GOHDON, I.M.; PICHAKHCHI, L.D.

Polarization of light in the emission lines of unstationary stars, excited by a synchroton radiation of relativistic electrons. Dokl. AN SSSR 120 no. 1:55-58 My-Je '58. (MIRA 11:7)

1. Predstavleno akademikom V.A.Ambartsumyanom.
(Stars--Spectra)
(Electrons)

24.2120

S/185/61/006/001/006/011
D210/D305

AUTHOR: Pichakhchi, L D

TITLE: On the stability of a tangential discontinuity in a rarefied plasma

PERIODICAL: Ukrayins'kyy fizychnyy znurnal, v. 6, no 1, 1961, 86-92

TEXT: Magnetohydrodvnamic equations of G F Chew, M L Goldberger and F.S Low (Ref. 1: Proc Roy Soc , A236, 112, 1956) are used by the author to examine the stability of a tangential discontinuity in a plasma It is assumed that the plasma can be described by:

$$\rho \frac{\partial v_i}{\partial t} + \rho v_k \frac{\partial v_i}{\partial x_k} + \frac{\partial p_{ik}}{\partial x_k} - \frac{1}{4\pi} H_k \frac{\partial H_k}{\partial x_i} - \frac{1}{4\pi} H_k \frac{\partial H_i}{\partial x_k} \quad (1)$$

where

$$p_{ik} = p_\perp \delta_{ik} + \frac{p_\parallel - p_\perp}{H^2} H_i H_k \quad (2)$$

$$\frac{\partial \rho}{\partial t} + \operatorname{div} \rho v = 0 \quad (3)$$

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On the stability

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$$\frac{\partial H}{\partial t} = \mathrm{rot}\,[vH] - \mathrm{div}\,H = 0 \qquad \ldots - \frac{1}{c}\,[vH] \qquad (4)$$

$$\frac{d}{dt}\left(\frac{p_\perp}{\rho H}\right) = 0, \quad \frac{d}{dt}\left(\frac{p_\perp H^2}{\rho^3}\right) = 0 \qquad (5)$$

Within the framework of Eqs (1)-(5) the tensors which give the densities of the momentum and energy fluxes are:

$$\Pi_{ik} = \rho v_i v_k + p_{ik} - \frac{1}{4\pi}\left(H_i H_k - \frac{1}{2}\,\delta_{ik} H^2\right) \qquad (6)$$

$$Q = \rho v\left(\frac{v^2}{2} + \varepsilon + \frac{p_\perp}{\rho}\right) + \frac{p_\parallel - p_\perp}{H^2} H\,(vH) - \frac{1}{4\pi}\,[H\,[vH]] \qquad (7)$$

where $\varepsilon = \frac{1}{\rho}\left(p_\perp + \frac{1}{2}p_\parallel\right)$ is the specific internal energy of the plasma. From Eqs (6) and (7) the conditions for a tangential discontinuity are easily obtained:

$$v_x = 0, \quad H_x = 0, \qquad (8)$$

$$\left\{p_\perp + \frac{H^2}{8\pi}\right\} = 0 \qquad (9)$$

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On the stability

The magnetic field H and the velocity v lie in the plane of the discontinuity and can suffer changes ("jumps") of arbitrary magnitude. The jumps of the density ρ and the pressure anisotropy a = p − p⊥, where p∥ is related to the magnetic field by Eq (9). The tangential discontinuity stability is investigated by the method employed by S I Syrovatskiy (Ref. 4: Trudy fizicheskogo instituta, 8, 13, 1956) for magnetonydrodynamics with scalar pressure. A necessary stability condition is derived for arbitrary jumps at the tangential discontinuity. For the special case, when only the plasma velocity suffers a sudden change, the stability region is found in terms of plasma parameters. Acknowledgment is made to Professor V I Berman for suggesting this work. There are 1 figure and 7 references: 6 Soviet-bloc and 1 non-Soviet bloc. The reference to the English-language publication reads as follows: G F Chew, M L Goldberger and F S Low, Proc Roy Soc A236, 112, 1956.

ASSOCIATION Kharkivs kyy derzhavnyy universytet im O M Hor kom (Khar kov State University im A M Gor kiy)

SUBMITTED April 9, 1960

Card 3/3

PICHAKHCHI, M.V.; RAYEV, I.I.

Preparation of chaplets. Lit.proizv. no.2:23 F '56.
(Foundry machinery and supplies) (MLRA 9:6)

Z/041/62/000/006/003/003
E160/E472

AUTHOR: Píchal, Miroslav, Engineer, Candidate of Sciences

TITLE: The turbulent boundary layer on a plane plate without a pressure gradient in a stream of high turbulence intensity

PERIODICAL: Strojnícký časopis, no.6, 1962, 552-571

TEXT: The experimental research on this subject was carried out at the Institute of Machine Research Czechoslovak AS with the aim of investigating the influence of the external flow turbulence on the development of the boundary layer and on the separate values characterizing it. The theoretical background and the basic characteristic equations are based on the assumptions of the two-dimensional non-compressible flow and cover the energy balance and velocity distribution within the boundary layer, as well as viscous stresses near the plate. Since the thickness of the boundary layer is small, special equipment as well as special measuring techniques had to be developed. They include: multi-probes, consisting of two rows of small Pitot tubes, which were used for rapid determination of velocity distribution across the boundary layer; multi-micromonometers; miniature probes used for measuring

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The turbulent boundary layer ...

viscous stresses and static pressures. Records of readings were taken photographically. Experiments were carried out in a recirculating wind tunnel, having a 1.59 x 2.84 sq.ft. working section, equipped with artificial means for increasing the main stream turbulence. The experimental flat plate was a 1.18 inch thick wooden board with a 21.5° chamfer on the leading edge and highly polished with a shellac solution on the surface where the measurements were taken. Experiments were carried out at two basically different turbulence levels, one very low - 0.19% given by the inherent properties of the wind tunnel - and the other artificially raised and gradually decreasing from 17 to 10% along the plate. Further tests were also carried out using turbulence creating wires, 1 mm diameter, placed 2.5 mm above the top surface and 50 mm downstream from the leading edge. Results are qualitative and have shown that the disturbance of the flow velocity, caused by the leading edge, stabilizes more rapidly when the turbulence level is higher. This is explained in terms of the normal conception of the mechanism of the turbulent boundary layer where greater interchange of mass and energy is said to

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occur between the layer and the main stream. With regard to the frictional forces at the surface of the plate, these were found to be greatly affected by the intensity of turbulence prevailing in the main stream. Local increase in turbulence, within the boundary layer itself, also exercises an influence on these frictional forces. An attempt is made to obtain a universal dimensionless representation of the velocity profile within the boundary layer. Experimental data obtained show very little scatter. It has also been proved that the constants in the logarithmic law of speed distribution in the boundary layer have no general validity and their magnitude depends on the degree of turbulence of the main stream. There are 6 figures.

ASSOCIATION: Ústav pro výzkum strojů ČSAV Praha
(Institute for Machine Research Czechoslovak AS Prague)

Z/041/62/000/004/001/001
E160/E435

AUTHORS: Květoň, Josef, Engineer, Píchal, Miroslav, Candidate of Sciences, Engineer

TITLE: Variable turbulence wind tunnel of the (Czechoslovak) Institute for Engine Research

PERIODICAL: Strojnícky časopis, no.4, 1962, 339-354

TEXT: The Institute for Engine Research ČSAV has for some time concerned itself with investigations into turbulence and boundary layer. The wind tunnel described in this article caters for one facet of this work, namely research into the influence of turbulence onto the boundary layer. At the same time this tunnel also had to be suitable for subsequent investigations into problems of two-dimensional flow. The tunnel had to satisfy the following requirements: the lowest possible turbulence level, adjustable over a wide range; the conditions to be suitable for fairly large plane, or even curved, models; for the given flow velocities, the tunnel had to fit into a limited space, be eventually transportable to a permanent building, whilst the

Variable turbulence wind ... Z/041/62/000/004/001/001
E160/E435

overall energy input was fixed at approximately 75 kW. The final design was of the recirculating type, having two long horizontal passages placed above each other, connected by short vertical passages and corner pieces with vanes. The test section is rectangular, 865 mm wide, 485 mm high and 1600 mm long, with 85 mm corner bevels at 45°. Maximum flow velocity is 97 m/sec. The first diffuser, after the test section, has an expansion ratio of 1:2.75 and the second, after the fan, of 1:3.23. The contracting cone has a ratio of 1:9. The fan is equipped with adjustable blades. The construction material is mainly wood, for frames, as well as plywood for walls which are painted. Dimensional tolerances are of the order of ±1% or better. After completion, the entire installation was first subjected to qualitative smoke tests and then to thorough quantitative testing to verify that uniform and constant flow velocities were achieved across sections at important stations of the tunnel. The turbulence intensity can be varied with the help of screens, plus streamers if required, placed at the entry to the test section. It proved possible to achieve the turbulence intensities of the

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Variable turbulence wind ... Z/041/62/000/004/001/001
E160/E435

test flow in the range 0.19 to approximately 10%.
There are 21 figures and 2 tables.

ASSOCIATION: Ústav pro výzkum strojů ČSAV, Praha
(Institute for Engine Research, ČSAV, Prague)

SUBMITTED: February 5, 1962

Card 3/3

KVETON, Josef, inz.; PICHAL, Miroslav, inz., C.Sc.

Aerodynamic tunnel with a changeable turbulence level of the Macine Research Institute. Stroj cas 13 no.4:329-354 '62.

1. Ustav pro vyzkum stroju, Ceskoslovenska akademie ved, Praha.

PICHAL, Miroslav, inz., C.Sc.

Turbulent boundary layer on a plane plate without pressure gradient in high intensity turbulence flowing. Stroj cas 13 no.6:552-571 '62.

1. Ustav pro vyzkum stroju, Ceskoslovenska akademie ved, Praha.

BALLO, I., doc. inz. CSc.; PICHAL, M., inz. CSc.

Eleventh International Congress of Applied Mechanics. Stockholm
16 [illegible] '64.

PICHAL, Miroslav, ing.

Boundary layers and [illegible]

Turbulent boundary layer on a flat plate in the flow with high intensity of turbulence Ibid., 19-25

1. Institute of Thermomechanics of the Czechoslovak Academy of Sciences, Prague. Submitted October 5, 1964.

PICHAL, Zdenek, inz.

Solution of underground sections of the municipal public transport in Prague. Inz stavby 11 no.10:398-400 O '63.

PICHALOVA, LUDMILA

The statistical evaluation of quality. Jiří Diabola and Ludmila Pichalová. *Listy Cukrovar.* 70, 199–202(1954). Forty samples were chosen for math.-statistical evaluation of best quality. Factors considered are roots, sucrose concn., leaves, and N (amide). Tables are furnished which give standard deviations. Joseph Lederer

SUSTER, M., prof. dr., DrSc.; PICHANIC, M.

