

KORNILOVA, R.D.

Effect of A.P. Polosukhin's antishock fluid on lymph circulation
and venous pressure prior to and during shock. Izv. AN Kazakh.
SSR. Ser. med. nauk no.1:3-6 '63. (MIRA 16:10)

*

SHKOL'NIK, B.I., kand.med.nauk; KORNILOVA, S.M.

Combined use of paracervical anesthesia and local anesthesia in gynecological surgery. Ped., akush. i gin. 19 no.3:56-60 '57. (MIRA 13:1)

1. Ginekologicheskoye otdeleniye (sav. - S.N. Kornilova) Zheleznodorozhnogo rodit'nogo doma Yugo-zapadnoy zheleznoy dorogi (glavnyy vrach - G.S. Stepankova).

(GENERATIVE ORGANS, FEMALE--SURGERY) (LOCAL ANESTHESIA)

33924
S/079/62/032/002/011/011
D243/D303

5.3832
AUTHORS:

D'yakonov, I.A., Nizovkina, T.V. and Kornilova, T.A.

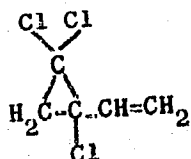
TITLE:

Reaction of dichlorocarbene with chloroprene

PERIODICAL:

Zhurnal obshchey khimii, v. 32, no. 2, 1962, 664-665

TEXT: The authors wished to confirm that dichlorocarbene, on reacting with chloroprene, joins in the 1,2 position. Investigation showed that this occurred, 1,2, 2-trichloro-1-vinylcyclopropane (I) being formed - a colorless liquid which darkens in air and forms a solid polymer. B.p. = 63-63.5° at 25 mm Hg; $d_4^{20} = 1.3330$, $n_D^{20} = 1.5007$. On ozonization of (I) or its oxidation by aq. $KMnO_4$ (II) was obtained which is described for the first time; m.p. = 94-95° C (from hexane).



(I)

Card 1/2

D'YAKONOV, I.A.; NIZOVKINA, T.V.; KORNILOVA, T.A.

Reaction of dichlorocarbene with chloroprene. Zhur.ob.khim.
32 no.2:664-665 F '62. (MIRA 15:2)

1. Leningradskiy gosudarstvennyy universitet.
(Carbene)
(Chloroprene)

KORNILOVA, T.I.; ZHDANOV, G.L.

Comparison of the anabolic activity of testosterone propionate,
19 -nor-D-homotestosterone, and some of its derivatives. Dokl.
AN SSSR 145 no.5:1163-1164 '62. (MIRA 15:8)

1. Institut khimii prirodnykh soyedineniy AN SSSR. Predstavleno
akademikom M.M.Shemyakinym.
(Testosterone) (Metabolism)

POPOVA, O.I.; KORNILOVA, V.I.

Analysis of high-melting alloys containing zirconium (titanium) and tungsten. Zhur.anal.khim. 16 no.5:651-652 S-O '61. (MIRA 14:9)

1. Institute of Metalloceramics and Special Alloys, Academy of Sciences, Ukrainian S.S.R., Kiev.
(Zirconium-tungsten alloys)

S/073/63/029/003/007/009
A057/A126

AUTHORS: Kornilova, V. I., Nazarchuk, F. N.

TITLE: Spectrophotometrical investigation of the formation of niobium compounds with the reagent arsenazo

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 29. no. 3, 1963, 330 - 335

TEXT: The process of formation, the composition, and the effect of pH, of oxalic, tartaric, and citric acid, of sodium fluoride and trilon B on the formation of the reddish-violet complex of niobium and arsenazo was investigated spectrophotometrically in aqueous solutions. The light absorption spectrum of the complex solution (Nb/arsenazo = 4/1) with pH = 0.65 (buffered) shows a maximum at 530 m μ , that of pure arsenazo at 520 m μ . Thus, all further measurements were carried out at 580 m μ . Since no considerable effect of the pH on the optical density of a complex solution (Nb : arsenazo = 2 : 1) was observed in the range pH = 0.65 - 3 it is assumed that hydrogen ions do not participate in complex formation. The composition of the complex was determined by the method of isomolar series and was found to be Nb : arsenazo = 2 : 1. The formation occurs

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S/073/63/029/003/001/009
A057/A126

Spectrophotometrical investigation of...

schematically: $2\text{Nb} + \text{H}_6\text{R} = \text{Nb}_2 \cdot \text{H}_6\text{R}$ and the corresponding equilibrium constant is $K = \frac{[\text{Nb}]^2[\text{H}_6\text{R}]}{[\text{Nb}_2 \cdot \text{H}_6\text{R}]} = 1 \cdot 10^{-8}$. The colour of the complex solutions obeys Lambert-Beer's law in the range of niobium concentrations from 3 to 35 g/ml. An unusual effect of admixtures of NaF, oxalic, tartaric, and citric acid, and of trilon B on the colour of the complex solutions was observed. The ratio niobium : admixture was varied from 1 : 0 to 1 : 25 and up to a ratio of 1 : 2 a strong increase of the colour intensity was observed. Further addition of the admixture effects a decrease of colour intensity. The composition of the Nb-arsenazo complex does not change, but is destroyed at a tenfold excess of the admixture. The following sequence in relation to the decreasing stability of the complex compound of Nb was observed: oxalic > fluoride > trilonate > tartaric > citric acid. The initial increase of the colour of the niobium-arsenazo complex affected by addition of the admixtures is explained by a transfer of niobium into a more reactive form. Apparently the monomer cationic form of niobium reacts with arsenazo, and an addition of the complexing admixtures contributes to the formation of monomer niobium ions. Similar observations were made by other

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S/073/63/029/003/007/009
A057/A126

Spectrophotometrical investigation of...

authors with coloured niobium-xylene orange compounds. According to the obtained results oxalic acid is the most favorable masking compound for niobium in acid solutions. There are 6 figures and 1 table.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN USSR (Institute of Powder Metallurgy and Special Alloys of the AS UkrSSR)

SUBMITTED: June 23, 1961

Card 3/3

KORNILOVA, V.I.; NAZARCHUK, T.N.

Colored complex of bismuth with hematoxylin. Ukr. khim. zhur.
29 no.11:1205-1208 '63. (MIRA 16:12)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.

KORNILOVA, V.M.

Retention of atmospheric dust in breathing. Gig. i san. no. 6:11-13 Je '59.
(MLRA 6:6)

1. Leningradskiy nauchno-issledovatel'skiy sanitarno-gigiyenicheskiy in-
stitut. (Dust) (Respiration)

KORNILOVA, V.N., nauchnyy sotrudnik

Important task of the vineyardists of Daghestan. Zashch.rast.ot
vred.i bol. 4 no.4:26-27 J1-Ag '59.

(MIRA 16:5)

1. Derbentskaya opytnaya stantsiya vinogradarstva i ovoshchevodstva
Dagestanskogo nauchno-issledovatel'skogo instituta sel'skogo
khozyaystva.

(Daghestan-Grapes-Diseases and pests)

(Daghestan-Spraying and dusting in agriculture)

KORNILOVA, V.N., starshiy nauchnyy sotrudnik

Additional spraying in vineyards. Zashch. rast. ot vred. i bol.
9 no. 4:19-21 '64. (MIRA 17:5)

1. Derbentskaya opytnaya stantsiya po vinogradarstvu i
ovoshchevodstvu.

~~KORNILOVA~~ V. P. kand. biol. nauk

Nutrition of anchovies in the Sea of Azov. Trudy VNIRO 31:368-377
'55. (MIRA 11:6)

1. Azovo-Chernomorskiy nauchnyy institut rybnogo khozyaystva.
(Azov, Sea of--Anchovies) (Fishes--Food)

KORNILOVA, V.P., kandidat biologicheskikh nauk.

State of reserves and biology of the Azov anchovy before regulation of river runoff. Trudy VNIRO 31 no.2:196-203 '55. (MLRA 9:8)

1. Azovsko-Chernomorskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva i okeanografii.

(Azov, Sea of--Anchovies)

KORNILOVA, V.P.

Biology and fisheries of the anchovy (*Engraulis encrasicolus*
maoticus Pns.) in the Sea of Azov. Trudy Azcherniro no.18:50-
73 '60. (MIRA 14:10)

(Azov, Sea of—Anchovies)

KORNILOVA, V. S. i LAVROV, V. V.

24870. KORNILOVA, V. S. i LAVROV, V. V. O Nakhodkakh Tretichnoy Kserofitnoy
Flory V Turgaye I Eye Stratigraficheskom Polozhenii. Vestnik Akad. Nauk
Kazakh. SSR, 1949, No 5, S 104-07. -- Bibliogr: 9 Nazv.

