29729

3,9410 (1482)

S/169/61/000/008/050/053
A006/A101

AUTHORS: Okhatsimskaya, M.V., Rastrusin, Yu.B., Rokityanskiy, I.I., Shchepetnov, R.V.

TITLE: Regularities in the excitation of short-period oscillations in middle latitudes

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 8, 1961, 42, abstract 8G280 (v sb. "Korotkoperiod. kolebaniya elektromagnitn. polya Zemli, no. 3", Moscow, AN SSSR, 1961, 17 - 22, English summary)

TEXT: The study of short-period oscillations of telluric currents during the IGY was carried out at stations of the Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth, AS USSR) (Borok, Alma-Ata, Petropavlovsk-Kamchatskiy, and Alushta). These investigations made it possible to detect a number of common regularities of short-period oscillations in middle latitudes. There are two basically different types of short-period oscillation: namely, stable oscillations, pc, with T $\sim$ (15 $\div$ 40) sec and train-type oscillations, pt, with T $\sim$(50 $\div$ 90) sec. The maximum number of pc cases occurs at local midday, and pt at local midnight, independent of the longitude of the station. The

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29729
S/169/61/000/008/050/053
A006/A101

Regularities in the excitation ...

diurnal run of pc is asymmetric and has a broad maximum around midday. The increase of pc amplitudes occurs 1.5 times more quickly than their damping. A somewhat increased pc number was observed in summer as compared to the winter. The diurnal pt run has a sharp maximum around local midnight. Seasonal variability was not observed for pt. Amplitudes of short-period oscillations in middle latitudes are low, being fractions of a unity and a few mv/km for pc, and several mv/km for pt. There are indications of a tendency for increased short-period oscillation amplitudes at seaside stations. Previous concepts on the dependence of pc and pt on universal time were explained as follows: a comparison was made of the diurnal run of short-period oscillations on stations located close in the longitude; a comparison was made of unclear maxima obtained from a small number of cases. This did not permit the detection of the longitudinal effect of maximum shift even for substantially remote stations; moreover, there are oscillations, in both modes, correlated with universal time, which occur seldom but are very intensive.

K. Zybin

[Abstracter's note: Complete translation]

L 00309-66 EWT(1)/EPA(s)-2/EPF(n)-2/T-2/ETC(m) IJP(c) WW

ACCESSION NR: AP5016659 UR/0382/65/000/002/0111/0122
538.4+621.689

51
B

AUTHOR: Vasil'yev, S. V.; 44,55 Okhemenko, N. M.; 44,55 Smirnova, L. G. 44,55

TITLE: Experimental investigation of the magnetic fields of an induction pump

SOURCE: Magnitnaya gidrodinamika, no. 2, 1965, 111-122 21,44,55

TOPIC TAGS: electromagnetic pump, magnetic field, magnetic induction

ABSTRACT: The spatial distribution of components of the magnetic induction, B in the gap between two-layer winding inductors of flat-type linear induction pump is studied. The test device operated at 80 KVA at current reading of 120 AMP. (operating without a load). The effects of loading on components of B are indicated. Both thermocouples on various metallic plates inserted in the gap and magnetic probe coils were used to obtain the data. Also given are data on measurement of integral distribution of components of B, demagnetization coefficient, and secondary leakage. Various fringe effects have been measured. In addition, it is shown that the above agrees with calculations which were carried out assuming the plane-parallel geometry for the magnetic field. Orig. art. has: 5 formulas, 9 figures, 1 table.

Card 1/2

L 00309-66

ACCESSION NR: AP5016659

0

ASSOCIATION: none

SUBMITTED: 30Jun64 ENCL: 00 SUB CODE: EM, ME

NO REF SOV: 008 OTHER: 000

dg

Card 2/2

ALAVERDYAN, M.I., dotsent; GEZALYAN, L.S., kand. biol. nauk; MARUKYAN, T.Kh., mladshiy nauchnyy sotrudnik; TERDZHANYAN, O.Ye.; OKHIKYAN, V.M., starshiy laborant

Effect of decortication and X-rays on the phagocytic activity of leucocytes in rabbits. Vop. radiobiol. [AN Arm. SSR] 3/4:47-52 '63. (MIRA 17:6)

L 06179-67 EWT(m) WW/JW/JWD

ACC NR: AP6029970 (A) SOURCE CODE: UR/0413/66/000/015/0162/0162

INVENTOR: Okhil'kov, G. T.; Sergeyev, B. B.; Belonozhko, G. G.

52
B

ORG: none

TITLE: Ignition composition for bridgeless electroigniters. Class 78, 184677

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 162

TOPIC TAGS: primer, explosive, detonator, ignition

ABSTRACT: An Author Certificate has been issued for an ignition composition for electric igniters without bridge circuits. To secure safe operation of the electric igniters in the presence of eddy currents and increase the stability of the electric resistance, the composition contains components in the following concentrations: potassium chlorate, 49—51%; lead rhodanide, 34.7—36.7%; crystalline graphite, 15—13%; and high viscosity colloxyline, 0.2—0.4%. [W.A. 88] [PV]

SUB CODE: 19/ SUBM DATE: 18Jan65/

OKNINA,V.A.

On 20 October at 1500, V.A. Oknina will submit her dissertation for the of Candidate of Chemical Sciences on the theme "Photocolorimetric Methods of Chemical Analysis of Natural Phosphates and Boron Containing Ores"

Vechernyaya Moskav, 10 Oct 1950, No. 240 (8141)

GENKEL', P.A.; OKHINA, Ye.Z.

Dormancy in plants as a process of cell protoplasm division. Trudy Inst.fiziol.rast. 6 no.1:85-102 '48. (MIRA 9:9)

1.Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR.
(Protoplasm) (Dormancy (Plants))

SEMENOV, V.A.; OKHINCHENKO, A.I.

Calculation of solid precipitations. Trudy Kaz.NIGMI no.16:87-92 '61. (MIRA 15:5)

(Precipitation (Meteorology))

OKHIYAMA, N.

S/035/61/000/012/011/041
A001/A101

AUTHORS: Khayyakava, S., Khayyashi, S., Ito, K., Kamugaki, J., Nishima, [illegible], Okhiyama, N., Tsukha, Kh., Tsudzhi, Kh.

TITLE: The chemical composition of cosmic rays and origin of elements

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 12, 1961, 39, abstract 12A327 ("Tr. Mezhdunar. konferentsii po kosmich. lucham, 1959, v. 3", Moscow, AN SSSR, 1960, 191 - 195)

TEXT: The authors note that the relative content of heavy nuclei and carbon is very high in primary cosmic radiation, whereas the neon content is very low. An attempt is made to explain these facts on assumption that cosmic rays are accelerated in the early stage of Supernova explosions. The temperature of envelope during the explosion attains approximately 10^{9}°K, density of envelope is ~(1-100) g/cm^{3}. Under these conditions synthesis of heavy nuclei is possible, based on the rapid processes of neutron capture. Since the most important neutron source is neon, its considerable fraction will vanish, and its relative content will decrease. Production of α-particles may proceed as a result of the rapid C-N cycle. In this process the role of beta-decay will be insignificant.

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S/035/61/000/012/011/0[illegible]3
A001/A101

The chemical composition ...

and the stars the relative content of carbon will be increased. Particles produced in [illegible] acceleration and a part of them acquire energies of the order of [illegible]. There are 14 references.

L. Dorman

[Abstracter's note: Complete translation]

Card 2/2

OKHIPYAN, Yu. A.

4000

2227 AERE-Lib/Trans.-585

ON THE KINETICS OF THE ISOTHERMAL MARTENSITE TRANSFORMATION CLOSE TO ABSOLUTE ZERO. B. Ya. Lyubov and Yu. A. Okipyan. Sept. 1955. 6p. Translated by Dr. J. B. Sykes from Doklady Akad. Nauk. S.S.S.R. 101, 853-6(1956).

A quantum mechanical study has been made on the martensite transformation near absolute zero in order to determine the nature of the factors affecting the transformation proportion. Results show that the rate of martensite transformation does not depend on the temperature at temperatures close to absolute zero. Thus the vibrational energy of the atoms is the chief factor which determines the rate of the transformation. (B.J.H.)

[illegible], A. V.

"Test of the Bending Fatigue During Rotation of Carbon Steel Specimens of Variable Cross Sections", Zavod. Lab., 14, No. 2, 1948.

ZAKHARKIN, L.I.; OKHOLOBYSTIN, O.Yu.; BILEVICH, K.A.

Exchange reactions of alkyls between organomagnesium compounds and halides. Izv. AN SSSR Ser. khim. no.7:1347-1349 Jl '64. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 16719-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM
ACCESSION NR: AP4043550 S/0020/64/157/004/0934/0937

AUTHORS: Aleksandrov, A.Yu.; Okhlovy*stin, O.Yu.; Polak, L.S.; Shpinel', V.S.