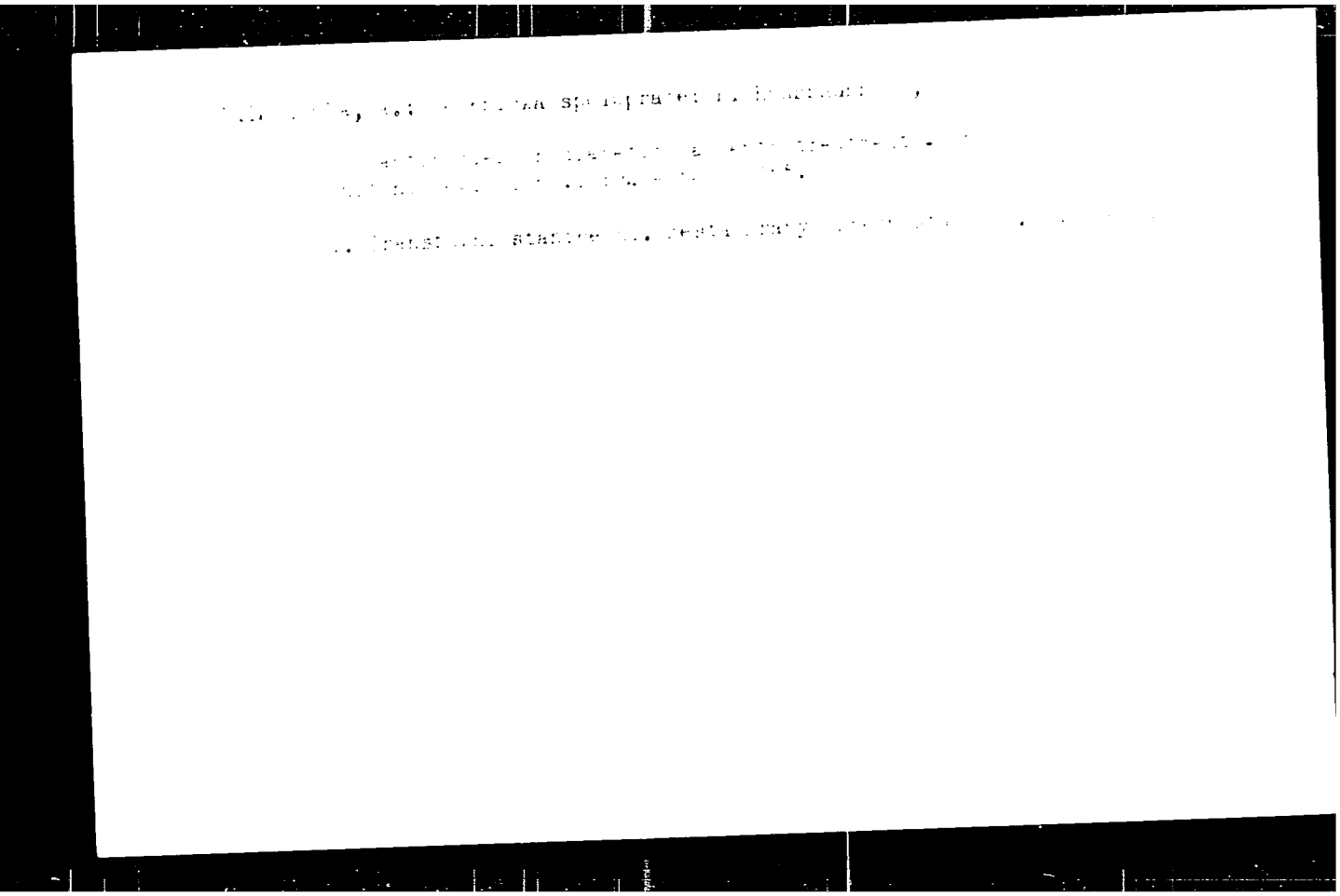
Epidemiological data on the familial incidence of scleroma. Cesk. otolaryng. 14 no.1:27-30 F'65.

1. Otolaryngologicka klinika Lekarskej fakulty University P.J. Safarika v Kosiciach (predstava: prof. dr. M. Suster, DrSc.).

BEGEMAN, F.; BUTTLAR, N.; GAUTERMANS, F.; ISAAK, N.; PICHCHIOTTO, Ye.

New method for determining the age of uranium minerals by means of the lead method. Biul.Kom.po opr.abs.vozr.geol.form.no.1:80-85 '55. (MIRA 9:10)

(Uranium--Decay)



Pichen, H

Polarographic determination of traces of metals in [illegible] M. Wechowska and M. Pichen. (*Chem. Anal., Warsaw*, 1956, 1, No. 2—3, 72—75). —The determination of traces of Zn, Pb, Cu, Fe and Mn is described. A solution of the sample in HCl is saturated with NH_4Cl and used directly for the determination of Zn at −1.4 v and Pb at about −0.5 v. Cu, Fe and Mn were determined after the addition to the original solution of aq. NH_3, glycerol and [illegible] waves at −0.2 to −0.5 v, −1.6 v and −1.7 v, respectively. Concn. of these metals <0.01% were determined by co-pptn. with $Al(OH)_3$, dissolving in HCl and testing polarographically.

K. F. SPOREK.

[illegible] aluminum. [illegible] (1953) [illegible] 73-76.—The determination of traces of [illegible], Fe and Mn in pure aluminium is described. A soln. of the sample in HCl is saturated with NH_4Cl and used directly for the determination of Zn at −1·4 V. and Pb at about −0·5 V. Copper, Fe and Mn were determined after the addition to the original soln. of aq. NH_3, glycerol and [illegible] in the ratio 1:3:37 at −0·3 to [illegible] V. [illegible] respectively. [illegible]

K. F. Snow

Polarographic determination of trace amounts of zinc in pure aluminum. Maria Wacler[illegible]ska and Małgorzata Piet[illegible] (Mining Inst., Katowice, Poland). Chem. Anal. (Warsaw) 1, 180-3 (1956) (English summary).—Zn and Pb were detd. directly in the original [illegible] (a soln. in HCl after satn. with NH_4Cl and Cu, Fe, and Mn (in amts. of about 0.01%) after mixing the soln. with NH_4OH, glycerol, and gum arabic in the ratio 1:2:1. Lower concns. of these metals can be detd. by sepg. them as hydroxides and redissolving in HCl. A. Kreglewski

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240730001-3"

PICHENYUK, Ya.D.; RUSANOV, K.S.; KHARITONOV, M.I.; SHPITAL'NIKOV, A.G.

Roofing support by means of bolts. TSvet. met. 26 no.2:11-19 Mr-Ap '53. (MLRA 10:9)
(Mine timbering)

ROKHLIN, S.L.; PICHENYUK, Ya.D.

Influence of the rate of agitation and aeration of the pulp on recovery of oxidized lead mineral during flotation. TSvet.met.29 no.12:20-26 D '56. (MLRA 10:2)
(Flotation)

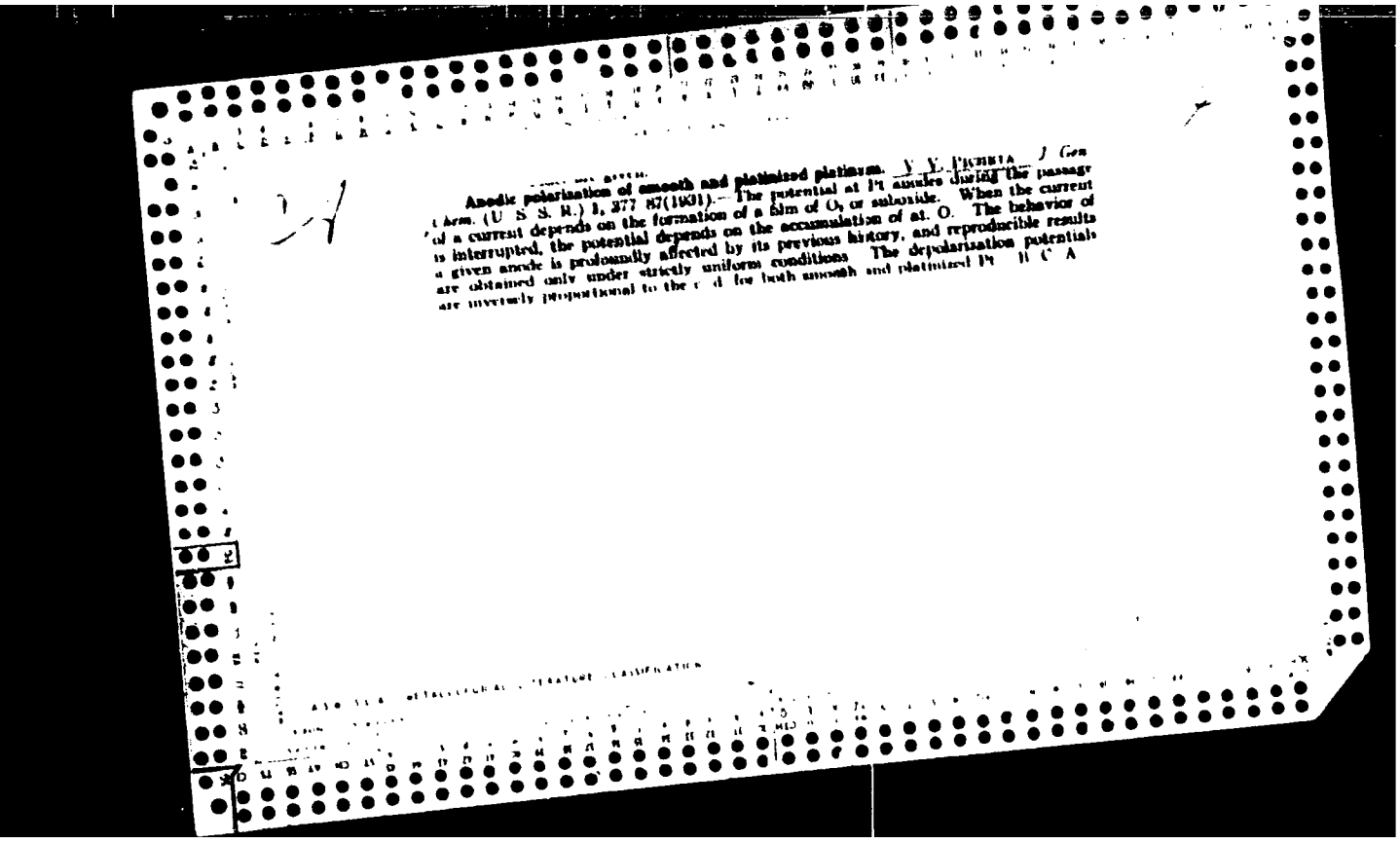
PICHET, V.

"Academician Yuri Vl[illegible] Type" [illegible], by V. Pichet, Vest. Ak. Nauk SSSR, Nos. 1-2, 1944.

Report U-1551, 7 Nov. 1951.

PICHIKIN, A.G.; RYABUSHKO, P.D.

