Infrared absorption spectra ...

oxalates containing Ti or Nb, however, showed two and three absorption maxima, respectively, in these two ranges. According to Zh. Lekont, (Infrakrasnoye izlucheniye (Infrared radiation), M., 1958), this proves that the titanium and niobium oxalates are complex compounds. The spectra further showed that the water contained in the oxalates was crystallization water. The absence of other absorption bands in titanyl oxalates suggests that both oxalate groups are coordinatively bound to Ti. There are some more bands in Nb derivatives. Studies of the thermal stability of these oxalates showed that two of the three oxalate groups are bound more loosely, and therefore are decomposed at lower temperatures, than the third. In Ti compounds both oxalate groups are decomposed at the same time. This leads to the conclusion that in complex niobium oxalates only one oxalate group is bound coordinatively to Nb. General formulas suggested for the Ti and Nb compounds investigated: $Me^{II}[TiO(C_2O_4)_2] \cdot nH_2O$, and $Me^{I}[NbO_2C_2O_4] \cdot 2Me^{I}HC_2O_4 \cdot mH_2O$. There are 2 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

GHIETSEANU, I. [Galateanu, I.]; LAPITSKIY, A.V.

Complex formation of protactinium with some organic acids (by the method of ion exchange). Dokl. AN SSSR 147 no.2:372-375 N '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Predstavleno akademikom S.I. Vol'fkovichem.

(Potactinium compounds)
(Acids, Organic) (Ion exchange)

VAL'KOV, Fedor Alekseyevich; LAPITSKIY, A.V., prof., red.;
METEL'SKAYA, G.S., red.

[Inorganic chemistry] Neorganicheskaia khimiia. Moskva,
Uchpedgiz, 1963. 483 p. (MIRA 17:4)

S/186/63/005/001/010/013
E075/E436

AUTHORS: Pankratova, L.N., Savich, I.A., Lapitskiy, A.V.

TITLE: Complexing of uranyl-ion with some Schiff bases

PERIODICAL: Radiokhimiya, v.5, no.1, 1963, 114-118

TEXT: The authors determined the dissociation constants of internal complex compounds formed from salicylal-aminopyridine or its halogeno-derivatives and UO_2^{2+}. The bases used were: 2-salicylal-aminopyridine, 5-chloro-, 5-bromo- and 5-iodo-2-salicyl-aminopyridine. The dissociation constants of the complexes were determined by potentiometric titration with an alkali at pH values ranging from 3 to 6. The constants were calculated using Bochkova's equation

$$pK = pH + \lg\left(\frac{V_o M_o}{V_1 M_1} - 1\right)$$

where V_o - volume of dioxane solution of a Schiff base, M_o - its molarity, V_1 - volume of added alkali and M_1 - normality of the alkaline solution. The constants increased from 2.3×10^{-10} to 3.1×10^{-6} for the bases in the order H-, Cl-, Br-

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Complexing of uranyl-ion ...

and I- derivatives. The stability constants for the complexes were determined using B'yerrum's graphical method. The constants decreased from 2.0×10^{11} to 1.0×10^{6} for the H-, Cl-, Br- and I-derivatives in this order. There are 1 figure and 3 tables.

SUBMITTED: December 18, 1961

Card 2/2

S/186/63/005/002/004/005
E075/E136

AUTHORS: Lapitskiy, A.V., Geletseanu, I., and Mink, Ya.

TITLE: Investigation of the complex formation of thorium with mandelic and α-oxyisobutyric acids

PERIODICAL: Radiokhimiya, v.5, no.2, 1963, 249-258

TEXT: The complexing with the acids was examined with a view to their utilization as eluants in the purification of Th by ion-exchange methods. To this end the adsorption of ^{234}Th was studied on cation exchanger resin Dowex 50 and 5 in the Na form. The work was carried out at the pH's of 1.75 to 2.5 to minimize the adsorption of Th on glass and because at this pH range the distribution coefficients were sufficiently large. The instability constants were calculated at pH = 2.2 by two methods, of which the method of S. Froneus (Acta Chi., Scand., v.4, no.1, 1950, 72) was considered the more reliable. The first instability constants for mandelic and α-isobutyric acid were 1.82×10^{-3} and 3.83×10^{-5} respectively. The second constants were 0.67×10^{-5} and 2.44×10^{-6}, and the third constants 1.92×10^{-7} and 8.34×10^{-9} respectively. Changes in the concentration of mandelic acid from

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0.01 to 0.1 M decrease the distribution coefficient by two orders of magnitude and a similar trend is shown for α-oxyisobutyric acid. The first complex $[Th\ A]^{3+}$ forms at the concentration of addend of 2×10^{-3} M. During further increases of the concentration up to about 10^{-2} M the composition of the complex changes to $[Th\ A_2]^{2+}$, $[Th\ A_3]^{+}$ and $[Th\ A_{3.5}]^{0.5+}$. In general, α-oxyisobutyric acid forms more stable complexes than mandelic acid and therefore is a more suitable eluent for the isolation of Th by ion exchange methods.
There are 13 figures and 7 tables.

SUBMITTED: January 18, 1962

L 14961-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3003680 S/0186/63/005/003/0290/0294

AUTHORS: Sayed, Abdel' Gavad; Lapitskiy, A. V.; Rudenko, N. P. 56

TITLE: Analysis of thorium extraction by benzohydroxamic acid

SOURCE: Radiokhimiya, v. 5, no. 3, 1963, 290-294

TOPIC TAGS: thorium, benzohydroxamic acid, hexanol

ABSTRACT: The extraction of thorium with hexanol in the presence of benzohydroxamic acid has been studied. It was shown that the maximum extraction was possible at a pH of 5.2 with a yield of about 98%. The formed compound of thorium and benzohydroxamic acid $Th(NO_3)\cdot 2HR$ was determined by extraction method with hexanol. For the comparison with the above extraction, thorium-benzohydroxamic acid compound was precipitated and extracted from an aqueous solution at a pH of about 7. The formed compound is confirmed by thermogravimetric analysis. The kinetics of its thermal decomposition have been established. A colorimetric method has been developed for the determination of benzohydroxamic acid by means of sodium vanadate which formes a colored complex with VO_3^-. "The authors express their gratitude to L. G. Vlasov for his help and valuable suggestions." Orig. art. has: 6 graphs.

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LAPITSKIY, A.V.; GELETSEANU, I.

Study of protactinium complex formation with mono-, di-, and polycarboxylic acids by the ion exchange method. Part 2: Complex formation of protactinium with α-hydroxybutyric and amygdalic acids. Radiokhimiia 5 no.3:330-334 '63. (MIRA 16:10)

(Protactinium compounds) (Acids, Organic)

PANKRATOVA, L.N.; VLASOV, L.G.; LAPITSKIY, A.V.

Certain characteristics of the behavior of zirconium 95 in carrier-free solutions. Radiokhimiia 5 no.4:519-520 '63. (MIRA 16:10)

(Zirconium isotopes)

LAPI

LAPICKIJ, A.W.; ZIENKIEWICZ, J.

Radiometric method of testing the kinetics and mechanism of the chlorination reaction. Nukleonika 7 no.7/8:535-537 '62.

1. Katedra Radiochemii, Uniwersytet im. Lomonosowa, Moskwa, i Zaklad Technologii Chemicznej, Instytut Badan Jadrowych, Polska Akademia Nauk, Warszawa.

BERDONOSOV, S.S.; BERDONOSOVA, D.G.; LAPITSKIY, A.V.; VLASOV, L.G.

