

A B S T R A C T S

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REDUCING OPENING OF HETEROCYCLIC FRAGMENT OF COMPOUNDS OF 2,1-BENZISOXAZOLE SET AT CONDITIONS OF METAL-COMPLEX CATALYSIS

The interaction of the 5-halogen-3-aryl-2,1-benzisoxazole and phenols for reaction system potassium carbonate/ N,N-dimethylformamide/8-quinolinol/ chloride of copper has been shown to result in the unexpectedly reducing opening of heterocyclic fragment and in formation of appropriate o-amine ketone under the reaction of nucleophilic aromatic substitution of halogen at conditions of metal-complex catalysis.

Key words: catalysis, 5-halogen-3-aryl-2,1-benzoxazole, phenols, nucleophilic aromatic substitution reaction

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INTER MOLECULAR DEHYDRATION OF ALCOHOL FRACTION OF KAPROLAKTAM PRODUCTION

The process of aliphatic ester synthesis from wasters of caprolactam production (alcohol fraction) has been studied. As the catalysts of dehydration the following substances have been considered: n-toluenesulfoic acid, sodium hydrosulfate, water solution of the sulfuric acid and catalytic system- sulfuric acid-aluminum sulfate. The catalysts studied have been shown to reveal a different selectivity with respect to process of ester formation. The reaction products can be used as anti-explosion additions to engine fuel and to solvents of paint-and-lacquer materials.

Key words: aliphatic esters, synthesis, caprolactam

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SUBSTITUTED COPPER PHTHALOCYANINES WITH FRAGMENTS OF PIPERIDINE AND AZEPANE

The mixed substituted copper phthalocyanines containing fragments of piperidine or azepane and aryl nature substituents have been synthesized. Some their physical-chemical properties have been studied.

Key words: phthalonitriles, piperidine, azepane, copper phthalocyanines, synthesis

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SYNTHESIS AND FORECASTING OF PHARMACOLOGICAL PROPERTIES OF NEW POLYHETEROCYCLIC SYSTEMS CONTAINING PYRIDOBENZOXAZEPINONE AND OXADIAZOLE FRAGMENTS

Synthesis of some pyrido[3,2-b][1,4]benzoxazepine-10(11H)-ones has been developed and carried out. Subsequent modification of given compounds allowed to form the oxadiazole fragment on molecular periphery. On the basis of neural-network modeling and construction of Kohonen's maps the forecasting of pharmacological properties of synthesized substances and their structural analogues have been done.

Key words: synthesis, pyrido[3,2-b][1,4]benzoxazepine-10(11H)-ones, pharmacological properties

M.A. KRIUSHKINA, A.V. BORISOV, G.P. SHAPOSHNIKOV

AMINOSUBSTITUTED TETRAANTHRAQUINONEPORPHYRAZINES

The synthesis methods of new acetylaminosubstituted 2,3-dicarboxyanthraquinones have been developed. On the base of these compounds the appropriate metalcomplexes of acetylaminotetraanthraquinoneporphyrines have been synthesized. By means of these compounds hydrolysis the aminotetraanthraquinoneporphyrines have been synthesized. The spectral properties of synthesized compounds have been studied.

Key words: synthesis, acetylaminosubstituted 2,3-dicarboxyanthraquinones, complexes, acetylaminotetraanthraquinoneporphyrines

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SYNTHESIS OF AZOHETEROCYCLES ON BASE OF 4-AMINOPHTALONITRILE

Methods of synthesis of heterocyclic azophthalonitriles have been developed. The reaction of the 3,4-dicyanophenylhydrazones with hydrazine and hydroxylamine has been studied. For the first time, the 3,4-dicyanophenylazo derivatives of isoxazole and pyrazole set have been obtained and described

Key words: diazotization, combination, cyclization, 1,3-diketone, hydrazine, hydrazone, isoxazole, pyrazole, azophthalonitrile

I.V. SHKUTINA, O.F. STOYANOVA, V.F. SELEMENEV

PHENOBARBITAL ADSORPTIVE CONCENTRATING ON VARIOUS KIND POLYMERS

The adsorptive properties of polymer sorbents like "Stirosorb" and of anion exchanger AV-17-2P at the phenobarbital concentrating have been studied. The phenobarbital sorption has been considered dependently on the equilibrium time achievement, on the concentration of hydrogen ions and on sorbat in the solution. The desorption of phenobarbital with chloroform and chloroform-isopropanol mixture has been carried out.