TITLE: Moesbauer effect in unsymmetrical organotin compounds

ing electron donor substituents

SOURCE: [illegible] SSSR. Doklady*, v. 157, no. 4, 1964, 934-937

TOPIC TAGS: Moesbauer effect, unsymmetrical organotin compound, tetravalent tin compound, resonance absorption spectrum, electron donor group, triphenyltinlithium, hexaethy tannane, hexaphenyldistannane, quadrupole splitting, isomeric doublet line

ABSTRACT: The resonance absorption spectra of unsymmetrical tin compounds containing electron donor (with respect to the atom) substituents, and of certain other tetravalent tin comp were studied. Measurements were made at liquid nitrogen te the γ-ray source; the γ-quantum Sn^{119} (as SnO_2) was used as kev was registered on a resonance counter. The spectra of R_3SnLi (triphenyltinlithium), $R_3Sn-SnR_3$ (hexaethyl- and hex

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L 16719-65

ACCESSION NR: AP4043550

distannane) and R_3SnR' type compounds were all singlets with [illegible]
at 1.45, 1.40, 1.35, corresponding to line widths of 1.15-1. [illegible]
Regardless of the electron donor substituent bonded directly [illegible]
Sn, the quadrupole splitting Δ was 0; the symmetry of the p-co[illegible]
of the four Sn bonds was not noticeably disturbed, and the de[illegible]
of the s-electrons near the Sn^{119} nucleus was increased only [illegible]
While Δ = 0 in donor (D)-containing molecules R_nSnD_{4-n}, the qua[illegible]
pole splitting in acceptor (A) type molecules R_nSnA_{4-n} varied [illegible]
to 4.8 mm/sec, depending on A. In both of these types of Sn [illegible]
pounds the isomeric shift varied within ± 50% of δ = 1.30 for [illegible]
symmetrical R_4Sn, indicating the isomeric shift caused by el[illegible]
acceptor groups was compensated to a great degree by the ele[illegible]
donor substitutents; in inorganic tin compounds, δ varied fro[illegible]
In compounds of the type $(C_4H_9)_nSn(OCOC(CH_3)=CH_2)_{4-n}$ the res[illegible]
absorption spectra had a doublet structure; the quadrupole split[illegible]
increased with increase in number of substitutent radicals a[illegible]
smaller in polymers in comparison to the respective monomers.
values for Δ and δ for $(C_4H_9)_2Sn(OCO(CH_2)_nCH_3)_2$, containing [illegible]
bond, were identical with those for the corresponding unsatura[illegible]
compound; δ again depended little on the exchange of alkyl g[illegible]

Card 2/3

L 16719-65
ACCESSION NR: AP4043550

electron acceptor groups and almost none on increasing the number of th
The resonance absorption spectra for $(CH_3)_3SnC_6H_5$, $(CH_3)_3SnCH=CH_2$
$(CH_3)_3Sn(C_6H_4)CH=CH_2$ also had only singlet lines and was the same as
$(CH_3)_4Sn$, indicating exchange of CH_3 by C_6H_5 or a conjugated bond syste
not change the electron density or cause a gradient in the electric field
nucleus. "The authors thank T. Krasnov, L. V. Layn for supplying s
ples of the organotin compounds and M. Ye. Dyatkin and G. K. Semir
valuable remarks in discussing the work." Orig. art. has: 1 table

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSS
(Institute of Petrochemical Synthesis, Academy of Sciences SSSR); Inst
elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Org
metallic Compounds, Academy of Sciences SSSR), Moskovskogo gosudars
universiteta im. M. V. Lomonosova (Moscow State University)

Submitted: 24Apr64 Encl: 00

Sub Code: GC, GP Nr Ref Sov: 005 Other: 000

Card 3/3

L 16112-65 EWT(m) [illegible] RM

ACCESSION NR AP404[illegible] S/0062/63/000/012/2202/[illegible]

AUTHOR: Zakharkin, L. I.; Okhloby*stin, O. Yu.

TITLE: Synthesis of organ[illegible] pounds from alkyl halides and [illegible] in a medium of solvat[illegible]

SOURCE: AN SSSR [illegible] no. 12, 196[illegible], 2202 [illegible]

TOPIC TAGS: organ[illegible] solvating solvent [illegible] dimethoxyethane, dig[illegible] dihalide, alk[illegible] iodide

ABSTRACT: The [illegible] of alkyl iodides [illegible] was studied in the [illegible] dimethyl esters of [illegible] diethyleneg[illegible] facilitated the reac[illegible] product isolated [illegible] products were [illegible] R_3SnX, polymerized [illegible] hexalkyldistannanes [illegible] alkyls. The catalyt[illegible] might be explain[illegible] tion of the C[illegible] bond [illegible] transfer from the [illegible]

Card 1/2

L 3511 -[illegible]

ACCESSION NR AP[illegible]

of the metal, such as [illegible]

$RX + M \rightarrow$ [illegible]

Alkyl bromides [illegible] with tin in the presence of the above solvents and an addition of [illegible] has [illegible] table

ASSOCIATION: [illegible] Akademii [illegible] (Institute of Organo-elemental Compounds of the Acad. of Sciences, [illegible])

SUBMITTED: 16Oct62 ENCL: 00

SUB CODE: [illegible] NO REF SOV: 001 OTHER: [illegible]

Card 2/2

L 15694-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 [illegible]
ASD-3/AFFTC/ESD-3 [illegible] RM

3

ACCESSION NR: AP4045840 S/0062/64/000/012/2238/2[illegible]

AUTHOR: Zakharkin, L. I., Stanko, V. I., Bratisev, V. A., Chap[illegible]
Okhloby*stin, O. Yu

TITLE: Synthesis of a new class of organoboron compounds, $B_{10}C_2H_{12}$, and its derivatives

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 12, 1963, 22[illegible]

TOPIC TAGS: organoboron compound, boron, boron derivative, [illegible] acetylenic compound, ligand, boron stability

ABSTRACT: Interaction of decaborane with acetylenic compounds in the presence of substances capable of $B_{10}H_{12}$ [illegible] ligand complex formation [illegible] class of compounds of the formula $B_{10}C_2H_{10}RR_1$. As ligands CH_3CN, $(C_2H_5)_2S$ and $HCON(CH_3)_2$ were used. The reaction proceeds [illegible] ing to (1) and (2)

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L 15694-65

ACCESSION NR: AP[illegible]

A yield of up to 90-85% of [illegible] was obtained depending upon the [illegible] acetylenic compound. The American patent 3,026,432 (1962) on the rea[illegible] isopropenylacetylene with diacetonitrildecaborane was obtained. Baren[illegible] derivatives show high stability upon exposure to heat-air, heating w[illegible] mineral acids and good stability to alkalis and oxidants, as compared [illegible] ane. Orig. art. has [illegible] formulas.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Organo-Elemental Compounds of the Academy of Sciences SSSR)

SUBMITTED: 28Sep63 ENCL: 00

SUB CODE: GC, OC NO REF SOV: 001 OTHER: 00[illegible]

Cord 2/2

L 10442-65 EWT(m)/EPF(c)/EPR/EWP(j)/EWA(h) Pc-4/Pr-4/Ps-4/Peb RPL/ a-
WW/HM

ACCESSION NR: AP4044709 S/0062/64/000/008/1539/1540

AUTHOR: Zakharkin, L. I.; Bregadze, V. I.; Okhloby*stin, O. Yu.

TITLE: Synthesis of organoelemental derivatives of barene

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1964, 1539-1540

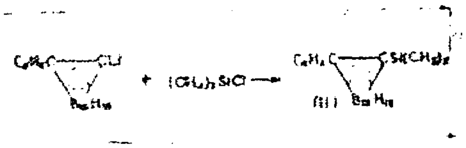
TOPIC TAGS: barene, organoboron compound, organosilicon compound, organotin compound, organophosphorus compound

ABSTRACT: A study has shown that lithium derivatives of barenes
(Zakharkin, L. I., V. I. Stanko, V. A. Bratsev, Yu. A. Chapovskiy
and O. Yu. Okhlobystin, Izv. AN SSSR. Ser. Khim., 1963, 2238) react
with organo-silicon, -tin, -mercury, and -phosphorus chlorides to
form a new class of compounds in which the element atom is attached
to the barene ring. The reaction of (phenylbarenyl) lithium (I) with
trimethylchlorosilane in benzene solution formed C-phenyl-C'
(trimethylsilyl)barene (mp 104--106C) in a 61% yield:

Card 1/2

L 10442-65

ACCESSION NR: AP4044709



Similarly, I reacted with triphenyltin chloride to form tripheny (phenylbarenyl) tin (mp 186—187C) in an 84% yield and with methyl-mercury bromide in a benzene suspension to form methyl (phenylbarenyl) mercury (mp 159—160C) in a 62% yield. I also reacted with dihexylphosphinous chloride to form dihexyl (phenylbarenyl) phosphine (mp 9—10C) in a 52% yield. Orig. art. has: 6 formulas.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 16Jan64	ATD PRESS: 3110	ENCL: 0
SUB CODE: IC, OC	NO REF SOV: 004	OTHER: 0

Card 2/2

ALEKSANDROV,, A. Yu.; OKHLOBYSTIN,O. Yu.; POLAK. L.S.; SHPINEL', V.S.

Mossbauer effect in unsymmetrical organotin compounds with electron-donor substituents. Dokl. AN SSSR 157 no.4:934-937 Ag '64 (MIRA 17:8)

1. Institut neftekhimicheskogo sinteza AN SSSR; Institut elementoorganicheskikh soyedineniy AN SSSR i Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta. Predstavleno akademikom M.I. Kabachnikom.

OKHLOBYSTIN, O. YU.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 22 - 32/56

Authors : Skvarchenko, V. R.; Levina, R. YA.; and Okhlobistin, O. Yu.

Title : Synthesis of hydrocarbons. New method of synthesizing symm. octahydrophenanthere (octanehtrene), 4,5-cyclopentanoindan and their homologues.