SO: Letopis' No. 33, 1949

KORNILOVA, V. S.

Kazakhstan - Paleobotany

New discovery of early Tertiary flora in Kazakhstan. Dokl. AN SSSR 86 No. 1, 1952

9. Monthly List of Russian Accessions, Library of Congress, December ¹⁹⁵² ~~1953~~. Unclassified.

KORNILOVA, V.S.; SATPAYEV, K.I., akademik.

Hydropteridinae *Asolla* in the deposits of the Chegan series. Dokl. AN SSSR
93 no.1:139-142 N '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Satpayev). 2. Kazakhskiy gosudarstvennyy universi-
tet im. S.M.Kirova (for Kornilova).
(Turgai River region--Paleontology) (Paleontology--Turgai River region)

KORNIEVA, V. S.

"Continental Tertiary Flora of Tortmola," Uch. zap. Kazakhsk. un-te, 15, No. 1, pp 80-94, 1954

The author presents the characteristics of the stratigraphic distribution of fossil flora in the tertiary deposits of the region of Tortmola (Kazakh SSR) and describes the plant remains observed in a cross section. The fossil flora is coordinate with the lenses of fine-grain sandstones and siltstones encountered in the layer of salted clays of lagoon origin possibly, which lie over clays of the Chegan series and are covered by sandy-clayey rocks of the continental Turgey series. The plant remains of Tortmola are connected with the deposits of the indricotherium series of the Middle Oligocene age and are represented by impressions of leaves and fruits of grasses, daphnogen, laurel, etc. (RZhGeol, No 4, 1955)

Sum. No. 681, 7 Oct 55

KORNILOVA, V.S.

Paleobotanical characteristics of the compact sandstone horizon
of the Paleogene in Kazakhstan. Mat. k ist. fauny i flory Kazakh.
1:95-116 '55. (MIRA 11:5)
(Kazakhstan--Sandstone)
(Paleobotany, Stratigraphic)

KORNILOVA, V.S.

Materials on the Eocene flora of the right bank of the Selety River.
Trudy Inst.bot.AN Kazakh SSR 1:118-130 '55. (MLRA 9:11)
(Selety Valley--Paleobotany)

KORNILOVA, V.S.

**Floral characteristics of the Turgai Bolattam strata. Izv. AN Kazakh.
SSR. Ser. biol. no.9:3-19 '55. (MLRA 9:4)**

(TURGAI GATES--GEOLOGY, STRATIGRAPHIC)

KORNILOVA, V.S.

Peltavian flora of Kazakhstan. Dokl. AN SSSR 104 no.1:124-127
S 155. (MLRA 9:2)

1. Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova i
Institut botaniki Akademii nauk KazSSR. Predstavleno akademikom
K.I. Satpayevym.
(Kazakhstan--Paleobotany)

KORNILOVA, V. S.

15-57-2-1379

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 2,
p 29 (USSR)

AUTHOR: Kornilova, V. S.

TITLE: The Results of a Study Dealing With the Oligocene
Flora From Turgay (Itogi izucheniya oligotsenovoy
flory Turgaya)

PERIODICAL: Tr. In-ta botan. AN KazSSR, 1956, Vol 3, pp 59-101

ABSTRACT: The history of the Turgay paleobotanical study is
subdivided into two stages: from 1858 to 1947, and
from 1947 to the present time. Altogether 32 species
were established in Turgay and North Aral district
toward the end of the first period. This material
provided A. N. Krishtofovich with an opportunity to
explain the character and genesis of the Turgay flora,
relating it to the Turgay province of the Turgay
botanical-geographical district. The latter period
is characterized by a complex study of stratigraphy,

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15-57-2-1379

The Results of a Study Dealing With the Oligocene (Cont.)

autochthonously in the lower and middle Oligocene from the Eocene flora through the gradual extinction of the Poltava elements and the development of the Turgay elements. The development of the Turgay flora in the middle Oligocene and its impoverishment in the upper Oligocene is related to the cooling of the climate, which led to the extinction of many wood species. Aridity occurring at the beginning of the Miocene caused further decrease in forest areas and an increase in the desert-steppe areas. The author gives a summary list of plants from the Oligocene floras of Turgay and North Aral district, including 314 titles.

L. B.

Card 3/3

KORNILOVA, V.S.

Lower Paleogene flora of Dzhaman-Tuz. Mat. po ist. fauny i flory
Kazakh. 2:84-108 '58. (MIRA 11:7)
(Dzhaman-Tuz region--Paleobotany, Stratigraphic)

KORNILOVA, V.S.; SAL'MENOVA, K.S.

Kulbolda hill as a new site of Eocene flora in Kazakhstan. Mat. po
ist. fauny i flory Kazakh. 2:109-116 '58. (MIRA 11:7)
(Kokchetav Province--Paleobotany, Stratigraphic)

BAZHANOV, V.S.; KORNILOVA, V.S.

What the paleontologists of Kazakhstan are working on. Mat. po ist.
fauny i flory Kazakh. 2:161-162 '58. (MIRA 11:7)
(Kazakhstan--Paleontological research)

KORNILOVA, Valentina Stepanovna; BAZHANOV, V.S., kand.biolog.nauk, otv.
red.; SEMENOV, M.M., red.; PROKHOROV, V.P., tekhn.red.

[Lower Miocene flora of Kushuk (Turgay Gates)] Nizhnemiotseno-
vaia flora Kushuka (Turgaiskii progib). Alma-Ata, Izd-vo Akad.
nauk Kazakhskoi SSR, 1960. 128 p. (MIRA 13:7)
(Turgay Gates--Paleobotany)

PAVLOV, N.V., akademik; AGEYEVA, N.T.; BAYTENOV, M.B.; GOLOSOKOV, V.P.,
kand.biolog.nauk, red.; KORNILOVA, V.S.; POLYAKOV, P.P., Prinsipali
uchastiye: VASIL'YEVA, A.N.; GEAZOVA, A.; FISTUN, V.V., BYKOV,
B.A., red.; KUBANSKAYA, Z.V., kand.biolog.nauk, red.; SUVOROVA, R.I.,
red.; ALFEROVA, P.F., tekhn.red.

[Flora of Kazakhstan] Flora Kazakhstan. Glav.red.N.V.Pavlov.
Sost.N.T.Ageeva i dr. Alma-Ata. Vol.3. 1960. 457 p. (MIRA 13:5)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut botaniki.
2. AN KazSSR (for Pavlov). 3. Chlen-korrespondent AN KazSSR (for Bykov).

(Kazakhstan--Dicotyledons)

KORNILOVA, V.S., kand.biologicheskikh nauk

Discovery of fossil Quaternary flora in the Tien Shan. Vest.AN.
Kazakh.SSR 16 no.5:89-90 My '60. (MIRA 13:7)
(Tien Shan--Paleobotany, Stratigraphic)

KORNILOVA, V.S., kand.biologicheskikh nauk

New species of *Myriophyllum* from middle Quaternary sediments of
the northern Tien Shan. Vest.AN Kazakh.SSR 16 no.10:101-102 0 '60.
(MIRA 13:10)

(Tien Shan--Water milfoil)

BAYTENOV, M.B.; BYKOV, B.A.; VASIL'YEVA, A.N.; GAMAYUNOVA, A.P.;
GOLOSOKOV, V.P., kand.biolog.nauk; DOBROKHOTOVA, E.V.;
KORNILOVA, V.S.; FISYUN, V.V.; PAVLOV, N.V., akademik, glavnyy
red.; KUBANSKAYA, Z.V., kand.biolog.nauk; SUVOROVA, R.I.,
red.; ALFEROVA, P.F., tekhn.red.

[Flora of Kazakhstan] Flora Kazakhstana. Glav.red. N.V.Pavlov.
Sost.M.B.Baitenov i dr. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi
SSR. Vol.4. 1961. 545 p. (MIRA 14:4)

1. AN Kazakhskoy SSR (for Pavlov). 2. Chlen-korrespondent
AN KazSSR (for Bykov).
(Kazakhstan--Botany)

KORNILOVA, V.S.

Plant remains from Neogene deposits of the Kungey Ala-Tau.
Mat. po ist. fauny i flory Kazakh. 3:74-93 '61.

(MIRA 14:7)

(Kungey Ala-Tau--Paleobotany, Stratigraphic)

BAZHANOV, V.S.; KORNILOVA, V.S.

Expeditionary work of the Section of Paleobiology during 1957-
1960. Mat. po ist. fauny i flory Kazakh. 3:188-191 '61.