Key words: adsorption, polymer sorbent, phenobarbital

V.N. LOSEV, S.L. DIDUKH, A.K. TROFIMCHUK

SORPTION-PHOTOMETRIC DETERMINATION OF IRON USING SORBENTS BASED ON INORGANIC OXIDES WITH FUNCTIONAL GROUPS OF 4,7-DIPHENYL-1,10-PHENANTHROLINE

Sorbents on the base of inorganic oxides (SiO_2 , Al_2O_3 , ZrO_2) sequentially modified with polyhexamethyleneguanidine and 4,7-diphenyl-1,10-phenanthrolinedisulfonic acid have been proposed for sorption-photometric determination of iron. Sorbents extract the iron(II) from solutions at pH range of 4-8 with extraction degree of 98-99% and equilibration time of 5 min. Formation of colored complexes of iron(II) on the surfaces of sorbents has been used at developing the procedure of its sorption photometric determination. The limit of detection was 0.02-0.05 μg of iron per 0.1 g of the sorbent. The calibration curves were a linear up to 6-8 $\mu\text{g}/0.1\text{g}$. Procedures have been used at determination of iron in natural waters.

Key words: iron sorption-photometric determination

N.P. PICULA, G.B. SLEPTCHENKO, G.V. KLIMACHEV, E.G. CHEREMPEY

ABOUT THEORY OF ELEMENTS INFLUENCE IN INVERSION VOLTAMPEROMETRY

The system of two equations allowing taking into account the mutual influence of two elements into volume of Hg-film or on the surface of solid indicator electrode accounting active resistance of electrochemical cell has been obtained and solved.

Key words: voltamperometry, electrochemical cell, account of active resistance

E.P. SUROVOY, L.I. SHURYGINA, L.N. BUGERKO, N.V. BORISOVA

FORMATION OF PRODUCTS OF THALLIUM AZIDE PHOTOLYSIS

By means of mass spectrometry, spectroscopy and electronic microscopy methods it has been established that the TlN_3 (A) preliminary irradiation with light in vacuum results in increase of photolysis rate and photocurrent as well as in appearance of new long-wavelength region of spectral response. The TlN_3 (A) photolysis products - thallium and nitrogen - are formed on a sample surface in a stoichiometric relationship. The topography and kinetics of photolytic thallium accumulation have been determined and efficient rate constants of thallium azide photolysis have been estimated.

Key words: photolysis, thallium azide, rate constants, mass-spectrometry, electron spectroscopy, radiation spectroscopy

L.S. KUDIN, V.B. MOTALOV, M.F. BUTMAN, S.N. NAKONECHNY, K.W. KRÄMER

MOLECULAR AND IONIC SUBLIMATION POLY- AND SINGLE CRYSTALS OF GADOLINIUM TRIBROMIDE

The molecular and ionic sublimation of poly- and single crystals of gadolinium tribromide was studied in the Knudsen and Langmuir regimes. In the temperature range of 894 – 1044 K the monomer and dimer molecules and GdBr_4^- and Gd_2Br_7^- negative ions were observed. The partial vapor pressure of neutral species were determined and the sublimation enthalpies ($\Delta_s H^\circ(298\text{ K})$, kJ mol^{-1}) in the form of monomer (296 ± 5) and dimer (384 ± 28) were obtained. The equilibrium constants of ion molecular reactions including GdBr_4^- and Gd_2Br_7^- ions were measured and the reaction enthalpies were calculated. The enthalpies of formation ($\Delta_f H^\circ(298\text{ K})$, kJ mol^{-1}) of molecules – 542 ± 6 (GdBr_3), -1292 ± 28 (Gd_2Br_6) and ions – 1070 ± 27 (GdBr_4^-) and -1844 ± 50 (Gd_2Br_7^-) are recommended.