Reasons for the loss of winter wheat and some means of avoiding it. Zemledelie 4 no.10:49-54 O '56. (MLRA 9:11)
(Wheat) (Plants, Effect of temperature on)



Anodic polarisation of smooth and platinised platinum. V. V. PICHETA. J. Gen. Chem. (U. S. S. R.) 1, 377–87 (1931).— The potential at Pt anodes during the passage of a current depends on the formation of a film of O_2 or suboxide. When the current is interrupted, the potential depends on the accumulation of at. O. The behavior of a given anode is profoundly affected by its previous history, and reproducible results are obtained only under strictly uniform conditions. The depolarisation potentials are inversely proportional to the c. d. for both smooth and platinized Pt. H. C. A.

FILIPPKIN, A.T.; PICHETA, K.V.; KONSTANTINOV, B.A.; AL'TSHULER, E., tekhn.red.

[Mechanization of labor-consuming manual machining operations in the machinery industry] Mekhanizatsiia trudoemkikh ruchnykh otdelochnykh operatsii v mashinostroenii. Moskva, Gos.nauchno-tekhn.komitet Soveta ministrov SSSR, 1959. 62 p. (MIRA 12:12)
(Machinery industry)

PHASE I BOOK EXPLOITATION SOV/3527

Filippkin, A. T., K. V. Picheta, and B. A. Konstantinov

Mekhanizatsiya trudoyemkikh ruchnykh otdelochnykh operatsiy v mashinostroyenii (Mechanization of Laborious Hand Finishing Operations in Machine Building) Moscow, 1959. 62 p. 1,500 copies printed.

Sponsoring Agencies: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet, and Akademiya nauk SSSR. Institut nauchnoy informatsii. Otdel nauchno-tekhnicheskoy informatsii. Sektor mashinostroitel'noy promyshlennosti.

Tech. Ed.: E. Al'tshuler

PURPOSE: This booklet is intended for technical personnel working in the field of machine part finishing.

COVERAGE: The authors describe briefly the techniques involved in the use of abrasive belt, grinding and polishing, tumbling, hydroabrasive polishing, and power brushing. These efficient methods are not widely used in the USSR because of shortage of production of good abrasive belts. No personalities are mentioned. There are 9 references, 7 English, and 2 German.

Card 1/3

TABLE OF CONTENTS:

PICHIKIN, A.G., kand.sel'skokhozyaystvennykh nauk

Poor cultivation practices cause losses in winter crop yields.
Zemledelie 7 no.6:79 Je '59. (MIRA 12:8)
(Grain) (Tillage)

YAVORSKIY, Yu., komandir zvena (Nikolayev); PICHINKIN, I., zamestitel' komandira podrazdeleniya (Kherson)

Airplanes and helicopters go out on the fields. Grazhd. av. 22 no.5:16-17 My '65. (MIRA 18:7)

PICHINOTY, F.

Study of the reduction of oxygenated compounds of mineral azote in bacterias. I. Measurement of the activity of nitrate reductase of the cellular extract of Aerobacter aerogenes. Folia microbiol 5 no.1:1-9 '60. (KEAI 9:6)

1. Laboratoire de Chimie Bacterienne, Centre National de la Rechrche Scientifique, Centre de Recherches Scientifiques Industrielles et Maritimes, Marseille.
(Nitrogen) (Bacteria) (Nitrates)
(Aerobacter) (Reductases)

PICHINOTY, F.

Assimilative reduction of nitrate by the aerobic cultures of Aerobacter aerogenes. Influence of the azoted nutrition on growth. Folia microbiol 5 no.3:165-170 '60. (EEAI 9:10)

1. Laboratoire de Chimie Bacterienne, Centre National dela Recherche Scientifique, Centre de Recherches, S.I.M., Marseille.
(AEROBACTER AEROGENES)
(NITRATES)

LITVINENKO, N.M.; PICHKA, A.A.

Stand for testing mooring devices. Ogneupory 22 no.3:127-128 '57. (MLRA 10:5)

(Cables--Testing)

PICHKA, V.Ye.

Ecology of spiders of the central forest steppe. Zool. zhur. 44 no.4:527-536 '65. (MIRA 18:6)

1. Kafedra entomologii . .skovskogo gosudarstvennogo universiteta.

PICHKA, V.Ye.

Spider fauna in the caves of western Transcaucasia. Zool.zhur. 44 no.8:1190-1196 '65.

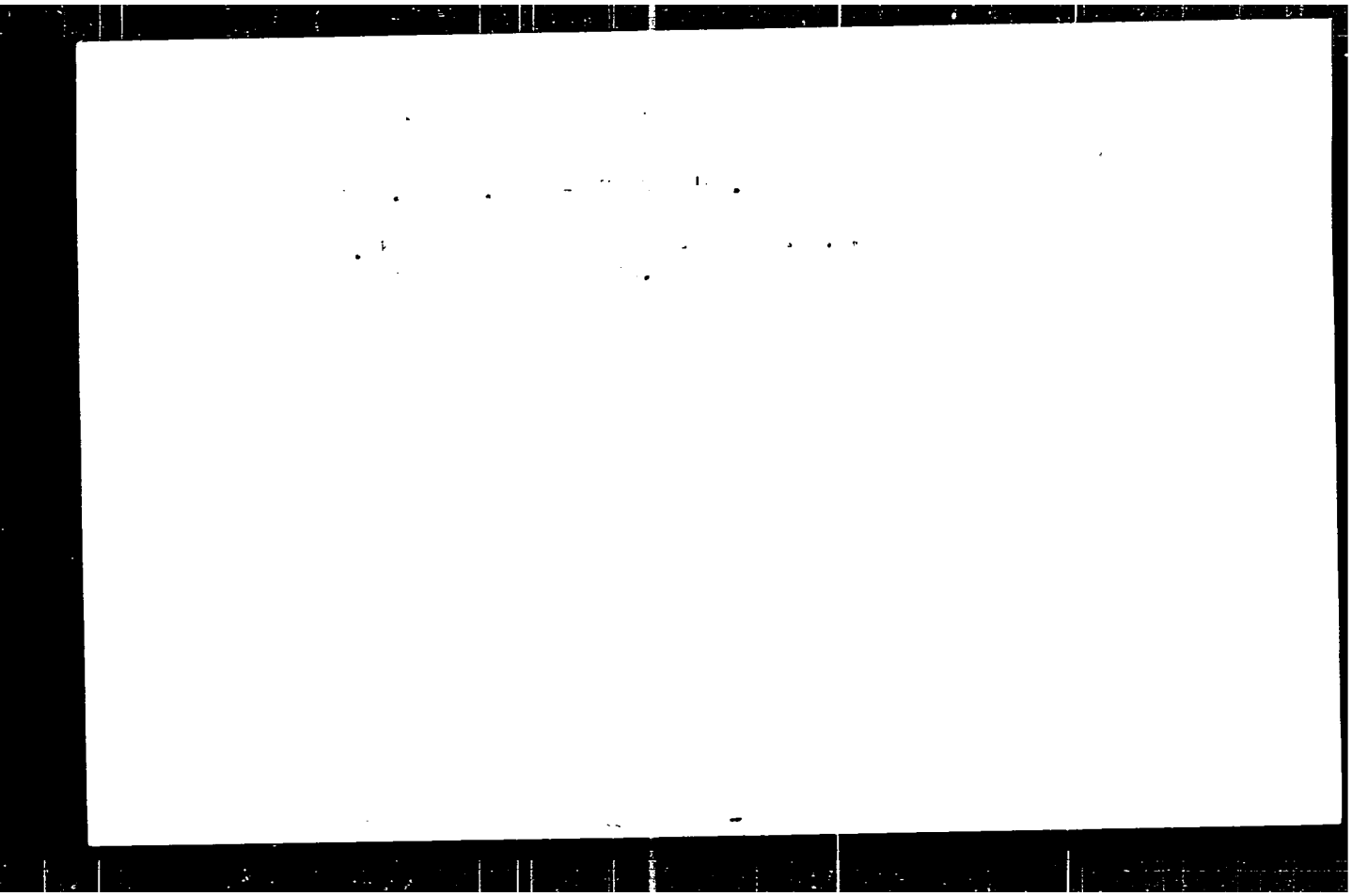
(MIRA 18:11)

1. Kafedra entomologii Moskovskogo gosudarstvennogo universiteta.

KIRILLOV, Yu.D.; PICHKAR', N.Ya.

Methods of lowering the cost of cement. TSement 29 no.4:18-19 Jl-Ag '63. (MIRA 16:11)

1. Zdolbunovskiy tsementno-shifernyy kombinat.



PICHKHADZE, I.P., inzhener.

Joint for fastening cables on supports. Mats. i izobr. predl. v stroi. no.150:11-13 '56. (MLRA 10:5)

1. Tbilisskoye otdeleniye Gosudarstvennogo proyektnogo instituta Tyazhpromelektroproyekt.
(Electric cables)

PICHKHADZE, I.P., inzh.

Lock for fastening guys and stays during the installation of supports. Energetik 6 no.4:22-23 Ap '58. (MIRA 11:4)
(Electric lines--Poles)

AUTHOR: Pichkhadze, I.F., Engineer SOV-91-58-4-18/19

TITLE: A Lock for Fastening Spans and Ropes to the Poles during Their Mounting (Zamok dlya krepleniya ottyazhek i trosov k oporam pri ikh ustanovke)

PERIODICAL: Energetik, 1958, Nr 4, pp 22-23 (USSR)

ABSTRACT: During the mounting of poles for power transmission lines, the ropes are usually fastened to the poles by means of knots, which must be disconnected after the installation work is finished. The article describes the design and operation of a lock with a built-in spring, which loosens the ropes from the poles without climbing them. The mechanical stresses and dimensions of the lock and rope are given. The string used for releasing the lock is made either of a "normal" or a "reinforced" binder twine (Nr 1 and 8, corresponding to "GOST 5725-51" or of a twisted cord corresponding to "GOST 5107-49".
There are 2 diagrams.

1. Transmission lines--Construction

Card 1/1

ABELISHVILI, L.G.; TRAPAIDZE, L. T.; PICHKHADZE, I.P.

Study of the carrying capcity of electric railroads taking into account traction current supply systems. Soob. AN Gruz. SSR 31 no. 3:661-668 S '63. (MIRA 17:7)

1. Gruszinskiy politekhnicheskiy institut imeni Lenina.
2. Chlen-korrespondent AN GruzSSR (for Abelishvili).

PICHKHADZE, I.P.

Some characteristics of the mechanical calculation of composite wires. Trudy GPI [Gruz.] no.7:175-178 '63.

(MIRA 18:6)

PICHKHADZE, I.P.

Operating mode of a static current converter of an a.c. locomotive. Soob. AN Gruz. SSR 29 [illegible]. 3:307-314 S '62
(MIRA 19:1)

1. Gruzinskiy politekhnicheskiy institut imeni Lenina, Tbilisi.
Submitted June 27, 1961.

PICHKHADZE, M.I.

