

USSR

UDC 547.26'118

PREDVODITELEV, D. A., URVANTSEVA, G. A., FILIPPOVICH, Yu. B., and
NIFANT'YEV, E. Ye., Moscow Pedagogical Institute Imeni V. I. Lenin

"Ethyleneamidophosphites of Glycerine Derivatives. III. Sulfohydrolysis
of Ethylenemethylamidophosphites of 1,2-Isopropylideneglycerine"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 8, Aug 73, pp 1799-1801

Abstract: Sulfohydrolysis of the cyclic ethylenemethylamidophosphite of 1,2-isopropylideneglycerine gave methylcolaminoglycerophosphothionophosphite. Based on this product a novel analog of natural glycerophospholipids was obtained containing a thiophosphoryl group and a phosphorus-carbon bond in its structure. A new synthetic route for 3-N-methylethyleneamidothionophosphate was developed started from 1,2-isopropylideneglycerine thionophosphite. It was shown that the sulfohydrolysis of ethylenemethylamidophosphites is different from the hydrolysis process.

1/1

USSR

UDC 547.26'118

PREDVODITELEV, D. A., URVANTSEVA, G. A., and NIFANT'YEV, E. Ye., Moscow
Pedagogical Institute Imeni V. I. Lenin

"Ethyleneamidophosphites of Glycerine Derivatives. IV. Synthesis of
Methylcolaminoglycerophosphonates, Enolphosphates and Phosphites"

Leningrad, Zhurnal Obschey Khimii, Vol 43 (105), No 8, Aug 73, pp 1801-1806

Abstract: The reaction of 1,2-isopropylidenglycerylethylene methyl phosphite (I) with chloral and methyl iodide was investigated, the reactions yielding respectively β,β -dichlorovinyl-N-methyl-N- β -chloroethylamidophosphate and N-methyl-N- β -iodoethylmethylphosphonate of 1,2-isopropylidenglycerine. Alcoholysis of (I) yields unsymmetric phosphites which undergo ring-chain tautomerism. The phosphites obtained were used in Perkov and Arbuzov reactions. New phosphorus-organic compounds -- analogues of glycerophospholipids -- were synthesized.

1/1

USSR

UDC 541.67:547.879

PREDVODITELEV, D. A., AFANAS'YEVA, D. N., FILIPPOVICH, YU. B., NIFANT'YEV, E. YE.

"New Method of Synthesis and Stereochemistry of 1,3-alkylene thiophosphites"

Leningrad, Zhurnal Obshchey Khimii, Vol XLIII (CV), No 1, 1973, pp 73-77

Abstract: A new procedure is proposed for synthesizing 1,3-alkylene thiophosphites by the sulfohydrolysis of amides of alkylene phosphorous acids. The nuclear magnetic resonance method and thin-layer chromatography were used to detect the phenomenon of stereoisomerism in the series of cyclic thiophosphites. The stereochemical result of synthesizing the thiophosphites depends on the type of initial compound and the chosen reaction. By comparing the calculated and determined dipole moments it was found that the preferred configuration of the 1,3-alkylene thiophosphites is the chair configuration with equatorial orientation of the thiophosphoroyl group.

1/1

USSR

UDC 547.26'118

PREDVODITELEV, D. A., URVANTSEVA, G. A., and NIFANT'YEV, E. Ye., Moscow
Pedagogical Institute Imeni V. I. Lenin

"Ethyleneamidophosphites of the Derivatives of Glycerine. Synthesis of
N-Methylcephaline Analogues Modified in the Phosphorus Moiety"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 4, Apr 73, pp 948-949

Abstract: Novel analogues of natural N-methylcephaline have been synthesized. A mixture of 2 g distearoylglycerine and 0.79 g hexaethyltriamide of phosphorous acid was heated in 20 ml benzene for 5 hrs at 90°, the solvent removed, and the residue recrystallized to yield tetraethyldiamidophosphite of 1,2-distearoylglycerine (I), m.p. 61-62°. (I) heated in benzene with N-methylcolamine yields 3-N-methylethyleneamidophosphite of 1,2-distearoylglycerine (II), m.p. 67-68°. Adding sulfur to a benzene solution of (II) at 20° converts it to 3-N-methylethyleneamidothionephosphate of 1,2-distearoylglycerine, m.p. 62.5-63°. Adding 0.075 g of chlozal to 0.32 g (II) in 5 ml benzene and keeping the mixture for 3 hrs at 20° yield 3-β,β-dichlorovinyl-β-chloroethyleneamidophosphate of 1,2-distearoylglycerine, m.p. 38-39°.

1/1

USSR

UDC 66.094.53:678.53:678.744:661,728

PREDVODITELEV, D. A., NAZAROVA, V. A., All-Union Institute of Artificial Fibers

"Synthesis of Phosphorus-Containing Derivatives of Polyhydroxy Compounds, by the Action of Oxaphospholanes"

Leningrad, Zhurnal Prikladnoy Khimii, 1971, Vol 44, No 8, pp 1845-1849

Abstract: As phosphorylizing agents, the anhydrides of the phosphorus acids possess strong advantages, since when they act on hydroxyl-containing compounds, no side-products which might destroy the initial polyhydroxy compounds are produced; but the formerly used acids of pentavalent phosphorus were inadequate in having a low reactivity. For this reason the development of synthetic methods for phosphorus-containing esters is of great interest. An approach is made by the author by using as acylating reagents, the mixed anhydrides of pentavalent phosphorus and of the carboxylic acids--and in particular that of a β -carboxydiethylphosphinic acid. All these offer advantages in the preparation and with regard to the amount of extraction of phosphorus by 1/1 the polymer.

USSR

UDC 661.728.87

~~PREBYODITELEV, D. A.~~, BAKSHEYEVA, M. S., All-Union Scientific
Research Institute of Synthetic Fiber

"New Method of Synthesizing Sulfur-Containing Phosphorus Acids
Cellulose Esters"

Leningrad, Zhurnal prikladnoy khimii, Vol 64, No 10, Oct 71,
pp 2355-2358

Abstract: The phosphorylation reaction of phosphorus-containing cellulose esters by thion- and thio derivatives of phosphorus acids is described. The objective of the study was the synthesis of the corresponding acid chlorides: phosphorus thiochloride (PSCl_3), butyl thiodichlorophosphite ($\text{C}_4\text{H}_9\text{SPCl}_2$), di-butyl dithiochlorophosphite ($\text{C}_4\text{H}_9\text{S}_2\text{PCl}$) and ethyl butyl thiochlorophosphonite, as well as the effects of reaction conditions (time, treatment temperature, solvents) on the P content in the synthesized cellulose esters. The starting material was sized viscose staple fabric. Sulfur-containing acid chlorides of trivalent phosphorus were found to be more reactive than thioacid chlorides of pentavalent phosphorus, they yielded cellulose thiobutylphosphites
1/2

USSR

PREDVODITELEV, D. A., et al, Zhurnal prikladnoy khimii, Vol 64, No 10, Oct 71, pp 2355-2358

with up to 8% P. The reaction rate of this acid chlorides with cellulose is closely related to the solvent employed. The highest reaction rate is shown by a reaction in the presence of nitrogen-containing bases. IR spectra of cellulose esters obtained by reaction with phosphorus thiochloride show a weak band in the 780cm^{-1} region which may be identified as the stretching vibration of P-S groups; the spectra of cellulose esters produced by reaction with butyl thiodichlorophosphite show a band in the 540cm^{-1} characterizing the presence of P-S bands. As expected, cellulose thiophosphates have a higher hydrolytic stability than sulfur-containing esters of trivalent phosphorus acids and cellulose. All phosphorus containing esters of polyhydroxy-compounds with 2-4% P are flame- and glow resistant.

2/2

- 60 -

1/2 029 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SYNTHESIS OF ARSENIC CONTAINING CELLULOSE ESTERS -U-
AUTHOR--(03)-PREDVODITELV, D.A., BUYANOVA, V.K., KONKIN, A.A.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(1), 74-7
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ORGANIC ARSENIC COMPOUND, CELLULOSE RESIN, NATURAL FIBER,
FABRIC, BENZENE, ESTERIFICATION, CHEMICAL SYNTHESIS, FIRE RESISTANT
MATERIAL, BACTERICIDE ADDITIVE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1192 STEP NO--UR/0460/70/012/001/0074/0077
CIRC ACCESSION NO--AP0116657
UNCLASSIFIED

272 029

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0116657

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COTTON DOWN ACTIVATED WITH ACOH OR DRESSED VISCOSE STAPLE FABRIC (I) CONTG. C SUB6 H SUB6 INCLUSIONS WAS REFLUXED WITH 10PERCENT PHASO IN SOLN. IN C SUB6 H SUB6 (IN THE PRESENCE OF H SUB2 SO SUB4) AT 80DEGREES FOR 4 HR TO GIVE MODIFIED CELLULOSE (II) CONTG. 8.6PERCENT AS. II ESTERS OF PENTAVALENT AS WERE OBTAINED BY TRANSESTERIFICATION OF I CONTG. C SUB6 H SUB6 INCLUSIONS IN ETOH-C SUB6 H SUB6. THE REACTION INVOLVED ESTERIFICATION OF RAS (O) (OH) SUB2 WITH ETOH FOLLOWED BY TRANSESTERIFICATION TO GIVE CELL OAS(O)(OET) EQUALS R (CELL EQUALS CELLULOSE MOIETY). I WAS ALSO REFLUXED WITH ME SUB2 AS (O)OH, P,HOC SUB6 H SUB4 AS (O)(OH) SUB2, OR PHAS(O)-(OH) SUB2 AT 60DEGREES FOR 4-7 HR TO GIVE ESTERS CONTG. 1.2-5.3PERCENT AS. ARSENIC-CONTG. II ESTERS WERE FIRE RESISTANT AND EXHIBITED BACTERICIDAL AND PHYSIOL. ACTIVITY. FACILITY: VSES. NAUCH.-ISSLED. INST. ISKUSSTV. VOLOKNA, MYTISHCHI, USSR.