Periodical : Dok. AN SSSR 99/5, 789-792, Dec 11, 1954

Abstract : The reaction of splitting tetrahydropthalic anhydrides under the effect P_2O_5 was used in the drivation of tricyclic condensed hydrocarbons symm. octahydrophenanthere (octanethrene), 4,5-cyclopentanoindan and their homologues. The basic diene hydrocarbons were found to be 1,1'-dicyclohex[illegible] dicyclopentenyl, the first of which conbined with maleic anhydride yielded 1, 2,3,4,5,6,7,8-octahydrophenanthrene. Other hydrocarbons derived from 1,1'-dicyclopentenyl mixed with maleic, citraconic and pyro[illegible] are listed. Twelve references: 4-USA; 4-USSR and 4-German [illegible].

Institution : The M. V. Lomonosov State University, Moscow

Presented by: Academician A. N. Nesmeyanov, July 16, 1954

6

Synthesis of hydrocarbons I. Synthesis of [illegible] cyclopentanyl. K. Yu. Levina, V. R. Skvarchenko, and O. [illegible]

[illegible]

HCl and heated with [illegible]

[illegible]

(9)

OKHLOBYSTIN, O. Yu.

AUTHORS: Zakharkin, L. I., and Okhlobystin, O. Yu. 20-2-20/50

TITLE: The Utilization of Aluminum Trialkyls in the Synthesis of Elemental Organic Compounds (Ispol'zovaniye alyuminiytrialkilov dlya sinteza elementoorganicheskikh soyedineniy).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 2, pp. 236-238 (USSR)

ABSTRACT: In connection with the fact that organoaluminum compounds were easily accessible in recent times the problem naturally rises of their utilization in the synthesis of other element-organic compounds. In patent publications production-methods were described of organozinc, organocadmium and organomercury compounds of the type RMeX, as well as of trialkylborines from haloid compounds of the same elements and from a mixture of alkylaluminum-halides which forms on the action of appropriate haloidalkyls on aluminum:

$3\ RX + 2\ Al \longrightarrow RAlX_2 + R_2AlX$. As far as this reaction only takes place with the lower alkyls (R not higher than C_3H_7), this method can not be considered general enough. In the present paper the authors studied the interaction of

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The Utilization of Aluminum Trialkyls in the Synthesis of Element Organic Compounds 20-2- 20/50

boron-, antimony-, arsenic-, phosphorus-, tin- and mercury-halides with triethylaluminum and tri-isobutyl-aluminum. In all cases investigated an exchange reaction takes place under formation of an aluminum halide and of alkyl derivatives of the elements taken. On addition of trifluorboro-ethydrate to tri-isobutyl-aluminum, triisobutylboron forms at 60-65°C. The same forms on blowing gaseous trifluorboron through a triethylaluminum solution in decahydronaphthalene. The interaction of tri-isobutyl-aluminum-ethyrate with a suspension of trifluor-antimony in ether takes place just as easily. The interaction of tri-isobutyl-aluminum with arsenic trichloride in ether does not lead to trialkylarsine; chief products are, however: isobutyl-trichloroarsine and di-isobutyl-chloroarsine. The interaction of tri-isobutyl-aluminum with phosphorus trichloride is more complicated. The formation of a complex of the reaction products with chloroaluminum takes place as the result of an energetic reaction (independently of the type of solvent). From the reaction mass

Card 2/4

isobutyldichlorophosphine can be distilled off in a vacuum. On further heating of the rest a radical decomposition takes place under formation of volatile products and elementary phosphorus. The interaction of equimolecular amounts of tri-isobutyl or tri-ethyl-aluminum with mercuric bromide or sublimate in ether or in hexane chiefly leads to symmetric dialkyl derivatives of mercury: a) Diiso-butyl-mercury and b) bromo-isobutyl-mercury. Diethyl-mercury was obtained from sublimate and triethylaluminum in hexane. Stannic tetrachloride yields tetra-isobutyl-tin on the action of tri-isobutyl-aluminum in heptane at 40-48°C (after decomposition by a NaOH-solution). Besides, tri-isobutyl-tin-oxide can be isolated by distillation of the rest over sodium, apparently by dehydration of the corresponding hydroxide. Thus $(iso\text{-}C_4H_9)$ and $(iso\text{-}C_4H_9)_3$ SnCl form in the case of interaction of tri-isobutyl-aluminum and stannic tetrachloride.
There are 14 references, 1 of which is Slavic.

The Utilization of Aluminum Trialkyls in the Synthesis of Elemental Organic Compounds 20-2-20/50

ASSOCIATION: Institute for Element Organic Compounds AN USSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

PRESENTED: By A. N. Nesmeyanov, Academician, May 8, 1957

SUBMITTED: May 7, 1957

AVAILABLE: Library of Congress

Card 4/4

OKHLOBYSTIN, O.Yu.

AUTHORS: Zakharkin, L. I., Gavrilenko, V. V., Okhlobystin, O.Yu. 62-1-18/29

TITLE: The Action of Triethyl Aluminum and Diisobutyl Aluminum Hydride on Metal Chlorides of Group VI in the Presence of Carbon Monoxide Synthesis of the Chromium , Molybdenum , and Tungsten Carbonyls (Deystviye trietilalyuminiya i diizobutilalyuminiygidrida na khloridy metallov VI gruppy v prisutstvii okisi ugleroda.Sintez karbonilov khroma, molibdena i vol'frama)

PERIODICAL: Izvestiya AN SSSR, Otdeleniye Khimicheskikh Nauk, 1958 Nr 1, pp 1oo - 1o2 (USSR)

ABSTRACT: The action of triethylaluminum and diisobutylaluminumhydride on the above mentioned chlorides was for the first time investigated by Jab and Cassal (reference 1). Both found, that carbonyles of chromium, molybdenum, and tungsten are formed in the reaction. Later this method was investigated by means of magnesium-organic compounds, i.e. in different variants. The authors show in this paper that for the obtaining of $Cr(CO)_6$, $MO(CO)_6$ and $CR(CO)_6$ triethylaluminum and diisobutylaluminumchloride can be used with success, i.e. in carrying out the reaction of the chlorides of the metals of the 6th group with triethylaluminum in etheric solution. In the reaction under the same conditions with diisobutylaluminumhydride $Cr(CO)_6$ and $Mo(CO)_6$ were obtained (with a

Card 1/2

The Action of Triethyl Aluminum and Diisobutyl Aluminum Hydride on Metal Chlorides of Group VI in the Presence of Carbon Monoxide. Synthesis of the Chromium,- Molybdenum-, and Tungsten Carbonyls 62-1-10/29

yield of 73 - 75%) The synthesis of the triethylaluminum and triisobutylaluminum (of which diisobutylaluminumhydride was produced) was carried out by the authors corresponding to the reaction of Ziegler, Gellert, Zosel (reference 5) from aluminum, hydrogen, and the corresponding olefin. There are 5 references.

ASSOCIATION: Institute of Elemental-Organic Compounds, AS USSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR).

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

1. Triethylaluminum-Synthesis 2. Triisobutylaluminum-Synthesis
3. Chromium carbonyl-Synthesis 4. Molybdenum carbonyl-Synthesis
5. Tungsten carbonyl-Synthesis 6. Diisobutylaluminumhydride-Production 7. Metal chlorides-Chemical reactions
8. Triethylaluminum-Chemical reactions 9. Diisobutylaluminumhydride-Chemical reactions 10. Carbon monoxide-Applications

Card 2/2

SOV/63-3-6-23/43

AUTHORS: Markevich, V.A., Krentsel', B.A., Candidates of Chemical Sciences, Okhlobystin, O.Yu.

TITLE: Conference on Metal-Organic Syntheses (Soveshchaniye po metalloorganicheskim sintezam)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1958, Vol III, Nr 6, p 821 (USSR)

ABSTRACT: In June 1958 a scientific-technical conference took place in Moscow dealing with metal-organic syntheses of alcohols, monomers, acids, etc. The conference was attended by 50 specialists from 16 different organizations. The following papers were presented: O.Yu. Okhlobystin, L.I. Zakharkin, Institute of Element-Organic Compounds, "The Use of Aluminum-Organic Compounds for the Synthesis of Other Element-Organic Compounds"; V.V. Gavrilenko, L.I. Zakharkin, Institute of Element-Organic Compounds, "Synthesis of Carbonic Acids and Alkylhal on the Basis of Aluminumtrialkyls"; I.M. Khorlina, L.I. Zakharkin, Institute of Element-Organic Compounds, "Production of Aldehydes From Nitryls and Double-Decomposed Amides by Di-isobutyl-Aluminumhydride Reduction"; V.M. Lisitsin, State Committee for Chemistry of the USSR Council of Ministers,

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Conference on Metal-Organic Syntheses SOV/63-3-6-[illegible]

"Study of the Possibility of Industrial Production of Tetraethyl-Lead by the Electrolysis of Complex Compounds of Triethyl-Aluminum"; I.V. Garmonov, K.K. Chevychalova, All-Union Scientific Research Institute of Synthetic Rubber, "Synthesis of 2-Methyl-butylen-1 and 2-Ethylbuten-1 on the Basis of Propylen, α -Butylen and Ethylen With the Application of Triethyl-Aluminum"; M.I. Farberov, S.I. Kryukov, A.M. Kut'in, "Selective Dimerization of Propylen and Its Use in Technical Syntheses"; A.M. Sladkov, V.A. Markevich, Scientific Research Institute of Synthetic Alcohols and Organic Products, "Production of Higher Alcohols From Organic Compounds of Aluminum". It has been recommended to install an experimental-industrial plant for the production of simple alkyls and pure suspended aluminum which are needed for metal-organic synthesis and which are not available in the necessary quantities. Colloquia should be arranged at intervals of 3 - 4 months.