Key words: poly- and single crystals of gadolinium tribromide, sublimation, vapor composition, formation enthalpies, equilibrium constants

S.N. YASHKIN, N.V. KUDASHEVA

DETERMINATION OF EQUILIBRIUM PARAMETERS "LIQUID - VAPOR" FOR ADAMANTANE AND ITS DERIVATIVES. PART I. BOILING TEMPERATURES

On the basis of experimental retention indexes on non polar stationary liquid phases by means of sorption-structural correlations the normal boiling temperatures (T_b) have been determined for 19 adamantane's functional derivatives. Polar components of boiling temperatures (T_{pol}), representing a difference between normal boiling tem-

peratures of substance and hypothetical n-hydrocarbon with the same retention index on non polar stationary liquid phase have been calculated. Depending on number, nature and positions of substituents in adamantane fragment the values T_{pol} were changed from -8.4° up to 46.6° . The opportunity of T_{pol} application for estimation of ability of studied compounds to realization of specific intermolecular interactions has been discussed.

Key words: adamantane, boiling temperature, intermolecular interactions

O.V. BALMASOVA, V.V. KOROLEV

ADSORPTION OF FATTY ACIDS FROM ORGANIC SOLVENTS SOLUTIONS ON SURFACE OF SUPERFINE FERRIMAGNETICS

The adsorption of unsaturated fatty acids ($C_{18:n}$) on the ferrimagnetics surface was studied. For describing isotherms of oleic, linoleic, linolenic acids adsorption the theory of volume microporous filling was used. From IR-spectroscopy and equilibrium adsorption data the isotherm of adsorption-desorption of oleic acid from cyclohexane was established to lie above the isotherms of linoleic and linolenic acids adsorption whereas the values of limited adsorption and characteristic energy increase from linoleic acid to oleic acid. For adsorption from heptane the inverse relation is observed. The value of limited adsorption on the manganese ferrite surface from carbon tetrachloride was shown to be more in comparison with the value of limited adsorption on the copper ferrite surface. All isotherms of adsorption-desorption of surfactants from solutions have the hysteresis.

Key words: fatty acids, adsorption, surface, ferrimagnetics, organic solvents

M.I. BAZANOV, V.V. CHUGUNOV, T.G. KOMAROVA, V.V. CHERNIKOV, N.V. CHIKUNKOVA
DEVELOPMENT OF CORROSION INHIBITORS AND ELECTROLYTES OF COMBINED ACTION ON THEIR BASE

The corrosion of copper, brass and steel in sulfamine acid water solutions has been investigated by gravimetric method. The inhibiting action of various organic additives (benzotriazole, urotropine, benzimidazole, triethanolamine) has been shown.

Key words: corrosion, copper, brass, steel, inhibitor

V.A. KHOLODNOV, D.A. KRASNOBORODKO, S.V. FROLOVA
INTERVAL ESTIMATION OF PARAMETERS OF ARRENIUS, LENGMUEARE AND ANTOINE DEPENDENCES

The questions connected with the solution of conventional problem of chemical technology - determination of parameters of mathematical dependences on experimental data are considered. On the base of computing experiment using system of computer mathematics Mathcad for linearized dependences of Arrhenius and Lengmuare the known method of interval estimation of parameters of the mathematical description has been considered. On an example of the equation of Antoine, the method of determination of interval estimations of parameters of the mathematical description has been offered and illustrated for complex dependences.

Key words: computer experiment, parameter determination on experimental data

O.I. ODINTSOVA, M.N. KROTOVA, E.Yu. KUVAEVA
INFLUENCE OF NON-IONIC SURFACTANTS ON SOLUBILIZATION OF DISPERSE DYES

The theoretical aspects of the solubilization process of disperse dyes by non-ionic surfactants of various chemical structure have been studied. The influence of the concentration of oxyethylated alkylphenols and oxyethylated fatty alcohols on absolute and specific value of solubilization for disperses anthraquinone and azodyes has been studied. The hypothetical structure (Schwartz surface) formed by micelles of oxyethylated fatty alcohols having vinylbutyl termination has been proposed. This structure explains the solubilizing efficiency of oxyethylated fatty alcohols with respect to disperse dyes.

Key words: disperse dyes, solubilization, surfactants

A.V. BADENIKOV, V.Ya. BADENIKOV, L.G. EVSEVLEEVA, M.S. KIRIK
DISPLACEMENT REACTIONS DURING FLOW ANALYSIS AT INDIRECT ION METRIC DETECTION OF Fe(III)

The copper displacement reaction from its chelate with EDTA by Fe(III) was used to determining Fe in flow analysis. The stationary state has been shown to connect with indirect detecting of Fe aqua ions.