X-ray diffraction examination of hafnium tetrabromide. Zhur.-neorg.khim. 8 no.2:531-532 F '63. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet, kafedra radiokhimii.
(Hafnium bromide) (X-ray diffraction examination)

BERDONOSOV, S.S.; LAPITSKIY, A.V.; BERDONOSOVA, D.G.; VLASOV, L.G.

X-ray diffraction study of niobium and tantalum pentabromides. Zhur. neorg. khim. 8 no.11:2510-2512 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet, khimicheskiy fakul'tet.

SHAO PIN'-SI [Shao P'in-hsi]; LAPITSKIY, A.V.; VLASOV, L.G.

Solutions of potassium metaniobate in some organic acids. Zhur. neorg. khim. 8 no.11:2614-2617 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet, khimicheskiy fakul'tet.

BERDONOSOV, S.S.; LAPITSKIY, A.V.; VLASOV, L.G.

Solubility of higher bromides of titanium, zirconium, and hafnium. Vest.Mosk.un. Ser.2:Khim. 18 no.1:38-39 Ja-F '63. (MIRA 16:5)

1. Kafedra radiokhimii Moskovskogo universiteta.
(Titanium bromides) (Zirconium bromides) (Hafnium bromides)
(Solubility)

BERDONOSOV, S.S.; LAPITSKIY, A.V.; VLASOV, L.G.

Reduction of tantalum pentabromide. Vest. Mosk. un. Ser. 2: Khim. 18 no.3:57-59 My-Je '63. (MIRA 16:6)

1. Kafedra radiokhimii Moskovskogo universiteta.
(Tantalum bromides)

L 17091-63 EWP(q)/EWT(m)/BDS AFFTC/ESD-3 RM/JD

ACCESSION NR: AP3004694 S/0189/63/000/004/0065/0066

64
57

AUTHORS: Bezrukov, V. I.; Lapitskiy, A. V.; Vlasov, L. G.

TITLE: Reaction of potassium metaniobate with the salts of some metals

SOURCE: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 4, 1963, 65-66

TOPIC TAGS: potassium metaniobate, sodium hydroxide, solubility, complex formation, salts of metals

ABSTRACT: The reaction between potassium metaniobate and the salts of heavy metals, as well as the solubility of the resulting product in excess of $KNbO_3$, were studied by the nephelometric, potentiometric, and conductivity techniques. In view of the high pH of KNO_3 solutions, parallel tests were conducted with KOH. The concentration of $KNbO_3$ solutions were 0.1-0.001 normal, that of the heavy metal salts 0.05-0.0005 normal. In all tests the $KNbO_3$ solutions were added to those of the heavy metals. Salts of dibasic Cu and Pb formed compounds which were soluble in excess $KNbO_3$ and KOH. The color of the $KNbO_3$ cupric compound differed from that of the original cupric salt, and the solution remained clear after a 32-time dilution. Ferric and ceric salts, as well as those of Mg and Cd, formed flocculent compounds insoluble in excess $KNbO_3$ or KOH. The salts

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L 17091-63

ACCESSION NR: AP3004694

of Zn, Al, and trivalent Cr produced compounds insoluble in excess $KNbO_3$ but soluble in excess KOH. The Zn and Al precipitates were white, and the one with Cr was green. The latter dissolved in excess $KNbO_3$, but further addition of it resulted in reprecipitation. Ferrous, cereous, and manganous salts, as well as of Co and Ni, formed compounds that were soluble only in excess $KNbO_3$. The solutions were all colored. The formation of complexes is suggested. Orig. art. has: 1 table.

ASSOCIATION: Moskovskiy universitet, Kafedra radiokhimii (Moscow University, Department of Radiochemistry)

SUBMITTED: 15Feb62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 002

Card 2/2

LAPITSKIY, A.V.; BEZRUKOV, V.I.; VLASOV, L.G.

Interaction of potassium tantalate with salts of certain metals. Vest. Mosk. un. Ser. 2: Khim. 18 no.5:32-33 S-O '63. (MIRA 16:11)

1. Kafedra radiokhimii Moskovskogo universiteta.

STRIZHKOV, B.V.; LAPITSKIY, A.V.

Problem of the anomalous properties of chemically pure ceramics of barium titanate. Vest.Mosk.un. Ser.2:Khim. 18 no.6:36-38 N-D '63. (MIRA 17:4)

1. Kafedra radiokhimii Moskovskogo universiteta.

BERDONOSOV, S.S.; LAPITSKIY, A.V.

Structure of zirconium and hafnium tetrabromides. Vest.Mosk.un. Ser.2:Khim. 18 no.6:42-44 N-D '63. (MIRA 17:4)

1. Kafedra radiokhimii Moskovskogo universiteta.

L 9972-65 EWT(m)/EPF(n)-2/EWP(b) Pu-4 ASD(m)-3/ASD(f)-2 JD/JG/MLK
ACCESSION NR: AT4046217 S/0000/63/000/000/0219/0225

AUTHOR: Vlasov, L. G. (Moscow, Novosibirsk); Lapitskiy, A V. (Moscow, Novosibirsk); Traletka, R. (Moscow, Novosibirsk)

TITLE: Investigation of the columbate-oxalic acid-water and tantalate-oxalic acid-water systems

SOURCE: Yubileynaya konferentsiya po fiziko-khimicheskomu analizu. Novosibirsk, 1960. Fiziko-khimicheskiy analiz (Physicochemical analysis); trudy* konferentsii. Novosibirsk, Izd-vo Sib. otd. AN SSSR, 1963, 219-225

TOPIC TAGS: niobium, niobium purification, niobium oxalate, oxalic acid complex, tantalum, tantalum purification, tantalum oxalate

ABSTRACT: The interaction of oxalic acid with columbate and tantalate, which is important in the industrial refining of these metals, followed by conductometric titration with simultaneous nephelometric measurements. The results with Nb showed that the maximal resistance was obtained at a molar ratio of $KNbO_3$: $H_2C_2O_4$ of 1:1, while the maximal turbidity was at a molar ratio of $KNbO_3$: $H_2C_2O_4$ of 1:0.5. In order to investigate the interaction of columbate with oxalic acid in more detail, the system of $KNbO_3$-$H_2C_2O_4$-H_2O was studied from the point of view of pH and conductivity. The results obtained showed that optimal interaction is obtained at a 1:1 ratio of $KNbO_3$: $H_2C_2O_4$. Spectrophotometric

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L 9972-65

ACCESSION NR: AT4046217

analysis of the $KNbO_3$-$H_2C_2O_4$ system and of the separate components showed formation of a new compound at a 1:1 ratio with a pH of 4.3. This indicates that the following reaction occurs: $KNbO_3+H_2C_2O_4 = K(NbO_2C_2O_4) +H_2O$. Further studies on the solubility of barium columbate and tantalate and their interaction with oxalic acid, using radioactive Nb^{95} and Ta^{182}, showed that the maximal stability of the Nb–oxalic acid complex was at pH 0.0 - 2.0 and that of the Ta-oxalic acid complex was at pH 0.6 - 3.0. Therefore, all measurements of the solubility were performed at pH 1.55. The results showed that the instability constants for the compounds formed when the ratio of Nb(Ta) to oxalic acid was 1:1 are 3.9×10^{-4} and $4:1 \times 10^{-3}$ for Nb and Ta, respectively. Electrophoretic studies showed that Nb and Ta both move towards the anode. Orig. art. has: 8 figures, 1 table and 4 chemical equations.

ASSOCIATION: None

SUBMITTED: 10 Sep 63 ENCL: 00 SUB CODE: IC

NO REF SOV: 001 OTHER: 004

Card 2/2

PANKRATOVA, L.N.; VLASOV, L.G.; LAPITSKIY, A.V.

