

SHEVER, E. S.

Fuel Abstracts
Vol. 14 No. 4
October 1953
Gaseous Fuels:
Properties and
Treatment

3149. KINETICS AND MECHANISM OF DECOMPOSITION OF PROPANE IN
PRESENCE OF ADMIXTURES OF ORGANIC MOLECULES. Stepukhovich, A. D. and
Shver, E. S. v (Dokl. Akad. Nauk SSSR (Rep. Acad. Sci. U.S.S.R.), 21 Apr.
1953, vol. 89, (6), 1067-1070). (L).

ZAPESOCHNYY, I.P. [Zapisochnyi, I.P.]; SHEVERA, V.S.

Excitation functions of the visible triple of cadmium $5^3 P_{012} \rightarrow 6^3 S_1$. Ukr. fiz. zhur. 5 no. 5:650-655 S-0 '60. (MIRA 14:4)

1. Uzhgorodskiy gosudarstvennyy universitet.
(Cadmium) (Collisions (Nuclear physics))

S/058/62/000/006/026/136
A061/A101

AUTHORS: Shevera, V. S., Zapesochnyy, I. P.

TITLE: Photoelectric measurement of the excitation functions of cadmium atoms in the ultraviolet

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 16. abstract 6V97 ("Dokl. i soobshch. Uzhgorodsk. un-t. Ser. fiz.-matem. n.", 1961, no. 4, 49 - 51)

TEXT: Measurements of the optical excitation functions of Cd atoms have been extended to the ultraviolet region of the spectrum (see RZhFiz, 1961, 9V55). The relative course of the excitation functions of the first resonance line at 3.261 Å and of three primary lines of the diffuse series $5^3D_j - 5^3P_j$ is measured in the accelerating potential range of 4 - 30 v. The pressure p is $1.2 \pm 4.4 \cdot 10^{-3}$ mm Hg, the density, i, of the exciting electron current is $1 \cdot 10^{-4}$ to $2 \cdot 10^{-3}$ a/cm², the velocity spread of the electrons is 0.8 ev for the line at 3.261 Å, and 1.5 ev for the lines of the diffuse series. Most of the measured curves of the excitation functions of singlet and triplet Cd lines in the visible

Card 1/2

Photoelectric measurement of...

S/058/62/000/006/026/136
A061/A101

region display more than one maximum and a more complex structure than Larche's one (Larche, K. "Z. Phys.", 1931, v. 67, 440). ✓

[Abstracter's note: Complete translation]

Card 2/2

ZAPESOCHNYY, I.P.; SHEVERA, V.S.

Fine structure of the excitation functions of certain cadmium lines. Dokl. AN SSSR 141 no.3:595-598 N '61. (MIRA 14:11)

1. Uzhgorodskiy gosudarstvennyy universitet. Predstavлено
akademikom A.N. Tereninym.
(Cadmium--Spectra)

34433
S/185/61/006/006/011/030
D299/D304

24.3500 (137,1138)

AUTHORS:

Zapisochnyy, I.P., Kyshko, S.M., Shevera, V.S.,
Fel'tsan, P.V., and Shimon, L.L.

TITLE:

Spectroscopic investigation of excitation functions
of atoms and molecules

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961,
770 - 773

TEXT: The experimental apparatus included a spectral device for separating the lines and bands, an electrophotometer with a photomultiplier, and tubes filled with gas and vapor. The experimental apparatus was described in detail in the references. It is noted that recording devices of high sensitivity were required; this was achieved by using a photomultiplier with a d.c. amplifier instead of a photographic plate. Another requirement which had to be met was homogeneity of the electron beam. In the references it was found that among secondary processes which cannot be neglected, cascade transitions have a considerable effect on the spectral lines of atoms. This fact was confirmed by the present investigation, Card 1/5 X

Spectroscopic investigation of ...

S/185/61/006/006/011/030
D299/D304

elementary processes of dissociation and ionization of molecules, followed by recombination; the latter leads to a jumplike increase in the concentration of the ionic state. Such an interpretation of fine structure is supported by additional facts. Another figure, showing the excitation function of the N₂⁺ band, illustrates the contribution due to the elementary processes, for various electron energies. There are 3 figures, 1 table and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc (in translation).

ASSOCIATION: Uzhhorods'kyy derzhuniversytet (Uzhhorod State University)

X

Card 3/3

L 10606 65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AR4044036 S/0058/63/000/011/D020/D020

SOURCE: Ref. zh. Fizika, Abs. 11D190

AUTHOR: Shevera, V. S.

TITLE: Excitation functions of singlet lines of cadmium atoms

CITED SOURCE: Nauk. zap. Uzhgorodsk. un-t. v. 49, 1962, 46-49

TOPIC TAGS: excitation function, cadmium atom, cadmium singlet line

TRANSLATION: Investigates the excitation functions of the individual Cd lines 5155, 4307, and 3982A (5^1P_1 - n^1S_0 ; $n = 7, 8$, and 9 , respectively) and 6438, 4140 (5^1P_1 - n^1D_2 , $n = 5, 7$, respectively). Explains the fine structure of the curves and gives a comparison with analogous results for Hg.

SUB CODE: NP

ENCL: 00

Card 1/1

L 12627-65 EPA(s)-2/EWT(m)/EWP(b)
ACCESSION NR: AR4044037

Pt-10 JD/JG

S/0058/63/000/011/D020/D020

SOURCE: Ref. zh. Fizika, Abs. 11D191

AUTHOR: Shevera, V. S.

TITLE: Excitation functions of mercury diffusion lines

CITED SOURCE: Nauk. zap. Uzhgorodsk. un-t, v. 49, 1962, 49-51

TOPIC TAGS: excitation function, mercury diffusion line

TRANSLATION: Investigates the excitation functions of the Hg lines 3651, 3655, 3663, 3126, and 3132A. Shows that these lines have complex shape of the excitation function.

SUB CODE: NP

ENCL: 00

Card 1/1

L 8546-65 EWT(1)/EWG(k)/EPA(w)-2/SEC(t)/SEC(b)-2 Pg-6/Pab-24 IJP(c)/SSD/
ASD(a)-5/AFWL/AFETR/ESD(gs)/ESD(t) AT
ACCESSION NR: AR4044035 S/0058/63/000/011/D020/D020

SOURCE: Ref. zh. Fizika, Abs. 11D189

AUTHOR: Shpenik, O. B.; Shevera, V. S.

TITLE: Use of the method of electron beam quasimonochromatization to investigate optical excitation functions

CITED SOURCE: Nauk. zap. Uzhgorodsk. un-t, v. 49, 1962, 59-63

TOPIC TAGS: electron beam, electron beam quasimonochromatization, optical excitation function

TRANSLATION: Describes a method and installation for investigating optical excitation functions by the quasimonochromatization of an electron beam. Investigates the fine structure of the excitation function of a line of the visible Cd triplet (5086A, transition $63S_1$ - $53P_1$), and shows that the method is applicable for a detailed investigation of the fine structure of the curves of the

Card 1/2

L 8546-65

ACCESSION NR: AR4044035

effective excitation cross sections.