Key words: copper complexes, iron determination, EDTA

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LEAD-CONTAINING COMPOSITE NANOMATERIALS BASED ON POLYETHYLENE

The composite nano-size material including lead-containing nanoparticles stabilized in matrix volume of high pressure polyethylene has been obtained with the method of thermal decomposition of lead acetate. The composites obtained have been studied by means of TEM and XRD. The lead containing nano-particles have been established to have the average size of 5 ± 0.2 nm and to include several components: Pb, PbO, Pb₂O₃. The studies of concentration dependencies of electrical and physical properties of synthesized materials have been carried out.

Key words: composite nano-size material, lead, polyethylene

E.I. IONOVA, V.G. BONDALETOV, A.A. LYAPKOV, E.P. FITERER, N.V. BELOV, V.D. OGORODNIKOV
HEAT EFFECTS OF INDENE POLYMERIZATION

The indene polymerization has been considered by means of adiabatic calorimetry. Accomplished studies shown that heat evolution in polymerization process is determined with input at least two parts – directly by heat effect of polymerization and by heat of catalyst solvation the input of which can be quite large.

Key words: indene, polymerization, heat effect, catalyst

S.V. MIKHEEV, V.A. EFIMOV

SOME METROLOGICAL ASPECTS OF VISCOSIMETRIC METHOD OF DETERMINATION OF MOLECULAR MASS OF SUPER HIGH MOLECULAR TRANS-POLYPENTANILENE

Metrological study of question of viscosimetry application for determination of molecular mass of super high-molecular trans-polypentaniene has been carried out.

Key words: viscosimetry, molecular mass, super high-molecular trans-polipentaniene

A.V. BORISOV, O.K. SHVETSOV, E.Yu. DUROSOVA, A.V. KOMIN, G.V. KATYSHEVA
STUDY OF EMULSION COPOLYMERIZATION OF BUTADIENE AND NITRILE OF ACRYLIC ACIDS IN PRESENCE OF ANIONIC EMULSIFIERS OF VARIOUS NATURE

The copolymerization study of butadiene and nitrile of acrylic acids in the presence of the sodium laurate and potassium salts of polymeric surfactants on the base of copolymers of metacrylic acids, nitrile acrylic acids and diene has been carried out. The copolymerization kinetics in their presence and latex particles distribution on the size has been studied. In the presence of polymeric surfactants the latex particles formation and their limited flocculation have been shown to occur during all stationary period of copolymerization, that indicate on non-micellar character of their formation.

Key words: copolymerization, butadiene, nitrile of acrylic acid, kinetics

V.F. KOVTUN
IMPULSE GRINDERS

In the frame of model of impulse grinder the foundation of conditions of follicle grinding has been carried out. The experimental checking of modeling results has been done.

Key words: grinding, modeling, follicle

L.N. ADEEVA, M.V. ODINTZOVA

SORBENT FOR WASTE WATER PURIFICATION FROM SHELL OF CEDAR NUTS

The possibility of oxidized sorbent obtaining from shell of cedar nuts by means of shell thermal treatment followed by the surface oxidation for formation of oxygen-containing groups has been considered. The possibility of application of sorbent obtained as cation-exchanger for extraction of metal ions from solution has been studied. The possibility of waste water afterpurification from copper ions has been shown.

Key words: sorbent, shell of cedar nuts, metal ions sorption

V.F. KOVTUN, V.A. KOZLOV

GAS-CHROMATOGRAPHIC AND SPECTRAL ANALYSIS OF SEPARATE FRACTIONS OF POULTRY FAT

The qualitative and quantitative composition of fat acids of separate fractions on poultry fat has been determined by means of spectral analysis and gas-liquid chromatography method.

Key words: fat acids, poultry fat

T.G. DMITRIENKO, S.S. POPOVA

ELECTROCHEMICAL BEHAVIOR OF 4 – METHYL – 2 – PHENYL – 5,6 – TETRAMETHYLENEDIOPYRILE PERCHLORATE ON INTERFACE WITH SOLID ELECTROLYTE

