

Contents

Vol. 73, No. 3, 2000

Simultaneous English language translation of the journal is available from MAIK "Nauka/Interperiodica" (Russia).
Distributed worldwide by Kluwer Academic/Plenum Publishers. *Russian Journal of Applied Chemistry* ISSN 1070-4272

Inorganic Synthesis and Industrial Inorganic Chemistry

- Phase Relationships in the System $\text{SnO}_2\text{-P}_2\text{O}_5$
A. E. Mal'shikov, M. A. Petrova, A. S. Novikova, and V. F. Popova 369
- Effect of Gas Phase on Growth Kinetics of Oxygen Diffuse Layer and Scale in Titanium Oxidation
V. I. D'yachkov and E. M. Ryabov 373
- Reaction of Sodium and Potassium Carbonates with Ammonium Hydrogen Fluoride
D. V. Makarov, E. L. Tikhomirova, Yu. V. Rakin, and V. T. Kalinnikov 380
- Ultradispersed Diamond Coatings Enhancing Wear Resistance of Hard Alloys
*T. N. Adrianiova, A. A. Zakharov, V. V. Letunovskii, A. N. Demchenko,
V. P. Sergienko, A. S. Gorshkov, and L. V. Goryacheva* 384
- Interaction of Various Technical Products of Diamond Synthesis with Nonequilibrium Oxygen Plasma
T. S. Ugnovenok, Yu. P. Udalov, and I. B. Gavrilenko 387
-

Physicochemical Studies of Systems and Processes

- Thermodynamics of Alloying in the Systems Lead–Calcium, Bismuth–Calcium,
and Lead–Bismuth–Calcium
A. G. Morachevskii, Z. I. Vaisgant, and E. V. Bochagina 391
- Kinetics of Ammonium Hexafluorotitanate Pyrohydrolysis in the Presence of $(\text{NH}_4)_2\text{SiF}_6$
E. I. Mel'nichenko, I. G. Maslennikova, D. G. Epov, and L. N. Kurilenko 397
- Solubility in the $\text{Ca}(\text{HCOO})_2\text{-Zn}(\text{HCOO})_2\text{-H}_2\text{O}$ System at 25 and 50°C
V. Z. Vasileva 401
-

Sorption and Ion-Exchange Processes

- Removal of Molybdenum(VI) from Tungstate Solutions with Weakly Basic Anion Exchangers
A. A. Blokhin, A. A. Kopyrin, A. A. Boev, and M. K. Kirillova 404
- Features of Copper(II) and Aluminum(III) Sorption with Various Cation Exchangers
M. A. Sinyakova, E. B. Mikryukova, I. V. Vol'f, and N. E. Manvelova 409
- Kinetic Treatment of Surface Electrokinetic Properties of NiO in Aqueous Tetrazole Solutions
in Terms of Surface Ligand Exchange
K. P. Tikhomolova, I. B. Dmitrieva, M. V. Ivanova, and G. I. Koldobskii 413
- Sorption Properties of Oxohydroxides Prepared by Alkaline Hydrolysis
of Cobalt(II) and Zinc(II) Salt Solutions
S. I. Pechenyuk, L. F. Kuz'mich, S. I. Matveenko, and E. V. Kalinkina 419
-

Applied Electrochemistry and Corrosion Protection of Metals

- Electrodeposition of Tin–Antimony Alloy from Dilute Sulfuric Acid Electrolyte
in the Presence of Organic Brighteners
G. I. Medvedev and N. Yu. Fursova 425

Electrolytic Preparation of Molybdenum Oxides <i>V. M. Nagirnyi, R. D. Apostolova, A. S. Baskevich, and E. M. Shembel'</i>	429
Anodic Oxidation of Vanadium(V) Oxide from Solutions of Vanadium(IV) Oxysulfate <i>E. M. Shembel', V. M. Nagirnyi, R. D. Apostolova, and V. M. Chaikovskaya</i>	432
Mechanochemical Synthesis of Lithium–Manganese Spinel, a Cathode Material for Lithium Power Cells <i>N. V. Kosova, N. F. Uvarov, E. T. Devyatkina, E. G. Avvakumov, and S. Yu. Solomentsev</i>	436
Rechargeable Polyaniline-based Air Electrode <i>M. O. Danilov and N. V. V'yunova</i>	441