UNCLASSIFIED

USSR

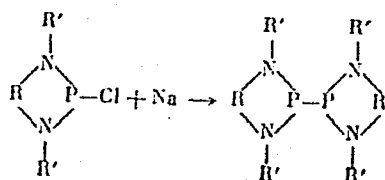
UDC 547.26'118

KOMLEV, I. V., ZAVALISHINA, A. I., CHERNIKEVICH, I. P., PREDVODITELEV, D. A.,
and NIFANT'YEV, E. YE., Moscow State University imeni M. V. Lomonosov

"Amides of Hypodiphosphorous Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 4, 1972, pp 802-807

Abstract: Metallic sodium was reacted with cyclic amidoacyl chlorides to form the amides and esteramides of the hypodiphosphorous acid as given in the following formula:



The anhydride reactant can be prepared by treating alkylenediamines with PCl_3 in the presence of triethylamine. The structure was confirmed by the NMR spectra of P^{31} and the IR spectra, especially the intense absorption in the region corresponding to the energy of the N-P vibration. The P-P bond is $1/2$

USSR

UDC: 51

KAAZIK, Yu. Ya. and PREEM, M. K.

"The Problem of Finding Routes"

Tr. Vychisl. tsentra. Tartus. un-t (Transactions of the Computer Center, Tartu University) No 28, 1973, pp 3-18 (from RZh-- Matematika, No 1, 1974, Abstract No 1V512)

Translation: In each of m warehouses K_1, \dots, K_m is one of K forms of goods $T(K_i)$. A particular form of goods $T(O_i)$ must be shipped to each of n customers O_1, \dots, O_n . We are given an $m \times n$ matrix, $C = (c_{ij})$ distances from the warehouses to the customers. We are required to set up an economical round trip $K_{i_1} O_{j_1} K_{i_2} O_{j_2} \dots K_{i_q} O_{j_q} K_{i_1}$ covering the customers no more than once and with the warehouse and its customer corresponding always to the same goods, $T(K_{i_r}) = T(O_{j_r})$, while all the warehouses in the route differ. Refinement of the concept of route economy originating from the desire to improve it to the point where it is better than the shipping plan constructed on the principle of shuttle delivery, warehouse--customer--warehouse leads to the following formal statement of the problem: Suppose we are now given numbers a , D , and s ; a $1/4$

USSR

KAAZIK, Yu. Ya and PREEM, M. K., Tr. Vychisl. tsentra. Tartus. un-t, No 28, 1973, pp 3-18

set H_j of indices for those warehouses K_i for which $T(K_i) = T(O_j)$; a set L_i of indices for those customers O_j for whom this equality is satisfied; and let $S_j = \min_{i \in H_j} c_{ij}$. We are required to find all such index sequences

$$i_1, j_1, i_2, j_2, \dots, i_r, j_r, i_1 \tag{1}$$

where $i_h \neq i_g$ and $j_h \neq j_g$ for $i \neq g$, $j_h \in L_{i_g}$ ($h = 1, 2, \dots, r$) and $0 < r \leq s$ for which the following inequalities are satisfied:

$$\sum_{h=1}^r (c_{i_h j_h} + c_{i_{h+1} j_h}) \leq a \sum_{h=1}^r S_{j_h}$$

and

$$\frac{\sum_{h=1}^r c_{i_{h+1} j_h}}{\sum_{h=1}^r (c_{i_h j_h} + c_{i_{h+1} j_h})} \leq D.$$

2/4

USSR

KAAZIK, Yu. Ya. and PREEM, M. K., Tr. Vychisl. tsentra. Tartus. un-t, No 28, 1973, pp 3-18

It is proposed to solve this problem by an algorithm of limited choice. Excluding the part of the routes of the form (1) and limiting the choice to the routes of form (1) here considered which, for each $p = 1, 2, \dots, r$, satisfy the condition

$$\sum_{h=1}^p (c_{1hj} + c_{i_{h+1}j}) \leq a \sum_{h=1}^p s_{jh}, \quad (3)$$

justified by the fact that, for each route satisfying inequality (2), one can find a cyclical permutation in which it also satisfies condition (3). The existence of such a permutation follows from this result:

Theorem: If the following condition is satisfied:

$$\sum_{i=1}^r a_i \leq \sum_{i=1}^r b_i,$$

3/4

USSR

KAAZIK, Yu. Ya. and PREEM, M. K., Tr. Vychisl. tsentra. Tartus. un-t, No 28, 1973, pp 3-18

such j ($1 \leq j \leq r$) can be found that, for each $p = j, \dots, r$, the following condition is satisfied:

$$\sum_{i=j}^p a_i \leq \sum_{i=j}^p b_i.$$

A detailed block diagram of the algorithm is given, as well as a program realizing the algorithm in the ALGOL-60 language. It is reported that for the "Minsk-32" computer the programs for realizing this algorithm are also composed in the MALGOL (for the case in which $s = 2$) and SSK (for the general case) languages. Ye. Gabovich.

4/4

UDC 615.371:576.851.553]-073

USSR

PREGER, S. M. and AL'BITSKAYA, N. B., Tomsk Institute of Vaccines and Sera

"Using the Flocculation Test to Determine the Titers of Antibotulinus Sera Type B"

Moscow, Laboratornoye Delo, No 3, 1973, pp 188-189

Abstract: To titrate antibotulinus sera type B requires the use of toxoids containing at least 10 EC with an EC/Lf ratio of 0.8 to 1.0. Lf (flocculent units) are calculated from the formula:

$$Lf = \frac{\text{serum titer} \times \text{serum dilution with initial flocculation}}{\text{serum dilution} \times \text{number of milliliters of toxoid}}$$

Flocculation starts within 2 hours. Applying the technique to seven series of crude and concentrated botulinus toxoids, the authors were able to titrate 70% of the type B sera(95); the other 30% were titrated from the biological neutralization reaction in white mice.

1/1

21

USSR

UDC 576.851.553.097.29.083.3

PREGER, S. M., AL'BITSKAYA, N. B., and POLESHCHUK, L. N., Tomsk Institute of Vaccines and Sera

"Change in Cobalt, Iron, and Copper Levels in Culture Medium During Toxin Formation by A and B Botulism Agent"

Moscow, Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, No 2, 1973, p 139

Abstract: Concentrations of metallic ions in Gluzman broth, used industrially in producing A and B botulism antigens, were determined prior to and up to 7 days after seeding with botulism agent, and 21 days after 2-week storage of 7-day cultures at 4-5°C. Iron, copper, and cobalt concentrations decreased significantly during the 7 days after seeding. Cold storage had no effect on iron and copper concentrations. Experiments indicated that cobalt is utilized in vitamin B₁₂ synthesis particularly intensively during toxin formation. Reduction of metallic ion concentrations was accompanied by increases in toxicity and rate of antigen formation. These results indicate that iron, copper, and cobalt are necessary in maintaining normal vital processes of botulism agents.

1/1

USSR

PRELOVSKAYA, R. D., GIMBURZHEVSKAYA, M. F., MYMRINA, N. I.

"Analysis of Production Program with Various Criteria of Optimality"

Tr. Arkhang. Lesotekhn. In-ta [Works of Arkhangl'sk Institute of Forestry],
1971, Vol 31, pp 89-94, (Translated from Referativnyy Zhurnal, Kibernetika,
No 3, 1972, Abstract No 3 V473).

NO ABSTRACT.

USSR

UDC 621.317.39:531.14.08

PREMET, E. I.

"Influence of Shaft Rotation Rate on an Inductive Current-Vortex Converter"

Tr. Kazan. Aviats. In-ta. [Works of Kazan' Aviation Institute], 1971, No 138, pp 39-43, (Translated from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 7, 1972, Abstract No 7.32.300, from the Resume).

Translation: A study of the influence of shaft rotation rate on output signal of an inductive current-vortex converter is performed in order to determine quantitatively the change in converter parameters and characteristics. A description and diagram are presented of an installation for this investigation. The dependences produced provide an overall qualitative picture for estimation of the influence of shaft rotation rate on converter characteristics and a particular quantitative picture for the converter selected. The studies performed allow it to be concluded that increasing the shaft rotation rate causes an apparent increase in clearance between shaft and converter. The degree of distortion increases with decreasing clearance and increasing frequency and current of the converter. 2 Figures; 6 Biblio. Refs.

1/1

USER

UDC: 621.375.029.64

MENDE, F. F., PRENTSLAU, N. N., and DMITRIYEV, V. M.

"UHF Amplifier With Internal Negative Feedback"

Moscow, Radiotekhnika, No 2, 1972, pp 69-75

Abstract: In this paper, the authors propose an improvement to a system they offered in an earlier paper (F. F. Mende, et al, Pri-bory i tekhnika eksperimenta, No 3, 1967). The earlier system was a frequency-stabilizing device using a uhf amplifier with intermediate frequency amplification and amplitude modulation. While the amplifier had good phase characteristics and high gain, the amplitude modulator limited the output signal since it was not designed for high power at the high modulation frequencies. The uhf amplifier offered in the present paper uses frequency modulation of the reference oscillator and has no amplitude modulator, thus avoiding the defect of the former model. A block diagram of the device is given and its operation is explained. Basic design expressions are developed. The new device was experimentally

1/2

- 2 -

- USSR

MENDE, F. F. et al, Radiotekhnika, No 2, 1972, pp 69-75

tested; it was equipped with a reflex klystron operating at 17-20 MHz and an intermediate frequency of 10 MHz. Curves for experimental and theoretically derived data are shown. The authors express thanks to M. B. Golant, M. S. Khaykin, and R. T. Mina.

2/2

Devices

USSR

UDC: 621.376.332

MENDE, F. F., PRENISLAU, N. N., and DMITRIYEV, V. M.

"UHF Discriminators with IF Error Signal"

Moscow, Radiotekhnika, Vol. 26, No 1, 1971, pp 51-56

Abstract: Two types of discriminator in which the error signal is at the intermediate frequency are proposed, the authors claiming for them freedom from difficulties encountered with such discriminators suggested by earlier work. The first circuit uses a parallel connection of the amplitude modulator and the standard resonator, such that the signal from the tunable oscillator is divided into two channels, one of them containing the attenuator and modulator, to which the i-f signal from the i-f oscillator is also applied, the other with the standard resonator and phase shifter. Both the i-f and variable oscillator signals are combined in a mixer to produce the i-f error signal. The second circuit, using a series connection of amplitude modulator and standard resonator, eliminates some defects inherent in the first. Both circuits are analyzed, and the results of experiments performed on both of them presented. The experiments were conducted in the 3-cm wavelength range. Oscillograms showing the characteristic curves of the discriminators are reproduced.