Current density dependences of 4 – methyl – 2 – phenyl – 5,6 – tetramethylenediopyrile perchlorate electrochemical reduction on potential, rate and duration of cathode polarization, carbon black content in the electrode composition were studied. The opinion about possible mechanism of 4 – methyl – 2 – phenyl – 5,6 – tetramethylenediopyrile perchlorate electrochemical reduction on the boundary with a solid electrolyte conducting through sodium ions was expressed. The cathode process was shown to proceed according to mechanism of two-dimensional centers formation. The electrochemical reaction peculiarity on the boundary with a solid electrolyte was discovered to determine by different surface states on boundaries of a semiconductor – electrolyte. The reason of these states occurrence is the chemical bonds breaks on the surface, structural defects, and impurities in near cells of a crystal lattice. Carbon atoms chemisorption on semiconductor surface can occur with partial or total electron charge transfer from the semiconductor on carbon black atom with forming ad-atoms. Such processes make easy of cathode reduction of organic salt cation and promote its transfer into a diffusion regime. This interpretation of process mechanism quite agrees with the results of potentiostatic measurements and the linear dependence feature of current potential and density in maximum of potentiodynamic curves on potential sweep speed.

Key words: electrochemical reduction, 4 – methyl – 2 – phenyl – 5,6 – tetramethylenediopyrile perchlorate, reactions mechanism

O.N. SCHERBININA, N.G. MEDVEDEVA, S.S. POPOVA

PROCESS OF CALCIUM INCORPORATION INTO COPPER-BISMUTH THIN LAYER ELECTRODE

It was proposed to modify the copper-bismuth thin layer electrode by calcium from aprotic organic solution of CaCl_2 in dimethylsulfoxide with the method of electrochemical cathode incorporation. Studies were carried out in a wide range of polarization potentials and concentrations of salt solution. X-ray analysis shown that solid solution of CaCuBi and inter metallic compound $\text{CaCuBi}_2\text{O}_3$ formed on the electrode. Diffusion-kinetic parameters of this compound were calculated.

Key words: electro chemical modification, calcium, copper-bismuth electrode, solid solution, inter metallic compound

E.Yu. ALESHUNINA, A.S. BRYKOV, V.V. DANILOV

INFLUENCE OF ALUMINATE ION ON CEMENTING PROPERTIES OF ALKALINE SILICA-CONTAINING COLLOIDAL SOLUTIONS

The cementing properties of the alkaline silica-containing colloidal solutions formed by interaction of SiO_2 nanoparticles with potassium aluminate solution were studied.

Key words: cementing properties, silica-containing colloidal solution, potassium aluminate

V.A. NIKIFOROV, E.A. PANKRATOV, E.I. LAGUSEVA, G.A. MASLENNIKOVA

THEORETICAL PRECONDITIONS FOR WATER STEAM APPLICATION AS GASEOUS PHASE CARRIER IN PROCESSES OF GAS-LIQUID POLYCONDENSATION

The possibility of superheated steam application as a carrier of acidating monomers gaseous phase was shown. The process can be realized both in slit lattice reactors and in confusor-diffuser reactors-fibrators. The dependences of fibrator properties on the technological parameters were revealed. The main reason of the low yield of polyamide fibrators was proved to be the hydrolysis of fine chloranhydride with the technological steam fog.

Key words: superheated steam, heat carrier, polyamide fibrators, hydrolysis

Yu.V. TITOVA, V.G. STOKOZENKO, M.V. KONYCHEVA, A.I. MAXIMOV

DELIGNIFICATION OF BAST FIBERS UNDER PLASMA-SOLUTION TREATMENT

Delignification processes of rough bast fibers under the action of underwater gas discharge were studied. The residual lignin and fiber mass losses were determined after plasma-solution treatment and further chemical one. The application of gas-discharge to bast fiber treatment was shown to increase essentially the lignin solubility allowing reaching the delignification degree up to 68 % for flax, 64 % for hemp and 39% for jute.

Key words: delignification, bast fibers, plasma-solution treatment

O.N. KARATUN, A.Yu. MOROZOV

INFLUENCE OF TECHNOLOGICAL PARAMETERS ON PYROLYSIS PROCESS OF PETROL FRACTION OF AGPP

The thermal transformation of petrol fraction of Astrakhan gas processing plant in temperature range of 650-850 °C and volumetric speed of raw material feed of 1-4 h⁻¹ has been considered. During experimental researches it has been established, that the petrol fraction of AGPP is good raw material for unsaturated hydrocarbons obtaining.