Card 2/2

AUTHORS: Okhlobystin, O. Yu., Zakharkin, L. I. SOV/62-58-8-15/22

TITLE: The Action of Aluminium Trialkyls on Phosphorus Trichloride (Deystviye alyuminiytrialkilov na trekhkhloristyy fosfor)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 8, pp. 1006-1008 (USSR)

ABSTRACT: The interaction of the aluminium trialkyls with phosphorus trichloride has been investigated only little up to now. Organo-lithium-, magnesium-and zinc compounds alkylate phosphorus trichloride to the trialkyl phosphines. In the introduction the authors discuss the investigations carried out by Kharash as well as the work on the effect of mercury dialkyl on phosphorus trichloride (Refs 2-4). The findings of this paper are that after the interaction had taken place between the aluminium trialkyls and phosphorus trichloride all three stages of the alkylation of PCl_3 may be obtained:

$$AlR_3 + PCl_3 \rightarrow RPCl_2 + R_2PCl + R_3Al.$$

In the present short report the conditions for the synthesis of alkyl dichlorophosphines is described proceeding from the phosphorus trichloride and the corresponding aluminium trialkyls.

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The Action of Aluminium Trialkyls on Phosphorus Trichloride SOV/62-58-8-15/22

There are 9 references, 2 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk SSSR (Institute of Elemental-Organic Compounds, AS USSR)

SUBMITTED: March 5, 1958

Card 2/2

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu. SOV/62-58-10-21/25

TITLE: Regrouping of Aluminum Trialkyls (Peregruppirovka alyuminiy-trialkilov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 10, pp 1278 - 1278 (USSR)

ABSTRACT: The authors found by the example of triisopropyl aluminum and tri-sec.-butyl aluminum that secondary aluminum trialkyls regroup into primary aluminum trialkyls on heating. The described method of the production of triisopropyl aluminum from $(i\text{-}C_3H_7)_2Hg$ and Al does not only yield triisopropyl aluminum, as the authors suggested (Ref 1), but also the mixture of triisopropyl aluminum and tripropyl aluminum which can be separated by fractionation. The triisopropyl aluminum produced in this way can be completely converted to tripropyl aluminum in a sealed ampoule. Tri-sec.-butyl aluminum produced in the reaction $(\text{sec. } C_4H_9)_2Hg$ with aluminum can be converted under the same conditions by regrouping into

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Regrouping of Aluminum Trialkyls

SOV/62-58-10-21/25

tri-n.butyl aluminum. In this case β-butylene and di-n. butyl aluminum hydride could partly form. Tri-n. butyl aluminum could be identified by means of n.butyl mercury bromide: boiling point 136°. There is 1 reference.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elementary Organic Compounds AS USSR)

SUBMITTED: June 6, 1958

Card 2/2

5(3)

SOV/62-59-1-37/38

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu.

TITLE: On the Reaction of Realkylation in the Aluminum and Boron Trialkyl Series (O reaktsii perealkilirovaniya v ryadu alyuminiy- i bortrialkilov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 1, pp 181 - 181 (USSR)

ABSTRACT: The authors write in a letter to the editor: On heating trialkyl or triaryl boron R_3B with trialkyl aluminum R'_3Al a reaction of realkylation occurs. Thus R'_3B, R_3Al and products of incomplete realkylation of initial trialkyl aluminum are formed:

$$R_3B + R'al \longrightarrow Ral + R'_3B$$

al= 1/3 Al; R= $n\text{-}C_4H_9$; $i\text{-}C_4H_9$, C_6H_5; R'= CH_3, C_2H_5.

Because of the high reaction temperature (120-180°) the olefin is separated from the R_3Al formed in some cases to a considerable degree. Consequently corresponding dialkyl

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aluminum hydrides are produced. In the interaction of triisobutyl boron with triethyl aluminum, for instance, triethyl boron and diisobutyl aluminum hydride were obtained. On gradual heating (up to 180°) of the mixture of triphenyl boron with a double quantity of triethyl aluminum triethyl boron is slowly distilled in pure nitrogen current. After the distillation of the mixture $(C_2H_5)_2AlC_6H_5$ and $C_2H_5Al(C_6H_5)_2$ in vacuum triphenyl aluminum remains in the residue. Under equal conditions, trimethyl boron is synthesized from $(C_6H_5)_3B$ and $(CH_3)_3Al$ with a yield of 75%. Trimethyl boron is slowly separated on heating the mixture of trimethyl aluminum and tributyl boron up to the boiling point. The tributyl aluminum being produced contains up to 25% dibutyl aluminum hydride. In the interaction of tributyl boron with triethyl aluminum triethyl boron and also a mixture of tributyl aluminum and dibutyl aluminum hydride is formed which contains 50% of the latter.

On the Reaction of Realkylation in the Aluminum and Boron SOV/62-59-1-37/38
Trialkyl Series

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR(Institute of Elemental Organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: September 9, 1958

Card 3/3

5(3)

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu. SOV/62-59-6-33/36

TITLE: Synthesis of Borontrialkyls by the Action of Organo-metallic Compounds on the Esters of the Metaboric Acid (Polucheniye bortrialkilov deystviyem metalloorganicheskikh soyedineniy na efiry metabornoy kisloty)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp 1135 - 1136 (USSR)

ABSTRACT: The reaction mentioned in the title has hitherto hardly been investigated. In the present investigation the borotrialkyls from alkylmetaborates $(ROBO)_3$ (with $R=CH_3$, $n=C_4H_9$) with aluminum trialkyls, zinc dialkyls and magnesiumhaloid alkyls were synthetized.

$(ROBO)_3 + AlR'_3 \longrightarrow R'_3B + Al_2O_3 + (RO)_3Al$; $R' = C_2H_5$, $i\text{-}C_4H_9$

$(ROBO)_3 + ZnR'_2 \longrightarrow R'_3B + ZnO + (RO)_2Zn$; $R' = C_2H_5$, C_3H_7

$(ROBO)_3 + R'MgX \longrightarrow R'_3B + MgO + MgX + ROMgX$; $R' = p\text{-}C_4H_9$, $i\text{-}C_5H_{11}$

The reactions occurred with high yield. In the experimental part the methods for the production of borotrialkyls are described. The yield in borotrialkyls obtained by different methods is

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Synthesis of Borontrialkyls by the Action of Organo-metallic Compounds on the Esters of the Metaboric Acid SOV/62-59-6-33/36

given in a table. There are 1 table and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: December 24, 1958

Card 2/2

82294
S/079/60/030/007/004/020
B001/B063

5.3700B

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu.

TITLE: Reactions of the Alkyl Exchange in the Series of Elements of the Third and Second Groups (Al, B, Zn, Mg)

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7, pp. 2134-2138

TEXT: Sufficiently convenient methods are now available for the conversion of organoaluminum compounds into organoboron compounds (Refs. 1-4), whereas the reverse process has not yet been possible. The authors of the present paper attempted to exchange the radicals between organoboron and organoaluminum compounds. The reactions of the exchange of alkyl derivatives of different metals (Refs. 5-8) are well-known, especially those of lithium. This is also the case with some alkyl derivatives of sodium and mercury (Refs. 7,8). Apart from the exchange reactions between B_2H_6 and $(C_2H_5)_3Al$, as well as C_2H_5MgX (Scheme 2), which were described by E. Wiberg and P. Strebel (Ref. 9), such reactions have hitherto been unknown for aluminum- and boron trialkyls. The exchange reactions of the radicals

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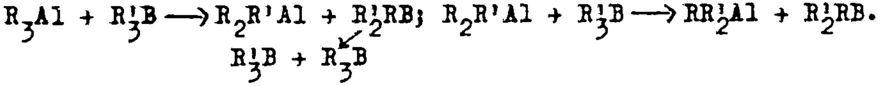
Reactions of the Alkyl Exchange in the Series of Elements of the Third and Second Groups (Al, B, Zn, Mg)

82294
S/079/60/030/007/004/020
B001/B063

between aluminum- and boron trialkyls were studied by the authors by a reaction of triethyl aluminum or trimethyl aluminum with boron trialkyls and boron triaryls according to the scheme $R_3Al + R'_3B \rightleftarrows R'_3Al + R_3B$. The reversible reaction may take place with a complete exchange of radicals if the more volatile component is removed from the reaction zone. It may be assumed that this reaction proceeds in the following stages:



$$R_3Al + R'_3B \longrightarrow R_2R'Al + R'_2RB; \quad R_2R'Al + R'_3B \longrightarrow RR'_2Al + R'_2RB.$$
$$\swarrow$$
$$R'_3B + R_3B$$

The authors studied exchange reactions of triethyl- and trimethyl aluminum with triphenyl boron, tributyl boron, and triisobutyl boron. The mechanism of radical exchange between organoaluminum- and organoboron compounds could not be clarified. It was found that alkyl exchange also took place between organoaluminum- and organozinc compounds as well as between organoboron- and organozinc- or organomagnesium compounds (cf. the three last-mentioned schemes). There are 13 references: 4 Soviet, 4 German, 4 US, and 2 British.

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Reactions of the Alkyl Exchange in the Series of Elements of the Third and Second Groups (Al, B, Zn, Mg)

S/079/60/030/007/004/020
B001/B063

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences USSR)

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SUBMITTED: July 8, 1959

Card 3/3

OKHLOBYSTIN, O. Yu.