1/1

USSR

UDC 665.637.6

PREOBRAZHENSKAYA, A. I., MAKAROV, A. D., BAYVAROVSKAYA, YU. V.

"Degreasing of Broad-Fraction Gach [Crude, Fairly Oil-Free Paraffins]"

Neftepererabotka i neftekhimiya. Nauchno-tekhn. sb. (Petroleum Refining and Petrochemistry, Scientific-Technical Collection), 1969, No 3, pp 8-10 (from RZh-Khimiya, No 23 (II), 10 Dec 69, Abstract No 23 P180)

Translation: Degreasing of samples of kamennolozhskaya petroleum gach [oil which cannot be pressed out] was studied on a laboratory unit. Based on the data obtained, a technology of degreasing was developed that affords production of crude-paraffin with oil content $< 1\%$.

1/1

- 78 -

USSR

(2)
UDC 632.95

PERESEDOV, V. P., PREOBRAZHENSKAYA, E. L., and ZASEDATELEVA, G. V.

"Toxicity of New Pesticide Dibrom"

Tr. Volgogr. med. in-ta (Works of Volgograd Medical Institute), Vol 24, 1971, pp 194-197 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom (I, L-S), No 1(II), 1973, Abstract No 1N447 by T. A. Belyayeva)

Translation: The LD₅₀ amounts to 440 ± 17 and 465 ± 17 mg/kg for white mice and rats, respectively, when administered perorally. The acute poisoning of animals is accompanied by activation of the choline-reactive systems. In the case of subcutaneous application the LD₅₀ is 1234 ± 70 and 1200 ± 63 mg/kg for white rats and rabbits, respectively. The cummulation coefficient of dibrom is 3.6. The new pesticide possesses anticholinesterase activity.

1/1

- 27 -

USSR

UDC 632.95

PERESEDOV, V. P., PREOBRAZHENSKAYA, E. L., and ZASEDATELEVA, G. V.

"Toxicity of New Pesticide Dibrom"

Tr. Volgogr. med. in-ta (Works of Volgograd Medical Institute), Vol 24, 1971, pp 194-197 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom (I, L-S), No 1(II), 1973, Abstract No IN447 by T. A. Belyayeva)

Translation: The LD₅₀ amounts to 440 ± 17 and 465 ± 17 mg/kg for white mice and rats, respectively, when administered perorally. The acute poisoning of animals is accompanied by activation of the choline-reactive systems. In the case of subcutaneous application the LD₅₀ is 1234 ± 70 and 1200 ± 63 mg/kg for white rats and rabbits, respectively. The cummulation coefficient of dibrom is 3.6. The new pesticide possesses anticholinesterase activity.

1/1

- 27 -

PREOBRAZHENSKAYA, I. N.

SPRS 55341
12
MAY 1972

UDC: 611.815+611.817-019:618.014.817-063

THE EFFECT OF BACK-CHEST G FORCES ON MENINGEAL AND MENINGEAL BLOOD VESSELS

[Article by I.N. Preobrazhenskaya, Chair of Normal Anatomy (headed by Professor M.C. Prives, Honored Scientist), First Leningrad Medical Institute imeni Akademika I.P. Pavlov; Leningrad, Arkhiv Anatomii, Gistologii i Embriologii, Sursian, No 11, 1971, submitted 25 November 1970, pp 60-66]

Much attention is being given to the effect of transverse gravitational stress on the blood vessels of the brain, mainly in physiological studies (A.R. Kotovskaya and Ye.M. Yuganov, 1962; A.A. Kisilev, 1962; A.S. Berez, 1962; Lindberg, 1962; P.K. Isakov, Ye.M. Yuganov, I.I. Kas'yan, 1964; A.A. Shrubusa, O.G. Garenko, Yu.Ye. Moskalenko, I.I. Kas'yan, 1964; O.G. Garenko, E.B. Yegorov, A.N. Razumeyev, N.A. Chakhonadskiy, 1964; V.Ye. Balay, P.V. Vasil'yev, S.P. Kolchin, 1964; Ye.B. Shui'zhenko, 1965; N.K. Simabnova, 1965; M.D. Yemel'yanov, E.S. Kotova, 1967; B.F. Asymolov, A.D. Voskresenskiy, 1968, and others). There have been relatively few morphological investigations in this area. There are the works of B.S. Glushkov (1963), D.I. Medvedev (1967), V.G. Patrukhin and V.I. Stepanov (1968). They report edema of brain tissue, hemorrhages and diverse histological changes in brain cells after exposure to transverse forces and, in particular, forces acting in the ventral direction. In the opinion of Yu.Ye. Moskalenko (1967), there are no significant changes in cranial hemocirculation under the effect of transverse forces, only some plethora and elevation of intracranial pressure. The author considers all these changes to be reversible.

The objective of the present work was to demonstrate changes in structure of blood vessels of the medulla, pons, and meningeal of the rabbit after exposure to dorsoventral G forces.

Brain preparations from ten rabbits (7 experimental and 3 controls) served as our material.

G forces acting in the dorsoventral direction were created on a centrifuge, 1 meter in radius. Two series of tests were performed.

USSR

UDC 612.821.6

PREOBRAZHENSKAYA, L. A., Laboratory of the Physiology of Emotions, Institute of Higher Nervous Activity and Neurophysiology, Academy of Sciences USSR, Moscow

"Some Characteristics of a Conditioned Avoidance Reflex Reinforced by Pain Stimulation of a Partner"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, No 1, Jan/Feb 73, pp 51-58

Abstract: The objective of the study was to elaborate a conditioned instrumental reaction in one dog, which would discontinue painful stimulation of a partner dog. For this purpose, two dogs were placed in two separate cages some 2 ft apart. A painful electrical current was delivered to the hind leg of the victim dog, causing it to pant, whine, and yelp. The observer dog could switch the current off by lifting its left front paw which was attached to a lever. Three out of six observer dogs learned to perform this operation. EEG and EKG revealed synchronization of theta rhythm in the dorsal hippocampus and accelerated heart rate in the observer dogs during excitation of the victim dogs. It is concluded that the defensive excitation of the victim dog sets the observer dog into a state of emotional stress which acts as the reinforcing factor in the elaboration of an instrumental reaction.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--CONDITIONED AVOIDANCE REACTIONS TO A PAIN STIMULATION OF ANOTHER
ANIMAL -U-
AUTHOR-(02)-PREOBRAZHENSAYA, L.A., SIMONOV, P.V.
COUNTRY OF INFO--USSR P
SOURCE--ZHURNAL VYSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 2, PP
379-385
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PAIN, CONDITIONED REFLEX, RAT, DOG, MONKEY, ELECTRIC CURRENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1702 STEP NO--UR/0247/70/020/002/0379/0385
CIRC ACCESSION NO--AP0106444
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0106444

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTS ON TWLEVE RATS AND THREE DOGS WERE AIMED AT ELABORATING AN AVOIDANCE RESPONSE TO A PAIN STIMULATION OF ANOTHER ANIMAL OF THE SAME SPECIES. THE REACTION OF THE RATS CONSISTED IN RUNNING TO A CERTAIN COMPARTMENT OF THE CAGE, AND OF THE DOGS, IN LIFTING THE LEFT FOREPAW WITH A LEVER ATTACHED TO IT TO DISCONNECT THE ELECTRIC CIRCUIT. THE AVOIDANCE REACTION COULD BE ELABORATED IN FOUR RATS AND ONE DOG WHICH HAD NEVER EXPERIENCED AN ELECTRIC STIMULATION. IN FIVE RATS THE REACTION APPEARED ONLY WHEN THEY HAD BEEN PREVIOUSLY USED AS "VICTIMS". THE RATS WHICH ELABORATED THE AVOIDANCE REACTION WITHOUT PRELIMINARILY EXPERIENCING THE ACTION OF THE CURRENT, ARE CHARACTERIZED BY A HIGH ACTIVITY IN "THE OPEN FIELD", VERY FEW DEFEICATIONS AND URINATIONS AND THE ABSENCE OF ATTACKS IN RESPONSE TO ELECTRIC STIMULATION, I. E. BY A WEAK AGGRESSIVENESS. A CONCLUSION HAS BEEN DRAWN THAT SOME OF THE ANIMALS ACTIVELY TRY TO INTERRUPT OR PREVENT THE ACTION OF THE SIGNALS COMING FROM THE ANIMAL STIMULATED BY CURRENT (VOCAL REACTIONS, MOTOR EXCITATION, ETC.). SENSITIVITY TO SUCH SIGNALS DEPENDS ON THE ANIMAL'S INDIVIDUAL FEATURES TO A GREATER EXTENT THAN ON THE PHYLOGENETIC LEVEL (A RAT, A DOG, A MONKEY) AND APPARENTLY REPRESENTS AN INDEPENDENT LINE OF EVOLUTION.

FACILITY: INSTITUTE OF HIGHER NERVOUS ACTIVITY AND NEUROPHYSIOLOGY, USSR ACADEMY OF SCIENCES, MOSCOW.

UNCLASSIFIED

USSR

UDC 615.31:547.75

PREORRAZHENSKAYA, M. N., ORLOVA, L. M., LIBERMAN, S. S., MOSINA, G. S.,
AVRAMENKO, V. G., SOROKINA, N. P., and SUVOROV, N. N., All Union Scientific
Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze, Moscow

"Synthesis and Investigation of Pharmacological Activity of the Indole
Series Hydroxyketones"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1, Jan 72, pp 32-38

Abstract: 10 g of 3-chloroacetylindole (I) in 300 ml dimethylformamide is added to 18.3 g molten potassium acetate, the mixture is stirred at 60-70°, filtered, and evaporated. The residue is recrystallized from water yielding 44% of 3-acetoxyacetylindole (II), m.p. 139-140°. Analogously a series of other 3- α -acetoxyacylindoles is obtained. To synthesize 3-benzoylhydroxyacetylindole (III), m.p. 187-189°, an analogous procedure was used employing potassium benzoate instead of the acetate. When (II) was heated with 2% NaOH solution, it hydrolyzed easily yielding 3-hydroxyacetylindole (IV), m.p. 167-169°. 5-Acetoxyacetylindole, m.p. 123-124.5° was obtained similarly to (II) starting from 5-hydroxyacetylindole, m.p. 177-179°. In each group several representative compounds were synthesized using reported reactions. 3-Hydroxyacetylindole was found to have neurotropic activity; modifications in its structure as a rule led to a lower biological activity.