SUB CODE: NP

ENCL: 00

Card 2/2

L 10622-65 EWT(1)/EEC(+) /EEC(b)-2 ASD(a)-5/AFWL/BSD/AEDC(b)/AS(mp)-2/SSD/
AFETR/RAEM(1)/ASD(d)/ESD(gs)/ESD(t)

ACCESSION NR: AT4046103

S/3114/61/000/004/0049/0051

AUTHOR: Shevera, V. S.; Zapesochnyy, I. P.

TITLE: Photoelectric measurement of the properties of radiation from cadmium atoms *B*
in the ultraviolet region

SOURCE: Uzhgorod. Universitet. Doklady* i soobshcheniya. Seriya fiziko-
matematicheskikh nauk, no. 4, 1961, 49-51

TOPIC TAGS: cadmium, spectroscopy, monochromator, radiation, photomultiplier,
ultraviolet radiation, electron bombardment, betatron

ABSTRACT: The paper presents data from experiments in which the decomposition of the
radiation from Cd atoms into a spectrum was accomplished by means of a monochromator
with a plane diffraction grating having 600 lines/mm (GOI). The spectral radiation was
recorded by an FEU-18 photomultiplier in combination with a DC amplifier. The authors
measured the intensity of resonance line 3261 Å and the three main lines of the diffusion
series $5^3D_j - 5^3P_j$, in the interval of accelerating potentials 4-30 v. The conditions of the
experiment were as follows: pressure $P = 1.2 \times 10^{-3} - 4.4 \times 10^{-3}$ mm Hg, current density
of the excitatory-electrons $i = 1. \times 10^{-4} - 2 \times 10^{-3}$ a/cm². An energy of 0.8 ev corres-
ponded to the line 3261 Å and 1.5 ev gave the lines of the diffusion series. Figures 1 and 2

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L 10622-65

ACCESSION NR: AT4046103

of the Enclosure show the results obtained. In general, the curves derived by means of the described photoelectric technique had more maxima than the corresponding results obtained by photographic means. Orig. art. has: 2 figures.

ASSOCIATION: Uzhgorodskiy gosuniversitet (Uzhgorod State University)

SUBMITTED: 00

ENCL: 02

SUB CODE: NP, OP

NO REF SOV: 002

OTHER: 001

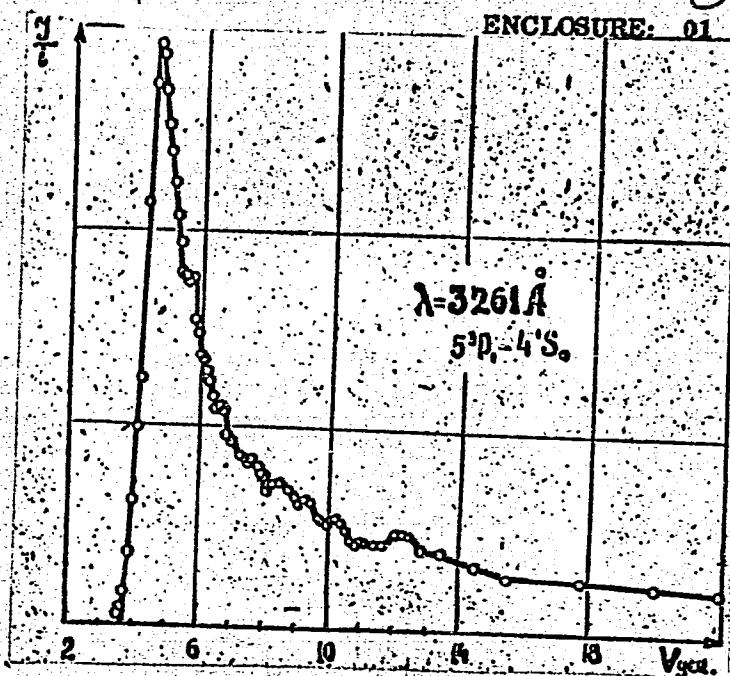
Card 2/4

L 10622-65

ACCESSION NR: AT4046103

Fig. 1. Dependence of the intensity of radiation of 3261 Å on the speed of the excitatory electrons

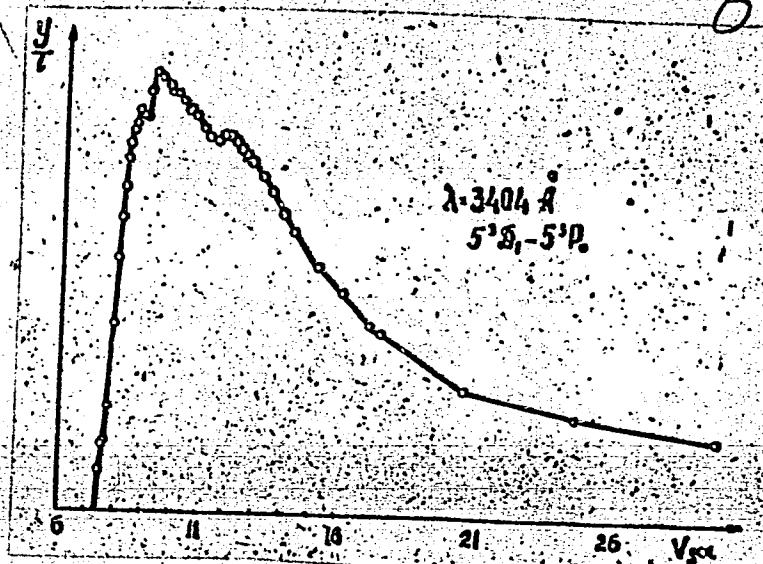
Card 3/4



L 10622-65

ACCESSION NR: AT4046103

ENCLOSURE: 02



Card 4/4

ZAPESOCHNYY, I.P., dotsent; SHEVERA, V.S.

Excitation functions of subordinate series of cadmium and mercury. Dokl. i soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:43-44 '62. (MIRA 17:9)

SHPENIK, O.B. [Shpenyk, O.B.]; SHEVERA, V.S.

Application of the quasi chromate electron beam method in
studying the optical functions of excitation. Nauk. zap.
UzhGU 49:59-63 '62. (MIRA 18:2)

SHEVERA, V.S.

Excitation functions on zinc. Dokl. i soob. UzhGU. Ser. fiz.-
mat. i ist. nauk no. 5:47-49 '62. (MIRA 17:9)

SHEVERA, V.S.

Excitation functions of the singlet lines of cadmium atoms.
Nauk. zap. UzhGU 49:46-49 '62.

Excitation functions of the diffusion lines of mercury.
Ibid.:49-51 (MIRA 18:2)

L 9194-66 EWT(1)/EWT(m)/EWP(b)/EWF(t) IIP(c) J9/16
ACC NR: AR6000112 SOURCE CODE: UR/0058/65/000/008/D023/D023

68

B

SOURCE: Ref. zh. Fizika, Abs. 8D181
^{14, 55} _{44, 55}

AUTHORS: Zapesochnyy, I. P.; Shevera, V. S.