Complex formation of zirconium with diethylenetriaminopentaacetic acid and 1,2-diaminocyclohexanetetraacetic acid. Zhur. neorg. khim. 9 no.6:1363-1368 Je '63 (MIRA 17:8)

L 39953-65 EWP(e)/EPA(s)-2/EWT(m)/EWP(w)/EWP(i)/EPF(n)-2/EWA(d)/EPA(w)-2/
T/EWT(t)/EWP(b)/EWA(c) Pab-10/Pt-10/Pu-4 IJP(c) JD/JG/WH
ACCESSION NR: AP4006931 S/0080/63/036/012/2595/2600 54

53
B

AUTHOR: Strizhkov, B. V.; Lapitskiy, A. V.

TITLE: Physicochemical study of divalent metal niobates

SOURCE: Zhurnal prikl. khimii, v. 36, no. 12, 1963, 2595-2600

TOPIC TAGS: ceramic, ferroelectric ceramic, divalent metal metaniobate, calcium metaniobate, strontium metaniobate, barium metaniobate, lead metaniobate, [illegible] product metaniobate preparation, hexaniobate thermal de-

metaniobate ceramic property, metaniobate dielectric property; niobate, metal niobate

ABSTRACT: A study of divalent metal niobates involved investigation into the properties of ferroelectric ceramics as well as the production of calcium, strontium, barium and lead metaniobates by synthesizing their hexaniobates by a previously developed method (V. A. Pchelkin, et al., Zhurnal Obshchey Khimii, 24, 1284,

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1954). Thermal decomposition of the divalent metal hexaniobates begins with a dehydration process which occurs in the form of two endothermic reactions approximately to 300C. When heated to 600-700C, the resulting exothermic reaction of the divalent metal hexaniobates does not produce any change in weight of the salts. A chemical and x-ray analysis of this process revealed that the solid phase produced by the stated reaction represents a mixture of the metaniobates

phase produced by the stated reaction represents a mixture of the metaniobates and oxides of the respective divalent metals, hence that the exothermic reaction occurring at 600-700C is apparently due to the decomposition of calcium, strontium, barium and lead hexaniobates and formation of metaniobates and oxides of these metals. An investigation of the dielectric properties of calcium, strontium and barium metaniobates reveals that they usually improve with increasing calcining temperature. The investigation showed that the thermal decomposition method facilitates the production of divalent metal metaniobates at 600-700C, whereas in the case of a caking reaction, these salts can only be synthesized at about 1000C; and that the ceramics consisting of such metaniobates possess very high dielectric properties. Orig. art. has: 2 figures and 3 tables.

S/020/63/149/003/023/028
B117/B186

AUTHORS: Moskvin, A. I., Geletseanu, I., Lapitskiy, A. V.

TITLE: Some regularities of complexing of pentavalent actinides

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 1963, 611-614

TEXT: On the basis of compositions and instability constants of complexes of pentavalent Pa, Np and Pu with anions of some acids (determined by means of the ion exchange method), the tendency of these elements to form complexes was shown to be much stronger than is generally supposed. This tendency is much the same for the elements mentioned, as they form complexes of identical composition and approximately identical stability with anions of suitable acids. The tendency of the addends to form complexes decreases according to the following sequence:
$Y^{4-} > Cit^{3-} > HPO_4^{2-} > tart^{2-} > Ac^- \simeq Lact^-$. The stability of the complexes of Pa(V) with hydroxy acids permits generalization of this sequence as follows: EDTA > citric acid > oxalic- > phosphoric- > trioxyglutaric > α-hydroxyisobutyric > tartaric > malic > mandelic > acetic > lactic acid.

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S/020/63/149/003/023/028
B117/B186

Although no complete data exist for Np(V) and Pu(V), this sequence can also be applied for these elements owing to conformance of instability constants. Instability constants of complexes formed by Pu of different valence with the same addend show that Pu in the pentavalent state has the weakest tendency to form complexes. On the basis of the similarity of complexing properties of pentavalent Pa, Np and Pu, and of the quantitative data available, conclusions may also be drawn as to the composition and stability of complexes of pentavalent uranium with the acids mentioned. One of the properties of actinides which serves to prove their position in the periodic system of elements is their behavior during ion exchange. Pa, Np and Pu in pentavalent state were found to behave similarly during ion exchange. There are 1 figure and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: October 29, 1962, by I. I. Chernyayev, Academician

SUBMITTED: October 24, 1962

KARYAKIN, A.V.; LAPITSKIY, A.V.; PANKRATOVA, L.N.; PETROV, A.V.

Infrared spectra of zirconium and hafnium compounds with some complexons in solution. Zhur. strukt. khim. 5 no.5:702-706 S-O '64 (MIRA 18:1)

1. Institut geokhimii i analiticheskoy khimii AN SSSR i Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

GELETSEANU, I.; LAPITSKIY, A.V.; VEYNER, M.; SALIMOV, M.A.; ARTAMONOVA, Ye.P.

Thorium acetates. Radiokhimiia 6 no. 1:93-101 '64. (MIRA 17:6)

L 16319-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/HW/JG
ACCESSION NR: AP4047845 S/0186/64/006/005/0617/0619

AUTHOR: Lapitskiy, A. V.; Rudenko, N. P.; Abdel' Gavad Sayed

TITLE: The extraction of neptunium by means of hydroxylamine derivatives

SOURCE: Radiokhimiya, v. 6, no. 5, 1964, 617-619

TOPIC TAGS: neptunium extraction, hydroxylamine, butylamine, neocupferron

ABSTRACT: Noting that the study of the behavior of actinoids during their extraction is of great importance in radiochemistry, the authors report an investigation of the extraction of neptunium by means of several hydroxylamine derivatives (benzohydroxamic acid, benzoyl phenylhydroxylamine and neocupferron) as well as the effect of butylamine on this process. Neptunium-239 was obtained by irradiating 30 mg of uranium in the form of U_3O_8 for 48 hours in a reactor with $0.87 \cdot 10^{13}$ neutrons/$cm^2 \cdot sec$. The separated neptunium isotope was oxidized to the pentavalent state by a sodium nitrite solution. The radiochemical purity of the isotope was checked by a measurement of its halflife, which was found to equal 2.3 days. During the extraction studies, the neptunium was placed in a test tube with the buffer solution, and shaken in a thermostat at 25C for 30 minutes with the extracting agent. After this period of shaking, measurements were made of the activity of the aqueous and organic phases, while the pH of the

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L 16319-65
ACCESSION NR: AP4047845

solutions was determined on an LP-58 potentiometer. The study of neptunium extraction by several cupferron analogs showed that of the reagents studied only benzohydroxamic acid failed to extract neptunium under the conditions described in this paper. Extraction by means of neocupferron took place at lower pH values than in the case of benzoyl phenylhydroxylamine. It was discovered that complete extraction of neptunium requires the presence of butylamine in the water phase. The authors also found that neocupferron, while it does have a large dissociation constant, is inferior to benzoyl phenylhydroxylamine because of its poor solubility and its instability. "The authors wish to express their gratitude to M. P. Mefod'yeva and L. G. Vlasov for their friendly advice and assistance." Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 17Feb64 ENCL: 00 SUB CODE: IC

NO REF SOV: 005 OTHER: 003

Card 2/2

STRIZHKOV, B.V.; LAPITSKIY, A.V.

