

Table of Contents

Preface

Chapter 1: Metallurgical Technologies, Properties of Steels and Alloys

Structure Diagnostic of Iron-Based Out-of-Peritectic Alloys during Nonequilibrium Crystallization

C.D. Le, K.D. Savelyev and V.M. Golod 3

The End-to-End Simulation of Semi-Continuous Casting and Subsequent Hot Rolling with Account of Microstructure

Y.A. Erisov, S. Surudin, I.N. Bobrovskij, C.P. Jiang and B. Khamrayev 11

Research of the Causes of the Defect "Sliver" on the Inner Surface of the Steel Pipe Strength Category X70

P.V. Kovalev, S.V. Ryaboshuk, A.I. Zhitenev and V. Kulikov 16

Filtration Permeability of Dendritic Structure in Condition of Diffusion-Capillary Coalescence of Secondary Side Branches

A. Kim, L.J. Dobosh and V.M. Golod 23

Phosphorus Removal Options at Induction Melting of Steel

V.P. Karasev, S.V. Ryaboshuk, P.V. Kovalev and V. Kulikov 30

Modification of Nitrogen-Containing High-Chromium Steels by Nanosized Lanthanum Hexaboride

E.Y. Kolpishon, L.V. Razumova and S.V. Ryaboshuk 37

Formulas for the Calculation of Temperatures and Concentrations of Carbon Responsible to the Parar Equilibrium of the Main Phases in Medium Sheet Steels

P. Zhitelev and D. Serzhenko 44

Homogenization of Cr-Ni Austenitic Steel Studying: Liquation and Microhardness Heterogeneity Equalization

A.S. Tsvetkov and I.V. Teplukhina 53

Cast Austenitic Steels for Cryogenic Technology

B.S. Ermakov, S.A. Vologzhanina, S.M. Bobrovskij, A.A. Lukyanov and R. Lee 60

Numerical Simulation of Hot High Strain Rate Torsion Tests for Al-Based Alloys

A. Naumov, A. Borisov and A.Y. Doroshchenkova 66

General Experimental Method of Research of Anisotropy of Conductive Materials

G.K. Baryshev, A.A. Barzov, A.P. Biryukov, A. Kondrateva and I.A. Tutnov 72

Effect of Microstructure and Impact Toughness, on the Character of the Destruction of Main Oil and Gas Pipelines

A.Y. Doroshchenkova 79

Application of Innovational Sc-Containing Alloys in Shipbuilding

M. Gogolukhina, L. Mamedova and O. Scholtz 87

Effect of Severe Plastic Deformation on the Structure and Properties of the Aluminum Alloy System Al-Cu-Mg

O.V. Paitova, E.V. Bobruk, S. Shasherina and B.F. Zhang 94

Improving the Properties of Aluminum Alloy System Al-Cu-Mg, Subjected to Hardening and Severe Plastic Deformation

O.V. Paitova, E.V. Bobruk, M.A. Skotnikova and J.Y. Wu 101

Joining of Titanium and its Alloys with Aluminum Alloys by Friction Stir Welding

R. Rzaev, A. Chularis and A. Rybakov 109

The Obtaining Layered Composite Materials that Contain Rare Earth Element

A.N. Burlova, F.Y. Isupov, S.A. Kotov and M.G. Livintsova 117

Temperature Influence on Microstructure and Properties Evolution of Friction Stir Welded Al-Mg-Si Alloy

A. Naumov, I. Morozova, F.Y. Isupov, I. Golubev and V. Mikhailov 122

Comparison of Porosity Evaluation Methods Using the Example of Dissimilar Metal Joints

D. Kurushkin, I. Mushnikov, E.N. Rylkov, F.Y. Isupov, O. Panchenko and I. Golubev 129

Chapter 2: Technologies of Plastic Processing of Materials

The Method for Determining the Friction Coefficient in Relation to the Hot Forging Processes

A.I. Khaimovich, Y.A. Erisov, S. Surudin, I. Petrov, C.P. Jiang and I. Strackbein 137

Improving the Quality of Parts Produced by Bending in a Die with an Elastic Element

E. Nesterenko, A. Volgushev and K. Frese 144

Investigation of the Hammer Forging Process of Large-Sized Turbine Blades of Stainless Steel