ORG: none

TITLE: Effective cross section for excitation of the spectral lines of zinc, cadmium, and mercury

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 2, vyp. 1, 1964, 167-174

TOPIC TAGS: zinc, cadmium, mercury, spectral line, excitation cross section, light excitation, pressure effect
^{21, 44, 55}

TRANSLATION: Absolute data are obtained on the effective cross sections for the excitation of the spectral lines of atoms of zinc, cadmium, and mercury in the visible region. The variation of the excitation functions with electron energy, up to 30 volts, was investigated at pressures 1×10^{-3} -- 2.3×10^{-3} mm Hg and exciting electron beam densities 4×10^{-4} -- 1×10^{-3} a/cm². The absolute values were determined by photoelectric comparison of the intensity of beam radiation with a standard source -- a band lamp. The values of the cross sections at the maxima of the excitation functions of the triplet and singlet lines are of the order of 10^{-17} -- 10^{-18} cm².

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 1/1 rdo

SHPENIK, O.B.; SHEVERA, V.S.; ZAPESOCHNYY, I.P., dotsent

Measurement of optical excitation functions by the method
of quasi-monochromatization of an electron beam. Dokl. i
soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:49-52 '62.
(MIRA 17:9)

L 18460-66 EWT(d)/EMP(1) LJP(c) BB/GG

ACC NR: AP6006384

SOURCE CODE: UR/0413/66/000/002/0116/0116

INVENTOR: Sheverda, E. A.

ORG: none

TITLE: Discharge element for a digital-analog converter. Class 42, No. 178171

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 116

TOPIC TAGS: digital analog converter, flip flop circuit, computer component

ABSTRACT: This Author's Certificate introduces a discharge element for a digital-analog converter. The unit contains a static flip-flop and an output switching circuit. The operating speed of the device is increased by using two self-excited oscillators, each of which is made from a single transistor by connecting the collector and base windings of a nickel-zinc ferrite transformer in a negative feed-back circuit. The emitters of the transistor oscillators share a common self-biasing circuit with the corresponding flip-flop transistor. The secondaries of the transformers are connected through rectifiers to the control inputs of the switching circuit.

SUB CODE: 09/ SUBM DATE: 07Dec64

Card 1/1

UDC: 681.142

SHEVERDA, Lidiya Andreyevna; SHESTOVA, L.M., red.

[The labor movement in the German Federal Republic] Rabochee dvizhenie v Federativnoi Respublike Germanii. Moskva, Izd-vo VPSH i AON pri TsK KPSS, 1961. 85 p. (MIRA 14:7)
(Germany, West—Strikes and lockouts)
(Germany, West—Communist Party)

SHEVERDA, M.G.

Permeability of the capillaries and the volume of extracellular liquid in hypertension patients in the neurogenic stage. Vrach. delo no.7:135-136 Jl '60. (MIRA 13:7)

1. Klinika fakul'tetskoy terapii (zaveduyushchiy - prof. B.S. Shklyar) Vinnitskogo meditsinskogo instituta.
(CAPILLARIES--PERMEABILITY) (HYPERTENSION)

SHEVERDA, M.G.

Water metabolism in hypertension. Vrach. delo no.4:16-20 Ap '61.
(MIRA 14:6)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.S.Shklyar)
Vinnitskogo meditsinskogo instituta.
(WATER IN THE BODY) (HYPERTENSION)

SHEVERDA, M.G.

Volume of extracellular fluid and the hydrophilism of the tissues
in hypertension [with summary in English]. Vrach.delo no.9:51-55
S '62. (MIRA 15:8)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.S.Shklyar [deceased])
Vinnitskogo meditsinskogo instituta.
(HYPERTENSION) (WATER IN THE BODY)

MIKUNIS, R.I., dotsent; SHEVERDA, M.G.

Water, protein and lipid metabolism in hypertension. Vrach.delo
no.10:35-40 O '62. (MIRA 15:10)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.S.Shklyar
[deceased]) Vinnitskogo meditsinskogo instituta.
(HYPERTENSION) (LIPID METABOLISM) (PROTEIN METABOLISM)
(WATER METABOLISM)

SHEVERDA, M.G.

Extracellular fluid volume as one of the objective indices of
the state of water metabolism in hypertension. Terap. arkh. 35
no.9:34-40 S'63 (MIRA 17:4)

1. Iz kafedry fakul'tetskoy terapii (ispolnyayushchiy obya-
zannost' zaveduyushchego kafedroy - dotsent R.I. Mikunis, nauchnyy
rukovoditel' - prof. B.S. Shklyar [deceased]) Vinnitskogo medi-
tsinskogo instituta imeni Pirogova.

SHEVERDA, M.G., kand. med. nauk

Water metabolism indices and their dependence on the functional state of the liver in hypertension. Sov. med. 27 no.12:94-99
(MIRA 18:11)
O '64.

1. Kafedra fakul'tetskoy terapii (ispolnyayushchiy obyazannosti zaveduyushchego - dotsent R.I. Mikunis, nauchnyy rukovoditel' - prof. B.S. Shklyar [deceased]) Vinnitskogo meditsinskogo instituta.

SHEVARDIN, P.G., Cand Tech Sci—(diss) "Theoretical bases of mine surveying works in open mining of deposits ~~with dump transport~~ bridges." Stalino, 1958. 21 pp (Min of Higher Education UKSSR. Donets Order of Labor Red Banner Industrial Inst), 150 copies (KL, 30-58, 129)

-190-

SHEVERDIN, P.G., inzh.

Calculating the front angle of curvature and the amount of
build-up in butt working with transport-and-dumping bridges and
built-in rotary excavators. Izv. vys. ucheb. zav.; gor. zhur.
(MIRA 12:5)
no.8:43-47 '58.

1. Donetskiy industrial'nyy institut.
(Strip mining) (Mine surveying)

SHEVERDIN, P.G.

Plotting curves for a haulage and dumping bridge with built-in
rotary excavator. Ugol' 34 no.2:37-39 F '59. (MIRA 12:4)
(Mine surveying)

SHERSTNEV, D.S., inzh.; SHEVERDIN, P.G.

Preventing the breakthrough of water into a mine from abandoned workings. Bezop. truda v prom. 5 no.8:3-4 Ag '61. (MIRA 14:8)

1. Gosgortekhnadzor USSR.
(Coal mines and mining--Safety measures)

SHEVERDIN, P.G.

Strengthen mine control by surveying. Bezop.truda v prom. 6
no.6:5-6 Je '62. (MIRA 15:11)

1. Glavnyy marksheyder Gosudarstvennogo komiteta pri Sovete
Ministrov UkrSSR po nadzoru za bezopasnym vedeniyem rabot v
Promyshlennosti i gornomu nadzoru.
(Mine surveying).

BERKOVSKIY V.S., inzh.; OSADCHIY, A.N., inzh. Prinimali uchastiye: STETSENKO,
N.V.; LOBAREV, M.I.; AVRUNIN, P.M.; SHALIMOV, M.I.; IVANISHKIN, A.Ya.;
OVECHKIN, V.I.; POVETKIN, G.I.; SHEVERDIN, V.I.