Properties of solid solutions of titanates and niobates of bivalent metals. Izv. vys. ucheb. zav.; khim. i khim. tekh. 7 no.3:373-377 '64. (MIRA 17:10)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova i Akusticheskiy institut AN SSSR.

BERDONOSOV, S.S.; LAPITSKIY, A.V.

Reduction of tantalum pentabromide with metallic tantalum. Zhur. neorg. khim. 9 no.2:276-278 F'64. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet.

BERDONOSOV, S.S.; LAPITSKIY, A.V.; BERDONOSOVA, D.G.

X-ray study of niobium and tantalum tetrabromides. Zhur. neorg. khim. 9 no.11:2569-2572 N '64 (MIRA 18:1)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

STRIZHKOV, B.V.; LAPITSKIY, A.V.

Properties of metatitanates of bivalent metals prepared by the method of thermal decomposition. Vest. Mosk. un. Ser. 2, Khim. 19 no.1:43-46 Ja-F '64. (MIRA 17:6)

1. Kafedra radiokhimii Moskovskogo universiteta.

BERDONOSOV, S.S.; LAPITSKIY, A.V.; VLASOV, L.G.

Aqueous solution of niobium tetrabromide. Vest. Mosk. un. Ser. 2 Khim. 19 no.2:26-29 Mr-Ap'64 (MIRA 17:6)

1. Kafedra radiokhimii Moskovskogo universiteta.

LAPITSKIY, A.V.; VLASOV, L.G.; TSALETKA, R.

Problem of the modern interpretation of D.I.Mendeleev's periodic system. Vest. Mosk. un. Ser. 2 Khim. 19 no.2:74-78 Mr-Ap'64

1. Kafedra radiokhimii Moskovskogo universiteta.

ZENKEVICH, Ya.; LAPITSKIY, A.V.

Radiometric method of investigating the kinetics and mechanism of chlorination. Zhur.prikl. khim. 37 no. 5: 1000-1005 My '64. (MIRA 17:7)

1. Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.

LAPITSKIY, A.V.; BEZRUKOV, V.I.; VLASOV, L.G.

Soluble niobates of some transition metals. Izv.vys.ucheb.zav.; khim. i khim.tekh. 7 no.2:175-179 '64.

(MIRA 18:4)

1. Kafedra radiokhimii Moskovskogo gosudarstvennogo universiteta.

PANKRATOVA, L.N.; VLASOV, L.G.; LAPITSKIY, A.V.

Interaction of zirconium with some complexons. Zhur. neorg. khim. 9 no.7:1763-1765 Jl '64. (MIRA 17:9)

1. Moskovskiy gosudarstvennyy universitet.

LAFITSKIY, A.V.; VIZGIN, V.P.; PANKRATOVA, L.N.

Reaction of uranium tetrachloride with some Schiff bases. Vest.Mosk. un.Ser.2:Khim. 19 no.4:39-44 Jl-Ag '64. (MIRA 18:8)

1. Kafedra radiokhimii Moskovskogo universiteta.

ACCESSION NR: AP4040523 S/0080/64/037/006/1238/1242

AUTHORS: Zenkevich, Ya.; Lapitskiy, A. V.

TITLE: Radiometric investigation of chlorination kinetics and mechanics

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 6, 1964, 1238-1242

TOPIC TAGS: chlorination radiometry, chlorine 36, tritium, carbon 14, cobalt chlorination, zirconium chlorination, chlorination mechanism, chlorination kinetics, observation

ABSTRACT: The authors propose a radiometric method permitting continuous observation of the chlorination mechanism and kinetics during gas interaction with solids and liquids. Chlorine-36 was used for tagging; its beta energy was 0.714 Mev. Changes in radioactivity monitored by a counter indicate the reaction course depending on temperature, pressure and time. Metallic cobalt and zirconium dioxide (in the presence of carbon) were chlorinated and curves of the process were plotted. The method establishes equilibrium constants without extrapolating the obtained data and permits

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ACCESSION NR: AP4012971 S/0020/64/154/004/0868/0870

AUTHORS: Lapitskiy, A.V.; Vlasov, L.G.; Bezrukov, V.I.

TITLE: Production of heteroniobates of certain transition metals

SOURCE: AN SSSR. Doklady*, v. 154, no. 4, 1964, 868-870

TOPIC TAGS: heteroniobate, potassium cerous niobate, potassium cuprous niobate, potassium ferrous niobate, potassium nickelous niobate, potassium cobaltous niobate, nephelometry, optical spectra, electrophoresis, molecular electroconductivity, anion mobility, anion diameter

ABSTRACT: The reactions of aqueous solutions of potassium metaniobate with transition metals salts (Cu(II), Pb (II), Cr (III) salts which are soluble in excess potassium niobate and KOH; Mn (II), Fe (II), Co, Ni and Ce (III) salts which are soluble in excess potassium metaniobate but insoluble in KOH) and the chemical and physical properties of the products were studied. Nephelometric observations indicated that precipitates were formed with equivalent amounts

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ACCESSION NR: AP4012971

of reactants: at 1:2 metal:niobium ratio for divalent and 1:3 ratio for trivalent metals. These precipitates dissolve with excess precipitant to form clear colored solutions (except for Pb, which is colorless). The formation of heteroniobates was further confirmed from their optical spectra and from electrophoresis studies in which the metal ions migrated to the anode indicating they became part of the negatively charged particle. The following compounds were obtained:

$K_4[Fe(NbO_3)_4(OH)_2] \cdot 11H_2O$
$K_4[Co(NbO_3)_4(OH)_2] \cdot 10H_2O$
$K_4[Ni(NbO_3)(OH)_5]$
$K_4[Co(NbO_3)_2(OH)_2] \cdot 5H_2O$
$K_4[Cu(NbO_3)_4(OH)_2] \cdot 10H_2O$
$K_3[Ce(NbO_3)_2(OH)_4] \cdot 5H_2O$

The maximum molecular electric conductivity of solutions of the last three compounds, and the mobility and the effective anion diameters were determined. Orig. art. has: 2 tables.

Card 2/3

ACCESSION NR: AP4012971

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M.V. Lomonosova (Moscow State University)

SUBMITTED: 11Nov63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 002

Card 3/3

L 44279-65 EWI(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/WW/JG

ACCESSION NR: AP5008003 S/0186/65/007/001/0032/0033

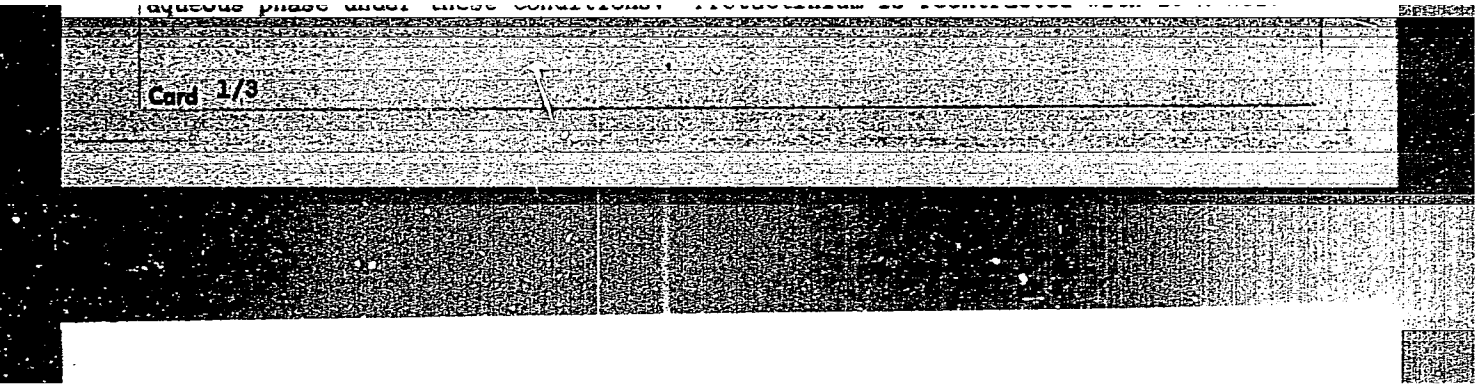
AUTHOR: Rudenko, N. P.; Sayed, A. G.; Lapitskiy, A. V.