M.O. Smirnov, T. Chizhik and A.M. Zolotov 150

Hot Axial Rotary Forging of Flanges Standard EN 1092

L.B. Aksenov, S. Kunkin and N.M. Potapov 159

Researching Conditions of Thermomechanical Process under Semihot Forging

M.M. Radkevich, D. Fomin and A. Gluchihin 165

Influence of Contact Friction on the Kinematics of Metal Flow during Equal Channel Angular Pressing

R.A. Parshikov and A.M. Zolotov 171

Determination of Boundary Parameters of Pipelines Elbows Blanking Elements Made from Titanium Alloy Ti-4Al-2Mn and Steel AISI 304

K. Nokolenko, K. Nikolenko, S. Zvonov and A. Lopatina 178

Mechanical Properties of Bars Produced by Hot Extrusion of Magnesium Shavings

M.Y. Zamozdra, J.S. Karzina and A. Perminova 185

Chapter 3: Composites and Polymers, Intermetallic Compounds and Powder Materials

Manufacturing and Properties of Radiation Resistance Aluminum Alloys and Composites with Addition of Gadolinium

G.A. Kosnikov, A.V. Kalmykov and E.N. Bepalov 195

Effect of Nanocarbons Additions on the Microstructures and Properties of Copper Matrix Composite by Spray Drying Process

P.G. Ji, D.D. Qi, F.X. Yin, G.K. Wang, E. Bobrynina and O. Tolochko 202

Investigation and Characterization of New Polyimide Powder for Selective Laser Sintering

G. Vaganov, A. Didenko, E. Ivan'kova, E. Popova, T. Kuznetsova, I. Kobychko and V.E. Yudin 208

Friction and Wear Characteristics of UD Thermoplastic Tape Based Nanocomposites with Fullerene Soot

I. Kobychko, D.V. Honcharenko, H.Y. Li, A.L. Steshenkov, J.B. Xu and V. Yadykin 215

Investigation by TGA, DSC and DMA Urethane-Imide Copolymers with High Content of Hard Imide Blocks

A. Didenko, V. Smirnova, E. Popova, G. Vaganov, A. Ivanov, E. Kuzmenko, T. Kuznetsova and V. Kudryavtsev 224

Si Nanopowder Based Anode Material for the Lithium Ion Battery Cell

A.V. Morozov, A.V. Semench, A.B. Freidin, W.H. Müller and M.G. Dronova 230

Research of the Possibility of Obtaining a Foam System of Aluminum - Carbon Nanotubes Using a High-Temperature Foam Agent

J.S. Karzina, M.Y. Zamozdra and M. Hootak 239

Effect of High Energy Ball Milling Washing Process on Properties of Nd₂Fe₁₄B Particles Obtained by Reduction-Diffusion

V. Galkin, K. Haider, J.B. Ahn and D.S. Kim 244

The Technology of Producing Layered Composite Materials on the Basis of Hypoeutectic Silumin AK9ch and Sintered Iron Powder AHC100.29

R.V. Kuznetsov, M.M. Radkevich and P.A. Kuznetsov 252

Consolidation Behavior of the Cu-Al₂O₃ Nanocomposite Powder

P.G. Ji, D.W. Lee and E.S. Vasilyeva 258

General Method of Research of Electrophysical Properties of Nanostructured Composites