Environmental Problems of Chemistry and Technology

Gas Sensitivity of Osmium and Ruthenium Complexes to Ammonia in Air <i>L. P. Maslov, T. M. Buslaeva, and E. V. Kopylova</i>	444
Electrochemical Oxidation of Iron Minerals in Alkaline Solutions <i>D. V. Makarov, V. N. Makarov, and T. N. Vasil'eva</i>	449

Production and Use of New Materials

Effect of Heterovalent Substitutions on the Electrical Conduction of Rubidium Diphosphate <i>E. A. Marks, E. I. Burmakin, and G. Sh. Shekhtman</i>	455
Effect of Isotope Substitution ${}^6\text{Li} \leftrightarrow {}^7\text{Li}$ on Ionic Transport in Lithium-containing Solid Electrolytes <i>V. P. Obrosov, M. I. Pantyukhina, O. V. Volkova, M. Yu. Bogomolov, V. Kh. Tamm, G. G. Arkhipov, N. N. Batalov, and A. P. Stepanov</i>	459
Phase Separation and Electrical Properties of Amorphous Systems $(\text{Co}_{40}\text{Fe}_{40}\text{B}_{20})_{1-x} + (\text{SiO}_2)_x$ <i>Yu. E. Kalinin, S. B. Kushchev, P. V. Neretin, A. V. Sitnikov, and O. V. Stognei</i>	464
New Glass-Enamel Lead-Free Coating for Copper, Modified with Fe_3O_4 , MnO_2 , and Co_2O_3 <i>E. A. Yatsenko, A. A. Nepomnyashchev, and A. P. Zubekhin</i>	468
Mechanism of Adhesion of Thermally Stable Glass-Enamel Coating to Copper <i>A. A. Nepomnyashchev, E. A. Yatsenko, and A. P. Zubekhin</i>	471

Processes and Equipment of Chemical Industry

Capillary Disintegration of Ideal Fluid Jet into Drops upon Build-Up of Long-Wavelength Perturbations <i>Yu. G. Chesnokov</i>	474
Crystallization and Separation of Solid Phase in Manufacture of Disodium 2-Naphthol-3,6-disulfonate <i>A. I. Leont'eva, V. I. Konovalov, K. V. Bryankin, P. A. Fefelov, S. Yu. Chuprunov, and S. A. Karetnikov</i>	479
On the Possibility of Improving the Efficiency of Drying of Pastelike Organic Dye Intermediates <i>A. I. Leont'eva, V. I. Konovalov, K. V. Bryankin, S. Yu. Chuprunov, L. N. Chemerchev, and A. A. Chernov</i>	483

Organic Synthesis and Industrial Organic Chemistry

Alkylation of 1 <i>H</i> -Benz[<i>de</i>]isoquinoline-1,3(2 <i>H</i>)dione and Benz[<i>cd</i>]indol-2(1 <i>H</i>)one under Conditions of Phase-Transfer Catalysis <i>V. F. Anikin, E. A. Krasnova, and D. G. Kupriyan</i>	486
Synthesis of 1-Phenyl-4-(2- <i>R</i> -Quinazol-4-on-3-yl)methyl-1,2,3-triazoles <i>I. A. Abdugafurov, A. A. Muzaffarov, N. Madikhanov, Kh. M. Shakhidoyatov, and A. G. Makhsumov</i>	490