TITLE: Separation of thorium and protactinium by extraction

SOURCE: Radiokhimiya, v. 7, no. 1, 1965, 32-33

TOPIC TAGS: protactinium, thorium, uranium, chemical separation, N-benzoylphenylhydroxylamine, neocupferron

ABSTRACT: The purpose of the present work was to develop separation methods for thorium and protactinium by extraction of the latter with the cupferron analogs N-benzoylphenylhydroxylamine and neocupferron. Under the conditions employed protactinium is completely extracted by 0.1 *M* benzoylphenylhydroxylamine while thorium



L 44279-65

ACCESSION NR: AP5008003

Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 14Feb64 ENCL: 01 SUB CODE: IC, OC

NO REF SOV: 002 OTHER: 002

Card 2/3

LAPITSKIY, A.V.; BERDONOSOV, S.S.

Bromination of microquantities of protactinium-233 on carrying agents. Radiokhimiia 7 no.1:118-119 '65.

(MIRA 18:6)

LAPITSKIY, A.V. [deceased]; RUDENKO, N.P.; ABDEL' GAVAD SAYED

Extraction of thorium, protactinium, and uranium by means of neocupferron. Radiokhimiia 7 no.2:139-142 '65.

Behavior of thorium, protactinium, and uranium during extraction by means of benzohydroxamic acid and N-benzoylphenylhydroxylamine. Ibid.:142-145 (MIRA 18:6)

GELETSEANU, I.; LAPITSKIY, A.V. [deceased]

Complex formations of actinide elements. Radiokhimiia 7 no.3:280-283 '65. (MIRA 18:7)

BERDONOSOV, S.S., LARITSKIY, K.V., PAZOV, Ye.K.

Density and saturated vapor pressure on niobium and tantalum pentabromides. Zhur. neorg. khim. 10 no.2:327-327 F '65. (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, khimicheskiy fakul'tet. Submitted July 4, 1964.

LUK'YANOV, V.B.; PANKRATOVA, L.N.; LAPITSKIY, A.V.

Evaluation of accuracy of a determination of Ki (instability constant) by a restricted-logarithmic method based on spectrometry data. Zhur. neorg. khim. 10 no.2:565-566 F '65. (MIRA 18:11)

1. Submitted July 6, 1964.

BERDONOSOV, S.S.; LAPITSKIY, A.V. [deceased]

X-ray diffraction study of Nb_3Br_8 and $NbBr_{3,04}$.
Zhur.neorg.khim. 10 no.12:2812-2814 D '65.
(MIRA 19:1)

L 22393-66 EWT(m)/EPF(n)-2/EWP(t) IJP(c) JD/WW/JG

ACC NR: AP6013975 SOURCE CODE: UR/0189/65/000/002/0025/0029

AUTHOR: Lapitskiy, A. V. (Deceased); Rudenko, N. P.; Sayed, Abdel' Gavad

ORG: Department of Radiochemistry, Moscow State University (Kafedra radiokhimii Moskovskogo gosudarstvennogo universiteta)

TITLE: Extraction of thorium, protactinium, uranium, and neptunium with the aid of hydroxylamine derivatives

SOURCE: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 2, 1965, 25-29

TOPIC TAGS: thorium, protactinium, uranium, neptunium, hydroxylamine, nonmetallic organic derivative

ABSTRACT: A description is given of the results of investigations on the extraction of thorium, protactinium, uranium and neptunium with the aid of hydroxylamine derivatives. Benzoyl hydroxylamine, N-benzoylphenyl hydroxylamine and N-nitrosonaphthyl hydroxylamine were used. Thorium-234, protactinium-233, neptunium 239 and uranium in its natural isotope mixture were used. Hexanol and chloroform were used as the organic phase. It was found that the behaviour of the elements in extraction under the experimental conditions was different. Their reactions to changing solution pH varied considerably. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 06Jun64 / ORIG REF: 004 / OTH REF: 005

Card 1/1 dda

[illegible], A.V. [deceased]; SHAO P'IN-HSI [Shao P'in-hsi]; VLASOV, L.G.

Reaction of potassium hexatantalate with solutions of some organic acids. Vest.Mosk.un.Ser.2,Khim. 20 no.3:47-50 My-Je '65.
(MIRA 18:8)

1. Kafedra radiokhimii Moskovskogo universiteta.

BERDONOSOV, S.S.; TSIREL'NIKOV, V.I.; LAPITSKIY, A.V. [deceased]

Determination of the density and pressure of zirconium and hafnium tetrabromide vapors. Vest. Mosk. un. Ser. 2:Khim. 20 no.4:26-29 Jl-Ag '65. (MIRA 18:10)

1. Kafedry radiokhimii i neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta.

PANKRATOVA, L.N.; LAPITSKIY, A.V. [deceased]

Calculation of the activation energy of self-diffusion of zirconium complexonates. Vest. Mosk. un. Ser. 2: Khim. 20 no.6:39-40 N-D '65. (MIRA 19:1)

1. Kafedra radiokhimii Moskovskogo universiteta. Submitted April 8, 1965.

L 23869-66 EWT(m)/EPF(n)-2/EWP(t) IJP(c) JD/JG/GS

ACC NR: AT6009942 SOURCE CODE: UR/0000/65/000/000/0238/0241

AUTHOR: Sychev, Yu. N.; Vlasov, L. G.; Lapitskiy, A. V.

ORG: none

TITLE: Use of gas chromatography in the preparative purification of niobium and tantalum chlorides involving removal of iron

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii i tekhnologii mineral'nykh soley i okislov (Studies in the field of chemistry and technology of mineral salts and oxides). Moscow, Izd-vo Nauka, 1965, 238-241

TOPIC TAGS: tantalum compound, iron compoud, niobium compound, chloride, adsorption, activated carbon, metal purification, gas chromatography

ABSTRACT: Gas chromatographic (gas adsorption) techniques were applied to the preparative separation of chlorides of certain rare elements from ferric chloride. The two pairs $NbCl_5$-$FeCl_3$ and $TaCl_5$-$FeCl_3$ were investigated and BAU activated carbon was used as the adsorbent. The preparation of this adsorbent and the apparatus employed in the removal of iron from $NbCl_5$ and $TaCl_5$ are described. The samples obtained after the purification were analyzed colorimetrically (iron was found to be absent) and radiometrically (iron present in quantities of less than $1 \cdot 10^{-6}$%, which is the sensitivity limit, determined by the specific activity of the iron-59 isotope introduced). Ana-

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L 23869-66
ACC NR: AT6009942

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lysis of the chromatographic column after the purification showed that iron has a convex adsorption isotherm on carbon relative to the axis of abscissas, and that high concentrations of ferric chloride move at a higher rate than low ones. This behavior of the chloride on carbon, similar to its behavior on silica gel, suggests that the removal of iron from tantalum and niobium can be carried out with a high separation factor. Orig. art. has: 2 figures.