(MIRA 14:7)

(Kazakhstan—Paleontological research)

KORNILOVA, V.S.

Basic distribution pattern of weeds in the agricultural belt of
northern and western Tien Shan. Trudy Inst. bot. AN Kazakh. SSR
11:58-100 '61.

(MIRA 15:3)

(Tien Shan--Weeds)

KORNITOVA, V.M., kand. biologicheskikh nauk

Conference on problems of paleobotany. Vest. An Kazakh SSR 18
no. 5:82-83 My '62. (MIRA 17:10)

KORNILOVA, V.S.

Genus *Salvinia* in Kazakhstan. Mat. po ist. fauny i flory Kazakh. 4:
83-99 '63. (MIRA 16:9)

Kazakhstan—Water ferns, Fossil)

KORNILOVA, V.S.

Quaternary floras from the mountain regions of Central Asia, Mat.
po ist. fauny i flory Kazakh. 4:113-151 '63. (MIRA 16:9)
(Soviet Central Asia—Paleobotany, Stratigraphic)

KORNILOVA, E.

✓ 3681. METHOD OF DETERMINING "PERIOD OF STABILITY" OF LEADED GASOLINES.
Rozhkov, I. and Kornilova, E. (Nov. Keff. Tekh. (Nav. Patrol. Tech.,
Moscow), 1953, (6), 3-6; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1955, (9), 14931). The period of stability is the time preceding the
formation of a deposit on oxidation by atmospheric air in special flasks at
100°C. The method has been adopted as the Soviet standard test (GOST
6667-53). Aviation gasolines have periods of stability of 2-13 hours
without antioxidants and 24-60 hours with.

KORNILOVA, E. N.

Stability of leaded gasolines. I. V. Rozhkov and E. N. Kornilova. *Novosti Neflyanol*, 1954, No. 6, 6-8. *ibid.*, 1955, No. 2809. — The effect of aged ethyl fluid on the induction period of leaded gasolines and the prevention of sediment formation in stored leaded gasolines was studied by using a sample (I) fluid which had been stored 1 yr. and a sample (II) stored 4 yrs. Gasoline contg. II but no antioxidant formed a ppt. of Pb comp. s. after 6 months storage at 30° in dark bottles. Gasolin; contg. I formed under similar conditions a ppt. after 11 months. Gasoline free from antioxidants but contg. II had an induction period of less than 2 hrs. and those contg. I of 2 hrs.; addn. an antioxidant raised the induction period to 12 and 28 hrs., resp. Addn. of an antioxidant to leaded gasoline, after the Pb ppt. had formed and been filtered off, improved the induction period, but to a lesser extent than addn. to fresh gasoline. Gasoline freed from sediment by filtration and treated with an antioxidant did not change after several

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KORNILOVA, YE. N.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor Fuels. Lubricants, I-13

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62608

Author: Rozhkov, I., Kornilova, Ye.

Institution: None

Title: Stability of Ethylated Aviation Gasoline of Different Chemical Composition

Original

Periodical: Novosti neft. tekhniki, Neftepererabotka, 1954, No 6, 19-22

Abstract: Investigation of the effects of the hydrocarbon composition of ethylated aviation gasolines on their stability in storage. Stability was evaluated by the method of GOST-6667-53 and the time of appearance of a precipitate of decomposition products of tetraethyl lead (TEL) on storage. The investigation showed that in extensively branched paraffin hydrocarbons TEL is more stable than in alkylated aromatic hydrocarbons. Accordingly B-100/130 gasoline obtained by

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KORNILOVA Ye. N.

Subject : USSR/Chemistry AID P - 342
Card : 1/1
Authors : Rozhkov, I. V., Shimonayev, G. S. and Kornilova, Ye. N.
Title : The effect of tetraethyl lead on the oxidation of hydrocarbons
Periodical : Neft. Khoz., v. 32, #5, 70-73, My 1954
Abstract : The result of study of oxidation of hydrocarbons of the kerosene types in liquid phase and at the presence of 0.01% of tetraethyl lead (TEL) are reported by the authors. The specimens of liquid hydrocarbons with and without TEL were placed in glass ampoules filled with air and tested at 100°C. The results indicate that TEL is a catalyst for low temperature oxidation of liquid hydrocarbons. The TEL also accelerates the decomposition of organic peroxides, which in turn accelerate decomposition of TEL and formation of deposits. 2 tables and 5 Russian references (1939-51).
Institution : None
Submitted : No date

The effect of tetraethyl lead (TEL) on the oxidation of hydrocarbons. I. V. Rogozov, G. S. Simonov, and E. N. Korolova. *Neftekhim. Khim.* 32, No. 5, 70-8 (1954).
TEL is a pos. hydrocarbon oxidation catalyst in low-temp. liquid-phase oxidation. TEL decomp. with the formation of a solid during the oxidation of hydrocarbons, and a deposit begins to form sooner when the hydrocarbons have a lower induction period. TEL accelerates the decompn. of org. peroxides, which in turn accelerate the deposit formation from TEL. W. M. Sternberg

KORNILOVA, Ye. N.

ROZHKOV, I.V.; KORNILOVA, Ye.N.

Oxidizability of benzine hydrocarbons in the liquid phase in
the presence of tetraethyl lead. Khim. i tekhn. topl. no.12:
43-47 D '56.

(MIRA 10:2)

1. Nauchno-issledovatel'skiy institut goryuche-smazochnykh
materialov.

(Hydrocarbons) (Lead)

ROZHKOV, I.V.; SHIMOVAYEV, G.S.; KORNILOVA, Ye.N.; POTEKHIN, B.A.

Method for evaluating chemical stability of ethylated aviation gasoline. *Khim. i tekhn. topl. i masel* no.1:59-66 Ja '57.

(MIRA 10:2)

1. Nauchno-issledovatel'skiy institut goryuche-smazochnykh materialov.
(Airplanes--Fuel)

KORNILOVA, E.N.

AUTHOR: Rozhkov, I.V. and Kornilova, E.N.

65-4-8/12

TITLE: On the mechanism of the action of anti-oxidants on the process of liquid phase oxidation of ethylated aviation petrols (O mekhanisme deystviya anikisleteley na protsess zhidkofaznogo okisleniya bensinov.)

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel"(Chemistry and Technology of Fuels and Lubricants)1957, No.4, pp.47-53(USSR)

ABSTRACT: The above problem was studied using fresh and to some extent oxidised samples of petrol and the following anti-oxidants: paraoxydiphenylamine, 4,4'-diaminodiphenylsulphide, diethyl-p-phenylenediamine, 2,6-ditertiary butyl-4-methylphenol and 2,4-diaminodiphenylamine. Changes in the physico-chemical properties of ethylated aviation benzene exposed to light at room temperature are shown in Table 1; the influence of admixtures on the oxidation process is shown in Figs. 1-6, and changes in properties of "corrected" petrol on storage is shown in Table 2. It was found that under conditions of liquid phase oxidation, lead tetraethyl decomposes with the formation of active products considerably easier than peroxides. These decomposition products initiate the decomposition of hydroperoxides. Therefore the additives capable of inhibiting the decomposition of lead tetraethyl also inhibit the decomposition of

Card 1/2

On the mechanism of the action of anti-oxidants on the process of liquid phase oxidation of ethylated aviation petrols (Cont.) hydroperoxides. Anti-oxidants inhibiting oxidation of ethylated benzene when added before the oxidation process is started, are capable of inhibiting the already started decomposition of lead tetraethyl in gasoline. The possibility of increasing the stability of ethylated gasoline in which the decomposition process of lead tetraethyl has already started by an addition of para-oxydiphenylamine was demonstrated. There are 2 tables, 6 figures and 7 Slavic references.

65-4-8/12

ASSOCIATION: NII GSM

AVAILABLE:

Card 2/2

Khimiya i Tekhnologiya Topliva i Masel

AUTHORS: Sahliya, Z. A. and Turakiy, Yu. I.
 APPROVED FOR RELEASE: 06/14/2000 GPO: 1965 O - 568-104
 65-6-10/13

TITLE: Phenols from processing Cherekhovsk coals as antioxidants for fuels. (Fenoly pererabotki cherekhovskikh ugley kak antiokisliteli dlya topliv).

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and Technology of Fuels and Lubricants) 1957, No.6, pp.58-62 (USSR).