History of the Promethean problem. Soob.AN Gruz.SSR 19 no.1:121-127 Jl '57. (MIRA 10:12)

1. Tbilisskiy gosudarstvennyy universitet im. Stalina. Predstavleno chlenom-korrespondentom Akademii A.G.Baramidze.
(Titans (Mythology))

GOTSIRIDZE, A.M., prof., red.; BETANELI, A.M., doktor med. nauk, red.; KHECHINASHVILI, N.N., kand. med. nauk, dots., red.; NADIRASHVILI, S.A., kand. med. nauk, dots., red.; NIKOLASHVILI, D.A., kand. biol. nauk, dots., red.; AKHVLEDIANI, O.M., kand.biol. nauk, dots., red.(Batumi); PICHKHADZE, R.I., st. prepodavatel', red.; CHOMAKHIDZE, D.D., red.; KIPIANI, E.Ya., red.

[Theses and abstracts of the reports presented at the Third Expanded Scientific Conference on Problems of Physiology Dedicated to the 110th Anniversary of N.E.Vvedenskii's Birth] Tezisy i referaty dokladov Rasshirennoi nauchnoi konferentsii po problemam fiziologii, posviashchennaia 110-letiiu so dnia rozhdeniia N.E.Vvedenskogo. Kutaisi, Go...kor-t vysshego i srednego spetsial'nogo obrazovaniia Soveta Ministrov Gruz.SSR., 1962. 166 p. (MIRA 17:3)

1. Rasshirennaya nauchnaya konferentsiya po problemam fiziologii, posvyashchennaya 110-letiyu so dnya rozhdeniya N.Ye.Vvedenskogo, 3d, Kutaisi-Batumi, 1962. (MIRA 17:3)

PICHKHADZE, Sh.I.

Methods for increasing the precision of the assembly of controlled dividing worm gears. Stan. i instr. 34 no.9:14-16 S '63. (MIRA 16:11)

ANDRIANOV, K. A.; PICHKHADZE, Sh. V.; NOVIKOV, V. M.; LAVYGIN, I. A.

Synthesis and some reactions of 8-hydroxyquinoline-butoxytitaniums. Izv. AN SSSR Otd. khim. nauk no.12:2138-2141 D '62. (MIRA 16:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

(Titanium organic compounds) (Quinoline)

5 (3)

AUTHOR: [illegible]

TITLE: Synthesis and Catalytic Hydrogenation of 3-Methyl-1-phenyl-pentyne-4-diol-1,3 (Sintez i kataliticheskoye gidrirovaniye 3-metil-1-fenilpentin-4-diola-2,5)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 5, pp 1341-1347 (USSR)

ABSTRACT: In the present paper the hydrogenation of acetylene-γ-glycols in the presence of palladium on calcium carbonate is described. The selective effect of palladium on calcium carbonate in the hydrogenation of unsaturated acetylene carbinols is known from publications (Ref 1). In case of this catalyst, however, vinyl ethynyl carbinols yield a mixture of the initial product, the diene carbinol, and the isomeric olefin carbinols (Ref 2). Therefore the effect of this catalyst on acetylene-γ-glycols was investigated more thoroughly. The compound mentioned in the title was obtained from ethyl-phenyl ketone and magnesium-bromo-methyl-acetylenyl-carbinol. By means of the catalyst mentioned the hydrogenation was found to take place up to the ethylene derivative. The reaction proceeds more slowly than with

Card 1/2

Synthesis and Catalytic Hydrogenation of ?-Methyl-5- [illegible]
[illegible]henyl Heptyne-3-diol-2,5

[illegible]tramethyl-butine-diol. The [illegible]lective nature of [illegible] [illegible]pplied to calcium carbon[illegible] was thus confirmed [illegible] acetylene-γ-glycols. The resultant [illegible] [illegible]tene-?-diol-?,5 is described for the first [illegible]. The experimen[illegible] [illegible] describes the synth[illegible] [illegible] compound and its hydro[illegible] [illegible] [illegible]nd physic[illegible] of the compo[illegible]. There are [illegible] [illegible]rces.

ASSOCIATION: Tbilisskiy [illegible] [illegible]stvennyy universitet (Tbilisi [illegible] University)

SUBMITTED: March ?9, [illegible]

Card ?/?

21133
S/190/61/003/004/008/014
B101/B207

15.8116 2209, 1372

AUTHORS: Andrianov, K. A., Pichkhadze, Sh. V.

TITLE: Reactions of polyorganotitanosiloxane formation

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 577-581

TEXT: This study deals with the synthesis of polymers containing the Si-O-Ti group in the main chain. For this purpose, the following processes are carried out: A) Cohydrolysis of dimethyl dichloro silane, diethyl dichloro silane or methyl-phenyl dichloro silane with bis-(cyclopentadienyl)-dichloro titanium (synthesized according to G. Wilkinson, Ref. 2, see below). The substances were cohydrolyzed by dropping the components dissolved in toluene into 10% NaOH. Thus, temperature rose to 45°C. Dark red polymers soluble in toluene and xylene were obtained in a 75-78% yield. The reaction did, however, not follow the scheme

$$(CH_3)_2SiCl_2 + (C_5H_5)_2TiCl_2 \xrightarrow{H_2O} -O-\underset{CH_3}{\overset{CH_3}{Si}}-O-\underset{C_5H_5}{\overset{C_5H_5}{Ti}}-O$$

Card 1/5

S/190/61/003/004/008/014
B101/B207

Reactions of ...

but was accompanied by a splitting off of cyclopentadienyl groups (CPD) owing to the readily hydrolyzable C-Ti bond. Chemical analysis of the polymer yielded an initial ratio Ti : Si atoms = 1 : 10, the C content, however, indicated that CPD groups had been split off. To study hydrolysis more closely, dimethyl dichloro silane was cohydrolized in acid medium with bis-(cyclopentadienyl)-dichloro titanium in acid medium without acceptor. Thus, the CPD groups were completely split off and octamethyl cyclotetrasiloxane and TiO_2 formed. Cohydrolysis of the titanium compound with diethyl dichloro silane and methyl-phenyl dichloro silane led to the same results as with dimethyl dichloro silane. These polymers were viscous liquids. The infrared spectra showed the 920 cm^{-1} band of the Ti-O-Si group. The following reaction scheme was set up on the basis of experimental data:

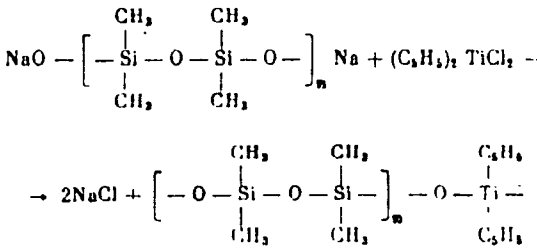
$$1CRR'SiCl_2 + (C_5H_5)TiCl_2 \xrightarrow[NaOH]{H_2O} (-O-\underset{R'}{\overset{R}{Si}}-)O-\underset{O\bar{.}5}{\overset{O\bar{.}5}{Ti}}- \quad \text{, where } R = CH_3\text{-},$$

$R' = CH_3$- (I); $R = C_2H_5$, $R' = C_2H_5$- (II); $R = CH_3$-, $R' = C_6H_5$ (III). To avoid hydrolysis, B), the exchange reaction between the di-sodium salts of

Card 2/5

Reactions of ...

1,3-dihydroxy tetramethyl siloxane or 1,5-dihydroxy octamethyl tetrasiloxane was carried out with bis-(cyclopentadienyl)-titanium in benzene solution at 80°C. Yellow polymers which are soluble in toluene or xylene were obtained in a 77-80% yield. The atomic ratio Si : Ti was 2 : 1 or 4 : 1. Apart from the exchange reaction:

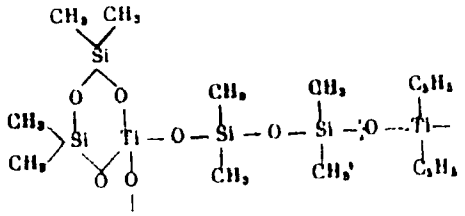


however, also CPD groups were split off. Infrared spectra revealed the absence of the 770 cm^{-1} band which corresponds to one CPD group on Ti, and the presence of the 870 cm^{-1} band which corresponds to two CPD groups on the Ti atom, as well as the bands 1020 and 1050 cm^{-1} of the Si-O group in six-membered or multi-membered cycles. Herefrom, the following structural

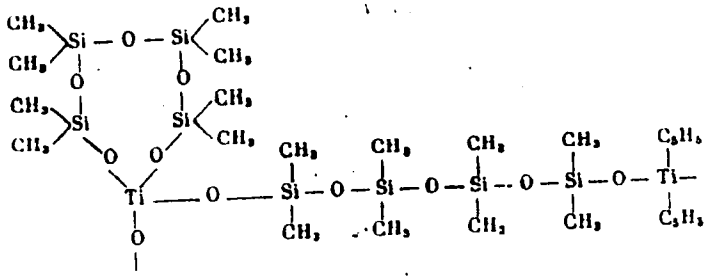
Card 3/5

Reactions of ...

formula was derived for the links of the polymer chain:



(IV)



(V)

Card 4/5

S/190/61/003/004/006/014
B101/B207

Reactions of

The vitrification temperature of polymer IV was approximately 12°C, while that of V was below 0°C. IV showed no flow when heated up to 250°C, while with flow occurred when heated to 100°C. Both polymers became insoluble after having been heated to 200°C. Thus, it may be concluded that structuration occurred. After evaporation of the solvent, the soluble polymers formed films. The authors thank the collaborators of the optiches-kaya laboratoriya (Optics Laboratory), headed by I. V. Obreimov, and those of the laboratoriya issledovaniya polimerov (Laboratory for Polymer Studies), headed by G L. Slonimskiy, for their ready cooperation. There are 2 figures, 1 table, and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc The 2 references to English-language publications read as follows: C L. Sloan, W. A Barber, J. Amer. Chem. Soc., 81, 1364, 1959; G. Wilkinson, I M. Birmingham, J Amer Chem. Soc., 76, 4281, 1954.

ASSOCIATION Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elemental Organic Compounds, AS USSR)

SUBMITTED. July 13, 1960

Card 5/5

15 8170

27568
S/190/61/003/009/003/016
B110/B101

AUTHORS: Andrianov, K. A., Pichkhadze, Sh. V., Bochkareva, I. V.