Grooving for the rolling of strip with acute angles. Stal' 23 no.7:
627-631 Jl '63. (MIRA 16:9)
(Rolling (Metalwork)) (Rolls (Iron mills))

Synthesis of primary amines by the reaction of α -methylhydroxylamine with organomagnesium and organolithium compounds. N. I. Sheverdina and K. A. Kocheshkov. *J. Gen. Chem. (U.S.S.R.)*, 8, 1825 (1938). -- RMgX and RLi in ether soln. at a temp. of -10° to -15° react readily with MeONH₂ (I) to give primary amines. The yield depends on the nature of X, decreasing sharply from Cl to I, and is practically independent of the nature of R. The following compds. were reacted with I: EtMgBr, iso-AmMgCl, iso-AmMgBr, iso-AmMgl, sec-BuMgCl, *tert*-BuMgCl, PhMgCl, PhMgI, ρ -BrC₆H₄MgBr and PhLi. The yields of RNH₂ were resp. 00.0, 80.1, 71.4, 5.3, 73.4, 73.0, 05.0, 0.21, 72.5 and 03.0%. John L. Ivak

10

Synthesis of organobismuth compounds. I. A. Zhukova, N. L. Sheverdina and K. A. Koshevskiy. *J. Russ. Chem. Soc. (U. S. S. R.)* 8, 1839-43 (1938). French, 1811; 1938. —Organobismuth compds., possessing possible therapeutic value, are prep'd. by reaction of RMgCl with Bi salts in toluene. The following methyl derivs. were prep'd.: $(\text{Me}_2\text{C}_2\text{H}_5)_2\text{Bi}$ (I), m. 136°-7°, from $\text{Me}_2\text{C}_2\text{H}_5\text{MgBr}$ and BiCl_3 ; *dichloride* (II), decomps. 150° without melting, from I and dry Cl_2 ; *dibromide*, bright yellow, m. above 250°, from I and Br_2 ; II, with $\text{Na}_2\text{S}_2\text{O}_3$, in acetone-water gives I. I with BiCl_3 in ether suspension gives a white, completely inorg. ppt. $\text{Ph}_3\text{BiHgCl}_3$ (III) under the same conditions gives $\text{Ph}_3\text{BiHgCl}_3$, m. 186°. PbMgCl and BiBr_3 in toluene give III, isolated as the dichloride, m. 141°; yield 47%. III with Ph_3OAc , in CCl_4 , is converted to $\text{Ph}_3\text{Bi}(\text{OAc})_3$, m. 104°, yield 21%. HgCl with Bi-Na in xylene at 145-150° for 18 hrs. gives chiefly Ph_3Hg , m. 125°, and only a small amt. of III. III is obtained in 44% yield from PhLi and BiBr_3 in ether. John Livak

ASA-SEA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001549320005-2"

SHEVERINA, N. I.

"Reaction between Gamma-Benzylhydroxylamine and Organometallic Compounds of Magnesium and Lithium as a Method for the Synthesis of Primary Amines," Iz. Ak. Nauk SSSR, Otdel. Khim. Nauk, No. 1, 1941.

SHEVERDINA, N. I.

"Metallo-Organic Combination of Magnesium and Lithium in the Synthesis of Amines," a lecture delivered by K.A. Kocheshkov (who compiled the work with N.I. Sheverdina) at the June session of the Dept. of Chem. Sci., AS USSR, held 26-29 June 1946.

Vestnik AS USSR 8/9, 1946

SHIGORIN, D.N.; SHEVERDINA, N.I.

Use of vibrational spectra in the study of the interaction of atoms
and groups. Dokl.AN SSSR 96 no.3:561-564 My '54. (MIRA 7:6)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L.Ya.Karpova.
Predstavлено академиком A.N.Tereninym.
(Fluorine organic compounds) (Raman effect)

5(2) PHASE I BOOK BORONIZATION 30V/1916

Vsesoyuznoye soveshchaniiye po khimii bora. 1955
 Bor, trudy Konferentsii po khimii bora i ego soyedinenii (boron).
 Translations of the Conference on the Chemistry of Boron and
 Its Compounds. Moscow, Gostkhizdat, 1955. 189 p. Kratai sipp
 issledov. 25,000 copies printed.

Ed.: G.P. Luchinskii; Tech. Ed.: N.S. Lar'ye.

PURPOSE: This book is intended for chemists, as well as for
 industrial personnel working with boron and its compounds.

GOVERNING: This collection contains 21 studies on the chemistry,
 crystallography, physicochemical properties, and
 technology of boron and its compounds. Twenty-two of the
 studies were presented at the All-Union Conference on Boron
 Chemistry, held at the Nauchno-Issledovatel'skii fiziko-
 khimicheskii institut im. L. Ya. Karpova (Karpov) in
 search Physicochemical Institute im. L. Ya. Karpov in

Summary of the Conference (cont.) 30V/1916

December 1955. Two of these articles deal with the thermo-
 chemistry of boron. The two studies on boronides pro-
 duction are being published for the first time. The studies
 are well illustrated and accompanied by bibliographies.

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Card 4/6

5(3)

AUTHORS: Abramova, L. V., Sheverdina, M. I., SOV/20-123-4-29/53
Kocheshkov, K. A., Corresponding Member, Academy of Sciences,
USSR

TITLE: Investigations in the Field of Radiation Chemistry of Organo-
metallic Compounds (Issledovaniya v oblasti radiatsionnoy khimii
metalloorganicheskikh soyedineniy) Gamma Radiation in the
Reaction of Metallic Tin With Halogen Alkyls (Gamma-izlucheniya
v reaktsii mezhdu metallicheskim olovom i galoidnymi alkilami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4,
pp 681 - 684 (USSR)

ABSTRACT: The problems mentioned above are more or less completely un-
known. The authors have investigated these problems systemati-
cally and studied the interaction reaction of halogen alkyls
and aryls with various metals. The reaction mentioned in the
subtitle is expressed by the general equation $2RBr + Sn \rightarrow R_2SnBr_2$.
This reaction probably takes place according to a more complex
mechanism (see below) and does not take place at normal
temperatures; it only begins at 200° (Ref 1) or $300-350^\circ$ (Ref 2)

Card 1/3

Investigations in the Field of Radiation Chemistry of SOV/2o-123-4-29/53
Organometallic Compounds. Gamma Radiation in the Reaction of Metallic Tin
With Halogen Alkyls

(Footnote: With the exception of Kakhut, 1860). Due to the unfavorable conditions of the reaction the final product is impurified by amounts of up to 25% R_3SnX and similar impurities. Heavy explosions also occurred. Besides, the said reaction is restricted by low alkyls (methyl, ethyl) (Ref 5) and there are still other difficulties. Therefore, the organic salts of Di-n-butyl tin (e.g. maleate, or laurate, which have the best effect in the stabilization of chloro-vinyl synthetics) were produced by the authors in an indirect way. The disproportionation of tetraalkyl tin compounds according to reference 6 was made use of: $(C_4H_9)_4Sn + SnCl_4 \rightarrow 2(C_4H_9)_2SnCl_2$. Although the yields are close to the quantitative ones the production of tetrabutyl tin was necessary first. It was therefore of interest to find a new way of directly producing dihaloid-alkyl tin at normal pressure and temperature using new energy sources. For this reason the γ -radiation was used. Experimentally, this was successful. The yields went up to 55 mol/eV, as related to the halogen alkyl. The reaction mechanism is assumed to be one of chain