ABSTRACT: Oxidation inhibiting properties of phenols obtained during semicoking of the Cherekhovsk coals were investigated. Numerous samples of phenols were tested, but the results for three most effective samples are given: 1) phenols separated from spent ammonia liquor, by solvent extraction (the method is not given) and distilled in vacuo; 2) individual fractions of these phenols (the composition - table 1), and 3) some phenolic fractions separated from tar (e.g., fraction boiling 240-330 C). Oxidation inhibiting properties of phenols were tested by rapid oxidation of samples of various fuels (containing components obtained by thermal cracking) inhibited with the antioxidants investigated in comparison with the same fuels containing already known inhibitors.

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ROZHKOV, I.V.; KORNILOVA, Ye.N.; ENGLIN, B.A.

Chemical stability of ethylated gasolines of varied hydrocarbon composition. Azerb. neft. khoz. 37 no.1:34-36 Ja '58. (MIRA 11:6)
(Gasoline)

85180

S/065/60/000/011/006/009
E194/E484

11. 1210

AUTHORS: Rozhskov, I.V., Klimov, K.I., Kornilova, Ye.N. and Vilenkiy, A.V.

TITLE: The Service Performance of Fuel Type T Stabilized With Anti-Oxidant ~~4~~-16 (FCh-16)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.11, pp.49-53

TEXT: Soviet jet fuels for civil aviation are grades T-1, TC -1 (TS-1) and T-2. Fuel T-2 is a wide gasoline-kerosene cut and fuels T-1 and TS-1 are kerosene cuts produced by straight distillation. Fuel type T is a jet-fuel containing gasoline fractions including thermally cracked components. The use of thermally cracked components considerably improves the supply position and the properties of the fuel are generally satisfactory, except that because of the presence of unsaturated hydrocarbons the fuel is much more subject to auto-oxidation than straight distillate fuels. Accordingly, the present work considers in particular the results of long-term storage of fuel containing thermally cracked components stabilized with anti-oxidant FCh-16. The wide-cut fuels are not such good lubricants as kerozene and may give rise to increased wear in fuel pumps. Accordingly,
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E194/E484

The Service Performance of Fuel Type T Stabilized With Anti-Oxidant FCh-16

this property was also studied. Table 1 gives laboratory oxidation test results on fuels produced by different refineries. The oxidation tests were made at a temperature of 110°C for eight hours, oxidation being assessed by the actual resin content at a temperature of 185°C. The fuels were stabilized with 0.05% weight anti-oxidant FCh-16 which consists of phenols that are by-products of semi-coking of Chermkhovsk coal. Previous work has shown that anti-oxidant FCh-16 is a more effective anti-oxidant for thermally cracked fuels than wood-rosin anti-oxidant, ionol and paraoxy-diphenylamine. Storage tests were made for 2.5 years under severe conditions with mean summer temperatures up to 30 to 35°C. In the fuel stabilized with anti-oxidant FCh-16 there was no increase in actual resins or in neutralization value. The data given in Table 2 show that the remaining physical-chemical properties of the fuel containing cracked component and stabilized with FCh-16 did not change during 2.5 years storage and remained within the standard limits. The anti-wear properties of fuels were investigated on a rig KB-1 (KV-1) illustrated schematically Card 2/4

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E194/E484

The Service Performance of Fuel Type T Stabilized With Anti-Oxidant FCh-16

in Fig.2 in which a steel cylindrical roller 5 mm diameter rubs against a spiral of wire 2 mm diameter, wound on the cylindrical surface of a disc. The speed of loading and other conditions are given and the loads to cause scoring with various commercial fuels are plotted in Fig.3. It is shown that the fuels differ considerably in their anti-wear properties, of the straight distillate fuels grade T-1 is the best, T-2 is the worst and TS-1 is intermediate. Samples of fuel containing thermally cracked components and additive FCh-16 are better in anti-wear properties than fuel grade T-2 of the same viscosity and are not worse than fuel TS-1 although of somewhat lower viscosity. In order to explain the reason for this wear, tests were made with the components of the fuel to investigate the influence of adding FCh-16 and the results are plotted in Fig.4. It will be seen that product FCh-16 is able to improve the anti-wear properties of the fuel. It is concluded that a fuel containing 30% of cracking component and 0.05% anti-oxidant FCh-16 is of good oxidation stability and can be stored in the southern regions for not less
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E194/E484

The Service Performance of Fuel Type T Stabilized With Anti-Oxidant FCh-16

than 2.5 years and, moreover, it is of satisfactory anti-wear properties. There are 4 figures, 2 tables and 6 references: 5 Soviet and 1 English.

X

Card 4/4

20056

S/065/61/000/005/002/002
E030/E435

11.1210

AUTHORS: Rozhkov, I.V. and Kornilova, Ye.N.

TITLE: Influence of Antioxidants on the Kinetics of
Oxidation of the Benzene/Kerosene Fraction of Synthene

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, No.5,
pp.54-57

TEXT: An experimental study has been carried out on inhibition of oxidation in "synthene", a product obtained from the oxidation of carbon and hydrogen, and containing 5.5% of unsaturated hydrocarbons. The results are discussed in terms of the threefold classification by K.I.Ivanov and Ye.D.Vilyanskaya (Ref.1 to 3) of antioxidants: first group, effective only on introduction into the oil at the start of oxidation and ineffective if added subsequently; second group, effective if introduced initially and also effective against branched chain peroxides; third group, effective both on introduction and in the autocatalytic stages and possessing moderate effectiveness against peroxides, but not high overall effectiveness. The 150 to 250°C fraction of synthene was studied. Oxidants added were

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E030/E435

Influence of Antioxidants ...

analytical grade hydroquinine in alcohol solution, pure ionol (2,6-ditertiary butyl-4-methylphenol), solutions in isopropyl benzene of analytical grade diphenylamine, α -naphthalamine, β -naphthol, and grade TV-3639-52 (TU-3639-52) paraoxydiphenylamine. The synthene was heated in a molybdenum-glass flask up to 130°C and the temperature maintained for 5 hours. Additives were introduced before heating, or 2, 3 or 4 hours after the start of heating. The specimen was 50 ml size and 5 ml samples were withdrawn every hour for analysis of acidity. All the additives gave similar performances, belonging to the third category, and typical curves are shown in Fig.2 for diphenylamine (plot a) and paraoxydiphenylamine (plot b): time of oxidation (hours) vs acid value (mg KOH/100 ml). It cannot be assumed that these additives will always be in the third group, since a previous study by the authors showed that the type of kinetics depended not only on the chemical structure of the additive but also on the chemical structure of the fuel. There are 4 figures, 1 table and 8 references: 7 Soviet and 1 non-Soviet.

Card 2/3

36931

S/081/62/000/007/021/033
B168/B101

11.0172

AUTHORS: Rozhkov, I. V., Sablina, Z. A., Gureyev, A. A., Kornilova,
Ye. N.

TITLE: Anti-oxidants for fuels

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 546-547,
abstract 7M172 (Sb. "Prisadki k maslam i toplivam". M.,
Gostoptekhizdat, 1961, 388-392)

TEXT: The effectiveness and the mechanism of the action of anti-oxidants intended for automobile gasolines containing components from thermal and catalytic cracking, ethylated aviation gasolines produced by straight distillation, turbojet fuels, tractor kerosenes and diesel fuels were investigated. It was established that the parameters referred to are not determined solely by the structure of the actual inhibitor but depend on the type of the oxidizing hydrocarbons and on the presence in the fuel of non-hydrocarbon additives (e.g. T.E.L.). The most effective anti-oxidant for ethylated aviation gasolines is 0.004-0.005% by weight p-hydroxydi-phenylamine, which ensures that the gasolines will keep without loss of

Card 1/2

Anti-oxidants for fuels

S/081/62/000/007/021/033
B168/B101

conditions for 3-4 years. The most efficient anti-oxidant for stabilizing automobile gasoline A-72 (A-72), which contains +70% components from single-stage catalytic cracking, was found to be FCh-16 (FCh-16) (0.03% by weight); this anti-oxidant consists of phenols extracted from the aqueous fraction of low-temperature carbonization of Cheremkhovo coals and is more effective than wood-tar anti-oxidant, Ionol, or p-hydroxydiphenylamine. Being a surface-active substance, FCh-16 improves the anti-wear properties of fuels. An addition of 0.05% by weight FCh-16 stabilizes for 8 1/2 years those fuels which contain unsaturated hydrocarbons. The addition of anti-oxidants to fuels ensures the retention of their thermal stability at its initial level during storage. 11 references. [Abstracter's note: Complete translation.]

Card 2/2

L 12399-63

EWP(j)/EPF(c)/EWT(m)/BDS AFTTC/APGC Po-4/Pr-4 EM/RM/WM/MH

ACCESSION NR: AP3001670

S/0065/63/000/006/0060/0065

76
75

AUTHOR: Kichkin, G. I.; Rozhkov, I. V.; Vilenkin, A. V.; Kornilova, Ye. N.