1/1

USSR

UDC 615.31:547.751].012.1

PREOBRAZHENSKAYA, M. N., ORLOVA, Z. G., STAROSTINA, Z. G., LIBERMAN, S. S.,
SUKHININA, G. P., and SUVOROV, N. N., All Union Scientific Research Institute
of Pharmaceutical Chemistry imeni S. Ordzhonikidze, Moscow

"Synthesis and Investigation of the Pharmacological Activity of 1-(Indolyl-3')-
2-alkylaminoethanols"

Moscow, Khimiko-farmatsevticheskiy zhurnal, Vol 4, No 10, Oct 70, pp 5-9

Abstract: 1-(Indolyl-3')-2-alkylaminoethanols were synthesized by hydrogenating the corresponding N-substituted 3-aminoacetylindoles, using Raney nickel as a catalyst. The resultant amino alcohols were converted to salts (chlorohydrates or adipinates) which were pharmacologically studied. The initial 3-alkylaminoacetylindoles were produced by interacting 3-chloroacetylindole or 3-bromoacetylindole with primary or secondary amines. The physicochemical properties of the 3-alkylaminoacetylindoles and 1-(indolyl-3')-2-alkylaminoethanols are tabulated. It was found that all amino alcohols containing the secondary amino group have sympathomimetic properties: they increase arterial blood pressure in rats and cats under anesthesia, cause contraction of the nictitating membrane, and constrict the peripheral vessels. This effect is
1/2

USSR

PREOBRAZHENSKAYA, M. N., et al, Khimiko-farmatsevticheskiy zhurnal, Vol 4, No 10, Oct 70, pp 5-9

attributed to excitation of the α -adrenoreactive systems. The most active of all compounds studied was 1-(indolyl-3')-2-methylaminoethanol. This alcohol has only 1/10-1/20 the activity of adrenalin, but its effect is longer-acting. Amino alcohols containing the tertiary amino group did not cause contraction of the nictitating membrane, they reduced blood pressure and relaxed the peripheral vessels.

2/2

- 71 -

PREOBRAZHENSKAYA, Z. V.

JFAS 55570
29 Mar 72

UDC: 362.11.007.4:658.351

INVESTIGATION OF WORK SCHEDULE OF HOSPITAL ATTENDANTS IN CLINICAL DEPARTMENTS OF HOSPITALS (BASED ON DATA FOR THE MUNICIPAL CLINICAL HOSPITAL IMENI S.P. BOTKIN, MOSCOW)

Article by I. S. Sluchanko, Z. V. Preobrazhenskaya, Ye. K. Golitsyna, I. I. Yevkrazova; Moscow, Sovetskaya Zdravookhraneniye, Russian, No. 2, 1972, Submitted 12 August 1971, pp 31-34

Researchers are devoting more and more attention to organization of work of medical personnel. Studies are made of the work of doctors and nurses in polyclinics and hospitals. Yet we failed to encounter data in the literature dealing with analysis of the work done by male and female hospital attendants. The hiring and training of such workers as well as organization of their work are urgent problems in modern public health.

At the request of the public health commission of the Moscow Council of Workers' Deputies, in July and August 1970 we made a study of the training of female hospital attendants, their availability in a clinical institution, their activities, schedule of work time, existing system of organizing their work, for the purpose of rationalizing it. This investigation was conducted using a method developed and used in the department of organization of labor of the All-Union Scientific Research Institute of Scientific and Public Health Organization (Imeni B. A. Semchenko) of Scientific Organizations and Public Health Organizations. Research Institute of Social Hygiene by the administration of the Hospital Imeni S.P. Botkin. Specifically trained nurses designated by the female attendants. The work of these attendants at each work place was studied around the clock for six days by the method of photogrammetric statistics methods. The material was processed statistically using variation statistics methods. Two therapeutic, two surgical, one neurological, and one neurosurgical departments were selected for the study. We investigated the work of 19 attendants (female) including seven in the therapeutic department, five in the surgical ones, three in the neurosurgical, and four in the neurological department.

The attendants studied ranged in age from 37 to 75 years, over 50 percent of them were 50-60 years of age and about 25 percent over 60 years old.

USSR

UDC 621.317.715

PREOBRAZHENSKIY, A. A., BISHARD, YE. G., POLONSKIY, A. M., Leningrad Electro-
technical Institute imeni V. I. Ul'yanov

"Digital Ballistic Galvanometer"

Leningrad, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Priborostroyeniye, Vol
XIV, No 3, 1971, pp 17-20

Abstract: An integrator with code conversion of the magnitude of the magnetic flux to pulse number code is investigated. The device is based on a ballistic galvanometer with a photomask at the input of a special amplifier. It permits complete automation of the process of measuring magnetic induction with the results obtained in digital form: the ballistic kick of the galvanometer is converted to a proportional number of pulses by means of the three dimensional coding converter (photomask) on the instrument scale. Recommendations are made with respect to selecting the light sensitive transducer and the pulse amplifier, and experimentally calculated characteristics of the integrating device are presented.

The proposed device permits measurement of the magnetic induction with an error not exceeding the error from direct measurements by a ballistic
1/2

USSR

PREOBRAZHENSKIY, A. A., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy --
Priborostroyeniye, Vol XIV, No 3, 1971, pp 17-20

galvanometer. With automatic limit selection of 40 seconds the measurement
time of the device is 10 seconds.

2/2

- 88 -

USSR

UDC 51:801

PREOBRAZHENSKIY, A. B.

"Semiotic Model of Large System Control"

V sb. Ekon.-mat. metody i programmir. plan.-ekon. zadach (Mathematical Economic Methods and Programming Economic Planning Problems--collection of works), Moscow, 1972, pp 184-191 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V540)

Translation: An effort is made to apply linguistic models to control problems.

- E N D -

1/1

10845

CSO: 1843-W

- 107 -

USSR

UDC: 51:155.001.517:518.9

KUZIN, L. T., PREOBRAZHENSKIY, A. B.

"The Problem of Creating Artificial Intelligence"

V sb. Inzh.-mat. metody v fiz. i kibernet. (Engineering-Mathematical Methods in Physics and Cybernetics--collection of works), Moscow, Atomizdat, 1971, pp 29-38 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V885)

Translation: The authors discuss the premises of development of the problem of creating artificial intelligence. Three approaches to creation of artificial intelligence are considered. The first consists in synthesizing a "neuron network" which would display properties of a nervous system. The second approach involves construction of a mathematical model which could be algorithmized and programmed on a digital computer. The third approach is based on using linguistic methods, and consists in the following: 1) a dictionary is compiled for the language in which behavior is described; 2) grammars are determined for this language; 3) a unit is constructed for translation from the created language to the language of a specific machine with the aid of some metalanguage such as REFAL. Bibliography of 20 titles. V. Mikheyev.

1/1

- 63 -

USSR

UDC: 681.3.06:51

KUZIN, L. T., PREOBRAZHENSKIY, A. B., VOLCHENKOV, N. G.

"A Mathematical Model for Construction of a Certain Class of Three-Dimensional Structures"

V sb. Inzh.-mat. metody v fiz. i kibernet. (Engineering-Mathematics Methods in Physics and Cybernetics--collection of works), Moscow, Atomizdat, 1971, pp 38-44 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V845)

Translation: The paper deals with a method of creating a grammar for propositions which will be descriptions of possible three-dimensional structures of a certain class. A fairly extensive class of structural elements made up of parts from an Erector Set is considered. The terminology vocabulary is made up of the symbols used to code the various parts which occupy a given position in the preselected coordinate system. The following assumptions are made with respect to the coordinates and the arrangement of the parts: 1) only discrete, whole-number values of the coordinates of objects are considered; 2) all parts with the sole exception of type L (flat plates) are arranged in such a way that their edges are parallel to the coordinate axes; 3) a part of type L is arranged in such a way that its

1/2

USSR

KUZIN, L. T. et al., Inzh.-mat. metody v fiz. i kibernet., Moscow, Atom-izdat, 1971, pp 38-44

plane is parallel to one of the three planes of the Cartesian coordinate system, and orientation in the given plane has one of 12 different values.
V. Mikheyev.

2/2

USSR

UDC 621.382.002

ROGOV, YU.P., PREOBRAZHENSKIY, A.I., KRUKUNENKO, N.K., KUZNETSOV, A.G.

"Some Distinctive Features Of The Construction Of Multiposition Mechanical Systems Of Inspection-Classification Complexes"

Elektron. tekhnika. Nauchno-tekhn.sb. Upr.kachestvom i standartiz. (Electronic Technology. Scientific-Technical Collection. Quality Control And Standardization), 1970, Issue 2, pp 94-108 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 45413)

Translation: On the basis of an analysis of the technology for inspection of semiconductor devices, recommendations are given on the use of single- and multiposition inspection-classification equipment. The distinctive features are considered of the construction of multiposition mechanical systems of an automatic inspection-classification complex. The possibility and the advantages of the aggregation principle of construction of mechanical systems on the basis of a single structural scheme are shown. Recommendations are given on the choice of devices for a particular purpose. 6 ref. Summary.

1/1

USSR

UDC 681.325.5

PREOBRAZHENSKIY, A. V., Gor'kiy Physicotechnical Research Institute

"Differencing Device"

USSR Author's Certificate No 312253, Cl. G 06f 7/02, filed 30 Jul 69,
published 13 Oct 71 (from RZh-Avtoratika, Telemekhanika i Vychislitel'naya
Tekhnika, No 5, May 72, Abstract No 5B242P)

Translation: There are well-known devices for the differencing of numbers which are similar in magnitude which use all digits of the numbers for subtraction. The disadvantage of such devices is the considerable volume of equipment and the long computation time. The purpose of the invention is to reduce the volume of equipment in the subtractor.