SUB CODE: 07/ SUBM DATE: 28Nov63/ ORIG REF: 002/ OTH REF: 000

Card 2/2 dda

L 23867-66 EWT(m)/EPF(n)-2/EWP(t) IJP(c) JD/JG/GS
ACC NR: AT6009943 SOURCE CODE: UR/0000/65/000/000/0242/0246

AUTHOR: Sychev, Yu. N.; Vlasov, L. G.; Lapitskiy, A. V. 28 B+1

ORG: none

TITLE: Possibility of purifying niobium during the chlorination of Nb_2O_5 18 27

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii i tekhnologii mineral'nykh soley i okislov (Studies in the field of chemistry and technology of mineral salts and oxides). Moscow, Izd-vo Nauka, 1965, 242-246

TOPIC TAGS: niobium compound, metal purification, chlorination

ABSTRACT: An attempt was made to follow the behavior of certain impurities found in niobium pentoxide during its chlorination and to carry out a preliminary purification of niobium pentachloride during the chlorination process. The following labeled microimpurities were used: iron-59, calcium-45, tin-113, phosphorus-32, and cadmium-115^m. Niobium metal was chlorinated and the $NbCl_5$ formed was dissolved in conc. HCl. Solutions of the isotopes were then added to portions of the HCl solution, and the specific activity was determined. The pentoxide was then precipitated with ammonia and the degree of coprecipitation was determined by measuring the residual activity of the filtrate. Chlorination of Nb_2O_5 labeled with tin-113 confirmed that niobium pentachloride can be separated from group II impurities, since the pentachloride obtained

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L 23867-66

ACC NR: AT6009943

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was free from them. It is thought that group I impurities can also be separated. Phosphorus could not be removed, apparently because of the formation of the thermally stable complex $POCl_3 \cdot NbCl_5$. Orig. art. has: 5 figures, 3 tables.

SUB CODE: 07/ SUBM DATE: 24Feb64/ ORIG REF: 004/ OTH REF: 004

Card 2/2 dda

L 05830-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6030019 SOURCE CODE: UR/0020/66/169/005/1075/1076

AUTHOR: Bezrukov, V. I.; Lapitskiy, A. V. (Deceased); Klimov, V. V.; Kisel', N. G. 33 B

ORG: Donets Branch of the All-Union Scientific Research Institute for Chemical Reagents and High Purity Compounds (Donetskiy filial vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i osobo chistykh veshchestv)

TITLE: Heteroniobates 27 of rare earth 27 elements of the cerium- and yttrium subgroups

SOURCE: AN SSSR. Doklady, v. 169, no. 5, 1966, 1075-1076

TOPIC TAGS: niobate, niobium compound, cerium, yttrium, rare earth element

ABSTRACT: Interaction between the aqueous solutions of potassium niobate with the salts of rare earth elements was studied by nephelometric technique. It was found that at the neutral point $Me(OH)(NbO_3)_2$ is formed; Me is a rare earth element. The water-soluble complex of heteroniobates are formed upon dissolving of the $Me(OH)(NbO_3)_2$ in the excess of potassium niobate. It was found that the breaking point on the transparency curve corresponds to Me:Nb=1:2. It was also found that $Me(OH)(NbO_3)_2$ precipitates at pH=6 and that it dissolves at pH=9.2-9.5 and the Me:Nb ratio is 1:9. Two types of thermal effects, endothermic and exothermic, were observed in the curve of calcination of the heteroniobates of the rare earth elements. The general formula of these heteroniobates was found to be $3K_2O \cdot Me_2O_3 \cdot 4Nb_2O_5 \cdot (17.9\text{-}19.8)H_2O$. It was also

UDC: 546.651'882+546.66'882:541.49

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L 05830-67

ACC NR: AP6030019

found that 70% of the crystalline water is lost upon heating to 100-180°C. Final dehydration occurs at 560-610°C. The dehydration was found to be partially irreversible. Presented by Academician I. I. Chernyayev on 14 December 1965. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 21Sep65/ ORIG REF: 007/ OTH REF: 002

Card 2/2

ACC NR: AP7010726 SOURCE CODE: UR/0189/66/000/003/0061/0066

AUTHOR: Lapitskiy, A. V. (deceased); Pankratova, L. N.

ORG: Department of Inorganic Chemistry, Moscow State University (Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta)

TITLE: Reaction of zirconium with several complexating agents

SOURCE: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 3, 1966, 61-66

TOPIC TAGS: zirconium, chemical reaction, spectrophotometric analysis

SUB CODE: 07

ABSTRACT: The direct spectrophotometric study of the reaction of zirconyl diperchlorate with triacetic acid nitrile (NTA), ethylenediaminetetraacetic acid (EDTA), and diethylenetriamine pentaacetic acid (DTPA). The reagents were double distilled from hot water. A weighed portion of $ZrOCl_2 \cdot 8H_2O$ was dissolved in $HClO_4$ and evaporated from the $HClO_4$ twice to almost total dryness. Then zirconyl diperchlorate was dissolved in 0.010 M $HClO_4$.

It was established that the complexating agents studied were governed by Beer's law at the given wavelength and at the given concentrations. Then spectra were recorded of the solutions of zirconium perchlorate, NTA, EDTA, DTTA, and their ...

Card 1/2 0930 UDC: 546 2977

ACC NR: AP7010726

mixtures with zirconium at a Zr: complexating agent ratio of 1:1 from 206-300 millimicrons. The concentration of the complexating agents and zirconium were $7.5 \cdot 10^{-4}$ mole/liter. For the mixture NTA / Zr, the greatest departure from additivity exists at 210 millimicrons. It was shown that the most complete picture of the reaction is obtained by studying a series and varying the concentration of one of the components and keeping other constant. The absence of an inflection on the curve describing this function shows that Zr reacts with NTA with a stoichiometric coefficient equal to 1. The number n, of NTA molecules arriving at a single central atom, is determined by the method of isomolar series. Similar determinations were made for the following systems: zirconyl diperchlorate-EDTA-water; zirconyl diperchlorate-DTTA-water. Orig. art. has: 5 figures, 6 formulas and 3 tables. [JPRS: 40,351]

Card 2/2

KAMENSKIY, I.V.; LAPITSKIY, V.A.

Synthesis and study of furfuralo-furfuramide polymers and plastics on their base. Plast. massy no.11:13-16 '65. (MIRA 18:12)

LAPITSKIY, A.S.

Mechanical shovel. Put' i put.khoz. 8 no.12:21 '64.
(MIRA 18:1)

1. Nachal'nik distantsii zashchitnykh lesonasazhdeniy, stantsiya Ufa, Kuybyshevskoy dorogi.

NEMKOVA, Ol'ga Georgiyevna; BUROVA, Yekaterina Ivanovna; VOROB'YEVA, Ol'ga Ivanovna; IPPOLITOVA, Yekaterina Aleksandrovna; LAPITSKIY, Anatoliy Vasil'yevich; KOROBTSOVA, N.A., red.; SPITSYNA, V.I., akademik, red.

[Laboratory work in inorganic chemistry] Praktikum po neorganicheskoi khimii. Moskva, Izd-vo Mosk. univ., 1965. 317 p. (MIRA 18:8)

LAPITSKIY, D. A.

Lapitskiy, D. A. "The effect of the temperature factor on the length of life of mice in a hermetically sealed chamber", In the collection: Mekhanizm patol. reaktsiy, Issues 11-15, Leningrad, 1949, p. 7-9.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

LAPITSKIY, D. A.

Lapitskiy, D. A. - "On the problem of the nature of rhythms in hyperkinesis", In the collection: Mekhanizm patol. reaktsiy, Issues 11-15, Leningrad, 1949, p. 166-74.