TITLE: Polyorganotitanosiloxanes. I. Synthesis of poly-bis-(acetylacetonate) organotitanosiloxanes

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 9, 1961, 1321-1325

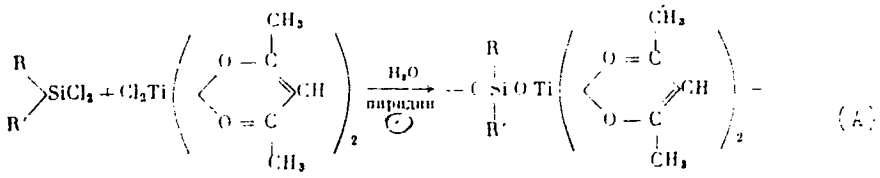
TEXT: As the formation of polymers with linear chains is rendered difficult owing to the hydrolytic instability of the Ti-O-C bond of the alkoxy derivatives of orthotitanic acid, the authors tried to use intracomplex titanium derivatives. The present paper deals with the cohydrolysis of alkyl-(aryl-) chlorosilanes with bis-(acetylacetonate) dichlorotitanium (BADT). In the cohydrolysis of dimethyl dichlorosilane (DMDS), diethyl dichlorosilane (DEDS), methyl-phenyl dichlorosilane (MPDS), and methyl-vinyl dichlorosilane (MVDS) with BADT, the yield of polymers with Ti-O-Si chains is only 35% in the absence of acceptors, since 60% BADT does not react. It hydrolyzes with separation of acetylacetonate groups and formation of TiO_2. The polymers which are well soluble in conventional solvents

Card 1/5

Polyorganotitanosiloxanes. ...

have low melting points. The organic radicals at the Si atoms have little effect on cohydrolysis. The ratio Ti : Si is smaller in the polymers than in the initial substances. Pyridine increases the yield of cohydrolysis of DMDS + BADT to 57.6% of DEDS + BADT to 70.5%, of MVDS + BADT to [illegible], and of MPDS + BADT to 63.8%. Ultimate analysis and infrared spectra indicate the following reaction:

1 = pyridine

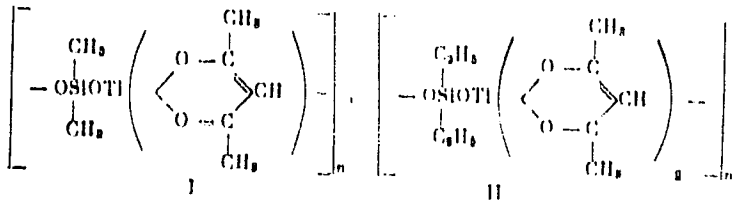


(A)

In the cohydrolysis of DMDS + BADT and DEDS + BADT the atomic Si/Ti ratio of polymers was 1 : 1 with the following composition of the repeating unit of the chain:

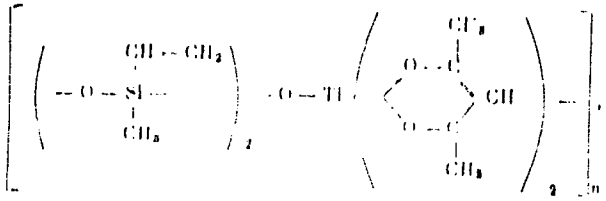
27568
S/190/61/003/009/003/016
B110/B101

Polyorganotitanosiloxanes. ...



I II (I)

On cohydrolysis of MVDS + BADT, and of MPDS + BADT, the atomic Si/Ti ratio is 2 : 1 with the following repeating units



(III),

Card 3/5

27568

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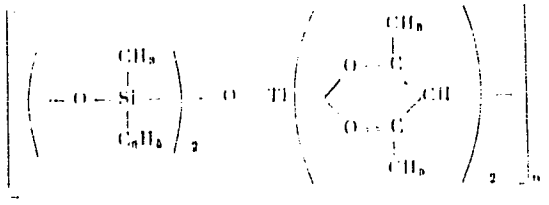
B110/B101

Polyorganotitanosiloxanes. ...



(I-IV).

The glass transition temperatures T_g for the polymers I, II, III, and IV were found to be ~-50, -25, -20, and +45°C, respectively. [illegible] to 200°C for 30 min, the polymer II, III, and IV do not flow even at 500°C, only the polymer I flows at about 160°C. Toluene and [illegible] calculated amount of water were filled into a four-necked flask. A solution of alkyl-(aryl-) chlorosilane in toluene was added from the drop... funnel by stirring. Temperature rose on addition of BADT. The toluene layer was separated from the water, washed out until neutral (litmus), and distilled in vacuo. The yellow polymers dissolved readily in [illegible],

Card 4/5

Polyorganotitanosiloxanes. ...

benzene, toluene, acetone, and carbon tetrachloride. The yield was 30% for poly-bis-(acetylacetonate) titanodimethylsiloxane, 40% for poly-bis-(acetylacetonate) titanodiethylsiloxane, and 38% for poly-bis-(acetylacetonate) titanomethylphenylsiloxane. Cohydrolysis of alkyl-(aryl-) chlorosilanes with BADT in the presence of pyridine gave: 57.6% for poly-bis-(acetylacetonate) titaniumdimethylsiloxane; 70.5% for poly-bis-(acetylacetonate) titanodiethylsiloxane; 62% for poly-bis-(acetylacetonate) titanomethylvinylsiloxane; and 63.8% for poly-bis-(acetylacetonate) titanomethylphenylsiloxane. The authors thank N. A. Chumayevskiy for taking the infrared spectra, and G. L. Slonimskiy, Head of the Laboratoriya issledovaniya polimerov (Laboratory for Polymer Research), for thermomechanical measurements. There are 2 figures, 3 tables, and 2 references: 1 Soviet and 1 non-Soviet.

ASSOCIATION: Institute elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: October 20, 1960

33978

S/062/62/000/002/007/014
B117/B138

15.8150

AUTHORS: Andrianov, K. A., Pronkhadze, Sh. V., and Kumarova, V. V.

TITLE: Synthesis of polychelate titanosiloxane elastomers by the polycondensation method

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 261-264

TEXT: Polychelate titanosiloxane elastomers were synthesized by polycondensation of organosiloxane diols with monomers containing titanium. The monomers used were bis-acetyl acetonate diisobutoxy titanium (I) and bis-8-oxyquinoline dibutoxy titanium (II). Organosiloxane diols were obtained by the method described in Ref. 7 (K. A. Andrianov and V. V. Severnyy, Dokl. AN SSSR 134, 1347 (1960)). The polycondensation took place in pure nitrogen atmosphere at 180°C and a residual pressure from 5 to 2 mm; the separating butyl alcohol was distilled off at the same time. Soluble red-brown elastic polymers were produced: poly-bis-(8-oxyquinoline)-titanodimethyl siloxane elastomer ($C_{26}H_{32}O_6N_2Si_2Ti$)$_n$ with a molecular weight 97,000, vitrification temperature at 110°C and

Card 1/2

3397?

S/062/62/000/00 ...
B1??/B138

Synthesis of polychelate

p... ...acetate titanodimethyl siloxane elastomer ... (molecular weight ... 000, vitrification temperature ... °C. The thermomechanical properties were examined by the method described in Ref. 4 (B. L. Tsetlin, V. I. Gavrilov, N. A. Vel... and V. V. K...kin, Zavodsk. laboratoriya 22, ... (19..)). The vitrification temperature was found to be influenced by the groups surrounding the titanium atom. Molecular weights were determined by the light diffusion method. There are 2 figures and ... references: ... Soviet and ... non-Soviet. The reference to the English-language publication reads as follows: A. Yamamoto, S. Kambara, J. Amer. Chem. Soc. 79, ... (1957).

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

SUBMITTED: September ..., ...

Card ...

37402
S/062/62/000/005/004/005
B110/B101

AUTHORS: Andrianov, K. A., Pichkhadze, Sh. V., Komarova, T. Y., and Yaroslavtsev, Ts. N.

TITLE: The reaction of organocyclosiloxanes with butyl orthotitanate

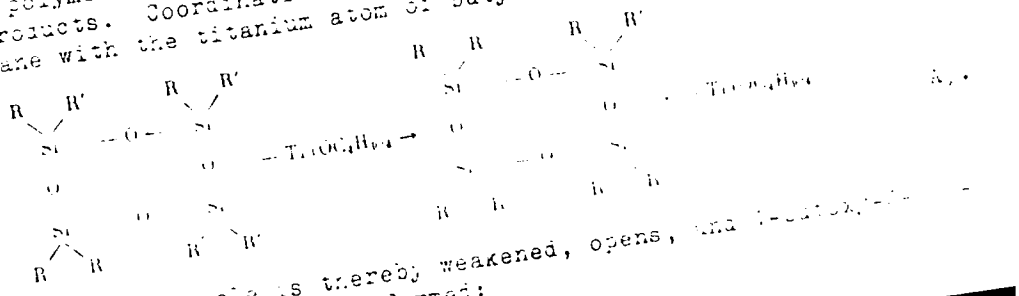
PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 5, 1962, 855 - 857

TEXT: The reaction of butyl orthotitanate with octamethyl cyclotetrasiloxane, tetramethyl tetravinyl cyclotetrasiloxane, and octaethyl cyclotetrasiloxane were examined. In the reaction of octamethyl cyclotetrasiloxane with butyl orthotitanate (5:1, 3:1), only two molecules of the cycle react with one molecule of butyl orthotitanate to form the following products: dimethyl dibutoxysilane (n_D^{20} = 1.4055), 1,3-dibutoxytetramethyl disiloxane (d_4^{20} = 0.8700; n_D^{20} = 1.4040), 1,5-dibutoxyhexamethyl trisiloxane (b.p. 96°C/4 mm Hg; n_D^{20} = 1.4031; d_4^{20} = 0.8960), 1,7-dibutoxyoctamethyl tetrasiloxane (b.p. 118°C/4 mm Hg; n_D^{20} = 1.4049; d_4^{20} = 0.9060), and a

Card 1/4

The reaction of organocyclosiloxanes ...

polymer of a chemically constant composition and the atomic ratio Si:Ti = 1:1, at 2:1 and 3:1 ratios of the initial components ... yields were obtained; however, at a 5:1 ratio, the part of ... octamethyl cyclotetrasiloxane rose. At a 1:1 ratio, the part of ... tributoxy... ane, 1,3-dibutoxytetramethyl disiloxane, and of the ... rose significantly. The polymers were readily soluble in benzene ... toluene and had a vitrification temperature of ~100°C. The ... mers and polymers is explained by disproportionation of the ... reaction products. Coordination of one of the oxygen atoms ... cyclosiloxane with the titanium atom of butyl orthotitanate ... first:

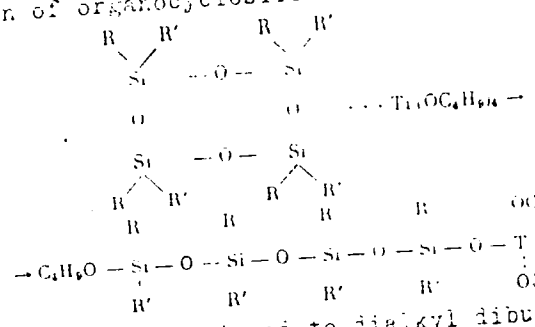


The Si-O bond in the cycle is thereby weakened, opens, and ... butoxyoctaalkyl tetrasiloxane is formed:

Card 2/4

S/062/62/000/003/014/...
B110/B101

The reaction of organocyclosiloxanes ...