G.K. Baryshev, A.V. Berestov, A.N. Tokarev, A. Kondrateva and P.O. Chernykh 264

Obtaining a Hard Alloy Powder from a Worn-Out Tools with a Subsequent Use for Pressing Rods	
S.A. Kotov, B.V. Avramishin and E.M. Fedorov	270
Comparison of Supramacroporous Polyester Matrices Fabricated by Thermally Induced Phase Separation and 3D Printing Techniques	
M. Stepanova, A. Eremin, I. Averianov, I. Gofman, A. Lavrentieva, V. Korzhikov-Vlakh and E. Korzhikova-Vlakh	277
The Research and Development of the Technology for Pressure Treatment of the Thermally Expanded Graphite Powders	
S.A. Kotov, S.V.R. Muzafarova and M.G. Livintsova	284
Correlation of Nonuniformities of the Seebeck Coefficient's Distribution and the Strain-Stress State in Extruded Thermoelectric Material	
A.A. Rulimov, D.D. Kuzavkova, S.A. Nemov and A.M. Zolotov	291
Nanostructural Composites in the WC/ZrO₂ (Y₂O₃) System	
A.V. Golub, O.V. Semenov and V.N. Gurtovoy	298
Obtaining Spherical Powders of Grade 5 Alloy for Application in Selective Laser Melting Technology	
N.E. Ozerskoi and Q.S. Wang	304
Synthesis of the <i>In Situ</i> Nb-Si Composites by Binder Jetting Additive Manufacturing Technology	
I.S. Goncharov, L.V. Hisamova, L.Y. Saubanova, I.A. Polozov and Q.S. Wang	311
Aerosol-Assisted Chemical Deposition of Nanocomposite Material in the "Iron-Carbon-Oxygen" System	
I. Tyurikova, S.E. Aleksandrov, K. Tyurikov and G.A. Iankevich	320
Research of Regularities of Aerosol Synthesis of Iron Oxide Particles	
E.N. Chapalda, S.E. Aleksandrov and E. Kucal	327
Synthesis and Study of Nanocrystalline Mg₂SiO₄ Powder and Yttrium Aluminum Garnet	
A.V. Semencha, E.V. Bochagina and M.G. Dronova	334
Agricultural By-Products as Advanced Raw Materials for Obtaining Modifiers and Fillers for Epoxy Materials	
E.M. Gotlib, H.T.N. Phuong, T.L.A. Nguyen, A.G. Sokolova, E. Yamaleeva and I.N. Musin	343
Wood - Polymer Composites Assessment Using Microtomography	
I.N. Musin, I.Z. Fayzullin, S.I. Volfson and R. Yuferev	350
Effect of Processing and Radiation Exposure on the Structure and Properties of Polypropylene	
M.S. Lisanevich, R.Y. Galimzyanova, E.R. Rakhmatullina, Y.N. Khakimullin, I.N. Musin and E.E. Tsareva	355
Investigation of Composite Materials Impact Damage by a Computer Tomography	
O.N. Bezzametnov, V.I. Mitryaykin, V.I. Khaliulin and E.O. Statsenko	362

Chapter 4: Laser Technologies and Additive Manufacturing

Influence of Powder Condition on Surface Properties of Cold-Resistant High-Strength Steel Produced by Direct Laser Deposition Method	
R.S. Korsmik, E. Alekseeva and A. Breki	373
Application Development for the Evaluation of Penetration in Laser and Laser-Arc Hybrid Welding of Tee and Corner Joints	
I.N. Udin, A.A. Voropaev and A. Unt	381
Phase and Structural Transformations in Heat Resistant Alloys during Direct Laser Deposition	
N. Buczak, T. Hassel, N.G. Kislov, O.G. Klimova-Korsmik, G.A. Turichin and L.A. Magerramova	389
Measurement of Thermal Cycle at Multi-Pass Layer Build-Up with Different Travel Path Strategies during DLMD Process	
S. Stankevich, A. Gumenyuk, A. Strasse and M. Rethmeier	396
Research of Effect of the Powder Material Quality in the Structure Formation of the DLD Inconel 718 Samples	
S.S. Silchonok, G.G. Zadykhan, O.G. Zotov and I.N. Morozova	404