1/1

1/3 013 UNCLASSIFIED PROCESSING DATE--09DCT70
TITLE--V. I. LENIN AND SOME PROBLEMS OF THE METHODOLOGY OF SCIENTIFIC
RESEARCH -U-
AUTHOR-(02)-PREOBRAZHENSKIY, B.S., RASKIN, B.V.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR. 2, PP 14-22
DATE PUBLISHED--70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES
TOPIC TAGS--POLITICAL THOUGHT, SCIENTIFIC PERSONNEL, MEDICAL PERSONNEL,
SCIENTIFIC RESEARCH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1986/1723 STEP NO--UR/0607/70/000/002/0014/0022
CIRC ACCESSION NO--AP0103489
UNCLASSIFIED

2/3 013

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0103489
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS NOTE, THAT THE MATERIALIST DIALECTICS CREATED BY MARX, ENGELS AND LENIN IS A UNIVERSAL METHOD OF KNOWLEDGE AND REVOLUTIONARY REORGANIZATION OF SOCIETY, THE ONLY SCIENTIFIC METHODOLOGY OF NATURAL SCIENCE, AND, IN PARTICULAR, OF MEDICINE. THE GREAT CORYPHAENS OF SCIENCE, V. I. LENIN POSSESSED EXCEPTIONALLY ALL ROUND KNOWLEDGE ALSO IN THE FIELD OF NATURAL SCIENCE. LENIN'S SCIENTIFIC ACTIVITY IS A BRILLIANT EXAMPLE OF THE APPLICATION OF THE METHOD OF THE MATERIALIST DIALECTICS TO THE STUDY OF THE MOST COMPLICATED LAWS OF NATURE AND SOCIETY. V. I. LENIN CONSIDERED THE ESTABLISHMENT OF EXACT AND INDISPUTABLE FACTS AS A NECESSARY CONDITION OF SCIENTIFIC RESEARCH. HE INSISTED UPON THE ANALYSIS AND COMPARISON OF ALL THE FACTS, CONCERNING THE PROBLEM, HE WAS AGAINST ARBITRARY SELECTION OF THEM AND SUBJECTIVE INTERPRETATION. V. I. LENIN CRITICIZED THE EMPIRICISM AND THE ECLECTICISM AND INSISTED UPON THE DEEP THEORETICAL GENERALIZATION OF THE FACTS, OBTAINED AS A RESULT OF RESEARCH. HE CONSIDERED NECESSARY TO COMPARE AND TO ANALYSE COMPARABLE, SIMILAR DATA AND CRITICIZED THE METHOD OF THE GROUNDLESS CALCULATION OF "THE MEANS". V. I. LENIN EXPLAINED, THAT SCIENTISTS PROCLAIMING THEMSELVES TO BE "OUT OF POLITICS", IN FACT PURSUE A BOURGEOIS POLICY. V. I. LENIN MERCILESSLY CRITICIZED REACTIONARY IDEALIST INTERPRETATION OF THE ACHIEVEMENTS OF SCIENCE, BUT AT THE SAME TIME HE INSISTED UPON THE UTILIZATION OF THE ACHIEVEMENTS OF FOREIGN SCIENCE AND TECHNIQUES IN EVERY POSSIBLE WAY FOR THE WELFARE OF PEOPLE, FOR BUILDING OF SOCIALISM.

UNCLASSIFIED

3/3 013

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0103489
ABSTRACT/EXTRACT--V. I. LENIN

KNEW MANY FOREIGN LANGUAGES AND IN HIS RESEARCH HE USED NOT ONLY HOME SOURCES, BUT A GREAT NUMBER OF FOREIGN ONES. V. I. LENIN WAS A GENIUS, BUT BESIDES THAT HE POSSESSED THE GREATEST DILIGENCE AND THE EXCEPTIONAL SCIENTIFIC HONESTY. LENIN'S IDEAS IN THE METHODOLOGY OF SCIENTIFIC RESEARCH ARE GUIDING PRINCIPLES FOR ALL SOVIET SCIENTISTS. THE AUTHORS DEMONSTRATE, THAT TO BE TRUE TO LENIN'S PRINCIPLES THE SOVIET SCIENTISTS WORKING IN THE FIELD OF MEDICINE SHOULD GIVE A DEEP DIALECTICAL MATERIALIST SUBSTANTIATION OF THE ACHIEVEMENTS OF MEDICINE, CRITICIZE REACTIONARY VIEWS AND TRENDS IN AND IN CLINICAL OBSERVATIONS, OVERCOME THE ELEMENTS OF EMPIRICISM, WHICH MEDICINE, FOLLOW A NUMBER OF OBLIGATORY DEMANDS IN MEDICAL EXPERIMENTS ONE COMES ACROSS IN SOME WORKS, RAISE THEIR GENERAL THEORETICAL LEVEL IN EVERY POSSIBLE WAY AND AS QUICKLY AS POSSIBLE PUT INTO PRACTICE OF SOVIET HEALTH SERVICES THE ACHIEVEMENTS OF MEDICINE, STUDY AND APPLY TO SCIENTIFIC ACTIVITIES THE REMARKABLE PATTERN OF LENIN'S STYLE OF WORK.

UNCLASSIFIED

USSR

PREOBRAZHENSKIY, I. N.

7 "An Experimental Investigation of the Stability of Circular Cylindrical Shells Under the Action of Axial-Symmetrical Pressure"

Kazan', Issled. po teorii plastin i obolochek. No 8 (Investigations on the Theory of Plates and Shells, Collection of Works), Kazan' University, 1972, pp 299-311 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V425 by O. I. Terebyshko)

Translation: Twenty-two shells, prepared with a high precision on a lathe from tubes of dimensions 210x170mm (Amg-6) and 230x170mm (D-16+) were tested on a special apparatus, allowing the loading of the sample with internal or external pressure along the whole or part of the length. The influence of conditions of end fastening on stability was investigated. In one case the full end fastening of the shell was provided ($u=v=w=\partial w/\partial x=0$), in the other partial ($v=w=\partial w/\partial x=0$, $T_1 = \mu pR/h$). The difference between the values of the critical pressures pertaining to different boundary conditions did not exceed 15%, that is it was within the limits of scatter usually encountered for experimental values of critical loading. The experimental values of critical pressures were compared to the calculated ones, obtained by the well-known Papkovich formula (see Byull. m.-tekh. kom. UMVS RSKA, 1929, Vyp 2, 113-123; Trudy po prochnosti korablya. (Work of Ship Stability), Leningrad, Sudpromgiz, 1/2

USSR

PREOBRAZHENSKIY, I. N., Issled. po teorii plastin i obolochek. No 8, 1972, pp 299-311

1956, 596-607). The ratio of the experimental to the calculated values was found in the limits 1.10-1.41. The forms of stability loss and the value of the critical pressure on shell loading by external pressure for part of the length were investigated, and also nonuniform pressure (external on one portion of the length and internal on the other). (13 bibliographic entries)

2/2

- 88 -

USSR

UDC 621.762.2:669.5

MITIN, I. I., SOKOLOV, M. A., KHAVSKIY, N. N., ~~PREOBRAZHENSKIY, N. A., YAKUBOVICH,~~
I. A., KIRILLOV, O. D.

"Obtaining Zinc Powder by an Acoustic Eddy Disperser"

V sb. Primeneniye ul'trazvuka v metallurg. protsessakh (Application of Ultra-
sound in Metallurgical Processes -- collection of works), Moscow Steels and
Alloys Institute, 67, Moscow, 1972, pp 149-151 (from RZh--Metallurgiya, No 4,
Apr 72, Abstract No 4G403)

Translation: A new procedure is described for obtaining finely dispersed Zn-
powder from a melt using an eddy acoustic pneumatic atomizer. Two illustra-
tions.

1/1

- 31 -

USSR

UDC 621.762.002.5

HITIN, I. I., KHAVSKIY, N. N., SOKOLOV, M. A., KIRILLOV, O. D., YAKUBOVICH, I. A.,
PREOBRAZHENSKIY, N. A.

"Acoustic Vortex Disperser to Obtain Finely Dispersed Metal Powders"

V sb. Primeneniye ul'trazvuka v metallurg. protsessakh (Application of Ultrasound
in Metallurgical Processes -- collection of works), Moscow Steels and Alloys
Institute, 67, Moscow, 1972, pp 171-173 (from RZh-Metallurgiya, No 4, Apr 72,
Abstract No 4G424)

Translation: A description of an acoustic eddy atomizer used to obtain finely
dispersed metal powders is presented. One illustration.

USSR

UDC 669.71.053.4.094

PREOBRAZHENSKIY, N. A., KHAVSKIY, N. N., YAKUBOVICH, I. A., SAMOYLOVA, L. I.,
KIRILLOV, O. D., ULANOV, V. I.

"Studies of the Influence of Ultrasound on the Process of Sulfuric Acid
Leaching of Phosphorite"

Primeneniye Ul'trazvuka v Metallurg. Protssakh [Use of Ultrasound in
Metallurgical Processes -- Collection of Works], Moscow, 1972, pp 72-74,
(Translated from Referativnyy Zhurnal, Metallurgiya, No 5, 1972, Abstract
No 5 G214 by the authors)

Translation: It is demonstrated that US oscillations, breaking down the film
of phosphogypsum, intensify the process of sulfuric acid leaching of phospho-
rites. 1 Table.

1/1

- 74 -

USSR

UDC: 573.953+547.917+547.593.261

KLYASHCHITSKIY, B. A., PIMENOVA, V. V., BASHKATOVA, A. I., ZHELVAKOVA, E. G.,
SOKOLOV, S. D., SHVETS, V. I., YEVSTIGNEYEVA, R. I., PREOBRAZHENSKIY, N. A.,
Deceased, Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov

"Research in the Area of Derivatives of Asymmetrically Substituted Myoinositol.
V. Complete Synthesis of sn-Myoinositol 1-Phosphate"

Leningrad, Zhurnal Obshchey Khimii, Vol 40 (102), No 11, Nov 70, pp 2482-2489

Abstract: A new method is used for synthesizing 1,2,4,5,6-penta-O-benzylmy-
oinositol. The compound is separated into antipodes through diastereomeric
orthoesters with D-mannose. Complete synthesis of the 1-phosphate of sn-myoin-
ositol identical to the natural compound is carried out on the basis of 2,3,4-
5,6-penta-O-benzyl-sn-myoinositol.