TITLE: Effect of additives on anti-wear properties of fuels ✓

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1963, 60-65

TOPIC TAGS: additives, anti-wear, fuels; anti-oxidants, dispersant stabilizers, metal deactivator, surface-active additives

ABSTRACT: The anti-wear properties of fuels T-1^{||} and TC-1^{||} (naphtha-kerosene fraction) and T-2^{||} (naphtha-kerosene-benzene fraction) were investigated. T-1 showed best and T-2 the worst anti-wear properties; increasing temperature from 20 to 150 degrees noticeably reduced the anti-wear properties. Addition of small amount (0.01% by weight) of antiwear additives (s-organic compounds, or thiophosphoric acid esters) developed for oils, increased anti-wear properties of the fuels to the same extent as the addition of anti-oxidants and dispersant stabilizers. A metal deactivator showed very little surface-active effect, but surface active phenols or phenylenediamine improved fuel stability

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Card 1/2

I. 12399-63

ACCESSION NR: AP3001670

and increased anti-wear property. "K. I. Klimov was one of the supervisors at the start of the work." Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 08Jul65

ENCL: 00

SUB CODE: none

NO REF SOV: 007

OTHER: 003

Card 2/2

B.A

AJ-1

Oxidation by manganese triacetate. II. Oxidation of α -glycols and α -hydro-alcohols. B. A. Zorin and Y. I. Korotkova (*J. gen. Chem. USSR*, 1950, 24, 1895--1901) [U.S. transl., 1951--1910; cf. preceding abstract].--The mechanism of oxidation of glycols by $Pb(OAc)_2$ suggested by Celmer; *et al.* (*Ann.*, 1932, 207, 155) is not applicable to $Mn(OAc)_3$ and the following scheme is advanced:

$$OH-CR^1R^2-CR^3R^4-OH + Mn(OAc)_3 \rightarrow$$

$$OH-CR^1R^2-CR^3R^4-OAc + Mn(OAc)_2$$

$$[CR^1R^2-CR^3(OAc)]_2 \rightarrow (R^1R^2CO)_2 \rightarrow SCR^1R^2O.$$

The velocity of oxidation is influenced by the structure of the compound undergoing oxidation, by the solvent, and by the temp. In polar solvents (glacial and 80% AcOH) the rates of oxidation of dihydropyridic alcohols are arranged in the following sequence: benzoin, CF_3CH_2OH , $OH-CH_2$, CF_3CH_2OH , $OH-CH_2$, $CH_2=CH$, α -hydroxyisopropyl, and α -hydroxyisobutyral. The rate of oxidation is influenced by the nature of the solvent; in 80% AcOH all the glycols and α -hydro-alcohols investigated are oxidized more slowly than in glacial AcOH. Under the same conditions, diols glycols are oxidized more rapidly than diols. The character of the solvent influences the oxidizing potential of $Mn(OAc)_3$. In particular, in the neutral solvents, CH_2Cl_2 and CCl_4 , glycols are oxidized more slowly than in AcOH.

Experiments are carried out in a 3-necked flask fitted with a stirrer and a reflux condenser, in CO_2 . The weighed quantity of $Mn(OAc)_3$ (0.001--0.002 mol.) is dissolved in 20--30 ml. of the desired solvent at the requisite temp. and the activity is measured. The glycol or hydro-alcohol (0.002--0.005 mol.) is added and the activity of aliquots is measured after definite time intervals. In all cases at the end of the experimental part of the solvent is removed and H_2O is added to the residue, which is filtered. The filtrate is made weakly alkaline with $MgCO_3$ or 10% alkali and extracted with Et_2O . Solvent is removed from the distal extracts and the residue is treated with NH_4OH , $MnCl_2$. Thus are obtained: benzoin oxime, m.p. 124--125°, and α -hydroxyisobutyral oxime, m.p. 17--22°. Phenols and $OH-CF_3CH_2-CH_2-OH$ furnish oximes, determined qualitatively by Mo nitrosamide. Hydrobenzoin gives $PhCHO$, detected qualitatively by Nessler's reagent. The isolation of the oxidation products

of the α -hydro-alcohols is effected similarly after the Et_2O has been removed and the solid residue crystallized from $EtOH$; benzil and anil are thus obtained.

H. Wenz.

2A

10

Oxidation by manganese triacetate. II. Study of the
oxidation of α -glycols and α -keto alcohols. S. A. Zonis and
Yu. L. Kozminova. *J. Gen. Chem. (U.S.S.R.)*, 20, 1301-10
(1950) (Engl. translation). IV. The action of manganese
triacetate on γ -acetylonic glycols. S. A. Zonis. *Ibid.*
1951, 21 (Engl. translation). See C. I., 45, 10196h.
R. M. S.

KORNILOVA, YU. I. and DOBRYANSKIY, A. F.

Catalytic Cleavage of Symmetrical Diphenylethane by the Action of Aluminum Chloride, Page 311, Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol I, Moscow-Leningrad, 1953, pages 762-766

Chair of Pyrogenic Processes, Leningrad Technological Inst imeni Lensovet

Heating $(\text{CH}_2\text{Ph})_2$ (I), with AlCl_3 to $230-50^\circ$ or $330-50^\circ$ results in 2 simultaneous processes: cleavage and condensation. I undergoes solely the unsym. cleavage, regardless of conditions, yielding C_6H_6 and condensation products of linear structure. The yields depend on conditions. If the low boiling material is not removed continuously, the yield of distillable material (mostly C_6H_6) declines. The yield of distillable material rises with the increase of catalyst concn. from 1% to 10%. Oxidation of the condensation products gave BzOH and $p\text{-C}_6\text{H}_4(\text{CO}_2\text{H})_2$.

КОММЕНТЫ, 194, 14, and ДОКЛАДЫ, А. П.
"Condensation of Ethylene Chloride with Aromatic Hydrocarbons in the Presence of Aluminum Chloride," Page 315.
Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol I, Moscow-Leningrad 1953, pages 762-766.

Chair of Pyrogenic Processes, Leningrad Technological Inst imeni Lensovet

The reaction of $(\text{CH}_2\text{Cl})_2$ with C_6H_6 in the presence of AlCl_3 yields $(\text{PhCH}_2)_2$

and resins, or condensation products. $(\text{CH}_2\text{Cl})_2$ (99 g.) and 234 g. C_6H_6 with 10 g. AlCl_3 gave, after the usual aq. treatment, 55% $(\text{PhCH}_2)_2$, $b_{15} 152-50^\circ$, and 40 g. product, $b_{16} 155-300^\circ$. Some higher boiling residue was left. Repeated distn. gave $p\text{-C}_6\text{H}_4(\text{CH}_2\text{CH}_2\text{Ph})_2$, $b_3 212^\circ$, m. $47-8.5^\circ$, and $(p\text{-PhCH}_2\text{CH}_2\text{C}_6\text{H}_4\text{CH}_2)_2$, $b_3 270-8^\circ$, m. $76-85^\circ$, (possibly a mixt. of isomers). Oxidation gave terephthalic acid and BzOH . The same oxidation products were obtained from the tarry distn. residue. Similarly MePh gave up to 65% ditolylethane, $b_3 142^\circ$, $d_{20} 0.9681$, which oxidized with KMnO_4 to terephthalic and isophthalic acids, with traces of toluic acids, thus indicating the formation of m- and p-isomers in the condensation. The higher boiling products yielded 1,3-bis(2-(p-methylphenyl)ethyl)-5-methylbenzene, $b_3 226-8^\circ$, in. $62-9^\circ$.

7
A U R W I Z U F 77

The action of aluminum chloride on esters of dibasic acids. A. P. Dobryanski and Yu. I. Kornilova. *Sbornik Statei Obshchei Khim. Akad. Nauk S.S.S.R.* 1, 323-1 (1953).
—AlCl₃ (5 g.) and 10 g. CH₃(CO₂Et)₂ heated on a steam bath 7-10 min. until the reaction commenced and the mixt. allowed to stand until gas (EtCl) evolution ceased gave a spongy yellow mass, which, extrd. with Et₂O, yielded a residue of Al malonate, C₆H₄O₄Al₂, which was extremely hygroscopic. Similarly 4.7 g. AlCl₃ and 22 g. *o*-C₆H₄(CO₂Bu)₂ yielded after the above-described treatment an unstated amount of Al phthalate, C₈H₄O₄Al₂, a very hygroscopic solid, along with BuCl. G. M. Koolanoff

M. J. G. J.

KORNILOVA, Y. I.

