

Table of Contents

Preface

Perturbed Angular Correlation Technique in Materials Science S. Koicki and M. Manasijević	1
Raman Scattering in Materials Science Z.V. Popović	11
Application of Electron Microscopy in Studies of Phase Transformations and Other Phenomena in Materials V. Radmilović	21
Electronic and Optical Properties of Semiconductor Quantum Wells and Superlattices D. Tjapkin, V. Milanović, Z. Ikonić and B. Radenković	33
Characterization of Metal Iodide Quantum Dots J.M. Nedeljković, M.I. Čomor, Z.V. Šaponjic, T. Rajh and O.I. Mičić	41
Fullerene C₆₀: Properties and Possible Applications D. Koruga, L. Matija, N. Mišić and P. Rakin	49
Epitaxial Growth of Hg_{1-x}Cd_xTe Z.G. Duric and V.B. Jovic	57
Recent Advances in Thick Films O.S. Aleksić	65
Coherent Optical Fiber Bundles Production R. Aleksić and R.M. Jančić	73
Synthesis of New Materials: Physicochemical Aspects M.V. Šušić	81
High Temperature Phase Transformations of Cation Exchanged Zeolites: A New Route for Synthesis of Aluminosilicate Materials V. Dondur, N. Petranović and R. Dimitrijevic	91
Heteropolyacids as Protonic Conductors M. Davidović and U.B. Mioč	99
Materials Science and Heterogeneous Catalysis P. Putanov	109
Some Physicochemical Aspects of Oxidative Catalysis on Solid Oxides A. Terlecki-Baričević	115
Molecular Engineering of Polymer Materials M.B. Plavšić	123
Some Recent Advances in the Silicon Containing Polymers P.R. Dvornić	131
Structure and Properties of Conducting Polymers D. Raković	139
Synthesis and Electrochemical Properties of Polypyrrole R. Stankovic, V. Laninović, M. Vojnović, O. Pavlović, N. Krstajić and S.M. Jovanovic	147
Targeted Porous Structure of Macroporous Copolymers Based on Glycidyl Methacrylate S.M. Jovanovic, A. Nastasović, N.N. Jovanovic and K. Jeremic	155
Atomic Collision on Surfaces and Material Implementation T. Nenadović	163
Chemical Vapour Deposition of Diamond S.N. Marinkovic	171
Plasma Deposition of Hard Coatings - Duplex Treatment M. Zlatanović, A. Kunosić, R.B. Beloševac and N. Popović	179
Synthesis of Advanced Materials by Powder Processing D.P. Uskokovic	189
Colloid Particles and Advanced Materials S.K. Milonjić	197
Thermal Plasma Synthesis of Ultrafine Si₃N₄ and SiC Ceramic Powders P.B. Pavlovic, Ž.G. Kostić and P.L. Stefanović	205

Formation Mechanism, Morphology and Synthesis of α-Al₂O₃ Mullite and Cordierite Particles Obtained by the Ultrasonic Spray Pyrolysis	
D. Janačković, V. Jokanović, L. Kostic-Gvozdenovic and D.P. Uskokovic	215
Nanoxide Ceramic Materials	
S. Bošković, E. Kostic and F. Sigulinski	223
Mechanical Behaviour of Carbon/Epoxy Composites	
M.M. Stevanović	231
Formation of Metallic Materials of Desired Structure and Properties by Electrochemical Deposition	
A.R. Despic and V.D. Jović	239
Electrochemical Properties and Corrosion Stability of Materials	
D.M. Drazic	249
Structure, Properties and Application of Ni₃Al Aluminides	
M.T. Jovanović, D. Božić, N. Ilic, M. Mitkov and M. Zdujčić	257
Synthesis, Structure and Properties of Non-Metallic and Metallic Singlecrystals	
A.V. Valčić and S. Nikolić	265