1/1

PROCESSING DATE--02 OCT 70

UNCLASSIFIED

1/2 020

TITLE--FIRST SYNTHESIS OF NATURAL PHOSPHATIDYL-MYO-INO-SITOL -U-

AUTHOR--(05)-ZHELVAKOVA, E.G., KLVASHCHITSKIY, B.A., SHVETS, V.I.,
YEVSTIGNEYEVA, R.P., PREORAZHENSKIY, N.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OESHCH. KHIM. 1970, 40(1) 248

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL SYNTHESIS, GLYCEROL, PHOSPHORUS COMPOUND, SPECTRUM,
BIOCHEMISTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1419

STEP NO--UR/0079/70/040/001/0248/0248

CIRC ACCESSION NO--AP0112413

UNCLASSIFIED

2/2 020

CIRC ACCESSION NO--AP0112413

- UNCLASSIFIED

PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. REACTION OF
 2,3,4,5,6,PENTA,O,BENZYL,SYN,MYO,INOSITOL WITH PHOPOCL SUB2 AND
 1,2,DI,PALMITOYL,SN,GLYCEROL IN C SUB5 H SUB5 N GAVE 32PERCENT
 1,0,(1,2,DIPALMITOYL,SN,GLYCERYL,(PHENYL,PHOSPHORYL),2,3,4,5,
 6,PENTA,O,BENZYL,SN,MYO,INOSITOL, M. 53-4PERCENT. HYDROGENOLYSIS OVER
 ADAMS PT CATALYST AND PD BLACK GAVE THE PHOSPHORYL ANALOG, ISOLATED AS
 NH SUB4 SALT, M. 169-72PERCENT. THIS GAVE SPECTRA VERY SIMILAR TO THOSE
 OF NATURAL MONOPHOSPHOINDSITIES.

UNCLASSIFIED

USSR

UDC 547.953 + 547.455

VOLKOVA, L. V., LUCHINSKAYA, M. G., SAMDYLOVA, N. A., and PREOBRAZHENSKIY, N. A. (deceased), Moscow Institute of Fine Chemical Technology ~~IMFI M. V. Tomonov~~

"Synthetic Studies of Glycophospholipids. II. Synthesis of 1,2-Distearoyl-glyceryl-3-phosphoryl-6'-(1',2';3',4'-dicyclohexylidene)-D-Galactose"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 2, Feb 71, pp 446-449

Abstract: Synthesis of title compound is described. Δ -D-Galactose was converted to 1,2;3,4-dicyclohexylidene-D-galactose (I) by a reaction with cyclohexanone in anhydrous benzene in presence of sulfuric acid. Treatment of (I) with p-toluenesulfonyl chloride yields 6-tosyl-1,2;-3,4-dicyclohexylidene-D-galactose (II), which reacts with sodium iodide in dimethylformamide to give 6-iodo-6-deoxy-1,2;3,4-dicyclohexylidene-D-galactose (III). The lipid moiety used in further condensation was the dibenzyl ester of 1,2-distearoylglyceryl-3-phosphoric acid (V), which was obtained by condensation of glycerine-1,2-distearoyl-3-iodohydrine with the silver salt of dibenzyl phosphate. Anionic debenzylation with sodium iodide yields the sodium salt of 1,2-distearoylglyceryl-3 monobenzyl phosphate which then is converted to the silver salt of the monobenzyl ester of 1,2-distearoylglyceryl-3-phosphoric acid (VI).

1/2

USSR

VOLKOVA, L. V., et al, Zhurnal Obshchey Khimii, Vol 41 (103), No 2, Feb 71,
pp 446-449

Finally, condensation of (III) with (VI) in anhydrous benzene gave 1,2-dis-
tearoylglyceryl-3-monobenzylphosphoryl-6'-(1',2';3',4'-dicyclohexylidene)-D-
-galactose, which could be reduced to the title compound -- 1,2-distearoyl-
glyceryl-3-phosphoryl-6'-(1',2';3',4'-dicyclohexylidene)-D-galactose.

2/2

- 74 -

PROCESSING DATE--30OCT70

UNCLASSIFIED

1/3 009

TITLE--ASYMMETRICALLY SUBSTITUTED MYO INOSITOL DERIVATIVES. I. SEPARATION OF A RACEMIC MIXTURE OF 1,4,5,6-TETRA-O-BENZYLMYO, INOSITOL. COMPLETE

AUTHOR--(05)-KLYASHCHITSKIY, B.A., STRAKHOVA, G.D., SHVETS, V.I., SOKOLOV, S.D., PREOBRAZHENSKIY, N.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(1), 236-42

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, BROMINATED ORGANIC COMPOUND, ESTER, CHEMICAL SEPERATION, CARBOHYDRATE, ISOMER/(U)AMBERLITE IRA400 MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1737

STEP NO--UR/0079/70/040/001/0236/0242

CIRC ACCESSION NO--AP0112726

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/3 009

UNCLASSIFIED

CIRG ACCESSION NO--AP0112726

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SYRUPY

TETRA-O-ACETYL-BETA-D-MANNOPYRANOSYL BROMIDE (14 G) KEPT WITH 9.1 ML
2,6,LUTIDINE IN ETOH 3 HR GAVE AFTER EVAPN. AND AN AQ. TREATMENT

67.5PERCENT 3,4,6,TRI-O-ACETYL 1,2,0-(ETHYL

ORTHOACETYL)-BETA-D-MANNOPYRANOSE, M. 102.5-4DEGREES, (ALPHA) PRIME20
SUBD MINUS 15DEGREES, WHICH (5.95 G) WITH 4.6 G1,4,5,6,TETRA-O-BENZYLMYO INOSITOL REFLEXED IN (CH SUB2 CL)SUB2 IN THE
PRESENCE OF P-MEC SUB4 H SUB4 SO SUB3 H 8.5 HR WITH REMOVAL AND

REPLENISHMENT OF THE DRIED SOLVENT, GAVE 18.6PERCENT

3,4,6,TRI-O-ACETYL,1,2,0,(3,4,5,6,TETRA-O-BENZYL-SN
MYO-INOSITYL,1,ORTHOACETYL)-BETA-D-MANNOPYRANOSE, M. 155.5-6DEGREES,(ALPHA) PRIME20 SUBD 9.8DEGREES, PPTD. BY ADDN. OF ET SUB2 O; THE
FILTRATE PURIFIED ON AL SUB2 O SUB3 GAVE 9.68PERCENT3,4,6,TRI-O-ACETYL,1,2,0-(1,4,5,6,TETRA-O-BENZYL-SN MYO-INOSIT,3,YL
ORTHOACETYL)-BETA-D-MANOPYRANOSE (I), M. 135-7DEGREES, (ALPHA) PRIME20SUBD 0.54DEGREES. I IN 1 HR AT 20DEGREES WITH 0.1N H SUB2 SO SUB4 IN
90PERCENT AQ. ME SUB2 CO GAVE AFTER PASSAGE OVER AMBERLITE IRA-400 (OH

FORM) 81.2PERCENT 1,4,5,6,TETRA-O-BENZYL-SN-MYO-INOSITOL, M.

140.2-2.1DEGREES, (ALPHA) PRIME20 SUBD 25DEGREES. SIMILARLY WAS

OBTAINED 86PERCENT 3,4,5,6,TETRA-O-BENZYL-SN-MYO INOSITOL, M.

141-3DEGREES, (ALPHA) PRIME20 SUBD MINUS 24.3DEGREES. THIS HEATED 2 HR
AT 100DEGREES WITH MEI AND POWD. KOH UNDER C SUB6 H SUB6 GAVE 25PERCENT

L-O-METHYL,3,4,5,6, TETRA-O-BENZYL-SN-MYO-INOSITOL, M. 115-16DEGREES,

(ALPHA) PRIME20 SUB3 MINUS 1.5DEGREES, WHILE THE MOTHER LIQUOR GAVE

5.8PERCENT 2,0-METHYL ANALOG, M. 137-8DEGREES, (ALPHA) PRIME20 SUBD

UNCLASSIFIED

3/3 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112726

ABSTRACT/EXTRACT--THE L-ISOMER WAS HYDROGENATED OVER Pd IN ACDH TO L-O-METHYL-SN-MYO-INOSITOL, M. 204-5.5DEGREES, (ALPHA) PRIME20 SUBD MINUS 33.2DEGREES, IDENTICAL WITH ANTURALLY OCCURING (-), BORNESITOL. THUS AN EFFECTIVE SEPN. OF RACEMIC ASYM. SUBSTITUTED MYO-INOSITOLS WAS PERFORMED VIA DIASTEREOMERIC ORTHO ESTERS WITH D-MANNOSE.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLES--SYNTHESIS OF OPTICALLY ACTIVE PENTABENZYL ETHERS OF MYO INOSITOL. /
TOTAL SYNTHESIS OF PHOSPHATIDYLINOSITOL WITH NATURAL STRUCTURE -U-
AUTHOR--(05)-KLYASHCHITSKIY, B.A., ZHELVAKOVA, E.G., SHVETS, V.I.,
EVSTIGNEEVA, R.P., PREOBRAZHENSKIY, N.A.
COUNTRY OF INFO--USSR P
SOURCE--TETRAHEDRON LETT. 1970, (8), 587-90
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--OPTIC ACTIVITY, POLYNUCLEAR HYDROCARBON, BENZENE DERIVATIVE,
ORGANIC PHOSPHORUS COMPOUND, ETHER, GLYCEROL, FATTY ACID, CHEMICAL
SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1985/1509

STEP NO--UK/0000/70/000/008/0587/0590

CIRC ACCESSION NO--AP0101593

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--A0101593

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS TREATED WITH PHO(0)CL SUB2 AND 1,2 DIPALMITOYL SN GLYCEROL TO GIVE II. II IS HYDROGENATED OVER ADAMS CATALYST AND PD BLACK TO GIVE I,0, (MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION) (1',2' DIPALMITOYL SN 3' GLYCERYLPHOSPHORYL) SN MYO INOSITOL (III) WHICH HAS A NATURAL STRUCTURE.

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131177

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CARBOBENZOXYGLYCYL-N

PRIMEEPSILON-TOSYL-L-LYSYL-N PRIMEIM-BENZYL-L-HISTIDINYL-N

TWO DIPEPTIDES. FACILITY: MUSK. INST. TONKOI KHIM. TEKHNOL. IM.

LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2

APPROVED FOR RELEASE 08/09/2001

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--SYNTHESIS OF A TRIPEPTIDE 24-27 OF THE AMINO ACID

SEQUENCE OF CYTOCHROME C -U-

AUTHOR--(04)-YEVSIGNEYEVA, R.P., LYOVA, S.D., CHJPRIKOVA, O.S.,

PREOBKAZHENSKIY, N.A.
COUNTRY OF INFO--USSR

SOURCE--KHIM. PRIR. SOEDIN. 1970, 6(1), 114-16

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--BIOLOGIC PIGMENT, IRON COMPOUND, CHEMICAL SYNTHESIS, AMINO ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0554

CIRC ACCESSION NO--AP0131177

STEP NO--UR/0393/70/006/001/0114/0116

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SYNTHETIC STUDIES ON GLYCOPHOSPHOLIPIDS. I. SYNTHESIS OF
1,2:3,4,DI,
AUTHOR--(04)--LUCHINSKAYA, M.G., VOLKOVA, L.V., STUPNIKOVA, V.A.,
PREOBRAZHENSKIY, N.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 915-918
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIPID, GALACTOSE, HETEROCYCLIC OXYGEN COMPOUND, ORGANIC
SYNTHESIS, STEARIC ACID, PYRIDINE, SULFONE, ORGANIC PHOSPHATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0986

STEP NO--UR/0079/70/040/004/0915/0918

CIRC ACCESSION NO--AP0134702

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0134702
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BATYL ALC. AND TDSYL CHLORIDE IN
PYRIDINE SHOWN ON MICROFICHE. FACILITY: MOSK. INST. TONKOI
KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--SYNTHESIS OF D, ERYTHRO, DIHYDROSPHINGOSINE -U-
AUTHOR--(04)--ELLER, K.I., ZVONKOVA, YE.N., MITSNER, B.I., PREOBRAZHENSKIY,
N.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(4), 665-8
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--EPOXY COMPOUND, ORGANIC SYNTHESIS, AMINO ALCOHOL, GLUTAMIC
ACID

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/2043 STEP NO--UR/0366/70/006/004/0665/0668
CIRC ACCESSION NO--AP0125631

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125631

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EPOXIDN. (SHOWN ON MICROFICHE).
RACEMIC II WAS RESOLVED INTO ITS OPTICAL ANTIPODES WITH L AND D, GLUTAMIC
ACIDS (H. E. CARTER, ET AL., 1953). FACILITY: MOSK. INST.
IONKDI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--LIPIDS. SYNTHESIS AND STUDY OF THE STRUCTURE OF
CIS,3,0,(OCTADECEN,1,YL),SN,GLYCIDOL -U-
AUTHOR-(03)-SEREBREENIKOVA, G.A., VTOROV, I.B., PREOBRAZHENSKIY, N.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 669-74

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIPID, ORGANIC SYNTHESIS, GLYCEROL, IR SPECTRUM, EPR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2044

STEP NO--UR/0366/70/006/004/0669/0694

GIRC ACCESSION NO--AP0125632

UNCLASSIFIED

2/2 018
CIRC ACCESSION NO--AP0125632
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT.

UNCLASSIFIED

PROCESSING DATE--30OCT70

3,0,(2, TGSYLOXYOCTADECYL), SN, 1,2, ISOPROPYLIDENEGLYCEROL WAS CONVERTED
STEPWISE INTO ME(CH SUB2) SUB14 CH SUB2 CHXCH SUB2 OCH SUB2 CH(OH)CH
SUB2 X (I) (X IS CONSECUTIVELY 4, MEC SUB6 H SUB4 SO SUB3, I, BR). THE
TREATMENT OF I (X EQUALS BR) WITH TERT BUOH IN TERT BUOH OR WITH
1,5, DIAZABICYCLO(5.4.0), UNDEC, 5, ENE IN ME SUB2 SO GAVE CIS AND TRANS
ISOMERS OF 3,0,(1, OCTA, DECENYL), SN, GLYCIDOL, TOGETHER WITH SOME
3,0,(2, OCTADECENYL), SN, GLYCIDOL. IR AND EPR SPECTRA OF THESE GLYCIDOLS
ARE DISCUSSED. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM.
LONONGSOVA, MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr.

AP0048824

Abstracting Service:

CHEMICAL ABST.

4/70

Ref. Code

UR0366

90780t Asymmetrically substituted myo-inositol derivatives.

III. Synthesis of 1,2,4,5,6-penta-O-tosyl-myoinositol. Zhel-

vakova, E. G.; Shvets, V. I.; Preobrazhenskii, N. A. (Mosk.

Inst. Tonkoi Khim. Tekhnol. im. Lomonosova, Moscow,

USSR). Zh. Org. Khim. 1970, 6(1), 62-5 (Russ). The methyl-

ation of 1,4,5,6-tetra-O-benzyl-myoinositol with MeI gave

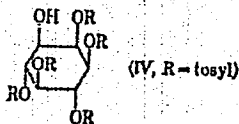
47.4% 2-O-methyl-1,4,5,6-tetra-O-benzyl-myoinositol (I), 20.9%

3-O-methyl-I analog, and 22.3% 2,3-O-dimethyl I analog.

The debenylation of I gave 1-O-methyl-myoinositol (II). The

esterification of II with HNO₃-H₂SO₄ mixt. gave 3-O-methyl-

1,2,4,5,6-penta-O-nitro-myoinositol (III). All the attempts to



demethylate III failed. The tosylation of II gave the corre-
sponding penta-O-tosyl deriv. which was demethylated with
BB₃ in CH₂Cl₂ soln. at -55° to the title compd. (IV). CPJR

REEL/FRAME
19800587

USSR

UDC 533.9

PREOBRAZHENSKIY, N. G., and SENINA, A. V.

"Spectral Characteristics of an Optically Dense Plasma"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 4, 1971, pp 25-37

Abstract: The modern possibilities of spectroscopy of an optically dense plasma are analyzed and reviewed. Primary attention is given to calculating the intensity distribution $I(\nu)$ with respect to the reabsorbed spectral line, which makes it possible to obtain interesting spectral characteristics of the line, including the integral characteristics.

The radiation transfer equation is derived and solved for $I(\nu)$ and $S(\nu, r)$ [the source function] become "disengaged" only under the assumption of complete redistribution with respect to frequencies in the act of re-emission of a photon belonging to the given line. A quantum investigation of the source function is presented, and basic generalizations are made concerning the defined category of problems of plasma physics and generalizations of the Biberman equation of a more general nature: efforts to consider the electron density and plasma temperature gradients and efforts to go beyond
1/2

USSR

PREOBRAZHENSKIY, N. G., and SENINA, A. V., *Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika*, No 4, 1971, pp 25-37

the two-level model of the atom. The successive approach to obtaining the source function $S(\nu, r)$ connected with investigating the kinetics of the excited atoms in an inhomogeneous (and, in the general case, nonequilibrium) optically dense plasma still has low efficiency from the point of view of finding the spectral characteristics of the plasma. This approach either is connected with extraordinary idealization of the problem or insurmountable mathematical difficulties. The attempt at numerical calculation of the function $S(\nu, r)$ on a computer using quite strict kinetic equations does not do away with the necessity for numerous approximations of cross sections and simulation of the spatial distributions $N_e(r)$, $T_e(r)$, $P_e(\nu, r)$, $P_A(\nu, r)$, and so on. Nevertheless, development of applications of simulation in spectroscopy of optically dense plasma is an urgent problem.

2/2

1/2 036 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--METHODS OF OPTICAL FLAME DIAGNOSTICS -U-
AUTHOR--(02)-PREOBRAZHENSKIY, N.G., YUDELEVICH, I.G.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL PRIKLADNOI SPEKTROSKOPII, VOL. 12, JAN. 1970, P. 3-7
DATE PUBLISHED--JAN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--FLAME STRUCTURE, FLAME EMISSION, EMISSION SPECTRUM, FLAME
TEMPERATURE, PYROMETRY, TEMPERATURE DISTRIBUTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1978/1214 STEP NO--UR/0368/70/012/000/0003/0007
CIRC ACCESSION NO--AP0046137
UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0046137

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF A METHOD FOR PYROMETRIC DIAGNOSTICS OF INHOMOGENEOUS, OPTICALLY DENSE, HIGH TEMPERATURE FLAMES BASED ON THE APPLICATION OF A MODIFIED KIRCHHOFF FORMULA. IN CONTRAST TO METHODS BASED ON THE CONVENTIONAL KIRCHHOFF LAW, THIS METHOD DOES NOT REQUIRE THE REDUCTION OF THE OBSERVED SPECTRAL LINE CONTOURS TO THE CONDITIONS OF A TRANSPARENT LAYER. GENERAL EXPRESSIONS ARE OBTAINED FOR THE INTEGRAL INTENSITY AND THE EQUIVALENT WIDTH OF THE FLAME SPECTRAL LINES. THE PHYSICAL MEANING OF A PROCEDURE FOR AVERAGING THE LOCAL TEMPERATURES ALONG THE LINE OF SIGHT IS EXPLAINED, SHOWING THAT THE EQUIVALENT LENGTH OF THE SPECTRAL LINE BEING STUDIED DETERMINES THE AVERAGING INTERVAL. THE TRUE TEMPERATURE PROFILES OF A HYDROGEN FLUORIDE FLAME ARE COMPARED WITH AVERAGED PROFILES BY COMPUTER CALCULATIONS.

UNCLASSIFIED

2

USSR

UDC 621.762.01

MITIN, I. I., KIRILLOV, O. D., KHAVSKIY, N. N., SOKOLOV, M. A., YAKUBOVICH, I. A.,
~~PREOBRAZHENSKIY, N. N.~~

"Problem of Using Sound Vibrations in Powder Metallurgy"

V sb. Primeneniye ul'trazvuka v metallurg. protsessakh (Application of Ultra-
sound in Metallurgical Processes — collection of works), Moscow Steel and
Alloys Institute, 67, Moscow, 1972, pp 147-149 (from RZh--Metallurgiya, No 4,
Apr 72, Abstract No 46367)

Translation: The prospects for using sound vibrations in powder metallurgy are
demonstrated. 4-entry bibliography.