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Investigations in the Field of Radiation Chemistry of SOV/20-123-4-29/53
Organometallic Compounds. Gamma Radiation in the Reaction of Metallic Tin
With Halogen Alkyls

character with the formation of free radicals R^{*} and furthermore with an intermediate formation of an organo-tin radical. By comparing their results with those to be found in publications the authors arrived at the following conclusions: 1) Alkyl chlorides and tin do not yield any organo-tin compounds without catalyst in any type of reaction (the reactions proceed in other directions). 2) Alkyl bromides form such compounds with tin under γ -radiation and on heating (with the exception of low radicals). Ultraviolet light does not have any effect. 3) The alkyl iodides, however, yield organo-tin compounds under all influences mentioned above. There are 1 table and 8 references, 3 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im.
L. Ya. Karpova (Scientific Physico-Chemical Research Institute
imeni L. Ya. Karpova)

SUBMITTED: August 5, 1958

Card 3/3

5(3)

SOV/20-124-3-31/67

AUTHORS: Sheverdina, N. I., Abramova, L. V., Kocheshkov, K. ...,
Corresponding Member, Academy of Sciences, USSR

TITLE: Crystalline Mixed Organic Zinc Compounds (Kristallicheskiye
smeshannyye tsinkorganicheskiye soyedineniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 602-605
(USSR)

ABSTRACT: On the dissolution of R_2Zn in ether (R = organic radical) and the addition of an equivalent quantity of zinc halide (also dissolved in ether), the compound $RZnX$ (X = halogen) is formed. This compound is precipitated by the addition of dioxane, and the composition of the crystalline complex compound $RZnX \cdot C_4H_8O_2$ is investigated by means of elementary analysis. The same compound is obtained from the direct reaction of the alkyl halide with zinc, dissolution in ether, and precipitation with dioxane. In the same way, zinc aryl compounds are treated, in an ether solution, with equivalent quantities of zinc iodide, crystalline complex compounds of the formula $ArZnX \cdot (C_2H_5)_2O$ being formed in this process

Card 1/2 (Ar = aryl radical). The paper gives a detailed recipe for the

Crystalline Mixed Organic Zinc Compounds

SOV/20-124-3-31/67

preparation of 1) $C_2H_5ZnJC_4H_8O_2$ from zinc diethyl and zinc iodide; 2) the same compound from zinc and ethyl iodide, 3) the compound $C_6H_5ZnJ(C_2H_5)_2O$ from zinc diphenyl and zinc iodide. The reactions of these compounds with benzoyl chloride, with the formation of ethyl-phenyl ketone and benzophenone, respectively, are also given. There are 7 references, 2 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im.
L. Ya. Karpova
(Physico-Chemical Scientific Research Institute imeni L. Ya. Karpov)

SUBMITTED: August 20, 1958

Card 2/2

5(2, 3)
AUTHORS:

Sheverdina, N. I., Paleyeva, I. Ye., SOV/20-125-2-30/64
Delinskaya, Ye. D., Kocheshkov, K. A.,
Corresponding Member AS USSR

TITLE:

Crystalline Cadmium-organic Compounds of the RCdX-Class
in the Aliphatic Series (Kristallichеские кадмиевые органические
соединения класса RCdX в алифатическом ряду)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 348-350
(USSR)

ABSTRACT:

Solutions in ether of the compounds mentioned in the title,
obtained from exchange reactions of cadmium salts and
Grignard's reagent, are fairly extensively used as an
excellent reagent for ketone production (Ref 1). When
dissolved in ether, the cadmium-organic compounds are
considered as dialkyl compounds (Ref 2). However, cadmium-
organic compounds of a mixed type had never been isolated
in an individual crystalline state. The authors were the first
to succeed in effecting this isolation after the reaction
between dialkyl cadmium and the cadmium salts on the
equation $R_2Cd + CdX_2 \rightarrow 2RCdX$ (I). The reaction occurs in an

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Crystalline Cadmium-organic Compounds of the
RCdX-Class in the Aliphatic Series

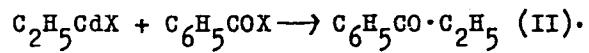
SOV/20-125-2-30/64

analogous way in the aromatic series as well. For this purpose dehydrated cadmium halogenides in absolute ether were employed. Contrary to an analogous reaction, described by the authors on an earlier occasion (zinc-organic compounds, Ref 3), they had in this case - due to the ether insolubility of the cadmium halogenides - to employ the appropriate suspensions. The mixed cadmium-organic compounds (obtained for the first time) are white, finely crystalline powders that do not melt, but which soften above 100°. They are energetically decomposed by water and alcohol. Atmospheric oxygen oxidizes them, but does not cause their spontaneous ignition. With the exception of n-butyl-cadmium-bromide, which is soluble in ether, all the compounds of the ethyl series are insoluble in aromatic hydrocarbons, hexane, and ether. Unlike in the RZnX (Ref 3), no stable complexes (e. g. with ether or dioxane) of the compounds concerned have been observed so far. The interaction of the individual cadmium-organic compounds described with the halogen anhydrides of the acids occurs on the equation

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Crystalline Cadmium-organic Compounds of the
RCdX-Class in the Aliphatic Series

SOV/20-125-2-30/64



In the experimental part, the usual data are presented.
There are 4 references, 1 of which is Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L.Ya. Karpova
(Physico-Chemical Institute imeni L. Ya. Karpov)

SUBMITTED: December 29, 1958

Card 3/3

5 (2, 3)

AUTHORS:

Sheverdina, N. I., Abramova, L. V.,
Kocheshkov, K. A., Corresponding Member AS USSR

SOV/20-128-2-27/59

TITLE:

Organozinc Compounds of the Ar₂Zn Class and Their Dioxanates

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 320-322 (USSR)

ABSTRACT:

The authors proved for the first time that zincorganic compounds of the RZnX class (X - halogen) may be isolated as complexes in purely crystalline state with ether or dioxane (Ref 1) (S. Gvozdov, Ref 4, could not isolate C₂H₅ZnJ purely; this was done by the authors). All halogen salts of Zn produce dioxanates according to data of publications (Ref 2), whereas an etherate ZnX₂·2 eth. has hitherto been known only for zinc iodide. It was now investigated whether the zinc aryls produce such complexes as well. The zinc diaryls described in the present paper did not yield corresponding etherates. With 1,4-dioxane, the following complexes could, however, be isolated:
C₆(H₅)₂Zn·C₄H₈O₂; (p-CH₃C₆H₄)₂Zn·C₄H₈O₂; (d-C₁₀H₇)₂ZnC₄H₈O₂.
These dioxanates are white crystalline substances, soluble in ether and dioxane, insoluble in benzene and petroleum ether.
The perfection of the method of preparing the initial zinc

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Organozinc Compounds of the Ar_2Zn Class and Their
Dioxanates