Alkylation of aromatic hydrocarbons by esters of dicarboxylic acids. A. B. Dobrynin and Yu. I. Kornilova, Sovetskii Soveti Khimii, Acad. Nauk S.S.S.R. 1, 322-4(1953).—Heating 70 g. $AlCl_3$, 40 g. C_6H_6 , and 30 g. $(CO_2Et)_2$, until the reaction started (total duration about 0.5 hr.) followed by aq. treatment of the mixt. after cessation of gas evolution, gave 10 g. EtPh. Similarly 20 g. $MePh$ gave 10 g. mixed *m*- and *p*- MeC_6H_4Et , with predominance of the former (as shown by oxidation to the dicarboxylic acids). *Com.* xylene similarly gave 6-ethyl-*m*-xylene, b. 184-7°, which on oxidation gave pure trimesic acid, m. 248-51°. A similar reaction with $CH_3(CO_2Et)_2$ and C_6H_6 gave very little EtPh. G. M. Kosolapoff

MA Jan

KORNILOVA, Yu. I. and A. F. Dobryanskiy

Catalytic Decomposition of Symmetrical Ditelylethane by the Action of Aluminum Chloride, Page 325

Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol I, Moscow-Leningrad 1953, pages 762-766

Laboratory of Pyrogenic Processes, Leningrad Technological Inst imeni Lensovet

Heating mixed 1,2-di(m-tolyl)ethane and 1,2-di(p-tolyl)ethane with $AlCl_3$ to 230-50° led to cleavage of the former in 2 directions, predominant reaction was cleavage of MePh, a lessor reaction was the cleavage of xylene (m- and p-isomers as identified after oxidation to the acids). The extent of the reaction rises with temp. and with duration as well as with increase of the proportion of $AlCl_3$ used. Attempts to oxidize the high boiling products failed to yield any conclusive results.

SEMENOV, S.S.; KORNILOVA, Yu.I.

Action of alcohol-alkali solution on organic matter of Baltic shales. Trudy VNIIPS no.3:5-10 '55. (MLRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

CA

10

Oxidation by manganese triacetate. II. Oxidation of α -glycols and α -beta alcohols. S. A. Zonis and Yu. I. Korotkova (Leningrad Tech. Inst., Leningrad), *Zhur. Obshchest. Khim. (J. Gen. Chem.)* 20, 1252-51(1950); cf. *C.A.* 45, 1556f. -- The oxidation mechanism by which $Pb(OAc)_2$ operates is inapplicable to the Mn acetate reaction. The proposed scheme is as follows: $R_2C(OH)C(OH)R_2 + Mn(OAc)_2 \rightarrow R_2C(OMn(OAc))C(OH)R_2 + Mn(OAc)_2 \rightarrow R_2C(OMn(OAc))C(OMn(OAc))R_2 \rightarrow (R_2CO)_2 \rightarrow 2R_2CO$. The temp., solvent, and substrate structure affect the reaction rate. Polar solvents (AcOH 100% or 80%) give the following ascending scale of reactivities: $[Ph_3C(OH)]_2$, $[MePhC(OH)]_2$, $PhMeC(OH)C(OH)Me$, $[Me_2C(OH)]_2$, bicyclopentyl-2,2'-diol, and 2-hydroxycyclohexanemethanol. The reaction is slower in 80% than in 100% AcOH, and tertiary oxidizes more rapidly than secondary glycols. The glycols are oxidized considerably slower in tetrachloroethane or trichloroethane than in AcOH, probably as a result of H bond action in the inert solvents. The results obtained with 0.0005-0.00025 mole substrate and 0.001-0.0005 mole $Mn(OAc)_2$, at 30, 50, 80, and 100°, are presented in tabular and graphic forms. IV. Action of

manganese triacetate on γ -acetylenic glycols. S. A. Zonis, *ibid.* 1263-72. -- Secondary γ -acetylenic glycols, such as $[PhCH(OH)C]_2$ (I), are oxidized by $Mn(OAc)_2$ to γ -diketones of the acetylene series; only tertiary glycols yield acetylation products at the triple bond under the action of $Mn(OAc)_2$, when the glycol is of aromatic type; aliphatic analogs are ruptured. The stereoisomerism of the glycol is of importance; this is explained by possible extensive polarization of the unsatd. link, which is different in trans and cis isomers; the polarization leads to coordination of the OH hydrogen with the neg. C, thus altering the oxidizability. Reactions of 0.24 g. I, m. 137-8°, with 0.7 g. $Mn(OAc)_2$ in 100 ml. AcOH, as well as with a doubled amt. $Mn(OAc)_2$ in 100 ml. AcOH, at 30, 50, and 100°, with final degrees of oxidation of 25, 53, and 88%, resp.; the final product was *diphenyl-3-butynedione*, m. 110.5-12° (from EtOH). Even at 100° I gave only 80-7% final products: *Pb.CO, 2,2,3,3-tetra-phenyl-3,4-diacetyloxy-3,3-dihydrofuran*, m. 180-80°, and

over

SEMENOV, S.S.; KORNILOVA, Yu.I.; GUREVICH, B.Ye.; ORLOVA, N.S.

Detection and analysis of functional groups in organic matter of
Baltic shales. Trudy VNIIPS no.3:11-15 '55. (MLRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

KORNILOVA, Yu.I.; SEMENOV, S.S.

Investigating the organic matter of oil shales from the Kashpir
field. Trudy VNIIT no.8:4-13 '59. (MIRA 13:4)
(Kashpir--Oil shales)

SEMENOV, S.S.; KORNILOVA, Yu.I.; DOKSHINA, N.D.

Methylation of oil shale kerogen by diazomethane. Trudy VNIIT
no.8:28-34 '59. (MIRA 13:4)
(Oil shales) (Kerogen) (Methylation)

SOVALOVA, A.A., kand.tekhn.nauk, dotsent; KORNILOVA, Z.I., inzh.

Heat resistance of certain nickel-base alloys. Trudy MATI no.31:
107-112 '58. (MIRA 11:7)
(Nickel alloys--Testing) (Heat-resistant alloys)

L 28538-66 EWT(m)/EWP(e)/ETI LJP(c) JD/WB/GD

ACC NR: AT6012383

SOURCE CODE: UR/0000/65/000/000/0143/0147

AUTHORS: Kornilova, Z. I.; Ignatov, D. V.

32

ORG: none

31

B+1

TITLE: A structural-kinetic study of the oxidizability¹⁶ of titanium alloys

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 143-147

27

TOPIC TAGS: titanium alloy, metal oxidation, oxidation kinetics, composition, temperature, phase transition / AT12 titanium alloy phase

12

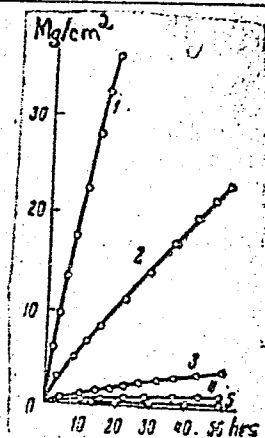
ABSTRACT: The results are given of a study of the kinetics of oxidation of titanium alloys of the AT type and of the phase composition of the scale formed on them. The kinetic curves of oxidation were obtained by the method of intermittent weighing on a balance with a sensitivity of $2 \cdot 10^{-5}$ g. Specimens in the form of $10 \times 10 \times 4$ -mm wafers were cut from forged and annealed (at 950C) rectangular rods. With prolonged exposure, the oxidation kinetics of AT alloys are functions of temperature and time (see Fig. 1). In the scale formed at 800-1000C, rutile and γ - Al_2O_3 were detected.

Card 1/2

L 28538-66

ACC NR: AT6012383

Fig. 1. Kinetic curves of oxidizability in air of AT12 alloy: 1 - 1000C; 2 - 900C; 3 - 800C; 4 - 700C; 5 - 600C.



A metallographic study of the scale on pure titanium and its alloys showed that the thickness of the oxygen-saturated layer on pure titanium is considerably greater than that on the alloys. The aluminum in the alloys stabilizes the phase α -Ti and increases the point of $\alpha \rightarrow \beta$ transition by 50--100C, depending upon the concentration. The intensive oxidation of the titanium alloys at 800--1000C is explained by: 1) the presence of an allotropic $\alpha \rightleftharpoons \beta$ transition; 2) intensive reaction of the scale with the metal; 3) the high ratio of the volume of TiO_2 to the volume of the metal; and 4) the absence in the scale of chemical compounds of TiO_2 and oxides of the alloy components that are thermodynamically stable at 800--1100C.