Cand Chem Sci - (diss) "Synthesis of elemento-organic compounds with the aid of aluminum alkyls." Moscow, 1961. 7 pp; (Moscow Order of Lenin and Order of Labor Red Banner State Univ imeni M. V. Lomonosov); 120 copies; price not given; (KL, 5-61 sup, 177)

S/026/61/000/004/002/002
A166/A127

AUTHORS: Zakharkin, L.I., Doctor of Chemical Sciences, and
Okhlobystin, O.Yu.

TITLE: Aluminum-Organic Compounds

PERIODICAL: Priroda, no. 4, 1961, 89-92

TEXT: The authors describe the properties of aluminum-organic compounds and their uses in the polymerization of olefines, spirit production and the synthesis of carbonic acids. The Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental-Organic Compounds, AS USSR) has found that carbonic acids can be produced by the action of dioxide on aluminum trialkyl at high pressures and temperatures:

$$(C_2H_5)_3\,Al + 3CO_2 \rightarrow (C_2H_5COO)_3Al.$$

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Aluminum-Organic Compounds

S/026/61/000/004/002/002
A166/A127

The method can be used to produce higher fatty acids used in the manufacture of synthetic detergents and emulsifiers. The use of aluminum trialkyl gives higher fatty acids of normal structure and without side branches which do not give fats toxic to the human body. Thus the method can be used for synthesizing edible fats simply from crude oil. It has further been found that aluminum-organic compounds can be used to synthesize alkyl derivatives of zinc, cadmium, boron, gallium, silicon, germanium, lead, tin, mercury, thallium, phosphorus, arsenic, antimony and bismuth. The method has been used to produce tetraethyl lead, valuable as an anti-detonator in motor fuels. There is 1 diagram.

ASSOCIATION: Institut biokhimii im. A.N. Bakha AN SSSR (Institute of Biochemistry imeni A.N. Bakh, AS USSR), Moscow.

Card 2/2

ZAKHARKIN, L.I.; STANKO, V.I.; OKHLOBYSTIN, O.Yu.

Reactions of decaborane and pentaborane with mercaptans and sulfides.
Izv.AN SSSR.Otd.khim.nauk no.11:2083-2084 N '61. (MIRA 14:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo i Institut
elementoorganicheskikh soyedineniy AN SSSR.
(Decaborane) (Pentaborane) (Sulfides)

30168
S/062/61/000/012/009/012
B117/B147

5.3700

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu., and Strunin, B. N.

TITLE: Synthesis of organic beryllium compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 12, 1961, 2254

TEXT: In the present "Letter to the Editor", the authors report on studies of the noncatalytic interaction of metals of the 2nd group with halogen alkyls. Powdery beryllium was found to react with halogen alkyls even in total absence of ether or any other catalyst. With sufficient duration of the process, alkyl beryllium halides are obtained in satisfactory yield:

$$\mathrm{Be} + \mathrm{RHal} \xrightarrow[12\ -\ 60\ \mathrm{hr}]{130^\circ\mathrm{C}} \mathrm{RBeHal}$$

$R = C_2H_5$, Hal = I; $R = C_4H_9$, Hal = Br, I; $R = C_5H_{11}$, C_8H_{17}, Hal = I.
Similar to alkyl magnesium halides, alkyl beryllium halides are insoluble, and separate as a precipitate during the reaction. Analysis shows that
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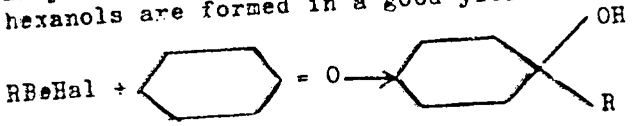
S/062/61/000/012/009/012
B117/B147

Synthesis of organic beryllium...

the yield of butyl beryllium iodide reaches 65-70% of the theoretical amount (130°C, 12 hr, without solvent). During reaction of the obtained alkyl beryllium halides with cyclohexanol the corresponding 1-alkyl cyclohexanols are formed in a good yield:



R = C_2H_5, boiling point 61°C (10 mm Hg), n_D^{25} 1.4623; d_4^{25} 0.9226; R = C_4H_9, boiling point 90 - 91°C (10 mm Hg); n_D^{25} 1.4635; d_4^{25} 0.9141; R = C_5H_{11}, boiling point 97°C (5 mm Hg); n_D^{20} 1.4667; d_4^{20} 0.9162; R = C_8H_{17}, boiling point 130 - 131°C (10 mm Hg); n_D^{25} 1.4610; d_4^{25} 0.8633. [Abstracter's note: Essentially complete translation.] There is 1 non-Soviet reference. The reference to the English-language publication reads as follows: H. Gilman, W. Schulze, J. Amer. Chem. Soc. 49, 2904 (1927).

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30168

Synthesis of organic beryllium... S/062/61/000/012/009/012
B117/B147

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: October 26, 1961

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30169

S/062/61/000/012/010/012
B117/B147

5 3700

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu., and Strunin, B. N.

TITLE: Organic magnesium synthesis of elemental organic compounds in ether-free medium

X

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 12, 1961, 2254 - 2255

TEXT: In the present "Letter to the Editor", the authors report on studies of noncatalytic organic magnesium synthesis. It was found that magnesium easily reacts exothermically with halogen alkyls either without a solvent or in various paraffins, and that for the synthesis no specific solvents of the isopropyl benzene type are required. Organic magnesium synthesis in the absence of ether was used for the production of various elemental organic compounds by one- and two-step synthesis of (aryl) derivatives of a number of elements: $EX_n + nRMgX \longrightarrow ER_n + nMgX_2$

$$EX_n + nMg + nRX \longrightarrow ER_n + nMgX_2$$

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Organic magnesium synthesis of...

S/062/61/000/012/010/012
B117/B147

R = C_2H_5; n-C_4H_9; i-C_5H_{11}; n-C_6H_{13}; n-C_8H_{17}; C_6H_5; E = Hg, B, Al, Sn, Ge, Si, Sb, P, As; X = Cl, Br, I. The yields of elemental organic compounds amount to 70-90%. P. Shorygin is mentioned. [Abstracter's note: Essentially complete translation.] There are 4 references: 2 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: M. S. Kharash, O. Reinmuth, Grignard reactions of nonmetallic substances, N. Y., 1954; D. Bruce-Smith, G. Cox, J. Chem. Soc. 1961, 1175. X

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: October 31, 1961

Card 2/2

30190

S/079/61/031/011/011/015
D228/D305

5.3700

AUTHORS: Zakharkin, L. I., and Okhlobystin, O. Yu.

TITLE: Synthesis of some metalloorganic compounds by means of the alumino trialkyls

PERIODICALS: Zhurnal obshchey khimii, v. 31, no. 11, 1961, 3662-3665

TEXT: This study of the reaction of triethyl- and triisobutylaluminum with the chlorides of Zn, B, Ga, Ge, and Sn is a continuation of previous research by L. I. Zakharkin and O. Yu. Okhlobystin (Ref. 1: Dokl. AN SSSR, 116, 236, 1957; Zh. obshch. khimii, 30, 2134, 1960) on the use of alumino trialkyls in the synthesis of metalloorganic compounds. Anhydrous $ZnCl_2$ was reacted with Et_3Al by heating the mixture for 3 hr. at 100°, the diethylzinc then being separated from the $Et_3Al_2Cl_3$ by vacuum distillation. The reaction is reversible since the authors similarly prepared a mixture of ethyl- and diethylaluminum chloride from $AlCl_3$ and Et_2Zn. Trimethylgallium was synthesized from Me_3Al and $GaCl_3$

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20695

S/079/61/031/011/011/015
D228/D305

Synthesis of some...

by heating the mixture for 2 hr. at 80° and distilling off the Me_3Ge. In the case of tetraethylgermanium, the original materials—Et_3Al and $GeCl_4$—were heated for 8 hr. at 120 - 130°, after which the solution was diluted with ether and decomposed by NaOH; Et_4Ge was then distilled off from the washed and dried ether layer. A similar procedure was adopted in the preparation of tetraisobutylgermanium from $GeCl_4$ and iso-Bu_3Al. The synthesis of isobutylboron dichloride involves the interaction of BCl_3 and iso-Bu_3Al at 2° for approximately 1.5 hr., followed by the gradual heating of the solution to room-temperature and its subsequent distillation; ethylboron dichloride was synthesized from BCl_3 and Et_3Al at a temperature of about -5°. The authors prepared diisobutyl stannous oxide by stirring a solution of anhydrous $SnCl_4$ and iso-Bu_3Al for 2 hr. at 110 - 115°. This was decomposed by NaOH and the residue was

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20190

Synthesis of some... S/079/61/031/011/011/015
D228/D305

then washed and dried; it may be purified by reprecipitation from an HCl solution with NH_3. There are 11 references: 2 Soviet-bloc and 9 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: C. A. Kraus, E. A. Flood, J. Am. Chem. Soc., 54, 1635 (1932); P. B. Brindly, W. Gerrard, M. F. Lappert, J. Chem. Soc., 1956, 824; P. A. McCusker, G. F. Hennion, E. A. Ashby, J. Am. Chem. Soc., 79, 5182 (1957); J. B. Honeycutt, J. M. Riddle, J. Am Chem. Soc., 82, 3051 (1960).

SUBMITTED: November 18, 1960

X

Card 3/3

ZAKHARKIN, L.I., doktor khim.nauk; OKHLOBYSTIN, O.Yu..