The latter is disproportioned to dialkyl dibutoxysilane, 1,3-dibutoxy-tetraalkyl disiloxane, and the polymer. The following succession holds for the reactivity of organosiloxanes with butyl orthotitanate: $(CH_3)_2SiO_{-3} \gg (CH_3)_2SiO_{-4} > CH_3(CH_2{=}CH)SiO_{-4} > (C_6H_5)_2SiO_{-4}$. The larger organic radicals are steric hindrances making the reaction difficult. Disiloxane ethers are easy to prepare in the manner described. There are 2 figures and 4 tables.

Card 3/4

B/062/62/[illegible]/[illegible]/[illegible]

The reaction of organocyclosiloxanes ... B110/B101

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii [illegible] SSSR (Institute of Elemental Organic Compounds of the [illegible] of Sciences USSR)

SUBMITTED: December 5, 1961

Card 1/4

15 8150

33384

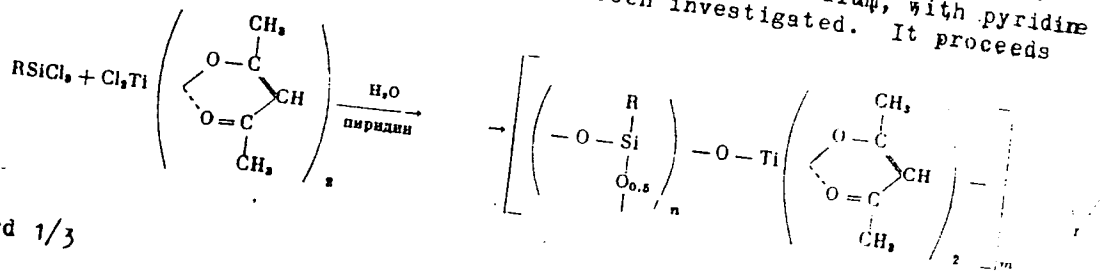
S/190/62/004/002/013/021
B110/B101

AUTHORS: Andrianov, K. A. Pichkhadze, Sh. V., Bochkareva, I. V.

TITLE: Polyorganotitanosiloxanes. II. Cohydrolysis of bis(acetyl-acetonate)dichloro titanium with alkyl(aryl)trichloro silanes

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 2, 1962, 256-260

TEXT: The cohydrolysis of bis(acetylacetonate) dichloro titanium with methyl-ethyl and phenyl trichloro silanes in aqueous medium, with pyridine as acceptor and toluene as solvent, has been investigated. It proceeds as follows:



Card 1/3

Polyorganotitanosiloxanes...

In the polymer, the Si:Ti ratio was always higher than that of the initial substances. Cohydrolysis of bis(acetylacetonate)dichloro titanium with methyl trichloro silane yielded maximum, poly-bis(acetyl-acetonate)titano phenyl siloxane (I) minimum ratio. The osmometrically determined molecular weight of I was 103,000. All polymers showed, in the infrared spectrum, absorption bands for Ti-O in the Ti-O-Si group, and complete absorption for Si-O in the Si-O-Si group. Analyses and investigations of properties of I, poly-bis(acetylacetonate)titano methyl siloxane (II), and poly-bis(acetylacetonate)titano ethyl siloxane (III) showed cyclolinear structure with oxygen-bound chains of eight- or six-membered rings. The viscosity in benzene was 0.073 for I; 0.069 for II; 0.0670 for III. The yellow, film-forming polymers were structurized at 100, 160, and 200°C; they became unsoluble except for I which was partially soluble even after 4 hr heating at 200°C. In this case, their thermomechanical properties correspond to those of structurized polymers. The structure of II and III is an intermediate stage between crystalline and amorphous structures, only I is amorphous. The OH groups were determined according to Terent'yev. The infrared spectra were taken at the opticheskaya laboratoriya INEOS (Optical Laboratory of INEOS) headed

Card 2/3

Polyorganotitanosiloxanes

33384
S/190/62/004/002/015/022
B110/B101

by I V Obreimov, the X-ray patterns at the laboratoriya rentgenovskogo strukturnogo analiza (Laboratory for X-ray Structural Analysis; ...) were made by A I Kitaygorodskiy; the thermomechanical measurements were made at the laboratoriya fiziki polimerov (Laboratory for Polymer Physics) headed by G. L. Slonimskiy. Yu S Ksimantovskaya determined the molecular weight. There are 1 figure, 3 tables, and 4 references: 3 Soviet and 1 non-Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR)

SUBMITTED: February 11, 1961

Card 3/3

B/190/62/004/006/008/026
B110/B138

AUTHORS: [illegible]

TITLE: [illegible]

PUBLISHED: [illegible]

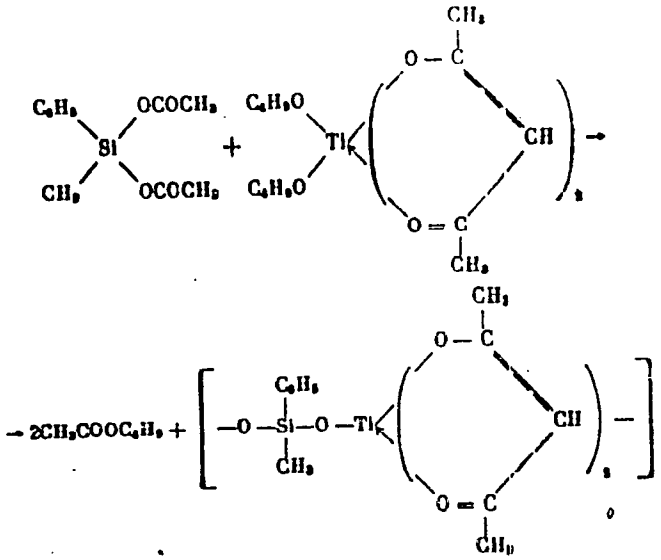
TEXT: The study covered the heterofunctional condensation of methyl phenyl diacetoxy silane (I) with bis-(acetylacetonate)dibutoxy titanium (II) and the combined hydrolysis of diethoxy silane with II. Butyl acetate was separated at 165°C. The viscosity of the condensation product increased as the separation advanced. The reaction developed according to

Card 1/4

3/190/62/004/006/004/026
B110/B138

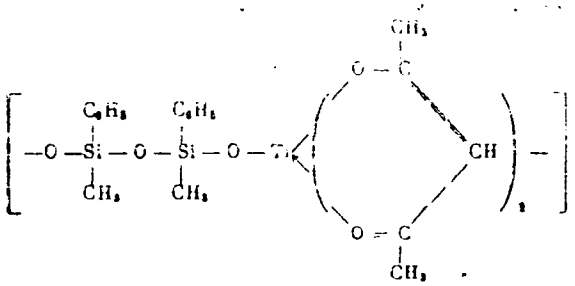
Polyorgano-titanium siloxanes. III. ...

A



Card 2/4

Polyorganotitanium silanes. III. ...



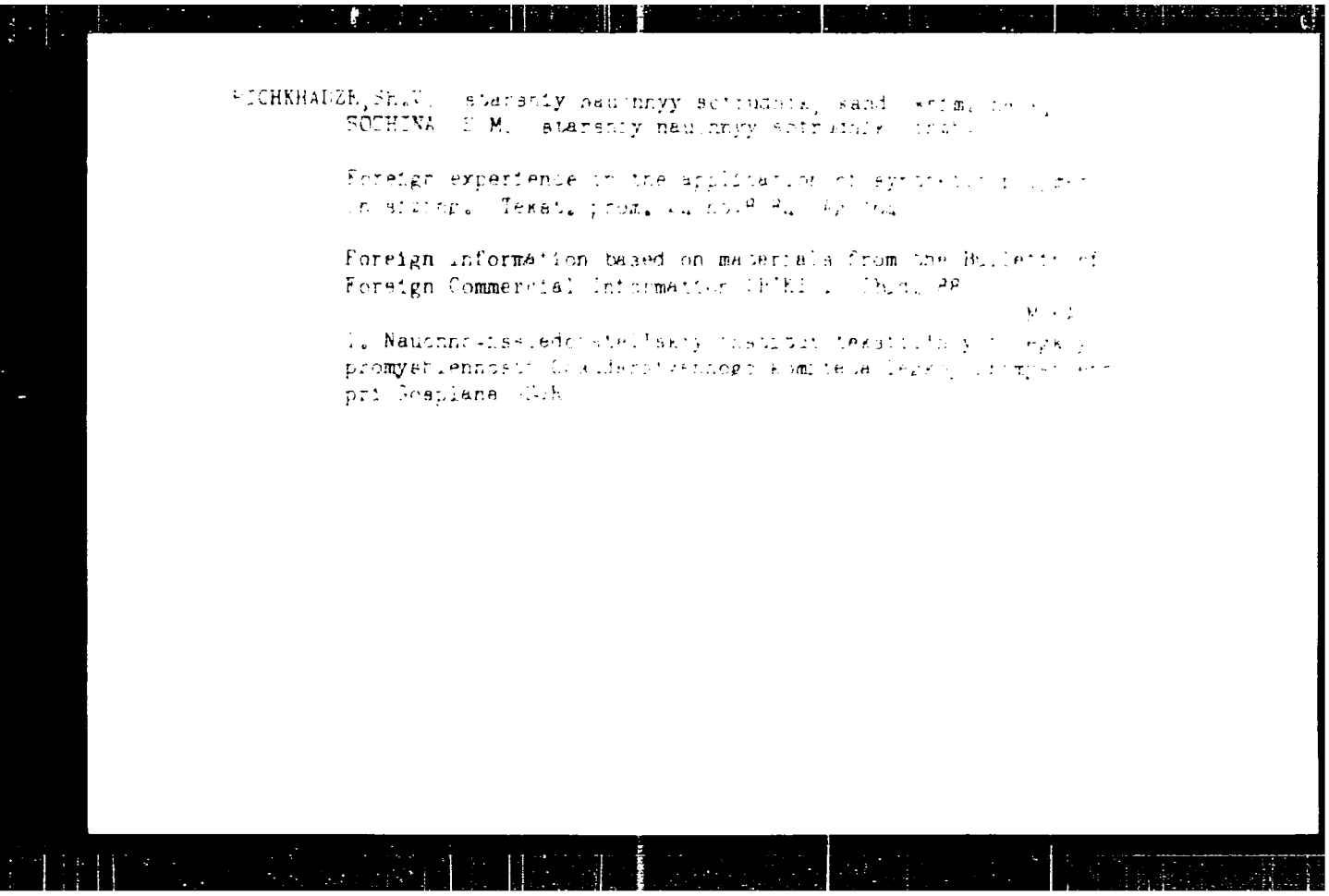
The vitrification temperature fell as the Si:Ti ratio, while the solubility of poly-bis-(acetylacetonate)titanium methyl phenyl siloxanes heated at 160-200° decreased with increasing Ti content. The molecular weight of the polymer obtained by hydrolysis was [illegible]. There are 1 figure and 1 table.