Orig. art. has: 5 figures.
 SUB CODE: 11/ SUBM DATE: 02Dec65/ ORIG REF: 004
 Card 2/2 AC

KORNILOVICH, A.

Subject : USSR/Aeronautics AID P - 2448

Card 1/1 Pub. 135 - 14/19

Author : Kornilovich, A., Lt. Col. Eng.

Title : ~~_____~~ Astashenkov, P. T., Elektrichestvo na samolete (Electricity in aircraft), 1955. (Book review)

Periodical : Vest. vozd. flota, 8; 82-83, Ag 1955

Abstract : This book is about the electric equipment of the modern aircraft. It belongs to the popular science library series for soldiers and sailors.

Institution: None

Submitted : No date

SOV/86-59-1-36/39

AUTHOR: Kornilovich, A.A., Engr Lt Col

TITLE: High-altitude Equipment of Aircraft (Vysotnoye oborudovaniye samoletov)

PERIODICAL: Vestnik vozdušnogo flota, 1959, Nr 1, pp 88-89 (USSR)

ABSTRACT: Thus article is a critical review of the book Vysotnoye oborudovaniye samoletov, High-altitude Aircraft Equipment, by L.T. Bykov, M.S. Yegorov, and P.V. Tarasov, published by the oborongiz (State Publishing House of the Defense Industry) Moscow, 1958, 392 pages.

KRAVCHENKO, A.F.; KORNILOVICH, A.A.; SAKS, I.A.; SIROTKINA, V.P.

Electric properties of silicon with phosphorus admixture. Izv.
SO AN SSSR no. 10. Ser. tekhn. nauk no. 3:79-85 '65

(MIRA 19:1)

1. Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN
SSSR, Novosibirsk. Submitted August 27, 1964.

L 2551-66 EWT(m)/EWP(w)/EPP(c)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/RM

ACCESSION NR: AF5021083

UR/0288/65/000/002/0153/0154
537.311.33

AUTHOR: Kornilovich, A. A.; Kravchenko, A. F.

TITLE: Effect of heat treatment on the electrical properties of silicon containing phosphorus as an impurity

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 2, 1965, 153-154

TOPIC TAGS: high temperature annealing, low temperature annealing, Hall effect, silicon, phosphorus impurity, free electron mobility, donor concentration, electrical resistance, electroneutral silicon dioxide

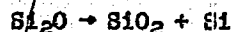
ABSTRACT: Heating of Si to temperatures above 350C markedly changes its electrical properties; the reason for this is not conclusively known, although certain theories on the interaction of oxygen with atoms of silicon and atoms of impurities have been advanced. In this connection, the authors present the results of an experimental investigation of electrical resistance, concentration, and free electron mobility as a function of the time and temperature of the heat treatment (annealing) of three groups of n-Si containing different amounts of P impurity. The annealing was performed in a vacuum (10^{-3} mm Hg) at from 400 to 1100C for 30 min to 40 hr, and the cooling, for 10 hr, inside the furnace. The effect of annealing differed

Card 1/3

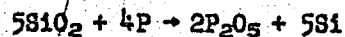
L 2551-66

ACCESSION NR: AP5021083

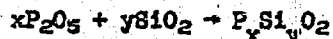
depending on the temperature range in which it was performed: above 800C the Hall coefficient and free-electron mobility tended to increase (most sharply in the material with the lowest content of P), while electrical resistance remained constant; below 800C (low-temperature annealing) the Hall coefficient and the electrical resistance of Si decreased while electron mobility somewhat increased. Annealing beyond 30 min no longer affected the electrical characteristics and parameters of Si. The differences in the effect of heat treatment on electrical properties are conditioned by the presence of oxygen in silicon in the form of monodisperse Si_2O groups. In the process of the heating of Si to 1000C the oxygen atoms become regrouped



The electrically neutral groups of SiO_2 interact with the phosphorus



The resulting oxides of the impurity react with SiO_2



As a result, the P and O atoms are bound into electrically neutral $P_xSi_yO_2$ groups and the

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ACCESSION NR: AP5021083

2

donor concentration decreases. On heating to 1300C the molecules of phosphorus-silica glasses, the oxides of the impurity, and the silicon dioxides decay, and the liberated oxygen diffuses through the interstices and, following rapid cooling of the crystal, is distributed in the form of Si₂O groups. By contrast, low-temperature treatment leads to the formation of electrically active SiO₄ complexes from Si₂O groups. These complexes may be singly or multiply ionized, thus leading to an increase in free-electron concentration. The increase in electron mobility is clearly attributable to the decrease in the number of thermal defects in the process of prolonged annealing. Orig. art. has: 3 figures. [16]

ASSOCIATION: Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN SSSR, Novosibirsk (Institute of Semiconductor Physics, Siberian Department, AN SSSR)

SUBMITTED: 08Oct64

ENCL: 00

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OTHER: 009

ATD PRESS: 4109

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L 14562-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP6002015

SOURCE CODE: UR/0288/65/000/003/0079/0085

AUTHOR: Kravchenko, A. F.; Kornilovich, A. A.; Saks, L. A.; Sirotkina, V. P.

ORG: Institute of Semiconductor Physics, Siberian Branch, AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov Sibirskogo otdeleniya AN SSSR)

TITLE: Electrical properties of silicon with phosphorus admixtures

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 3, 1965, 79-85

TOPIC TAGS: silicon semiconductor, specific resistance, Hall effect, thermoelectromotive force, phonon scattering

ABSTRACT: The majority of earlier works concerning the influence of phosphorus on the physical properties of silicon were carried out on polycrystalline materials in which the intercrystalline potential barriers made the interpretation of kinetic effects extremely complicated. In view of the present-day uses of n-type silicon with low P content, the authors investigated effects in three types of Si samples (Si-1, Si-2, Si-3) with differing P concentration having at room temperature specific resistivities of 18, 9, and 6 ohm·cm. Experimental results are summarized in Figures 1 through 4. A detailed theoretical interpretation of the experimental results is also given. The theoretical dashed curves in Fig. 4 are in good agreement with experimental data except in the low temperature region, where the deviation may be due to admixture scattering which was neglected during the theoretical derivation.

UDC: 639.293:538.632

639.295:537

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L 14562-66

ACC NR: AP6002015

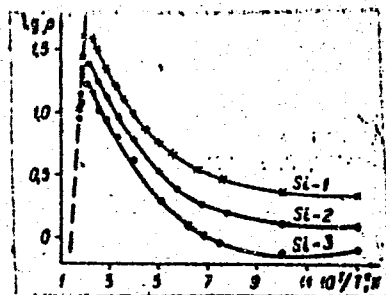


Fig. 1 Temperature dependence of n-type, P admixture silicon resistivity.

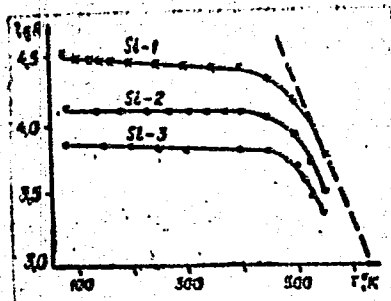


Fig. 2 Temperature dependence of the Hall constant of n-type, P admixture silicon.

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L 14562-66

ACC NR: AP6002015

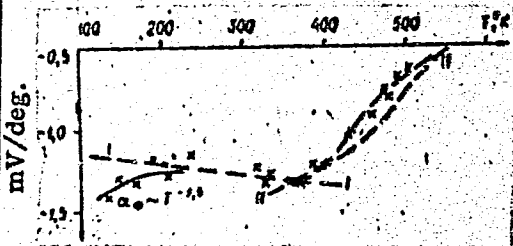


Fig. 3 Temperature dependence of the thermal emf of n-type, P admixture silicon

Curve II in Fig. 3 is somewhat below the experimental points probably because of a too coarse estimate of the role of inter-valley scattering. The increase in the absolute value of the

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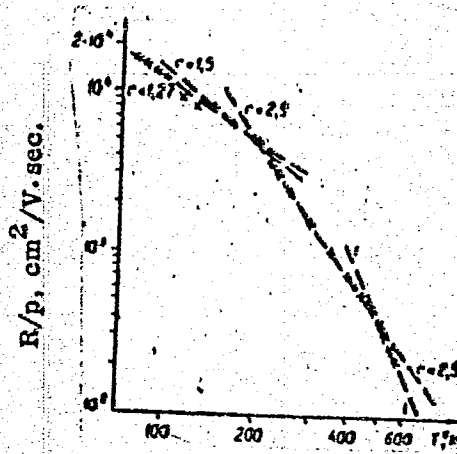


Fig. 4 Hall mobility as a function of temperature

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DUBININA, V.N.; KORNILOVICH, I.A.