Effect of Process Parameters on Microstructure and Mechanical Properties of Direct Laser Deposited Cold-Resistant Steel 09CrNi2MoCu for Arctic Application	
R.V. Mendagaliev, S.Y. Ivanov and S.G. Petrova	410
Research of Mechanical Properties of Cold Resistant Steel 09CrNi2MoCu after Direct Laser Deposition	
Y.A. Bistrova, E.A. Shirokina, R.V. Mendagaliev, M.O. Gushchina and A. Unt	418
Analysis of the Source Type Influence on the Structure Forming during Aluminum Wire-Feed Laser Deposition	
S.S. Silchonok, N.G. Kislov, A.O. Zotova, A.I. Shamshurin and O.G. Klimova-Korsmik	425
An Analytical Model for Filler Wire Heating and Melting during Wire Feed Laser Deposition	
D.V. Mukin, S.Y. Ivanov, E.A. Valdaytseva, G.A. Turichin and A.E. Beniash	431
Modeling of the Formation Process of the Coherent Intermetallides in Nickel Alloys during Laser Treatment	
A.V. Alekseev, E.A. Valdaytseva and V.L. Aleksandrov	438
Effect of Inter-Layer Dwell Time on Distortion and Residual Stresses of Laser Metal Deposited Wall	
S.Y. Ivanov, A. Vildanov, P.A. Golovin, A. Artinov and I. Karpov	445
Current Design Rules for Welding of Wind Energy Structures for Arctic Conditions	
S. Lopaev, P. Layus, P. Kah and S.G. Parshin	452
Feasibility Study of Hybrid Laser Arc Welding Application in Shipbuilding	
M. Gogolukhina, L. Mamedova, O. Scholtz and A. Firsova	459
Structure and Phase Composition of Ti-6Al-4V Samples Produced by Direct Laser Deposition	
S.A. Shalnova, G. Panova and N. Buczak	467
Comparison of Titanium Powders and Products Manufactured by the Direct Laser Deposition Method	
M.O. Gushchina, S.A. Shalnova, N.I. Gerasimov, N.V. Lebedeva and G.G. Klimov	473
Investigation of Crystallization Process of a Single Crystal Nickel-Based Alloy during the Laser Multilayer Cladding	
R.S. Korsmik, G.A. Turichin, G.G. Zadykhan and A.I. Zhitenev	481
Manufacture of a High-Pressure Centrifugal Fan Made of 316L by the Method of High-Speed Direct Laser Deposition	
I.K. Topalov, P.A. Golovin, A.A. Lanin and N.I. Gerasimov	489
Research of the Treatment Parameters Effects on the Layer Formation during Wire-Feed Laser-TIG Deposition with Aluminum Alloy	
V.V. Somonov, I.A. Tsibulskiy, N.G. Kislov and A.A. Lanin	496
Research of the Structure Defects at Wire-Feed Laser and Laser-Arc Deposition with AlMg6	
A.A. Voropaev, A.D. Akhmetov, T. Hassel and G.G. Klimov	504
Features of Laser Welding Light Constructions from Cryogenic Austenitic Steel 316L	
M. Kuznetsov, M. Larin and A. Sorokin	512
Laser Cladding of Heat-Resistant Iron Based Alloy	
D.V. Masaylo, A.V. Orlov, N. Razumov, A.A. Popovich and V. Popovich	520
Designing of Topology Optimized Parts for Additive Manufacturing	
A.V. Orlov, D.V. Masaylo, I.A. Polozov and P.G. Ji	526
Investigation of Aluminum Composite Produced by Laser-Assisted Cold Spray Additive Manufacturing	
D.V. Masaylo, A.V. Orlov and S.D. Igoshin	534
X-Ray CT Investigation of Graded Ti-Ti64 Material Produced by Selective Laser Melting	
V. Sufiiarov, A. Kantyukov and I.A. Polozov	542
Effect of Selective Laser Melting Process Parameters and Heat Treatment on Microstructure and Properties of Titanium Alloys Produced from Elemental Powders	
I.A. Polozov, E. Borisov and V. Popovich	549
The Effect of Laser Power on the Microstructure of the Nb-Si Based <i>In Situ</i> Composite, Fabricated by Laser Metal Deposition	
I.S. Goncharov, D.V. Masaylo, A.V. Orlov, N. Razumov and A. Obrosoy	556
Investigation of Functional Graded Steel Parts Produced by Selective Laser Melting	
V. Sufiiarov, E. Borisov and I.A. Polozov	563

Evolution of the Lattice Structures Properties Manufactured by Selective Laser Melting and Subsequent Hot Isostatic Pressing	
E. Borisov, V.V. Sokolova, A.V. Orlov and P.G. Ji	569
Selective Laser Melting of Nanocomposite Ti-6Al-4V and TiC Powder	
E. Borisov, D.V. Masaylo and V. Popovich	575
Control of Deviations in Lattice Structures Manufactured by Selective Laser Melting	
V.V. Sokolova and A. Kantyukov	580