SO: U-4329, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

LAPITSKIY, D. A.

Lapitskiy, D. A. "On the use of calcium chloride for avoiding and eliminating certain pathological reactions", In the collection: Mekhanizm patol. reaktsiy, Issues 11-15, Leningrad, 1949, p. 236-46.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

LAPITSKIY, D. A.

Britanishskiy, G. R., Lapitskiy, D. A., and Sobolev, V. I. "The recording of diaphragm currents -- electrodiaphragmography", In the collection: Mekhanizm patol. reaktsiy, Issues 11-15, Leningrad, 1949, p. 384-90.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

AYZENBERG, D.Ye.; BELEVTSEV, Ya.N.; BORDUNOV, I.N.; BORISENKO, S.T.; BULKIN, G.A.; GORLITSKIY, B.A.; DOVGAN', M.N.; ZAGORUYKO, L.G.; KAZAKOV, L.R.; KALYAYEV, G.I.; KARASIK, M.A.; KACHAN, V.G.; KISELEV, A.S.; LAGUTIN, P.K.; LAZARENKO, Ye.K.; LAZARENKO, E.A.; LAPITSKIY, E.M.; LAPCHIK, F.Ye.; LAS'KOV, V.A.; LEVENSHTEYN, M.L.; MALAKHOVSKIY, V.F.; MITKEYEV, M.V.; PRUSS, A.K.; SKARZHINSKIY, V.I.; SKURIDIN, S.A.; SOLOV'YEV, F.I.; STRYGIN, A.I.; SUSHCHUK, Ye.G.; TEPLITSKAYA, N.V.; FEDYUSHIN, S.Ye.; FOMENKO, V.Yu.; SHKOLA, T.N.; SHTERNOV, A.G.; YAROSHCHUK, M.A.; ZAVIRYUKHINA, V.N., red.

[Problems of metallogeny in the Ukraine] Problemy metallogenii Ukrainy. Kiev, Naukova dumka, 1964. 254 p. (MIRA 18:1)

1. Akademiya nauk URSR, Kiev. Instytut geologichnykh nauk.

L 27182-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 WW/RM

ACCESSION NR: AP4009481 S/0063/63/008/006/0708/0709

43
38
B

AUTHORS: Makin, S.M.; Lapitskiy, G.A.; Kolunova, A.M.

TITLE: New method of producing polymethine polymers

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v.8, no. 6, 1963, 708-709

TOPIC TAGS: polymethine polymer, dialdehydic polymer, polymethine dialdehydic polymer, dialdehyde phosphonium, salt polycondensate, thermal stability, magnetic susceptibility, polyene polymer

ABSTRACT: 1,4-bis-(triphenylphosphonium bromide)-butene-2(I) or p-zylylene-bis-(triphenylphosphonium chloride) (II) were reacted with octatriene-2,4,6-dial (III) or with terephthalic aldehyde (IV) (equations shown in the enclosure) to form polymers consisting exclusively of $(CH=CH)_n$ and/or $-C_6H_4-CH=CH-$ linkages. The polycondensation is carried out in absolute ether in the presence of sodium ethylate without separating the bis-alkylidenephosphorane. There is no halide in the product, and IR spectra show the terminal groups are aldehydic. All the products are powders, which melt above 400C

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L 27182-65

ACCESSION NR: AP4009481

and are insoluble in organic solvents. The oxygen content and the polymer weight (by 10%) of compound V increased on storage in air. With prolonged boiling in water, oxygen content increases 35%. EPR signal intensity decreases with increase in oxygen content. These polymers are thermally stable, have catalytic activity and increased magnetic susceptibility. [Abstractor's note: author apparently calls the $(CH=CH)_n$ gouping "methine", this work does not relate to the trivalent HC≡radical]. Orig. art. has: 1 table and 1 set of equations.

ASSOCIATION: None

SUBMITTED: 20Sep63 ENCL: 02

SUB CODE: IC,GC NR REF SOV: 005 OTHER: 007

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L 27182-65
ACCESSION NR: AP4009481

ENCLOSURE: 01

a) $(C_2H_5)_3\overset{+}{P}CH_2CH{=}CHCH_2\overset{+}{P}(C_2H_5)_3 + 2\,\bar{Br}$

+ $CHO{-}(CH{=}CH)_3{-}CHO$ (III) $\xrightarrow{NaOR}$ $CHO{-}(CH{=}CH)_n{-}CHO$ (V)

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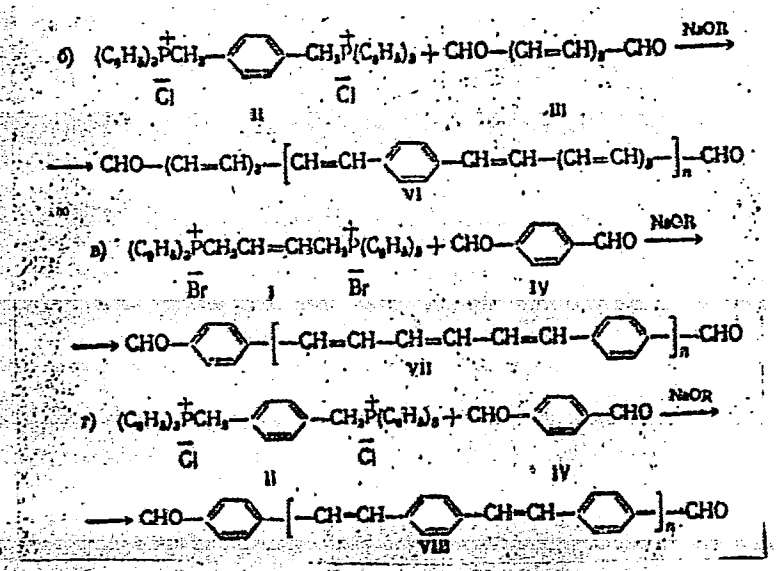
L 27182-65

ACCESSION NR: AP4009481

ENCLOSURE: 02



Card 2/4

LAPITSKIY, G.A.; MAKIN, S.M.

Synthesis of polymeric Schiff bases with a system of conjugate bonds. Zhur.VKHO 9 no.1:116-117 '64. (MIRA 17:3)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

L 21733-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Po-4/Pr-4/Ps-4 RPL RM/WW/JW

ACCESSION NR: AP4044192 S/0079/64/034/008/2564/2566

AUTHOR: Lapitskiy, G. A.; Makin, S. M.; Dy*mshakova, G. M.

TITLE: Chemistry of unsaturated esters. XIX. Synthesis of octatriene-2,4,6-dioic-1,8 acid and some of its derivatives

SOURCE: Zhurnal obshchey khimii, v. 34, no. 8, 1964, 2564-2566

TOPIC TAGS: octatrienedioic acid, derivative, dinitrile, dichloranhydride, bifunctional polyene compound

ABSTRACT: Octatriene-2,4,6-dioic-1,8 acid, $HOOC-(CH=CH)_3-COOH$ (I) was synthesized from octatriene-2,4,6--dial-1,8 (II), either by direct oxidation with silver oxide or by heating the corresponding dinitrile $N\equiv C-(CH=CH)_3-C\equiv N$ (III) with 75% sulfuric acid. III was synthesized directly from II with hydroxylamine and acetic anhydride, or from the dioxime $HO-N=CH-(CH=CH)_3-CH=N-OH$ (IV) with acetic anhydride. IV was prepared by reacting II and hydroxylamine hydrochloride in pyridine solution. I treated with thionyl chloride gave the dichloran-

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L 21733-65

ACCESSION NR: AP4044192

hydride of octatriene-2, 4, 6-dioic-1, 8 acid. The latter compound entered in polycondensation reaction with diamines to form polymers. The bifunctional polyene compounds are high melting and are relatively highly stable in comparison to the corresponding monofunctional polyene compounds. Orig. art. has: 2 equations.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii imenii M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 15Jun63 ENCL: 00

SUB CODE: GC NO REF SOV: 002 OTHER: 005

Card 2/2

MAKIN, S.M.; LAPITSKIY, G.A.; STREL'TSOV, R.V.