Plumbojarosite in the oxidation zone of lead-zinc deposits of eastern Transbaikalia. Zap.Vses.min.ob-va 88 no.3:323-328 '59.

(MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut, Leningrad. 2. Deystvitel'nyy chlen Vsesoyuznogo mineralogicheskogo obshchestva (for Dubinina).

(Transbaikalia--Jarosite)

3(8)

SOV/25-128-1-42/59

AUTHORS: Dubinina, V. N., Kornilov, I. A.

TITLE: On Mutual Substitutions Between Mimetesite and Bindheimite

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1,
pp 156 - 159 (USSR)

ABSTRACT: Bindheimite which is formed in consequence of the oxidation of boulangerite was found in the oxidation zone of quite a series of polymetallic deposits of the eastern Baykal region. Furthermore a considerable distribution of mimetesite was observed which substitutes metasomatically cerussite in the presence of scorodite. In the present paper on the one hand the gradual transitions from cerussite over mimetesite to bindheimite other were observed which were confirmed by radiometric investigations and a spectrum analysis. On the other hand the change of pseudomorphoses of the bindheimite substituted by a mixture of cerussite and beudantite towards boulangerite or the development of mimetesite along the flaws in and on the "crystals" composed of bindheimite (Fig 1). The radiogram recorded by the honey-colored mimetesite shows a distinctly marked diffraction picture and the line pattern

Card 1/3

On Mutual Substitutions Between Mimetesite and
Bindheimite

SOV/20-128-1-42/50

corresponds to the standard (Table 1). The radiograms calculated for other are given in table 2. It was found that the penetration of antimony into the crystal lattice of mimetesite proceeds by a gradual displacement of arsenic and by the disturbance of the mimetesite structure. An almost perfect removal of arsenic causes a rearrangement of the structure into a bindheimite structure. The transition from mimetesite to bindheimite was in numerous cases observed in the Yekaterininskoye deposit. The transformation of bindheimite into cerussite-budantite mixture or into mimetesite was observed in parallelly carried out microchemical, chemical, and immersion determinations of minerals of sections from the deposit in the middle section of the Spasskaya mountain. Bindheimite forms most frequently pseudomorphoses on boulangierite. The chemical analysis of bindheimite is given in table 3. It often occurs that the bindheimite pseudomorphoses are crossed by mimetesite small veins towards boulangierite, at some places entire surfaces are filled by granular mimetesite (Fig 2). These facts speak in favor of the fact that the affinity of lead to arsenic and antimony in the oxidation

Card 2/3

On Mutual Substitutions Between Mimetesite and
Bindheimite

SOV/26-128-1-42/58

zone is approximately equal. The development of lead-containing arsenic- or antimony minerals depends obviously on the higher concentration of the one or other anions. The radiograms were taken in the X-ray Laboratory VSEGEI and calculated by Ye. P. Sokolova. The spectrum analyses were carried out in 1954-55 by Ye. Ya. Smirnova in the Spectral Laboratory VSEGEI. There are 2 figures, 3 tables and 1 reference.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut
(All- Union Scientific Research Institute of Geology)

PRESENTED: April 8, 1959, by A. G. Betekhtin, Academician

SUBMITTED: March 19, 1959

Card 3/3

KORNILOVICH, I.A.

Find of valentinite in Spasskaya Mountain (eastern Transbaikalia).
Zap. Vses. min. ob-va 89 no.3:343-346 '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut
(VSEGEI), Leningrad.
(Transbaikalia--Valentinite)

DUBININA, V.N.; KORNILOVICH, I.A.

Mineralogy of oxidised zinc ores in complex metal deposits of
eastern Transbaikalia. Trudy Min.miz. no.1343-61 '62.

(MIRA 16#2)

(Transbaikalia--Zinc ores)

DUBININA, V.N.; KORNILOVICH, I.A.; SOKOLOVA, Ye.P.

Pyromorphite and other exogenetic minerals of the apatite
group in the complex metal deposits of eastern Transbaikalia.
Trudy VSEGEI 96:137-149 '63. (MIRA 17:9)

DUBININA, V.N.; KORNILOVICH, I.A.

Halloysite from the Sherlovaya Gora deposit. Trudy VSEGEI 96:
151-160 '63. (MIRA 17:9)

KORNILOVICH, I.A.

Idoyrite from the Sherlovaya Gora deposit. Trudy VSEGEI 96:
161-163 '63. (MIRA 17:9)

KORNILOVICH, Yuriy Yevgen'yevich

DECEASED

c. '64

KUTSYNA, L.M.; VOYEVODA, L.V.; KORNILOVSKAYA, L.D.

Dipole moment of 1,3,5-triphenylpyrazoline- Δ^2 in the first
electronic excited state. Opt. i spektr. 18 no.3:520-522
Mr '65.

(MIRA 18:5)

KORNILOW-PIOTROWSKI

WĘGRZYŃSKI, L:KORNILOW-PIOTROWSKI, E.

Problem of group therapy of tuberculosis in health resorts.
Polski tygod. lek 5 no.15:582-583 11 Apr 1950 (CJML 20:1)

1. Of the Infirmary of the National Social Insurance in Oborniki
Slaskie, near Trzebnica (Director--Leslaw Węgrzynowski, M. D.)

NIECIUNSKI, Witold, mgr; KORNILOWICZ, Jan, mgr; DOMINIAK, Wladyslaw, mgr

Housing problems in new centers of developing industry.
Inst bud miesz prace 15 no.47:1-122 '64.

137-58-4-6540

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 31 (USSR)

AUTHORS: Lerner, V.S., Kornil'tsev, Yu. A.

TITLE: Automatic Measurement of the Level of the Fused Mass in Electrical Lead-smelting Furnaces (Avtomaticheskoye izmeryeniye urovnya rasplavlennoy massy v elektricheskikh pechakh svintsovoy plavki)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 14, pp 24-25

ABSTRACT: A description is offered of a periodically-functioning instrument consisting of a bar and a cable let down by a driving mechanism (DM) every 20 or 30 min, or at some other time interval actuated by a time relay (TR) and an electronically-recording automatic balanced bridge (BB) with a disk record and an electric circuit. When the bar touches the melt as it is lowered, a voltage relay is turned on, the DM stops, the BB is switched on, and this measures the resistance of the feedback resistor of the DM and records the distance the bar has been lowered, or in other words the level of the heat. Then the TR switches off the BB circuit, raises the bar, and actuates a disconnect switch when the bar is in its raised position. The

Card 1/2

137-58-4-6540

Automatic Measurement of the Level (cont.)

interval is counted off, the TR operates, and the cycle is repeated. The level can be measured within the range of 500-2000 mm.

M. L.

1. Metallurgy 2. Equipment--Design 3. Equipment--Operation 4. Melts
--Level--Measurement

Card 2/2

SOV/137-58-8-16348

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 16 (USSR)

AUTHORS: Lerner, V.S., Kornil'tsev, Yu.A.

TITLE: An Automatic Power-control Circuit of an Electric Foundry Furnace for Smelting Lead Sinter (Skhema avtomaticheskogo regulirovaniya elektricheskoy moshchnosti rudnotermicheskoy pechi dlya plavki svintsovogo aglomerata)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 24, pp 22-26

ABSTRACT: A description is provided of an automatic power-control system (ACS) in an electric foundry furnace developed and tested by the VNIITsvetmet at the Leninogorsk Lead Plant. The ACS circuit is adduced, its principles of operation are described, as is the equipment used in the ACS. In the conclusions it is noted that 3 variants of the ACS based on measuring and controlling the resistance in the electrode-slag-hearth circuit have been checked out in operation.

M.L.

1. Furnaces--Control systems 2. Furnaces--Circuits 3. Sintered lead--Processing

Card 1/1

AUTHORS: Lerner, V.S., and Kornil'tsev, Yu.A. SOV/115-58-1-28/50

TITLE: Measuring Alternating Currents and Voltages by the Compensation Method (Izmereniye peremennykh tokov i napryazheniy kompensatsionnym metodom)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 1, p 56 (USSR)

ABSTRACT: The automatic control and adjustment of many processes requires precise measuring, recording and adjusting of alternating currents and voltages. But the control instruments produced by the Soviet instrument industry are not adapted for this purpose. The automation laboratory of VNIITsvetmet has solved the problem by using a revised version of a common automatic potentiometer, EPD-17. The

Card 1/2