Chapter 5: Applied Plasma Technologies

Registration of an ICP Plasma CV Dependences under Various Pressures in the Plasma-Chemical Deep Etching System	
G.A. Iankevich	587
Calculating the Nominal Values of the Matching Device Installation of Plasma Chemical Etching	
E.V. Endiiarova and S. Ruby	594
Microstructure and Mechanical Properties of Powder Steel 16Cr - 2Ni - Mn - Mo Obtained by Mechanical Alloying and Spark Plasma Sintering	
T.Y. Makhmutov, N. Razumov and A.I. Shamshurin	601
Design of Special Device for the Forced Electrolytic-Plasma Polishing of Internal Surfaces by Counter Flows	
L.A. Ushomirskaya, Y.M. Baron and I.S. Kuzmichev	610
Effect of the Mechanical Alloying and Spark Plasma Sintering on Microstructure, Phase Composition and Chemical Elements Distribution of Nb-Si Based Composite	
I.S. Goncharov, N. Razumov, A.I. Shamshurin and Q.S. Wang	617
Plasma Chemical Synthesis of Aluminum Nitride Nanopowder	
P.A. Novikov, A. Kim, N.E. Ozerskoi, Q.S. Wang and A.A. Popovich	628
Technological Principles of Internal Surfaces Finishing by Forced Electrolytic-Plasma Polishing	
M.M. Radkevich and I.S. Kuzmichev	634
Aspect-Independent Siliconglass Etching by Bosch Method	
R.A. Alekseev, A.I. Alieva and E. Kucal	640

Chapter 6: Engineering Tribology, Coatings and Surfaces in the Design of Machine Parts and Mechanisms

Tribotechnical Diagnostics of an Internal Combustion Engine According to the Condition of the Oil	
I.S. Syundyukov, E.K. Ivanov, M.A. Skotnikova, J.D. Qian, V.V. Medvedeva and N.A. Krylov	649
Investigation of Tribological Characteristics of Polymers Used in Medicine	
E. Andriushchenko, V. Semenova and P. Yuan	656
Vibroacoustic Study of Abrasive Wear of Multilayered Sliding Bearings	
A.V. Tikalov and L.V. Yefremov	662
Comparative Tribological Testing of Diamond-Containing Inserts of Bearings of Main Shaft of Rotary Steerable Systems	
B.A. Shemyakinskiy, M.A. Skotnikova, Z.X. Wang, A.A. Alkhimenko and V.P. Lozhechko	669
Formation of Nanostructure and Tool Wear during Cutting Treatment of Titanium Alloy	
G.V. Ivanova, J. Padgurskas, V. Jankauskas, A. Popov and S. Shasherina	677
Study of Micro-Hardness of Steel Surfaces after their Friction in the Medium of Plastic Lubricating Material Used in the Units and Mechanisms of Equipment of Oil and Gas and Shipbuilding Industry	
A.L. Steshenkov, S.G. Chulkin, A.A. Alkhimenko, S.D. Shaitor, K.D. Bogatyrev and V.A. Tarasova	684
Method of Testing Rolled Tubular Products for Oilfield Pipes for Corrosion-Abrasive Wear	
B.A. Shemyakinskiy, A.A. Alkhimenko, S.M. Tikhonov, A.V. Mitrofanov and E.P. Sidorova	690
Evaluation of the Strength of Flat Gears According to the Criterion of the Onset of Plastic Deformation	
A.S. Komarov and V.A. Zhukov	695