Aluminum organic compounds. Priroda 50 no.4:89-92 Ap '61.
(MIRA 14:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR, Moskva.
(Aluminum organic compounds)

S/062/62/000/011/007/021
B101/B144

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu., and Strunin, B. N.

TITLE: Use of organomagnesium compounds for synthesizing organic derivatives of the elements of groups II-V in non-ethereal medium

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1962, 2002 - 2008

TEXT: It is shown that organo-magnesium compounds are easily synthesized from Mg and alkyl halides in yields of 80-92%, even without the usual Grignard catalysts (ether, amines, etc.). Halides of the elements of groups II-V are easily alkylated with the resulting organomagnesium compounds. The reaction was performed in N_2 by addition of alkyl or aryl halides RX ($R = C_2H_5$ to C_9H_{19}, C_6H_5, $p\text{-}CH_3C_6H_4$; X = Cl, Br, I) to magnesium chips and, as a rule, by utilizing the developed heat for the reaction with the gradually added halide (or oxyhalide) or Hg, B, Al, Si, Ge, Sn, P, As, Sb. The further treatment is carried out as in the usual organomagnesium synthesis. In some cases alkyl and element halides were made to react
Card 1/3

simultaneously with Mg. By choosing the appropriate solvents (heptane, isooctane, decalin, dodecane), work can be done at high concentrations and optimum temperature. The following syntheses were made: tetraethyl tin; triethyl tin fluoride was precipitated with KF from the triethyl tin halides formed as by-products; tri-n-butyl boron, yield 85%; tetra-n-butyl silane, yield 79%; methyl-(n-butyl)-phenyl silane from Mg with n-butyl chloride in heptane, and addition of $(CH_3)(C_6H_5)SiCl_2$, yield 85%, b.p. 125°C/4 mm Hg, n_D^{20} 1.4930, d_4^{20} 0.8749; tetra-n-butyl tin, yield 90%; di-n-butyl tin oxide (addition of $SnCl_4$ at -10°C), yield 65.3%; tri-n-butyl germanium chloride, yield 60%, b.p. 104°C/1 mm Hg; n_D^{20} 1.4638, d_4^{20} 1.0252; butyl dichloro phosphine (addition of PCl_3 at -70°C), yield 45%, tri-n-butyl phosphine, yield 66%; tributyl phosphine oxide, yield 84.4%; tri-n-butyl arsine, yield 80.7%; tri-n-butyl stibine, yield 73%; triisoamyl aluminum, yield 87%, b.p. 152°C/1 mm Hg; triisoamyl tin fluoride (reaction with $SnCl_4$, precipitation with KF), yield 82%; hexyl dichloro phosphine (addition of PCl_3 at -70°C), yield 46%; trihexyl phosphine, yield 63%;

n-octyl mercury iodide, yield 85%, m.p. 96°C; trioctyl phospine oxide: (a) from magnsium and with simultaneous addition of n-octyl iodide and $POCl_3$ in i-octane, yield 85%; (b) from iodineactivated Mg and n-octyl iodide in i-octane, and with addition of $POCl_3$ after cooling to 10°C, yield 87%; tri-n-nonyl phosphine oxide, yield 92.4%, m.p. 35-36°C, b.p. 235-240°C/4 mm Hg; triphenyl aluminum, yield 75.3%; tetraphenyl tin, yield 74%; triphenyl phosphine, yield 72.3%; triphenyl phospine oxide, yield 92.2%; methyl-di-p-tolyl phosphine oxide, yield 80%; triphenyl arsine, yield 75.7%. The most important English-language reference is: D. Bryce-Smith, C. F. Cox, J. Chem. Soc., 1958, 1050.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: March 22, 1962

ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; STRUNIN, B.N.

Synthesis of organometallic compounds via organomagnesium compounds in an ether-free medium. Dokl. AN SSSR. 144 no.6:1299-1302 Je '62. (MIRA 15:6)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSR. Predstavleno akad. A.N.Nesmeyanovym.
(Organometallic compounds) (Magnesium organic compounds)

ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; STRUNIN, B.N.

Preparation of alkyl magnesium halides from primary alkyl halides and magnesium in a hydrocarbon medium. Dokl. AN SSSR 147 no.1:108-110 N '62. (MIRA 15:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Predstavleno akademikom I.L. Knunyantsem.

(Magnesium organic compounds)

(Alkyl halides) (Hydrocarbons)

S/062/63/000/001/022/025
B101/B186

AUTHORS: Zakharkin, L. I., and Okhlobystin, O. Yu.

TITLE: Synthesis of organozinc compounds in solvating (solvents)

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 193

TEXT: When studying the effect of solvents on the reaction of metals with alkyl halides it was found that the reaction of Zn with alkyl halides became greatly accelerated by the presence of solvating media such as dimethyl ether of ethylene or diethylene glycol, dimethyl formamide, dimethyl sulfoxide, etc. In such solvents the alkyl iodides RI (R = CH_3, C_2H_5, n-C_3H_7, i-C_3H_7, n-C_4H_9) reacted spontaneously and exothermically with commercial zinc dust to form the corresponding alkyl zinc iodides in high yields. As regards their accelerating effect the solvents come in the order: isooctane $<$ dibutyl ether $\ll$ diglym $<$ dimethoxy ethane $<$ dimethyl formamide $<$ dimethyl sulfoxide. With the use of a zinc-copper pair, RBr (R = C_3H_7, C_4H_9, C_6H_{13}) also react with Zn after short heating; the in-

Card 1/2

Synthesis of organozinc ... S/062/63/000/001/022/025
B101/B186

duction period can be eliminated by adding iodide. The low-molecular alkyl zinc bromides were obtained in 60% yields. The yield drops with increasing chain length of the radical. Benzyl chloride reacts readily and exothermically with Zn in dimethyl formamide, the yield of $C_6H_5CH_2ZnCl$ being more than 80%. Allyl zinc chloride forms in dimethyl sulfoxide in equally high yields. This synthesis cannot be carried out in dimethyl formamide because allyl zinc chloride reacts with this solvent.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: November 4, 1962

Card 2/2

STRUNIN, B.N.; OKHLOBYSTIN, O.Yu.; ZAKHARKIN, L.I.

Organomagnesium synthesis of some organophosphorus compounds in ester-free medium. Izv.AN SSSR.Ser.khim. no.8:1373-1376 Ag '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Phosphorus organic compounds) (Grignard reagents)

ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.

Synthesis of organotin compounds from alkyl halides and metallic tin in solvating media. Izv. AN SSSR. Ser. khim. no.12:2202-2204 D '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ZAKHARKIN, L.I.; STANKO, V.I.; BRATTSEV, V.A.; CHAPOVSKIY, Yu.A.;
OKHLOBYSTIN, O.Yu.

Synthesis of the new type of organoboron compounds $B_{10}C_2H_{12}$ (baren) and its derivatives. Izv. AN SSSR. Ser. khim. no.12: 2238-2239 D '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; STRUNIN, B.N.

Synthesis of organotin compounds by means of aluminum alkyls. Zhur. prikl. khim. 36 no.9:2034-2038 D '63. (MIRA 17:1)

ZAKHARKIN, L.I.; BILEVICH, K.A.; OKHLOBYSTIN, O.Yu.

Interaction of organomagnesium compounds with alkyl halides in a dimethoxyethane solution. Dokl. AN SSSR 152 no.2:338-341 S '63. (MIRA 16:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Predstavleno akademikom A.N. Nesmeyanovym.

ALEKSANDROV, A.Yu.; MITROFANOV, K.P.; OKHLOBYSTIN, O.Yu.; POLAK, L.S.;
SHPINEL', V.S.

Some features of the Mössbauer effect on Sn^{119} nuclei in organotin oxides. Dokl. AN SSSR 153 no.2:370-373 N '63. (MIRA 16:12)

1. Institut neftekhimicheskogo sinteza AN SSSR i Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova. Predstavleno akademikom A.P.Vinogradovym.

NESMEYANOV, Aleksandr Nikolayevich; SOKOLIK, Rozaliya Abramovna; KOCHESHKOV, K.A., otv. red.; OKHLOBYSTIN, O.Yu., red.; NOVICHKOV, N.D., tekhn. red.

[Methods of metallo-organic chemistry; boron, aluminum, gallium, indium, thallium] Metody elementoorganicheskoi khimii; bor, aliuminii, galii, indii, tallii. Moskva, Izd-vo "Nauka," 1964. 499 p. (MIRA 17:4)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).

ZAKHARKIN, L.I.; STANKO, V.I.; BRATTSEV,V.A.; CHAPOVSKIY, Yu.A.;
KLIMOVA, A.I.; OKHLOBYSTIN, O. Yu.; PONOMARENKO, A.A. [deceased]

Synthesis and study of the properties of a new class of organoboron compounds: $B_{10}C_2H_{12}$("baren") and its derivatives. Dokl. AN SSSR 155 no. 5:1119-1122 Ap '64. (MIRA 17:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Predstavleno akademikom A.N.Nesmeyanovym.

ZAKHARKIN, L.I.; BREGADZE, V.I.; OKHLOBYSTIN, O.Yu.

Synthesis of organometallic derivatives of organoboron complexes.
Izv. AN SSSR. Ser. khim. no.8:1539-1540 Ag '64. (MIRA 17:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ALEKSANDROV, A. Yu.; BERLYANT, S.M.; KARPOV, V.L.; LESHCHENKO, S.S.;
OKHLOBYSTIN, O.Yu.; FINKEL', E.E.; SHPINEL', V.S.