Macromolecular Chemistry and Polymeric Materials

Role of Nitrogen Atoms in Polyacrylonitrile Carbonization <i>A. V. Gribanov and Yu. N. Sazanov</i>	493
Effect of <i>m</i> -Phenylenediamine and Methyl Hydrogen Norbornenedicarboxylate on the Structure of Solutions of H Complexes of Dimethyl Dihydrogen Benzophenonetetracarboxylate with Diaminodiphenylmethane <i>I. G. Silinskaya, N. A. Kalinina, V. N. Artem'eva, N. V. Kukarkina, V. P. Samarin, and V. V. Kudryavtsev</i>	497
Copolyarimide Fibers: Structure, Properties, and Molecular Design <i>G. M. Mikhailov, M. F. Lebedeva, Yu. G. Baklagina, and T. A. Maricheva</i>	501
Emulsion Copolymerization of Zinc Methacrylate–Acetate with Alkyl Methacrylates <i>L. V. Kabanova, N. V. Kuznetsova, and Yu. A. Aleksandrov</i>	510
Mass-Spectrometric Study of Thermal Degradation of Low-Molecular-Weight Polystyrene Grafted to Fullerene C ₆₀ <i>B. M. Ginzburg, A. O. Pozdnyakov, O. F. Pozdnyakov, and B. P. Redkov</i>	515
Phase-Transfer Dehydrochlorination of Vinyl Chloride Copolymers <i>V. N. Salimgareeva, Yu. A. Prochukhan, N. S. Sannikova, and Yu. A. Lebedev</i>	521
Features of Local Graft Polymerization of Methacrylic Acid in the Areas of Latent Tracks in Perfluorinated Polymer Films <i>V. P. Zubov, I. P. Chikhacheva, A. M. Evtushenko, S. V. Budris, S. V. Vityutneva, V. V. Shirkova, and O. L. Orelovich</i>	527
Effect of Natural Chalk on Curing of Liquid Thiokol and Thiopolyether with Manganese Dioxide <i>O. V. Petrov, E. S. Nefed'ev, Yu. N. Khakimullin, A. A. Idiyatova, and V. A. Chistyakov</i>	533
Decrease of the Viscosity and Nitrogen Content in Nitrocellulose of Utilized Pyropowders <i>M. A. Drozdov, G. Ya. Gumenyuk, A. V. Pokrovskii, and S. N. Berdonosova</i>	537
Synthesis and Molecular Structure of Modified Carboxymethyl Hydroxyethyl Cellulose <i>E. B. Knyshenko, N. N. Molotkova, K. I. Kienskaya, V. Kim, and L. A. Shits</i>	541
Use of Lignin Derivatives as Oxidants for Production of Aromatic Aldehydes from Lignin <i>A. F. Gogotov</i>	545

Brief Communications

Phase Formation in the Na ₃ NbO ₄ –LaNbO ₄ System <i>V. I. Strakhov, A. P. Pivovarova, and T. V. Trishina</i>	548
Recovery of Gossypol from Cottonseed Kernels as Influenced by Electric Field Intensity <i>K. S. Nadirov, O. N. Chechina, N. A. Prikhod'ko, and K. B. Amanbaeva</i>	551
Silver(I) Sorption with Organosilicon Polymer Poly[<i>N</i> -(3-silsesquioxanylpropyl)thioacetamide] <i>A. I. Kirillov, E. V. Panezhda, Yu. N. Pozhidaev, L. Yu. Belousova, N. N. Vlasova, and M. G. Voronkov</i>	554
Catalytic Fluorination of Hexachlorobenzene with Supported Potassium Fluoride <i>A. I. Shipilov and N. G. Fedoseev</i>	556

Obituaries

Gennadii Aleksandrovich Petropavlovskii (1926–2000)	558
---	-----

Book Reviews

Kovernisty, Yu.K., <i>Ob''emno-amorfiziruyushchiesya metallicheskie splavy</i> (Bulk-amorphizing Metal Alloys), Moscow: Nauka, 1999 <i>A. G. Morachevskii</i>	560
--	-----
