ЭКОЛОГИЧЕСКИЕ ПРОБЛЕМЫ ХИМИИ И ХИМИЧЕСКОЙ ТЕХНОЛОГИИ

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ИЗВЕСТИЯ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ

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C O N T E N T S

R E V I E W S

C H E M I S T R Y
(inorganic, organic, analytical, physical, colloid
and high-molecular compounds)

C H E M I C A L   T E C H N O L O G Y
(inorganic and organic substances.
Theoretical fundamentals)

ECOLOGICAL PROBLEMS
OF CHEMISTRY AND CHEMICAL TECHNOLOGY

A B S T R A C T S

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MAIN REACTIONS OF N-ALKYLATION

The main classes of alkylation of compounds are given. In work the ways of N-alkylation of organic substances were considered. Catalysts which are used and conditions of reactions carrying out were given.

Key words: synthesis, alkylation, nitrogen-containing compounds, alkylating reagents, catalysts

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SYNTHESIS AND PHYSICAL-CHEMICAL PROPERTIES OF [(BU-TOXY)(STEARATEACYLOXY)TITANATE]BORANES

Synthesis and physical-chemical constants of oligomer products of reaction of re-etherification of tris[[tri(butoxy)titanate]borane by stearic acid was described at vdifferent their mole ratio. Extracted products were viscous liquids or solid substances which were soluble well in lowest alcohols, simple ethers, aliphatic-, aromatic- chloroaromatic- and chlorinated hydrocarbons. Their structure was verified by elemental analysis, molecular mass, infrared and ^{1}H NMR spectroscopy.

Key words: tris[[tri(butoxy)titanate]boranes, stearic acid, [butoxy (stearateacyloxy)] titaniumoxy] boranes, re-etherification, substitution degree

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SPECTROPHOTOMETRIC STUDY OF ACIDIC AND COMPLEXATION PROPERTIES OF DERIVATIVES OF OCTAMETHYL PORPHYRIN

By the method of spectrophotometric titration the acidic and complexation properties of the derivatives of octamethylporphyrin were studies in the system 1,8- diazabicyclo[5.4.0] undets-7- ene - acetonitrile at 298 k. It was established that at titration of compounds mentioned above the deprotonation of nitrogen atoms of pyrrole rings occurred with the formation of the mono- and twice deprotonated forms. The step constants of acidic dissociation were determined. Complexing the twice deprotonated forms of the studied ligands with zinc acetate was investigated. The kinetic parameters of appropriate reactions were obtained. The comparative analysis of the kinetic parameters of the formation of the zinc complexes of the ligands under study on the ionic and molecular mechanisms was carried out.

Key words: porphyrins, acidic properties, coordination properties, reactions, kinetics

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EFFECTS OF MEDIUM UNDER FORMATION OF HYDRO-SULFATE ION IN ISOMOLAR SOLUTIONS OF NITRIC ACID AND HYDROBROMIC ACID AND THEIR SALTS

This paper presents a general approach for investigation of weak ion-ion interaction in solutions allowing determining simulteneously the constants of such interactions, and the parameters characterizing the impact on these constants the changes in an ionic composition of medium using chlorides and bromides of alkali metals as example.

Key words: solubility, hydrosulphate ion, medium effect

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NANO COMPOSITE MATERIALS BASED ON N,N-DIALLILAMINOETHANE ACID

The nanocomposites were obtained with the reaction of radical polymerization on the basis of Na^{+}-montmorillonite and new monomer – N, N-diallylaminoetanoic acid in the presence of the radical initiator in the water environment. The structure and thermomechanical properties of nanocomposites were investigated.