Key words: thermal transformation, petrol fraction, unsaturated hydrocarbons

Yu. Yu. SMIRNOV, I.V. KHLEBNIKOVA, T.D. KHLEBNIKOVA, T.V. KIRSANOVA
**PURIFICATION OF MODEL WASTE SOLUTION WITH SULFATE REDUCING BACTERIA
AND CHOICE OF CONDITIONS OF THEIR CULTIVATION**

Process of biochemical sulphatereduction with sulfate reducing bacteria on various nutrient media has been studied. Optimal conditions for cultivation of microorganisms have been determined.

Key words: waste solution, biochemical purification, bacteria cultivation

E.V. SHALYGIN, V.K. LEONTIEV, T.E. ABRAMOVA
**CALCULATION OF BUBBLE DIAMETER AND EFFICIENCY PARAMETER FOR GAS-LIQUID
REACTORS WITH EJECTION DISPERSION**

The parameter for the working diagram plotting for efficiency comparison of construction of gas-liquid reactors has been proposed. It has been obtained, that efficiency is proportional to power per unit of gas flow and in inverse proportion of gas flow on a volume of reactor.

Key words: gas-liquid reactors, efficiency parameter

L.N. OVCHINNIKOV
MODELING OF DRYING PROCESS OF FERTILIZER IN FLUIDIZED BED

Results of drying process modeling of fertilizers in fluidized bed are given.

Key words: drying, fertilizers, fluidized bed

V.M. ISMAILOV, M.M. TINAVASOVA, I.A. MAMEDOV, N.N. YUSUBOV
NUCLEOPHILIC REACTIONS OF DIALKYLPHOSPHITES WITH ALKYLHALOGENIDES

The interaction of the dialkylphosphites and trihalogenopropane has been studied. The dependence of reaction direction on radical nature at phosphorous of dialkylphosphites and halogen has been discovered.

Key words: dialkylphosphites, trihalogenopropane, reaction direction

P.A. ROMODANOVSKIY, N.G. DMITRIEVA, S.N. GRIDCHIN
**ENTHALPIES OF DISSOLUTION AND STANDARD ENTHALPIES OF FORMATION FOR L-SERINE
IN AQUEOUS SOLUTION**

For the first time, dissolution enthalpies of L-serine in water and aqueous solutions of potassium hydroxide have been measured at 298.15K. The standard enthalpies of formation for this aminoacid and the reaction products of its protonation and dissociation in aqueous solution have been calculated.

Key words: enthalpy, dissolution, L-serine, potassium hydroxide

A.A. SENNIKOV, L.N. MOROZOV, Ya.V. SHKARINA
**FORMALDEHYDE FORMATION AT METHANOL DECOMPOSITION ON SUPPORTED COPPER
CATALYSTS**

The supported copper catalysts $\text{CuO}\cdot\text{K}_2\text{O}/\text{Al}_2\text{O}_3$ and $\text{CuO}\cdot\text{K}_2\text{O}\cdot\text{MoO}_3/\text{Al}_2\text{O}_3$ in methanol conversion process have been studied. The correlation was revealed between formaldehyde and methyl formate yield on $\text{CuO}\cdot\text{K}_2\text{O}/\text{Al}_2\text{O}_3$ unlike molybdenum containing catalysts where methyl formate was not formed. A complication of supported molybdenum containing catalysts by means of introducing the copper and potassium oxides allowed increasing their productivity on the formaldehyde in a wide temperature range. The maximum conversion degree of the methanol to formaldehyde was ~5 %.

Key words: copper-containing catalysts, methanol conversion, formaldehyde, methyl formate

V.K. GORSHKOV, M.O. MESNIK, E.A. PAVLOV
**TECHNOLOGY OF AUTO DEPOSITION OF CARBOXYL-CONTAINING COMPOSITION
MATERIALS ON SURFACE OF COPPER-ZINC ALLOYS**

The main parameters influencing on auto deposition process have been considered. The technological process of surface preparing and auto phoresis plating of КЧ-0125 lacquer has been developed. That process allows obtaining the coatings possessing high protective properties.

Key words: lacquer, auto deposition, plating, protective properties

B.D. BEREZIN
DEVELOPMENT HISTORY OF COORDINATION AND PHYSICAL CHEMISTRY OF PORPHYRINS

The main ways and results of development of coordination and physical chemistry of porphyrins and phthalocyanines in USSR, Russia and CIS countries from the middle of XX century up to the present time are discussed.

Key words: porphyrins, phthalocyanines, aromatic macrocycles, coordination chemistry, physical chemistry