V. Mihajlović | |
| Microstructure and Mechanical Properties of ZA27 Alloy Matrix Composites | 219 |
| M. Čančarević, I. Bobić and M.T. Jovanović | |
| Optimization of Intersubband Nonlinear Optical Susceptibilities in Asymmetric Bragg-Confining Structures | 225 |
| J. Radovanović, D. Indjin, V. Milanović and Z. Ikonić | |
| Gallium Doping Influence on Optical and Transport Properties of PbTe | 231 |
| M.J. Romčević, D.R. Khokhlov and N.Ž. Romčević | |
| The Influence of Ideality Factor on Fill Factor and Efficiency of Solar Cells | 241 |
| A. Vasić, M. Stojanović, P. Osmokrović and N. Stojanović | |
| Effect of High Pressure on Fluorescence Lifetime and Position for R1 Line in Synthetic Spinel $MgAl_2O_4:Cr^{3+}$ | 247 |
| B.R. Jovanić | |
| Temperature Dependence of Dielectric Relaxation in 12-Tungstophosphoric Acid Hexahydrate at Microwave Frequencies | 251 |
| T. Čajkovski, M. Davidović, D. Čajkovski, V. Likar-Smiljanić, R. Biljić, U.B. Mioč and Z. Nedić | |
| Electron Paramagnetic Resonance in $Hg_{1-x}Mn_xTe_{1-y}Se_y$ | 255 |
| D. Milivojević, B. Babić-Stojić, M. Stojić, V.A. Kulbachinskii, P.D. Maryanchuk and I.A. Churilov | |
| The Influence of the Transition Metal Atoms (X) Microstructural Ordering on the Magnetic Properties of the Hf-X Systems | 261 |
| N. Ivanović, D. Rodić, B. Cekić, M. Manasijević, V. Koteski, S. Koički and D. Marjanović | |
| Determination of the Activation Energy of Nucleation and Grain Growth in Ni-P Metallic Glass | 267 |
| P. Tomić and M. Davidović | |
| Thermal Stability and Kinetic Studies of New Cobalt(III) Complexes with a Tetraazamacrocyclic and Dithiocarbamate Ligands | 271 |
| S.P. Sovilj, K. Babić-Samardžija, D. Minić and D.L. Stojić | |
| The UO_2^{2+} Complexes with 2',2''-(2,6-Pyridindiyldiethylidine)Dioxamohydrazide ($H_2dapsox$) | 277 |
| I. Ivanović-Burmazović, M. Šumar, I. Brčeski, I. Hodžić and K.K. Andjelković | |