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diaryls (Ref 5) became necessary in connection with the successful production of dioxanates (as well as of the compounds of the ArZnX class, Ref 1). This method (heating of diphenyl mercury with metallic zinc without solvent) which is too vigorous was improved by K. A. Kocheshkov, A. N. Nesmeyanov, and V. I. Potrosov (Ref 3). They carried out the reaction in boiling xylene. In this way the synthesis could be used for a series of organozinc compounds with one substituent in the nucleus. This method has the disadvantage that the success of the synthesis depends on the state of the zinc. So-called "zinc wool" should be preferred. The authors proceeded from solid lithium aryls to avoid vacuum distillation (Ref 6). The latter produced by the method of T. V. Talalayeva and K. A. Kocheshkov (Ref 7) (exchange reaction X - M) practically contain no diaryls, or only little quantities of it. The isolation of pure diaryl zinc by crystallization is therefore obtained without distillation. Diphenyl zinc (yield 8%), di-o-tolyl zinc (7%), di-p-tolyl zinc (4%), and di- α -naphthyl zinc (4%) were produced in this way, the two first ones for the first time. White crystalline precipitations

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Organozinc Compounds of the Ar₂Zn Class and Their
Dioxanates

SOV/20-128-2-27/59

of corresponding dioxanates are separated in the dissolution
of diaryl zinc in dioxane and in the distillation of the major
part of the solvent. There are 7 references, 4 of which are
Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im.
L. Ya. Karpova (Scientific Physicochemical Research Institute
imeni L. Ya. Karpov)

SUBMITTED: June 16, 1959

Card 3/3

SHEVERDINA, N.I.; ABRAMOVA, L.V.; KOCHESHKOV, K.A.

Complexes of the series of aromatic organozinc compounds of the class ArZnX. Dokl.AN SSSR 134 no.4:853-855 O '60.

(MIRA 13:9)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).
(Zinc compounds)

SHEVERDINA, N. I.

(4)

KOCHESHKOV, Ksenofont A., Corresponding Member,
Academy of Sciences USSR, SHEVERDINA, N. I., and
PALEYEVA, I. E., all at Scientific Research Physico-
Chemical Institute imeni L. Ya. Karpov - "Research in
the realm of organometallic compounds of zinc and
cadmium" (Morning session 28 Sep 62) [Only KOCHESHKOV
is included in the List of Participants in the
Colloquium. KOCHESHKOV is also scheduled as President
of the Morning session 25 Sep 62.]
REUTOV, Oleg A., Faculty of Chemistry, Moscow
State University - "On the synthesis of optical
active alkylmagnesium and alkyllithium compounds by
means of mercuriorganic compounds" (Morning session,
25 Sep 62)

report to be submitted for the Intl. Colloquium on Organometallic Derivatives
(CMDS) Paris France, 24-28 Sep 1962.

SHEVERDINA, N.I.; PALEYEVA, I.Ye.; DELINSKAYA, Ye.D.; KOCHESHKOV, K.A.

New organocadmium compounds of the Ar₂Cd class, and their
dioxanates. Dokl. AN SSSR 143 no.5:1123-1126 Ap 62.
(MIRA 15:4)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-
korrespondent AN SSSR (for Kocheshkov).
(Cadmium organic compounds) (Dioxanate)

S/844/62/000/000/068/129
D204/D307

AUTHORS: Abramova, I. V., Sheverdina, N. I. and Kocheshkov, K. A.

TITLE: The preparation of organotin compounds under high energy
irradiation

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimi-
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
394-397

TEXT: Compounds of the general formula R_2SnBr_2 (where R = n-propyl,
n-butyl, n-hexyl, n-heptyl, n-octyl and n-nonyl) were synthesized
by γ irradiation of powdered Sn with the corresponding alkyl bro-
mide, at 90 - 100°C, in yields of 30 - 165 mol/100 ev with a dose
of 18 - 20 Mr (37 - 74% of theoretical yields calculated w.r.t.
RBr), since such compounds may be used to prepare R_2SnX_2 (where X =
organic acid radical), used as stabilizers and catalysts in plas-
tics technology. The yields of $n\text{-}Bu_2SnBr_2$ and $n\text{-}Pr_2SnBr_2$ increased
with increasing dose of irradiation, to maxima of 74% at 18.3 and

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The preparation of ...

S/844/62/000/000/068/129
D204/D307

By at 1.7 atm for the butyl and propyl compounds respectively. The energy yields decreased with increasing dose. The compounds formed under a certain induction period. Experimental details are given of (a) above reactions, which involved the irradiation of pre-mixed Sn powder and RBr in an ampoule, and (b) the preparation of $n\text{-Bu}_2\text{SnBr}_2$ in an apparatus in which $n\text{-BuBr}$ circulated gradually into an irradiated ampoule containing the Sn, and the reaction product and unreacted bromide passed back into the flask holding the original $n\text{-Bu}_2\text{SnBr}_2$ to be raised to 300 - 400 mol/100 ev. There are 1 figure and 3 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ia. Karpova (Physico-Chemical Institute im. L. Ia. Karpova)

Card 2/2

S/064/62/000/010/001/002
D214/D307

AUTHORS: Sheverdina, N.I., Abramova, L.V., Paleyeva, I.Ye.
and Kocheshkov, K.A. Corresponding Member of the
AS USSR

TITLE: Preparation of organic salts of di-n-butyltin

PERIODICAL: Khimicheskaya promyshlennost', no. 10, 1962, 7-8

TEXT: This paper reports a new method of preparing organic salts of di-n-butyltin, suitable for application on an industrial scale. The interaction of SnCl₄ with n-C₄H₉ MgCl in (n-C₄H₉)₂O forms (n-C₄H₉)₂SnCl₂ which on treatment with 30% ethanolic NaOH gives a precipitate of (n-C₄H₉)₂SnO. A slow addition of this oxide (1.25 moles) to 2.5 moles of a warm organic acid (60-70°C) gives, after 2 hours, the organic salt (95-98% yields). In this way the dicaprylate, dilaurate, distearate, and dioleate of di-n-butyltin were prepared. The dimaleate and diacetate were obtained by adding 1 mole of the oxide to 1 mole of the corresponding anhydride dissolved in toluene (yields > 95%). There is 1 table.

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SHEVERDINA, N.I.; ABRAMOVA, L.V.; PALEYEVA, I.Ye.; KOCHESHKOV, K.A.

Preparation of organic salts of di-n-butyl tin. Khim.prom.
no.10:707-708 O '62. (MIRA 15:12)

1. Chlen-korrespondent AN SSSR (for Kocheshkov).
(Tin organic compounds)

KOCHESHKOV, K.A., PALEYEV, O.A., SOGOLOVA, T.I., SHEVERDINA, N.I.,
TALALAYEVA, T.V., RODIONOV, A.N.

Nouveaux composants des catalyseurs de la polymerisation de l'ethylene
dans des conditions habituelles et inhabituelles.

Report submitted for the International Symposium of Macromolecular Chemistry,
Paris, 1-6 July 63

L 12436-63

EWP(j)/EPF(c)/EWT(m)/BDS ASD Pe-4/Pr-4 RM/WW

ACCESSION NR: AP3001156

S/0190/63/005/006/0846/0849

68
67AUTHOR: Kocheshkov, K. A.; Kargin, V. A.; Sheverdina, N. I.; Sogolova, T. I.;
Paleyeva, I. Ye.; Paleyev, O. A.