Study by the Mössbauer effect of the behavior of dibutyltin
dimaleate as stabilizer in the irradiation of polyethylene.
Vysokom. soed. 6 no.11:2105-2107 N '64 (MIRA 18:2)

L 37713-65 EWT(m)/EPF(c)/EPR/EWP(j)/EWA(h) Pc-4/Pr-4/Ps-4/Peb R
WW/RM S/0062/64/000/012/2210/221

ACCESSION NR: AP5001599

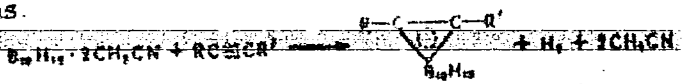
AUTHOR: Zakharkin, L. I.; Ponomarenko, A. A. (Deceased); Okhlobystin

TITLE: Synthesis of hydrocarbon derivatives of barene

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 12, 1964, 22

TOPIC TAGS: barene derivative, organoboron compound, ethylbarene di triledecaborane acetylenic hydrocarbon reaction, carborane, synthesis barene

ABSTRACT: A series of barene hydrocarbons (abstractor's note: organo compounds $B_{10}H_{10}C_2RR'$, corresponding to American nomenclature were synthesized by reacting decaborane diacetonitrile with the appropri tylenic hydrocarbons.



1) $R = CH_3$, $R' = H$; 2) $R = (CH_3)_2CH$, $R' = H$; 3) $R = CH_2{=}CH$, $R' = H$;
4) $R = (CH_3)_2C{=}CH$, $R' = H$; 5) $R = C_4H_9$, $R' = H$; 6) $R = R' = (CH_3)_2C{=}CH$;
7) $R = C_6H_5$, $R' = H$

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L 37713-65

ACCESSION NR: AP5001599

The reactions were run in an autoclave in n-heptane or benzene, or at atmospheric pressure with the slow addition of the acetylenic compound. These compounds have high thermal, hydrolytic and oxidation stability: vinylbarene is stable at 190C in concentrated H_2SO_4, can be boiled in a mixture of acetic and sulfuric acids, or in methanol or ethanol. It can be reduced at 100-150C at 100 atm. H_2 over Raney nickel to yield ethylbarene quantitatively. "Vinylbarene was first obtained in our laboratory by V. I. Stanko by reaction of decaborane diacetonitrile with vinylacetylene in an autoclave." Orig. art. has: 3 equations

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organometallic Compounds, Academy of Sciences, SSSR)

SUBMITTED: 22Apr64	ENCL: 00	**SUB CODE:** OC, GC
NR REF SOV: 003	OTHER: 005	

Card 2/2

L 28755-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

75 S/0056/65/048/001/006

ACCESSION NR: AP5004375

AUTHOR: Shpinel', V. S.; Aleksandrov, A. Yu.; Ryasnyy, G. K.; Okhlobystin,

TITLE: Asymmetry of the doublet in Mossbauer resonance absorption spectra
organic compounds of tin

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 1, 1
69-71

TOPIC TAGS: tin, Mossbauer effect, asymmetry, line width, doublet splitting

ABSTRACT: The asymmetry of the doublet in the resonance absorption spectrum
$(C_6H_5)_2SnCl_4$, noted first by Bryukhanov et al. (ZhETF v. 43, 448, 1962), in
sidered. Various experiments carried out to find the cause of this asymme
a polycrystalline sample are described. The measurements were made with
velocity apparatus, using a source of Sn^{119} in the form of SnO_2 and Mg_2Sn.
gamma quanta were detected by a standard scintillation method using a resona
counter. The spectra obtained upon application of a magnetic field to the
sorber showed that the doublet structure is actually due to quadrupole inter
NMR magnetic measurements of this compound, made by I. F. Shchegolev of the

Card 1/2

L 28736-65

4

ACCESSION NR: AP5004275

stitut fizicheskikh probom (Institute of Physical Problems) AN SSSR, have
that there are no regions with unpaired spins in this molecule, and that th
metry of the doublet has no magnetic origin. Later investigations have esta
lished that after careful purification and recrystallization of the sample,
ried out at Institut elementoorganicheskikh soyedineniy (Institute of Organo
elemental Compounds) AN SSSR, the resonance absorption spectrum became a symm
rical doublet. It is concluded from the results that some tin-organic frac
are present in this compound and that the spectrum is the result of superpo
of the two spectra, of $(C_2H_5)_2SnCl_2$ and $(C_6H_5)_2SnCl_2 \cdot nH_2O$. The asymmetry
tained when the components near zero velocity coincide while the other two
shifted somewhat relative to each other. "We thank I. F. Shchegolev for the
measurements." Orig. art. has: 1 figure.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo univers
(Institute of Nuclear Physics, Moscow State University)

SUBMITTED: 03Jul64

ENCL: 00

SUB CODE: NP

NR REF SOV: 004

OTHER: 000

Card 2/2

ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; KUDRYAVTSEV, R.V.; BILEVICH, K.A.

Exchange of organic groups in the systems n-C_5H_{11}MgBr-X-R.
Izv. AN SSSR Ser. khim. no.1:182-184 '65.
(MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KRIZHANSKIY, L.M.; OKHLOBYSTIN, O.Yu.; POPOV, A.V.; ROGOZEV, B.I.

Mössbauer spectra of organotin compounds containing an acyloxy group. Dokl. AN SSSR 160 no.5:1121-1123 F '65. (MIRA 18:2)

1. Submitted August 25, 1964.

OKHLOBYSTIN, Oleg Yur'yevich; NESMEYANOV, A.N., akademik, otv. red.

["Third" chemistry; metallo-organic compounds] "Tret'ia" khimiia; elementoorganicheskie soedineniia. Moskva, Nauka, 1965. 198 p. (MIRA 18:3)

UNANYAN, M.P.; KONDRAT'YEVA, G.V.; LOCHMELIS, A.Ya.; ZAV'YALOV, S.I.;
ZEYFMAN, Yu.V.; GAMBARYAN, N.P.; MINASYAN, R.B.; KNUNYANTS, I.L.;
KOCHARYAN, S.T.; ROKHLIN, Ye.M.; KAVERZNEVA, Ye.D.; KORSHAK, V.V.;
ROGOZHIN, S.V.; DAVANKOV, V.A.; TSEYTLIN, G.M.; PAVLOV, A.I.;
ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; SEMIN, G.K.; BABUSHKINA, T.A.;
BLIEVICH, K.A.

Letters to the editor. Izv. AN SSSR. Ser. khim. no.1:1909-1914 '65. (MIRA 18:11)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR (for Unanyan, Kondrat'yeva, Lochmelis, Zav'yalov, Kaverzneva). 2. Institut elementoorganicheskikh soyedineniy AN SSSR (for Zeyfman, Gambaryan, Minasyan, Knunyants, Kocharyan, Rokhlin, Korshak, Rogozhin, Davankov, Zakharkin, Okhlobystin, Semin, Babushkina, Bilevich).

L 8085-66 EWT(m)/EPF(c)/EWP(j) RPL WW/JW/RM

ACC NR: AP5027697 SOURCE CODE: UR/0062/65/000/010/1914/1914

44,55 44,55 44,55 62 B 44,55

AUTHOR: Bilevich, K. A.; Zakharkin, L. I.; Okhlobystin, O. Yu.

ORG: Institute of Organometallic Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Anion radicals 7 of the barene 7 series

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1965, 1914

TOPIC TAGS: organoboron compound, chemical reaction, EPR spectrometry

ABSTRACT: Aryl substituted barenes readily formed colored paramagnetic solutions by the action of potassium in tetrahydrofuran or dimethoxyethane. These solutions were decolorized by air and by decomposition with water or alcohol, but there was no hydrogen evolution. The relatively high affinity of phenylbarene for electrons was confirmed by polarographic reduction and by absence of fine structures in the EPR spectra. The disubstituted barene 1,3-bis-(phenylbarenyl)propane reacts similarly with potassium. Formation of stable anion radicals of the barene series is indicated. Vinylbarene reacts to form deeply colored diamagnetic solutions, apparently due to formation of the dimer dianion. The authors thank Yu. N. Bubnov and V. V. Bukhtiyarov for obtaining the EPR spectra and S. P. Gubin for polarographic measurements. Orig. art.

UDC: 547.024+661.718.4

Card 1/2

L 8085-66

ACC NR: AP5027697

has: 1 equation.

SUB CODE: OC/ SUBM DATE: 22Jul65/ ORIG REF: 000/ OTH REF: 000

Card 2/2

ALEKSANDROV, A.Yu.; BREGADZE, V.I.; GOL'DANSKIY, V.I.; ZAKHARKIN, L.I.;
OKHLOBYSTIN, O.Yu.; KHRAPOV, V.V.

Organotin derivatives of barenes studied by means of Mössbauer spectroscopy. Dokl. AN SSSR 165 no.3:593-596 N '65.
(MIRA 18:11)

1. Institut khimicheskoy fiziki AN SSSR i Institut elementoorganicheskikh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Gol'danskiy).

ACC NR: AP7012426 SOURCE CODE: UR/0079/66/036/010/1734/1735

AUTHOR: Okhlobystin, O. Yu.; Zakharkin, L. I.