Semiempirical Mathematical Models of Spinning Friction Steel ShKh15 Steel Titles on Steel R6M5, on a Scheme of a Globe Plane Taking into Account Wear A.L. Steshenkov, S.G. Chulkin, A.A. Alkhimenko, K.Y. Galskii, K.D. Bogatyrev and V.A. Tarasova	701
Studies of Tribological and Corrosion Properties of Coatings Based on Iron for Light Alloy Drill Pipes of Aluminium Alloys B.A. Shemyakinskiy, M.A. Skotnikova, Z.X. Wang and A.A. Alkhimenko	709
Strain and Friction Effect on the Stress-Strain State in the Deformation Zone during Cold Rolling of Thin Beryllium and Aluminum Foils V.V. Mishin, I.A. Shishov and V. Paromov	716
Quasi-Optimal Correlation Algorithm for Measuring the Parameters of Surface Microrelief A. Abramov, N.M. Bobrovskij, N.V. Nosov, V. Tabakov and K. Galyalieva	725
Method for Determining Texture Parameters of Processed Precision Surfaces by Correlation A. Abramov, S.M. Bobrovskij, N.V. Nosov, V. Tabakov and F. Lopatina	731
Finite Element Simulation of Temperature Field during Friction Surfacing of Al-5Mg Consumable Rod F.Y. Isupov, O. Panchenko, L. Zhabrev, I. Mushnikov, E.N. Rylkov and A.A. Popovich	737
Improvement of Technology of Formation of Coatings with Metal Effect by Modified Water-Dispersion Paints V.A. Sokolova, V.A. Markov and A.A. Rzhavtsev	745
Corrosion-Resistant Ceramic Coatings that are Promising for Use in Liquid Metal Environments M.A. Markov, A.D. Kashtanov, A.V. Krasikov, A.D. Bykova, D.A. Gerashchenkov, A.M. Makarov and S.N. Perevislov	752
Study of the Method of Obtaining Functional Interest-Metallic Coatings Based on Ni-Ti Reinforced with WC Nanoparticles A.M. Makarov, D.A. Gerashchenkov, S.E. Aleksandrov, M.A. Markov, E.Y. Gerashchenkova, A.N. Belyakov and A.D. Bykova	760
Technological Aspects of Obtaining Functional Gradient Coatings to Protect Machinery from Wear D.A. Gerashchenkov, A.M. Makarov, R.Y. Bystrov, T.I. Bobkova, A.N. Belyakov, A.D. Bykova, M.A. Markov and B.V. Farmakovskiy	768
Technological Aspects of Obtaining Functional Coatings Based on Silver by the Method of Cold Gas-Dynamic Spraying A.D. Bykova, B.V. Farmakovskiy, M.A. Markov, A.N. Belyakov, A.M. Makarov, D.A. Gerashchenkov and S.N. Perevislov	774
Electrochromic Properties of NiO Thin Coatings A. Kondrateva, P. Bepalova, G.K. Baryshev and M. Mishin	781
The Use of the TMA as Stabilizing Reagent for the Li-O System Obtained by Atomic Layer Deposition D. Nazarov, I. Ezhov, I. Mitrofanov, O. Lyutakov and M.Y. Maximov	787
Features of the Implementation of the Vegard's Law in Thin Films of Rare Earth Elements Compounds G.D. Khavrov, V.V. Kaminski, N.V. Sharenkova and A.A. Vinogradov	795
Effects of PTA Deposition Parameters on Coating Quality of 41Cr4, 50CrV4 and 100Cr6 Steel P.A. Golovin, M. Mildebrath and E. Zemlyakov	801

Chapter 7: Amorphous Materials with Special Properties

Influence of Se on Properties of As-S-Se-I Glass for Immersion Mid-IR Leds Lenses M.G. Dronova and A. Osipov	811
Ionic Seebeck Effect in Alkali Niobophosphate Glasses V.A. Markov, I. Sokolov, M. Bozhko and E. Kovalenko	818
Structural Features and the Effect of Two Alkalis in Chalcogenide and Phosphate Glasses V.A. Markov, I. Sokolov and A. Povolotskiy	824
Fusible Glass Based on Glassy Chalcogenide Type Systems Ge-S(Se)Br, Ge-S(Se)I N.I. Krylov, M.D. Mikhailov, L.N. Blinov and E.V. Bochagina	834

Bi-Activated Glasses and their Potential Covering Spectral Region as Active Media for Tunable near Infrared Lasers	
Y. Fedorov, V. Aseev, I. Tuzova and V.A. Klinkov	841
Effective Diagnostics of Internal Defects of Diamonds in the near Infrared Range on the Basis of Immersion Medium Made from Low-Melting Chalcogenide Glass	
A.V. Semenchа, M.G. Dronova, V.A. Klinkov, A. Osipov and J. Mistry	848
Formation of New Glass-Ceramic Materials with Controllable Dielectric and Magnetic Properties	
Z.G. Tyurnina, N. Tyurnina, S.I. Sviridov, O.Y. Sinelshchikova, A.V. Tumarkin, A.V. Drozdovskii and N.S. Vlasenko	856
Electronic Structure and Ionic Transport in Phosphate Glass with Pyrophosphate Structural Elements	
A. Petrov, I. Sokolov and V.A. Markov	864
Manifestation of Concentration Quenching of Fluoroaluminate Glasses Doped with Erbium	
V.A. Klinkov, A.V. Semenchа, E. Tsimerman, A. Osipov and M.G. Dronova	871
Study of Crystallization Kinetics of Amorphous Zirconia in Fe₂O₃ Matrix by Kissinger Method	
E. Bobrynina, R. Starykh, S. Ginzburg and I. Morozova	878
Investigation of the Pastes for Multilayer Ceramic Capacitors Termination	
A.V. Dmitrieva, P.S. Gordeev and I.Y. Gallai	885