TITLE: Polymers of ethylene prepared by means of organocadmium-titanium tetrachloride mixtures

SOURCE: Vy*sokomolekulyarnye soyedineniya, v. 5, no. 6, 1963, 846-849

TOPIC TAGS: polymers, ethylene, organocadmium compounds, titanium tetrachloride, polyethylene, dioxanates

ABSTRACT: The polymerization of ethylene was conducted in a reactor filled with ethylene gas to which were added 300 ml of hexane and from 0.025 to 0.007 Mol/liter of an organic cadmium compound, cooled to -30°C, and followed by dropwise addition, under constant stirring, of a titanium tetrachloride solution in hexane, in a ratio C-Me/TiCl₄ = 1/1. The highest yields were obtained with (n-C₄H₉)₂Cd and (p-CH₃C₆H₄H₂)₂Cd, and it was observed that complexes of the cadmium compounds with dioxane were equally effective. In comparing the polymerization processes conducted with diphenylcadmium and phenylcadmiumiodide it was found that the yield of an essentially similar polyethylene amounted in the

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ACCESSION NR: AP3001156

latter case to only one-half of the one obtained with diphenylcadmium, thus revealing the equivalency of the same radicals in the organometallic component in the catalyst and the essential role played by their number. The obtained polyethylenes were essentially white powders. Thermomechanical studies were conducted on films obtained at 180-185°C and 90-100 atm, which were stretched in one direction. It was found that the polymers possessed sufficiently high values of recrystallization stress and tensile strength and high stretch and softening point values, the latter in the 130-135°C range. Orig. art. has: 2 tables.

ASSOCIATION: Fiziko-khimicheskij institut im. L. Ya. Karpova (Physico-Chemical Institute)

SUBMITTED: 25Nov61

DATE ACQ.: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 005

Card 2/2

VIKTOROVA, I.M.; SHEVERDINA, N.I.; DELINSKAYA, Ye.D.; KOCHESHKOV, K.A.

Organogallium compounds of the Ar₃Ga class and their dioxanates.
Dokl. AN SSSR 152 no.3:609-610 S '63. (MIRA 16:12)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

SHEVERDINA, N.I.; PALEYEVA, I. Ye.; ZAYTSEVA, N.A.; KOCHESKHKOV, K.A.

Preparation of R₂Zn-type organozinc compounds in the aromatic,
heterocyclic, and aliphatic-aromatic series by means of the
Grignard reagent. Dokl. AN SSSR 155 no. 3:623-625 Mr '64.
(MIRA 17:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-
korrespondent AN SSSR (for Kocheshkov).

SHEVERDIN\, Nataliya Ivanovna; KOCHESHKOV, Ksenofont Aleksandrovich.
Prinimala uchastiye AIRAMOVA, L.V.; NESMEYANOV , A.N.,
akademik, otv. red.; RODIONOV, A.N., red.

[Methods of the chemistry of organometallic compounds;
zinc, cadmium] Metody elementno-organicheskoi khimii; tsink
kadmii. Moskva, Nauka, 1964.. 235 p. (MIRA 18:2)

PALEYEVA, I.Ye.; SHEVYRDINA, N.I.; KOCHESHKOV, K.A.

Asymmetric aromatic organozinc and organocadmium compounds
of the type ArMeAr'. Dokl. AN SSSR 157 no. 3:626-628 Jl '64.
(MIRA 17:7)
I. Fiziko-khimicheskiy institut imeni L.Ye. Karpova, 2. Chlen-
korrrespondent AN SSSR (for Kocheshkov).

PALEYEVA, I.Ye.; SHEVERDINA, N.I.; ABRAMOVA, L.V.; KOCHESHKOV, K.A.

Chemical composition of the "Elaise reagent". Dokl. AN SSSR
159 no.3:609-611 N '64 (MIRA 18:1)

1. Fiziko-khimicheskiy institut imeni L. Ya. Karpova 2. Chlen
korrespondent AN SSSR (for Kocheshkov).

AVERBUKH, B.S.; ABRAMOVA, L.V.; BREGER, A.KH.; VAYNSHTEYN, B.I.; GOL'DIN, V.A.; KOCHESHKOV, K.A.; SYRKUS, N.P.; SHALYAPIN, N.K.; SHEVERDINA, N.I.

Determination of the optimum conditions for the reaction of radiation-chemical synthesis of dibutyltin dibromide. Zhur. fiz. khim. 38 no.10:
2445-2448 O '64. (MIRA 18:2)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

L 17714-66 EWP(j)/EWT(m)/T RM
ACC NR: AP6003405 (A)

SOURCE CODE: UR/0190/66/008/001/0008/0010

AUTHORS: Paleyev, O. A.; Sheverdina, N. I.; Sogolova, T. I.; Paleyeva, I. Ye.;
Kargin, V. A.; Kocheshkov, K. A.

ORG: Physico-Chemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Application of $(n\text{-C}_3\text{H}_7)_2\text{Cd}$, $n\text{-C}_3\text{H}_7\text{CdCl}$ and $n\text{-C}_3\text{H}_7\text{CdI}$ in polymerization of ethylene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 1, 1966, 8-10

TOPIC TAGS: polyethylene plastic, organocadmium compound, polymerization catalyst

ABSTRACT: In this work, $(n\text{-C}_3\text{H}_7)_2\text{Cd}$ (I), $n\text{-C}_3\text{H}_7\text{CdCl}$ (II), and $n\text{-C}_3\text{H}_7\text{CdI}$ (III) in mixtures with TiCl_4 were investigated as polymerization catalysts for propylene, substituting for the generally used organic aluminum compounds. This is an expansion of the earlier published study by the authors on organic cadmium compounds as components of mixed polymerization catalysts (Vysokomolek. soyed., 5, 846, 1963). II and III are white solids insoluble in n-hexane (solvent used in this polymerization), have poorly developed surface structure and, therefore, are

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UDC: 66.095.26+678.742

L 1771⁴-66

ACC NR: AP6003405

2

inefficient as catalysts. I is readily soluble in organic solvents and was found to be a very effective catalyst at very low concentrations (1 g mole per 11 kg of polyethylene). The product prepared with I (softening point 137--139C) has high tensile strength (4400--4500 kg/cm²), and may serve in the preparation of strong oriented films and fibers.¹⁵ Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 28Jan65/ ORIG REF: 004/ OTH REF: 001

Card 2/2 nst

NEKLYUDOV, A., komandir sovetskogo letchika, pilot, 1. k. p. 1.;
SHEVCHENKO, Yur., kartographant; KERIAKOV, V. S., pilot-pilot;
CVSYANNIKOV, V., bombardist

increase the economy of each flight. Gramm. av. 21 no.3:8
(MIDA 16:7)
Mr. '65.