Chemistry of unsaturated ethers. Part 18: Synthesis of unsaturated dialdehydes and their derivatives. Zhur. ob. khim. 34 no.1:65-70 Ja '64. (MIRA 17:3)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

DAVYDOV, B.E.; ZAKHARYAN, R.Z.; KARPACHEVA, G.P.; KRENTSEL', B.A.; LAPITSKIY, G.A.; KHUTAREVA, G.V.

Disarrengement of complanarity and conjugation in crystal-forming polymers. Dokl. AN SSSR 160 no.3:650-653 Ja '65. (MIRA 18:3)

1. Institut neftekhimicheskogo sinteza im. A.V. Topchiyeva AN SSSR. Submitted July 14, 1964.

L 29134-65 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4/Pt-10 RM

ACCESSION NR: AP5005899 S/0020/65/160/003/0650/0653

AUTHOR: Davydov, B. E.; Zakharyan, R. Z.; Karpacheva, G. P.; Krentsel', B. A.; Lapitskiy, G. A.; Khutareva, G. V.

TITLE: Impairment of coplanarity and conjugation in crystallizing polymers

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 650-653

TOPIC TAGS: crystalliization, conjugation, conjugated polymer, organic semiconductor, semiconducting polymer, coplanarity

ABSTRACT: A study has been made to determine to what extent crystallization gives rise to conjugation disruption due to impairment of coplanarity in conjugated polymers in the solid phase, and how it affects their optical, paramagnetic, and semiconducting properties. These properties were compared for 32 polyazines and polymeric Schiff bases. It was found that the properties which are typical of conjugated polymers are exhibited to a greater extent by amorphous than by crystalline polymers. Thus, in color, in IR spectra, and in the absence of EPR, crystalline polyazines are similar to their analogs containing O, S, CH_3, or OCH_3 groups between conjugated segments in the backbone. A similar correlation, but less marked, was in evidence for the polymeric Schiff bases. This effect of crystallinity on con-

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ACCESSION NR: AP5005899

jugated-polymer properties was attributed to the impairment of coplanarity during crystallization. In thermal stability and activation energy for conduction, however, the crystalline polymers were closer to the amorphous ones. The effect of crystallinity on semiconducting properties was interpreted as being determined in each individual case by changes in activation energy due to two competing processes occurring on crystallization: an increase in carrier mobility and a decrease in carrier concentration. Orig. art. has: 1 table. [SM]

ASSOCIATION: Institut neftekhimicheskogo sinteza imeni A. V. Topchiyeva Akademii nauk SSSR (Institute of Petrochemical Synthesis, Academy of Sciences, SSSR)

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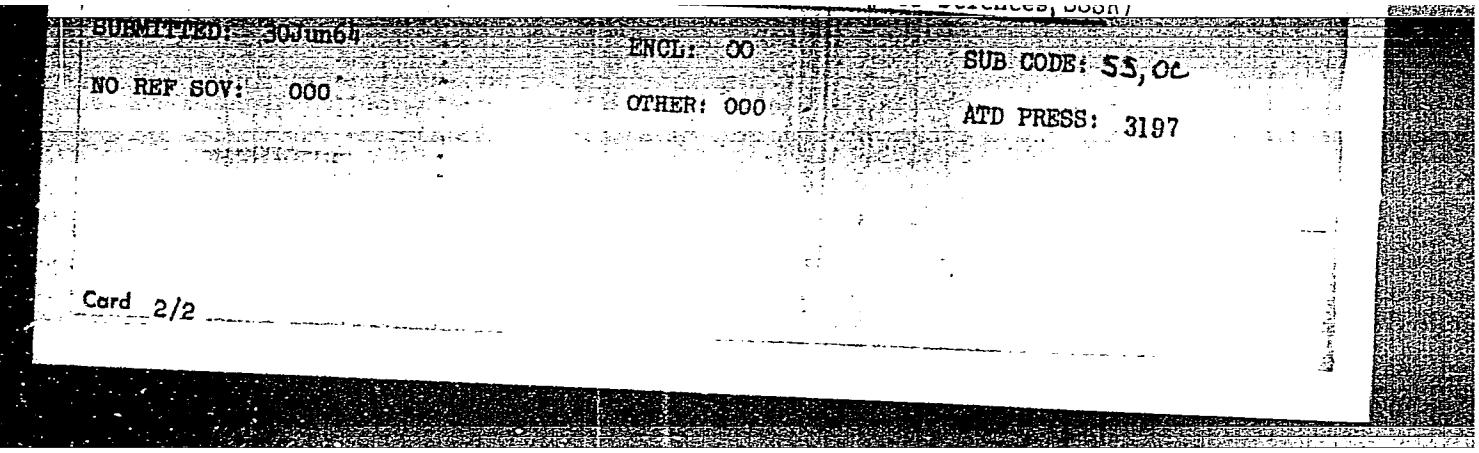

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Creating a breeding school of the whitefish Coregonus albula for stocking lakes of Novgorod Province. Trudy sov.Ikht.kom. no.3:90-97 '54. (MLRA 7:8)

1. Novgorodskoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva - VNIORKh. (Novgorod Province--Whitefishes) (Whitefishes--Novgorod Province)

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Population dynamics and state of the stocks of principal commercial fishes in Tsimlyansk Reservoir. Vop. ikht. no.15:3-25 '60.
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(Tsimlyansk Reservoir--Fishes)

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LAPITSKIY, Kh.M.

Methods for calculating tracks for marshalling yards. Transp. stroi. 7 no.11:26 N '57. (MIRA 11:2)

1. Glavnyy inzhener proyektov uzlov i stantsiy Lengiprotransa.
(Railroads--Hump yards) (Railroads--Tracks)

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Calculating the number of receiving and departure tracks in classification yards. Transp.stroi. 10 no.6:45-47 Je '60. (MIRA 13:7)

1. Glavnyy inzhener proyekta Lengiprotransa.
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Determining the necessary capacity of the marshalling equipment at railroad stations. Transp.stroi. 10 no.8:47-48 Ag '60. (MIRA 13:8)
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Calculating the length of make-up sidings at stations. Transp.stroi. 11 no.4:44-46 Ap '61. (MIRA 14:5)
(Railroads--Yards)

LAPITSKIY, Kh.M., inzh.

Determining the meteorological conditions for calculating the height of classification humps. Transp. stroi. 13 no.1:43 Ja '63 (MIRA 18:2)

(SOV/117-59-8-41/44

AUTHORS: Frantov, S.S. and Lapitskiy, L.V.

TITLE: A Cabin for Wiping Shop Lantern Panes

PERIODICAL: Mashinostroitel', 1959, Nr 8, p. 46 (USSR)

ABSTRACT: In one of the shops of the Avtomobil'nyy zavod imeni I.A. Likhacheva (Automobile Plant imeni I.A. Likhachev) a special cabin has been constructed for wiping lantern panes from inside the building (see drawing). The cabin consists of a welded body that moves on four rollers along the lantern on a special path laid on beams of the transverse girders. There is 1 diagram.

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