ASSOCIATION: Institut [illegible] (Institute of Elementoorganic Compounds AS USSR)

SUBMITTED: April 5, 1961

Card 4/4

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240730001-3"



ANDRIANOV, K.A.; PI..KHADZE, Sh.V.; NOGAYDELI, A.I.; VARDOSANIDZE, TS.N.

Poly-bis-(8-hydroxyquinoline)-titanomethylphenylsiloxanes. Soob. AN Gruz. SSR 33 no.3:557-564 Mr '64. (MIRA ...)

1. Institut khimii imeni P.G. Melikishvili AN GruzSSR ... akademikom ... V. TSitsishvili ... AN ... SSSR (...).

3661

S/062/62/000/004/010/013
B110/B101

15.8170

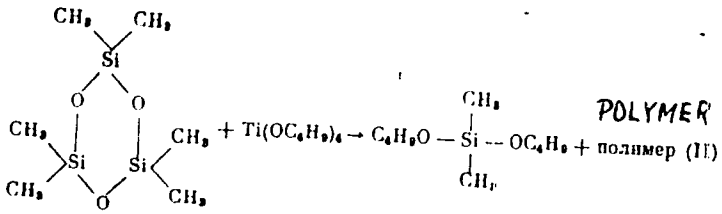
AUTHORS: Andrianov, K. A., Pichkhadze, Sh. V., and Komarova, V. V.

TITLE: Reactions of dimethyl cyclosiloxanes with butyl orthotitanate

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 4, 1962, 724-725

TEXT: In continuation of earlier papers by the authors (Vysokomolek. soyed. 3, 577 (1961), ibid. 3, 1321 (1961)) on the synthesis of polyorganotitanosiloxanes, the reaction of butyl orthotitanate with dimethyl cyclosiloxanes was investigated. It was established that the siloxane bond was split and that low-molecular organo-silicon compounds formed. 4 hrs' heating at 200°C of octamethyl cyclotetrasiloxane with butyl orthotitanate in a 1:1 molar ratio gives dimethyl dibutoxy silane (b.p. 186°C, n_D^{20} = 1.4034) and the hardly accessible 1,3-dibutoxy tetramethyl disiloxane ($C_{12}H_{30}O_3Si_2$, b. p. 98-100°C (10 mm Hg), n_D^{20} = 1.4045, d_4^{20} = 0.866):

Card 1/3



The Si/Ti ratio was 1:1 in polymer I, and 1:1.78 in polymer II. There are 2 tables.

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

SUBMITTED: November 12, 1961

Card 3/3

[illegible] L[illegible]V, K. A.; [illegible]ICHIGADZE, Sh.V.; K[illegible]V., V.V.; V[illegible], S.N.

[illegible] of organo[illegible] [illegible] with butyl o-t[illegible]. Izv. AN SSSR Otd.khim.nauk no.5 [illegible] My '62.

1. Institut elementoorganicheskikh soyedineniy [illegible]
(Silicon organic compounds) (Butyl titrates)

S/062/62/000/012/003/007
B117/B101

AUTHORS: Andrianov, K. A., Pichkhadze, Sn. V., Novikov, V. M., and Lavygin, I. A.

TITLE: Synthesis and some reactions of 8-oxy-quinoline butoxy titanium

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 12, 1962, 2138-2141

TEXT: 8-oxy-quinoline tributoxy titanium was synthesized by the action of 8-hydroxy-quinoline on tetrabutoxy titanium at ~ 140°C; $C_{21}H_{33}O_4NTi$, light-green crystals which hydrolyze easily, m.p. 55-56°C. At a 1:1 ratio of the two components, approximately equal amounts of 8-oxy-quinoline tributoxy titanium and bis-(8-oxy-quinoline)dibutoxy titanium are formed: $C_{26}H_{30}O_4N_2Ti$, yellow crystals, m.p. 148-150°C. The latter hydrolyzed in a neutral medium with the cleavage of butoxy groups only, yielding a product identified as bis-(8-oxy-quinoline)-dihydroxy titanium: $C_{18}H_{14}O_4N_2Ti$, orange, nonfusible crystals, which disintegrate at 400°C. The condensation

Card 1/2

Synthesis and some reactions of... S/062/62/000/012/003/007
B117/B101

of bis-(8-oxy-quinoline)-dihydroxy titanium showed that water (6.9%) was separated by heating (200°C, 4 hrs). The structure of bis-(8-oxy-quinoline)-dihydroxy titanium was confirmed by its condensation with bis-(8-oxy-quinoline)-dibutoxy titanium. Butyl alcohol was thus separated by heating to 200°C. The reaction of bis-(8-oxy-quinoline)-dibutoxy titanium with organosilicon compounds was smooth; the reaction with trimethyl silanol took place at 50°C yielding bis-(trimethyl siloxy)-bis-(8-oxy-quinoline)-titanium $C_{24}H_{30}O_4N_2Si_2Ti$, light-yellow crystals, m.p. 143-144°C, yield 75%. The reaction with triethyl silanol at 150°C yielded bis-(triethyl siloxy)-bis-(8-oxy-quinoline)-titanium, $C_{30}H_{42}Si_2O_4N_2Ti$, yellow crystals, m.p. 162-164°C, yield 83%. The reaction with triphenyl silanol at 150-170°C yielded bis-(triphenyl siloxy)-bis-(8-oxy-quinoline)-titanium, $C_{54}H_{42}Si_2TiO_4N_2$, a crystalline substance, m.p. 188°C, yield 66%.

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

SUBMITTED: April 11, 1962

Card 2/2

ANDRIANOV, K.A.; PICHKHADZE, Sh.V.

Polyorganotitanosiloxanes. Part 4: Reactions of co-hydrolysis and heterofunctional condensation of bis-(8- hydroxyquinoline) dibutoxytitanium with dimethyl- and phenylmethyldiacetoxysilanes. Vysokom.soed. 4 no.7:1011-1018 Jl '62. (MIRA 15:7)

1. Institut elementooganicheskikh soyedineniy AN SSSR.
(Titanium organic compounds)
(Silane)

ANDRIANOV, K.A.; PICHKHADZE, Sh.V.; KOMAROVA, V.V.

Reactions of dimethylcyclosiloxanes with butylorthotitanates.
Izv.AN SSSR Otd.khim.nauk no.4:724-725 Ap '62. (MIRA 15:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Siloxanes) (Titanium compounds)

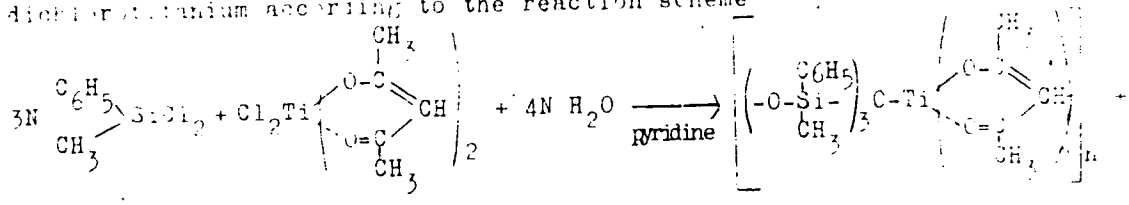
S/062/62/000/009/005/009
B119/B186

AUTHORS: Rafikov, S. R., Amerkanov, K. A., Pavlova, S. A., Tverdokhlebova, I. I., and Pichkhadze, Sh. V.

TITLE: Study of polyorganotitanosiloxanes in solutions

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 9, 1962, 1581 - 1584.

TEXT: Poly-bis-(acetyl acetonate)titanophenyl methyl siloxane was produced by cohydrolyzing methyl phenyl dichlorosilane with bis-(acetyl acetonate) dichlorotitanium according to the reaction scheme



8N HCl. The reaction product was obtained by fractional precipitation from a 20 % solution in benzene n-heptane (1:1). The individual frac-

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Study of poly-organotitanosiloxanes in ... S/062/62/[illegible]
B110/B186

were analysed into their elements; their molecular weight and viscosity were determined (solvent: dimethyl formamide, benzene, chlorobenzene, methyl ethyl ketone). Results: With minimum deviations, all the fractions have a relative homogeneity, and differ only in molecular weight. Maximum molecular weight found: 11,200; degree of polymerization n of this fraction = 17; characteristic viscosity (depending on the solvent used and the rate of flow through the capillary tube of the viscosimeter): 0.01 - [illegible]. There are 6 figures and 1 table.

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

SUBMITTED: February 17, 1962

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ANDRIANOV, K.A.; PICHKHADZE, Sh.V.; BOCHKAREVA, I.V.

Polyorganotitanosiloxanes Part 2: Cohydrolysis of bis-(acetylacetonate)dichlorotitanium and alkyl(aryl)trichlorosilanes. Vysokom.soed. 4 no.2:256-260 F '62. (MIRA 15:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Titanium organic compounds) (Silane)

PICHKHAYA, T. P., ASATIANI, V. S., ANASASHVILI, A. Ts., AGEYEVA, A. K., KEKELIDZE, O. V., KITIYA, T. D., KORDZAKHIYA, T. P., KUNCHULIYA, V. G., PRUIDZE, T. V., SULEYSKIRI, G. V., (USSR).

The Effect of the Mountainous Climate on Biochemical Aspects of Human Blood.

report presented at the 5th Int'l.
Biochemistry Congress, Moscow, 10-16 Aug. 1961.

PICHKHAYA, T. P.

35449-Izmeneniya v okislitel'novosstanovitel'nykh sistemakh organizma pod vliyaniyem gornogo klimata. Soobshch. Akad. Nauk Gruzz. SSR, 1949, No. 5, S. 281-86-Bibliogr: 6 Nazv.