ORG: none

TITLE: Influence of coordination on the ability of organocadmium compounds for metallation reaction

SOURCE: Zhurnal obshchey khimii, v. 36, no. 10, 1966, 1734-1735

TOPIC TAGS: organocadmium compound, metallation, coordination chemistry, organolithium compound, organomagnesium compound

SUB CODE: 07

ABSTRACT: The metallation of phenylacetylene with diethylcadmium in the presence of various electron donor aprotonic complex formers was studied to determine whether the general principle of increasing nucleophilic activity of the metal-carbon bond in coordination is applicable to such relatively nonreactive substances as alkyl derivatives of cadmium. It was found that the nucleophilic activity of diethylcadmium can be varied in very wide range in the selected model reaction by suitable selection of the complex-forming solvents. The rate of metallation of phenylacetylene by diethylcadmium depends on the complex-forming ability of the medium: in diethylether the reaction virtually does not take place, while in the presence of an equimolar amount of N,N'-tetramethylethyl-

Card 1/2 UDC: 541.49:542.957:546.48

0932 1363

ACC NR: AP7012426

endiamine, which forms a complex with diethylcadmium, metallation is extremely vigorous. Other complex formers tested occupy intermediate positions (arranged according to increasing acceleration of the reaction): dimethoxyethane, dimethylformamide, dimethylsulfoxide, hexamethyltriamidophosphate, and alpha,alpha-dipyridyl. In the presence of sufficiently strong complexformers, the metallating ability of diethylcadmium was found to be close to the metallating ability of the corresponding organomagnesium and organolithium compounds. Orig. art. has: 1 table. [JPRS: 40,422]

2/2

OKHLOBYSTINA, L.V.; FAYNZIL'BERG, A.A.; NOVIKOV, S.S.

Improved methods for producing α,ω-dinitroalkanes. Izv.AN SSSR.Otd.khim.nauk no.3:517-518 Mr '62. (MIRA 15:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins) (Nitro compounds)

L 14708-66 EWT(l)/EWT(m)/EWA(d)/EWP(j)/EWP(k) IJP(c) WW/JW/RM
ACC NR: AP6002102 SOURCE CODE: UR/0062/65/000/011/2063/2065

AUTHORS: Slovetskiy, V. I.; Okhlobystina, L. V.; Faynzil'berg, A. A.; Ivanov, A. I.; Biryukova, L. I.; Novikov, S. S.

67
B

ORG: Institute of Organic Chemistry im. N. D. Zelinski, Academy of Sciences SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

21,44,55

21,44,55

TITLE: Spectrophotometric determination of the ionization constant of fluorodinitromethane 9,44,55

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 11, 1965, 2063-2065

TOPIC TAGS: ionization, fluorine compound, nitromethane / SF-4 spectrophotometer

ABSTRACT: Ionization constant of fluorodinitromethane (I) in water and absolute ethanol was determined spectrophotometrically according to the method described by V. I. Slovetskiy, S. A. Shevelev, A. A. Faynzil'berg, and S. S. Novikov (Zh. Vses. khim. ob-va im. D. I. Mendeleyeva, 6, 599, 707, 1961). The measurements were taken on a SF-4 spectrophotometer fitted with a thermostatic attachment. Concentration of I was kept within 2.2×10^{-5} to 5×10^{-5} mole/ℓ. The measurements were taken in the region 365-395 mμ. Spectra of the species present in solution are shown in Fig. 1. Acidity of I was found to be 10^{-4} less than that of the parent dinitromethane. Entropy, enthalpy, and free energy were calculated.

1

Card 1/2 UDC: 543.422+541.132+547.232

2

L 11708-66

ACC NR: AP6002102

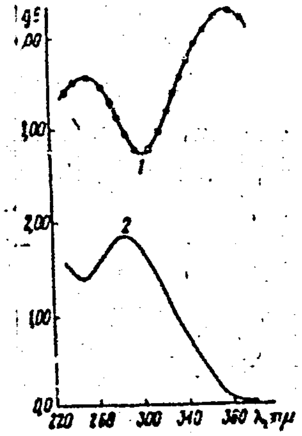

Fig. 1. UV spectra of fluorodinitromethane in aqueous solution: 1 - anion; 2 - nondissociated molecule.

Orig. art. has: 2 tables and 2 figures.

SUB CODE: 07/ SUBM DATE: 24Mar65/ ORIG REF: 004

BV/S

Card 2/2

LEGIN, G.Ya.; OKHLOBYSTINA, L.V.; FAYNZIL'BERG, A.A.

Preparation of individual dinitromethane and its physical properties. Izv.AN SSSR.Ser.khim. no.12:2220-2221 '65.

(MIRA 18:12)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR. Submitted April 26, 1965.

OKHLOPKOV, B., inzh.

The "Volga" radio-phonograph combination. Radio no.10:29-31 O '62.
(MIRA 15:10)

(Radio—Receivers and reception) (Phonograph)

OKHLOPKOV, V., inspektor.

On the quality of the FS-2 type film-repair table. Kinomekhanik no.6:31 Je '53.
(MLRA 6:8)

1. Otdeleniye kinoprokata, g. Osipenko, USSR. (Photography--Films)

L 56494-65 EPA(s)-2/EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pt-7/Pu-4 JD/WW/JG

ACCESSION NR: AP5017803

UR/0286/65/000/011/0033/0034
669.187.2.036

AUTHOR: Teytel'man, A. Ya.; Okhlopkov, V. I.; Odinochkin, V. D.

TITLE: A device for protecting inspection ports in high temperature vacuum installations. Class 18, No. 171436

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 33-34

TOPIC TAGS: metal vapor condensation, test chamber

ABSTRACT: This Author's Certificate introduces a device for protecting [illegible] ports in high temperature vacuum installations from being spattered with [illegible] vapor. The device consists of a cassette made in the form of two coils [illegible] parent film wound on them. The cassette is mounted inside the chamber [illegible] vice is designed for assuring continuous visual observation and photograph[illegible] the various processes taking place inside the vacuum chamber. The unit [illegible] with a drive which takes up the film smoothly as the metal vapor settles [illegible] surface.

L 56494-65

ACCESSION NR: AP5017803

ASSOCIATION: none

SUBMITTED: 23Mar62 ENCL: 01 SUB CODE: IE, MM

NO REF SOV: 000 OTHER: 000

Card 2/3

L 56494-65
ACCESSION NR: AP5017803

ENCLOSURE: 01

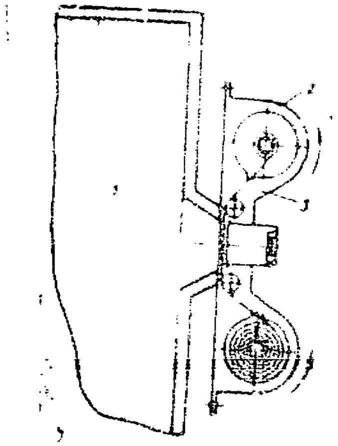

Fig. 1. 1--vacuum chamber; 2--[illegible]
3--film

Card 3/3

7S

L 21116-65 EEC-4/EWG(v)/EWA(h)/EWT(1)/EEC(t)/FS(v)-3/EDC(m)/FCC/FSF(h)/FSS-2
Pe-5/Pg-4/Pi-4/Pl-4/Po-4/Pq-4/Pae-2/Peb/Pb-4 AEDC(b)/BSD/AFWL/SSD/ASD(a)-5/
AEDC(a)/AFMD(c)/AFETR/AFTC(a)/AFTC(b)/APGC(f)/ESD(si) TT/GW/WS
ACCESSION NR: AP5002106 S/0048/64/028/012/2038/2074

B

AUTHOR: Vernov, S. N.; Chudakov, A. Ye; Vakulov, P. V.; Gorchakov, Ye. V.; Ignat'yev, P. P.; Kuznetsov, S. N.; Logachev, Yu. I. Lyubimov, G. P.; Nikolayev, A. G.; Okhlopkov, V. P.; Sosnovets, E. N.; Ternovskaya, M. V.

TITLE: Radiation study by Cosmos 17. [Report presented at the Vsesoyuznoye soveshchaniye po fizike kosmicheskikh luchey (All-Union Conference on the Physics of Cosmic Rays), held at Moscow, 4-10 October 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 12, 1964, 2038-2074

TOPIC TAGS: radiation measurement, spaceborne ionization measurement, primary cosmic radiation, scintillation counter, gas discharge counter/ STS-5 gas discharge counter, Cosmos-17

ABSTRACT: The article describes equipment used in the flight of Cosmos-17 (apogee, 788 km; perigee, 260 km) for investigating the Earth's radiation belts and primary cosmic radiation. The equipment consisted of two scintillation counters (with NaI and CsI crystals) and

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L 21116-65
ACCESSION NR: AP5002106

a STS-5 gas-discharge counter. The cylindrical NaI counter (20 X 20 mm) was mounted under the shell of the satellite and was fitted with aluminum shielding (1 g/cm^2). On one channel it recorded ionization produced in the crystal by radiation; on the two others, it registered the number of pulses with energy release in the crystal over the specified thresholds (50 kev and Mev). The effective cross section of the NaI crystal for particles registered along the ionization and first threshold channels was approx. 4.7 cm^2; for the second channel, it was roughly 5% smaller for particles with quadruple ionization and 20% smaller for relativistic particles.

The STS-5 gas-discharge counter has an effective cross section of 4.3 cm^2. It was placed inside the device containing the scintillation counter and was not fitted with any special protection. Up to counting rates of 3×10^3 pulse/sec, the counter registered virtually all particles. At higher rates, the count became less reliable.

The flat CsI counter (crystal diameter, 6 mm; thickness, 3 mm) was mounted outside the container. For protection from light, the crystal was covered with aluminum foil (2 mg/cm^2). For protection against

Card 2/5