ACCESSION NR: AP4015294

S/0280/64/000/001/0073/0074

AUTHOR: Sagalovich, Yu. L. (Moscow); Sheverdyayev, A. Yu. (Moscow)

TITLE: Constructing a long code out of a short one preserving its error-correction capacity

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1964, 73-74

TOPIC TAGS: code extension, error correcting code, code error correction capacity

ABSTRACT: This problem is considered: A length n code is given which can correct a certain set of patterns of errors. The construction of a code of much greater length N which would be able to correct the same set of error patterns is required. In practice, it means that by adding a few check symbols, a much longer code preserving its error-correcting ability can be obtained; hence, the rate of transmission and the code capacity can be increased. The mathematical

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ACCESSION NR: AP4015294

conditions for such code extension are set forth for a cyclic code with a base p. For the case of independent errors, the code length can be increased by d times while its redundancy rises only by $t \log_2 d/2$, where t is the number of correctable errors. An attempt to solve the same problem for a binary case made by C. M. Melas, et al. (IBM Res. and Developm., 1963, 7, no. 2, pp. 151-152) is criticized by the authors. Orig. art. has: 6 formulas.

ASSOCIATION: none

SUBMITTED: 04Nov63

DATE ACQ: 12Mar64

ENCL: 00

SUB CODE: CO, IE

NO REF SOV: 000

OTHER: 001

Card 2/2

BLOKH, E.L.; SAGALOVICH, Yu.L.; SHEVERDYAYEV, A.Yu.

Error-correcting and detecting codes in batches. Probl. pered.
inform. no.16:21-25 '64. (MIRA 17:12)

L 27860-65 EWT(d)/T/EWP(1) IJP(c)

ACCESSION NR: AT4049768

S/2945/64/000/016/0021/0025

13

B+1

AUTHOR: Blokh, E. L.; Sagalovich, Yu. L.; Sheverdyayev, A. Yu.

TITLE: Codes for correcting and detecting burst errors

SOURCE: AN SSSR. Institut problem peredachi informatsii. Problemy peredachi informatsii, no. 16, 1964. Teoriya peredachi informatsii (Theory of information transmission), 21-25

TOPIC TAGS: error correction, burst error, correction code, information transmission, cyclic code, Wyner code

ABSTRACT: The paper discusses two complete solutions to the problem of correcting burst errors where all combinations not exceeding t errors within a burst of length l ($t \leq l$) have to be corrected; $1 \leq n$ where n is the length of a code combination. The solutions to the above problem belong to the class of cyclic codes and shortened cyclic codes. The first one was developed by Aaron D. Wyner (IEEE Trans. Information Theory, IT-9, No. 2, 1963) and the second one by the author. The results obtained by the two types of code are compared. It is noted that the two codes are a modification of the Fire codes. Each of the 2 codes shows some advantages but also some weaknesses. In fact, the number of check digits of the author's code consists of 2^{l-1} plus the number of check digits which are

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ACCESSION NR: AT4049768

necessary for detecting t errors in a code of length l . However, in the case of Wyner's code, the number of check digits consists of 1 plus the number of check digits which is required for correcting t errors in a code of length not less than $2l-1$, or, in other words, which is required for detecting $2t$ errors in a code of the same length. Thus, generally speaking, Wyner's code contains a somewhat smaller number of check digits than the cyclic code developed by the author. On the other hand, this advantage is not an absolute one as shown by an example where, although the same number of check digits was obtained for both codes, Wyner's code was much longer than the corresponding code developed using the author's method. In general, Wyner's cyclic codes are much longer than the author's codes. For example, for $l = 15$ and $t = 4$, the author's codes give $n = 415$ while for $l = 16$ and $t = 4$ Wyner's codes give a value of n of the order of 2^{21} . In a general form, we have for the author's codes $n \ll (2b-1)l \approx 2l^2$, and for Wyner's codes $n \ll (2l-1)(2l-1) \approx 12l^{l+1}$. It is true that we can obtain shortened cyclic codes from long cyclic Wyner's codes; however, in decoding, we cannot use the procedure which is characteristic for cyclic codes. The paper discusses the final (in the sense of redundancy) solution to the problem of detecting burst errors. Orig. art. has: 11 formulas.

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ACCESSION NR: AT4049768

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BLOKH,G.S.; ZAYONTS,R.M.; ROKHVARGER,Ye.L; SHEVERDYAEV,N.P.

Semidry pressing of ceramic pipe. Stek. i ker. 12 no.6:17-19
Je '55. (MIRA 8:9)

(Pipe, Clay)

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Automatization of a four-column hydraulic press. Stek. i ker.
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(Hydraulic presses) (Automatic control)

SHVERDYAYEVA, G.

Sheverdyayeva, G. "Physico-geographical characteristics of the central part of the Don-Sala watershed," Sbornik nauch. Rabot studentov ("ost. n/D gos. un-t im. Molotova), Issue 1, 1949, p. 163-71

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ZUBOV, P.I.; SUKHAREVA, L.A.; SHEVERDYAYEVA, G.A.; OSIPOV, Ye.A.

Internal stresses arising during film formation from polyvinyl alcohol and its derivatives. Koll. zhur. 25 no.4:438-440
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1. Institut fizicheskoy khimii AN SSSR, Moskva.

SHEVERDYAYEVA, V.M.

Determination of arsenic in asian tablets. Apt.delo 8
no.2:58-63 Mr.Ap '59. (MIRA 12:5)

1. Iz Moskovskogo farmatsevticheskogo instituta Ministerstva
zdravookhraneniya RSFSR (nauchnyy rukovoditel' - dots. S.P.
Bystrov)

(ARSENIC--ANALYSIS)

SHEVERDYAYEVA, V.M.; BYSTROV, S.P.

Quantitative determination of arsenic in aminarsone. Apt. delo 9
no. 6:29-32 N-D '60.
(MIRA 13:12)

1. Farmatsevticheskiy fakul'tet I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(ARSENIC—ANALYSIS)

BELOVA, A.V.; GORBACHEVA, N.A.; SHVAYKOVA, Mariya Dmitriyevna, prof.;
SHEVERDYAYEVA, V.M.; RUBTSOV, A.F., kand.farmatsevticheskikh
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retsenzent; KOZULIN, V.S., red.; RAYKO, N.Yu., tekhn.red.

[Manual on the practical studies of forensic chemistry for
pharmacology correspondence students of institutions of higher
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khimii; dlja studentov-zaochnikov farmatsevticheskikh vuzov.
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I.M.Sechenova, 1961. 101 p.

(MIRA 14:6)

1. Kafedra sudebnoy khimii farmatsevticheskogo fakul'teta 1-go
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(PHARMACOLOGY--LABORATORY MANUALS)
(CHEMISTRY, LEGAL)

SHEVERDYAYEVA, V.M.; BYSTROV, S.P.

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1. Farmatsevticheskiy fakul'tet I Moskovskogo ordena Lenina
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1. Farmatsevticheskiy fakul'tet I Moskovskogo ordena Lenina meditsinskogo instituta.

(ARSENIC--ANALYSIS)

SHEVERDYAYEVA, V.M.; BYSTROV, S.P.

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ll no. 5:71-74 S-0 '62. (MIRA 17:5)

1. Farmatsevticheskiy fakul'tet I Moskovskogo ordena Lenina
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