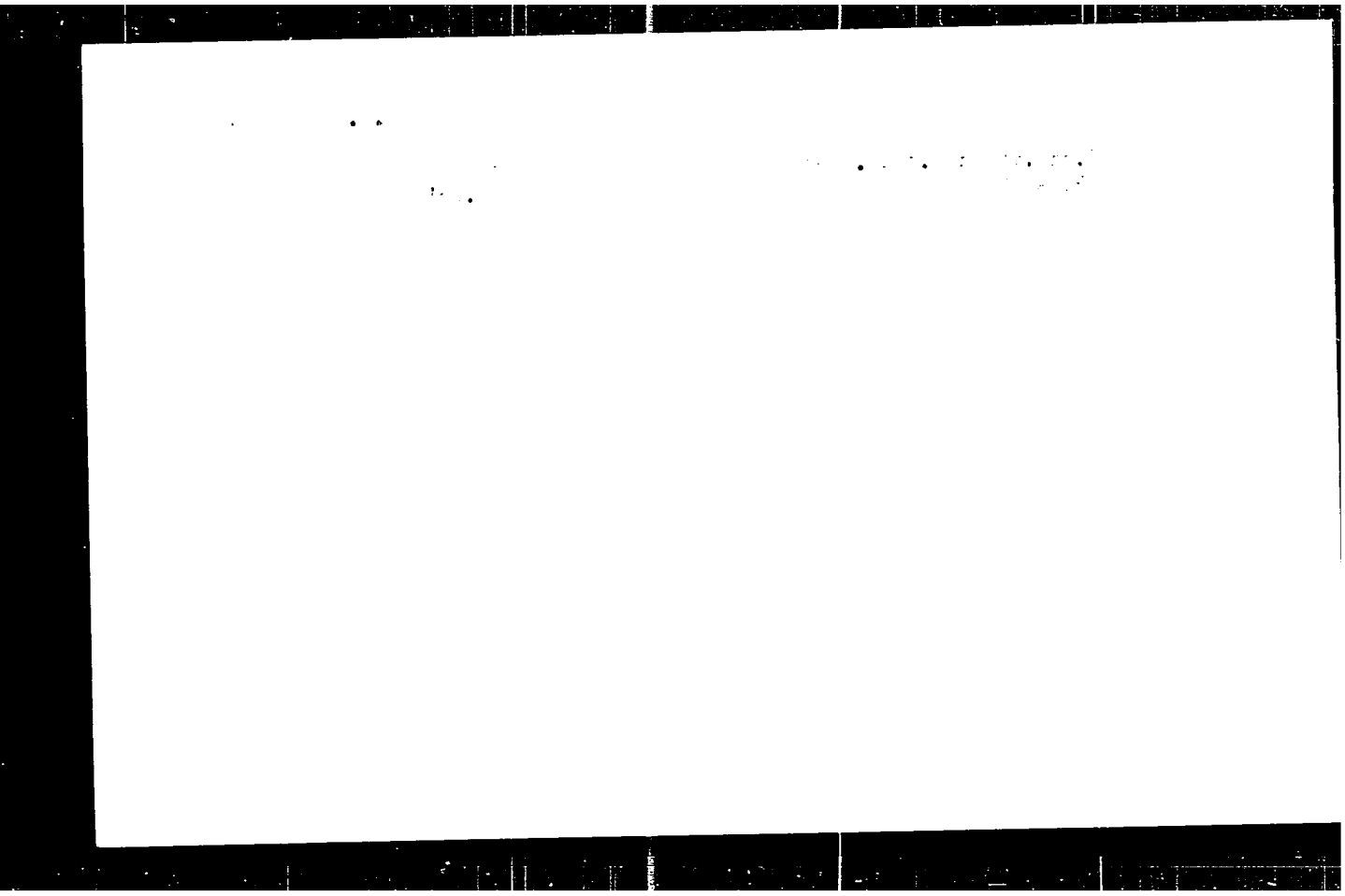
So; Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

ASATIANI, V.S.; PICHKHAYA, T.P.; AGEYEV, A.K.; KEKELIDZE, O.V.; PRUIDZE, T.V.

Some indicators of blood composition in the lower apes. Biul. eksp. biol. med. 47 no.2:69-73 F '59. (MIRA 12:4)

1. Iz Tbilisskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.

(BLOOD,
chem. in lower monkeys, comparison with human standards (Rus))
(MONKEYS,
blood chem. in lower monkeys, comparison with human standards (Rus))



Pichkov K

SINEL'NIKOV, N.; GOL'BETS, M.; PICHKOV, K.; IRAUSAL', A.; NEKRASOV, V.
SKRINNIKOV, Yu.; POGOSTKIN, S.; GARAYEV, V.; SMIRNOV, V.
MINOSYAN, I.

Useful details. Za rul. 15 no.5:insert p.12-14 My '57. (MLRA 10:6)
(Automobiles)

ASATIANI, V.S.; prinimali uchastiye: AGEYEVA, A.K.; KEKELIDZE, O.V.; PICHKHAYA, T.P.; PHUIDZE, T.V.

Data on the comparative biochemistry of man and monkey. Ukr.biokhim. zhur. 30 no.3:392-401 '58. (MIRA 13:3)

1. State Medical Institute, Tbilisi.
(MONKEYS) (BLOOD--ANALYSIS AND CHEMISTRY)

BABICHEV, A.[illegible], kand. tekhn. nauk; PICHKO, A.S., inzh.

Investigating a shot peening unit. Vest. mashinostr. 45 no.1:63-65 Ja '65. (MIRA 18:3)

[redacted]

L 55075-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AP5017998 UR/0186/64/006/005/0619/0621

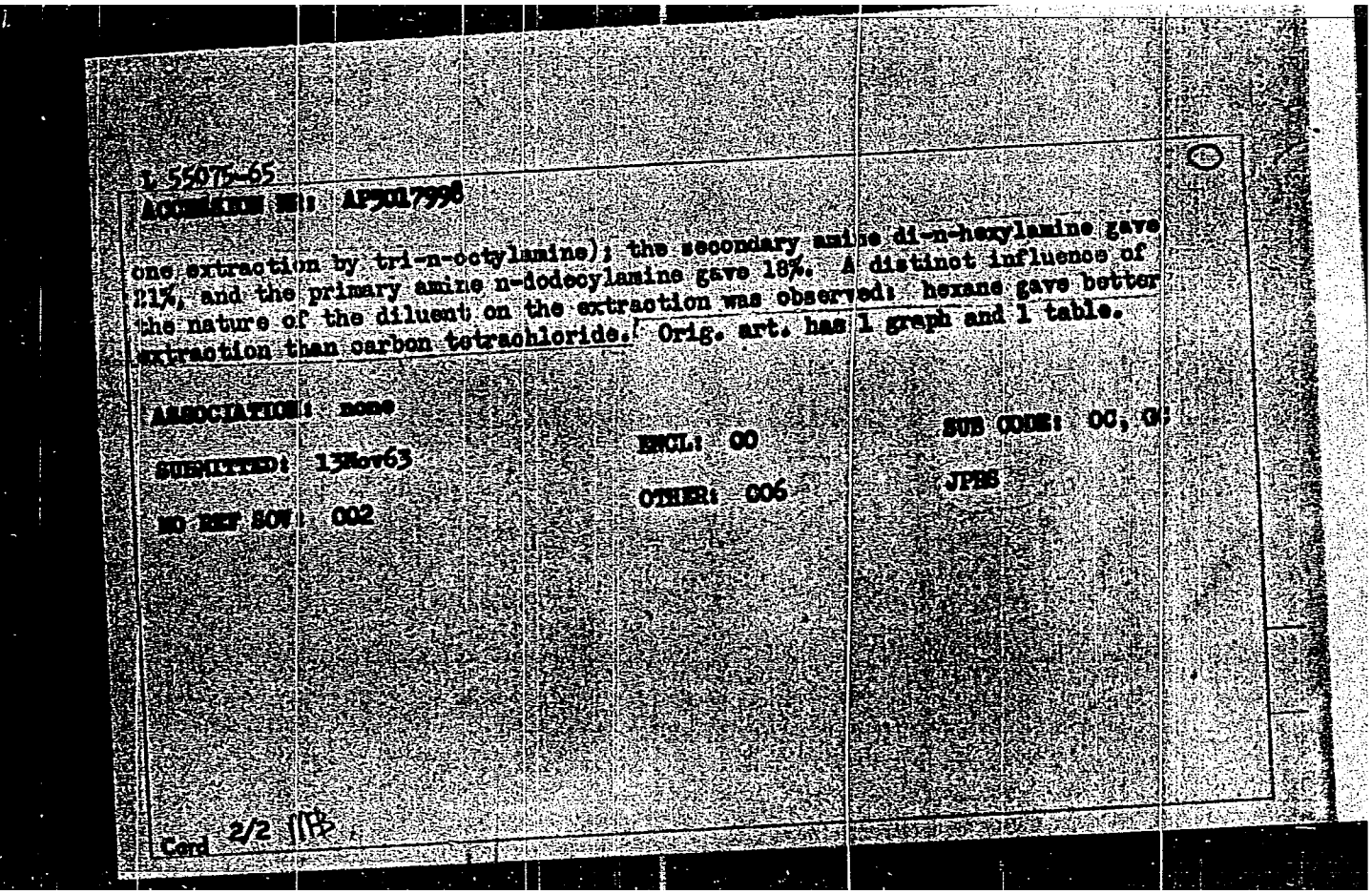
AUTHOR: Zvyagintsev, O. Ye.; Sinitsyn, N. M.; Pichkov, V. N.

TITLE: Extraction of $Na_2[RuNO(NO_2)_4OH]\cdot 2H_2O$ with aliphatic amines

SOURCE: Radiokhimiya, v. 6, no. 5, 1964, 619-621

TOPIC TAGS: sodium compound, chemical labelling, ruthenium, amine, chemical separation, nitric acid, solution property

Abstract: The sodium salt of tetranitrohydroxonitrosoruthenium, labeled with radioactive ruthenium-106, was used to study its behavior during extraction from nitric acid solutions by aliphatic amines: tri-n-octylamine $[(n-C_8H_{17})_3N]$, tri-n-decylamine $[(n-C_{10}H_{21})_3N]$, tri-n-laurylamine $[(n-C_{12}H_{25})_3N]$, di-n-hexylamine $[(n-C_2H_{13})_2NH]$, and n-dodecylamine $[n-C_{12}H_{25}NH_2]$. Extraction was conducted at room temperature and a 1:1 phase ratio; initial solution 0.005 M with respect to ruthenium; equilibrium aqueous phase after extraction 1N with respect to HNO_3. Five minutes of shaking sufficed for the establishment of an extraction equilibrium. Lengthening the chains of the tertiary amines from 8 to 12 carbon atoms led to a decrease in extraction of ruthenium. Tertiary amines were found to extract ruthenium best (41% in



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ACCESSION NR: AP5017998

one extraction by tri-n-octylamine); the secondary amine di-n-hexylamine gave 21%, and the primary amine n-dodecylamine gave 18%. A distinct influence of the nature of the diluent on the extraction was observed: hexane gave better extraction than carbon tetrachloride. Orig. art. has 1 graph and 1 table.

ASSOCIATION: none

SUBMITTED: 13Nov63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 002 OTHER: 006 JPRS

Card 2/2 11B

[illegible] V.N.; [illegible]

Nitrosorutheni[illegible] compound [illegible]
SSSR 156 no. 4[illegible] e '64.

1. Institut obshchey i neorganicheskoy khimii im. [illegible]
Kurnakova AN [illegible] akademikom [illegible]

PICHKOV, V.P.

Checking and using measurement voltage transformers. Izm.tekh. no.4:23-25 Ap '62. (MIRA 15:4)
(Electric instruments)

PICHKOV, V.P.

Testing low-ohmic potentiometers by means of incomplete compensation. Izm.tekh.no.5:46-50 S-O '55. (MLRA 9:1)
(Potentiometer--Testing)

PICHKOV, Yu.A., inzh.; BEDIM, V.G., inzh.

Measuring velocity fields at the intake of axial-flow fans for main ventilation in mines. Izv. vys. ucheb. zav.; gor. zhur. no.5:105-109 '64. (MIRA 17:12)

1. Moskovskiy institut radioelektroniki i gornoy elektrotekhniki. Rekomendovana kafedroy statsionarnykh mashin i ustanovok.