1/1

- 32 -

1/3 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SYNAPTIC PROCESSES IN THORACIC ALPHA MOTONEURONS EVOKED BY
SEGMENTAL AFFERENT STIMULATION -U-
AUTHOR--(03)-PREGBRAZHENSKIY, N.N., GOKIN, A.P., BEZHENARU, I.S.
COUNTRY OF INFO--USSR
SOURCE--NEYROFIZIOLOGIYA, 1970, VOL 2, NR 3, PP 279-288
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--NERVOUS SYSTEM, NEURON, BIOPOTENTIAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1028 STEP NO--UR/0660/70/002/003/0279/0288
CIRC ACCESSION NO--AP0123469
UNCLASSIFIED

2/3 020

UNCLASSIFIED

PROCESSING DATE--30JCT70

CIRC ACCESSION NO--AP0123469

ABSTRACT/EXTRACT--(U) GP-D- ABSTRACT. IN ANAESTHETIZED AND DECEBERATED CATS SYNAPTIC PROCESSES IN THE VARIOUS FUNCTIONAL GROUPS OF THORACIC MOTONEURONS TH SUBIX, TH SUBXI EVOKED BY STIMULATION OF INTERCOSTAL NERVES WERE STUDIED. IN THE MOTONEURONS OF THE MAIN INTERCOSTAL NERVE ONLY EXCITATORY (MONO, AND POLYSYNAPTIC) SYNAPTIC POTENTIALS WERE RECORDED IN RESPONSE TO STIMULATION OF THE HOMONYMOUS NERVE. STIMULATION OF THE NERVE TO THE EXTERNAL INTERCOSTAL MUSCLE AND OF THE DORSAL BRANCHES WAS NOT ACCOMPANIED BY VISIBLE SYNAPTIC PROCESSES IN THESE MOTO NEURONS THROUGH SMALL POLYSYNAPTIC EPSPS WERE SOMETIMES RECORDED. IN THE MOTONEURONS OR DORSAL MUSCLES THE HOMONYMOUS NERVE STIMULATION LED TO APPEARENCE OF SIMPLE SHORTLATENCY EPSPS. LONG LATENCY IPSPS (OR EPSPS MINUS IPSPS) WERE FOUND IN MOST MOTONEURONES OF THIS GROUP BY STIMULATION OF THE MAIN INTERCOSTAL NERVE. IN OTHER MOTONEURONS OF THIS GROUP STIMULATION OF THE MAIN INTERCOSTAL NERVE (AND THE NERVE TO THE EXTERNAL INTERCOSTAL MUSCLE) WAS NOT EFFECTIVE. IN THE MOTONEURONS OF THE NERVE TO THE EXTERNAL INTERCOSTAL MUSCLE EXCITATORY PSPS (MONO AND POLYSYNAPTIC) WERE EVOKED BY STIMULATION OF THE HOMONYMOUS NERVE AS WELL AS OF THE MAIN INTERCOSTAL NERVE. STIMULATION OF DORSAL BRANCHES DID NOT PRODUCE ANY EFFECT IN THE LAST GROUP OF MOTONEURONS. RECIPROCAL RELATIONS BETWEEN THESE MOTONEURONAL GROUPS WERE NOT OBSERVED. PATTERNS OF SYNAPTIC RESPONSES OF THE RESPIRATORY MOTONEURONS TO SEGMENTAL AFFERENT IMPULSES STUDIED IN SPONTANEOUSLY BREATHING CATS WERE ESSENTIALLY DIFFERENT.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

3/3 020

CIRC ACCESSION NO--AP0123469

ABSTRACT/EXTRACT--PECULIARITIES OF THE PSPS IN THE RESPIRATORY MOTONEURONS
EVOKED BY SEGMENTAL AFFERENT STIMULATION IN SPONTANEOUSLY BREATHING AND
ARTIFICIALLY VENTILATED CATS WERE DISCUSSED. FACILITY: THE A.
A. BOGOMOLETZ INSTITUTE OF PHYSIOLOGY, ACADEMY OF SCIENCES, UKRAINIAN
SSR, KIEV.

UNCLASSIFIED

15

UDC 621.396.6--181.5 (088.8)

USSR

BARANOV, A.I., BATSIAURI, V.D., VOSECHOYNIKOV, I.I., GAVRILOV, R.A., GALYATKIN, V.P., GOLUBTSOV, M.S., ZAMIKHOVSKIY, M.B., ZALIPSKIY, A.I., ZLOTIN, V.A., KAZATSKER, L.I., LAGUTKIN, G.V., LARIONOV, YU. S., ERGONRAZITSKIY, S.P., MALKIN, D.L., RAMENSKIY, I.V., SIMONOVA, I.S., TIKHONIROV, B.G., PLSHEL, I.SH., SHUBERT, M.M.

"Device For Deposition Of Multilayer Coverings In A Vacuum"

USSR Author's Certificate No 279291, filed 16 June 68, published 30 Nov 70 (from RZh--Radiotekhnika, No 9, Sep 1971, Abstract No. 9V272P)

Translation: A device proposed for deposition of multilayer coverings in a vacuum is fulfilled in the form of a number of successively mounted independent operating chambers supplied with evaporators, heaters, and an exhaust system. The device contains a mechanism for transporting substrates, a mechanism for loading and unloading, and a drive mechanism. With the object of increasing the reliability of the device and improving the quality and reproducibility of the coverings deposited, outside of the area of the arrangement of operating chambers and parallel to it a supplementary vacuum chamber is installed, which serves for the deposition in it of the transporting mechanism, and which communicates with each of the operating chambers by means of vacuum-overlapping transfer windows located on the side wall

1/2

USSR

BARANOV, A. I., et al., USSR Author's Certificate No 279291, filed 16 June 68, published 30 Nov 70 (from RZh--Radiotekhnika, No 9, Sep 1971, Abstract No 9V272P)

of the supplementary chamber at places for connection to it of the operating chambers. Each of the operating chambers or a group of them is provided with an individual system of high-vacuum pumping.

2/2

- 4 -

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DETERMINATION OF NITRIC ACID CONSUMPTION DURING THE PRODUCTION OF
ADIPIC ACID FROM CYCLOHEXANOL -U-
AUTHOR-(03)-PREOBRAZHENSKIY, V.A., GOLDMAN, A.M., FURMAN, M.S.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. (MOSCOW) 1970. 46(3), 170-1
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ADIPIC ACID, CYCLOHEXANOL, CHEMICAL PRODUCT PRODUCTION, NITRIC
ACID, SUCCINIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605012/E06 STEP NO--UR/0064/70/046/003/0170/0171
CIRC ACCESSION NO--AP0140311

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 013

CIRC ACCESSION NO--AP0140311

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE CONSUMPTION OF HNO SUB3, DELTA SUBHNO SUB3, IN THE OXIDN. OF CYCLOHEXANOL TO ADIPIIC ACID BY HNO SUB3 DEPENDS ON THE YIELD OF INTERMEDIATES IN THE PROCESS; THE TOTAL CONSUMPTION OF HNO SUB3 FOR THE CONVERSION OF CYCLOHEXANOL TO ADIPIIC, GLUTARIC SUCCINIC AND OXALIC ACIDS MAY BE DETD. FAIRLY ACCURACTELY FROM THE EQUATION: DELTA SUBHNO SUB3 EQUALS 3 MINUS 1.2N SUBCNA WHERE N SUBCNA IS THE YIELD (MOLE-MOLE) OF CARBOXYNITROLIC ACID AND DELTA SUBHNO SUB3 IS IN MOLE-MOLE(MOLE CYCLOHEXANOL). THIS EQUATION IS IN GOOD AGREEMENT WITH DATA FROM THE LITERATURE.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11SEP70

1/2 026

TITLE--CONDITIONS FOR CARBOXYNITROLIC ACID FORMATION DURING THE NITRIC
ACID OXIDATION OF CYCLOHEXANOL -U-
AUTHOR--TRUBNIKOVA, V.I., PREOBRAZHENSKIY, V.A., GOLDMAN, A.M., FURMAN,
M.S., KOSTINA, V.N.
COUNTRY OF INFO--USSR

P

SOURCE--KHM, PROM. (MOSCOW) 1970, 46(1), 12-14

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NITRIC ACID, OXIDATION, CYCLOHEXANOL, CARBOXYL RADICAL,
CHEMICAL REACTION RATE, ACTIVATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1985/1453

STEP NO--UR/0064/70/046/001/0012/0014

CIRC ACCESSION NO--AP0101539

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0101539

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CYCLOHEXANOL (I) 57PERCENT HNO
SUB3 MIXT. (MOLE RATIO 1:7) WAS AGITATED (BY BUBBLING N) 1 TO 30 MIN AT
35DEGREES; THE CONC. OF CARBOXYNITROLIC ACID HO SUB2 C (CH SUB2) SUB4 C
(:NDH) NO SUB2 (II) IN THE MIXT. INCREASED FROM 0.48 M AFTER 1.9 MIN TO
0.685 M AFTER 10.0 MIN, AND DECREASED SLIGHTLY THEREAFTER. THE MAX.
YIELD (60PERCENT) OF II WAS OBTAINED WHEN THE REACTION WAS CARRIED OUT
AT 45 TO 55DEGREES. THE RATE CONST. OF THE REACTION (K) WAS 0.5 MIN
PRIME NEGATIVE1 AT 30DEGREES; LOG K INCREASED LINEARLY FROM NEGATIVE4
TO 3 WHEN THE TEMP. INCREASED FROM 5 TO 55DEGREES; THE ENERGY OF
ACTIVATION WAS 25.4 KCAL. PER MOLE.

I/3 024 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PATRIS LUNUMBA UNIVERSITY OF PEOPLES FRIENDSHIP ONE OF THE
REALIZATIONS OF V. I. LENIN'S IDEA ON THE EQUALITY OF NATIONS -U-
AUTHOR--(02)-PREOBRAZHENSKIY, YU.B., DROMASHKO, V.I.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 2, PP 106-111
DATE PUBLISHED-----70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, BIOLOGICAL AND MEDICAL
SCIENCES
TOPIC TAGS--EDUCATION, FOREIGN TECHNICAL ASSISTANCE, MEDICAL TRAINING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0664

STEP NO--UR/0607/70/000/002/0106/0111

CIRC ACCESSION NO--AP0102649

UNCLASSIFIED

2/3 024

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102649

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE NATIONAL PROBLEM OCCUPIES AN IMPORTANT PLACE IN THE IMMORTAL TEACHING OF V. I. LENIN. ONLY BASING UPON THE TEACHING OF V. I. LENIN CAN ONE SOLVE THE PROBLEM OF THE NATIONAL LIBERATION MOVEMENT. THE SOVIET UNION AND OTHER SOCIALIST COUNTRIES, COMMUNIST AND WORKER'S PARTIES OF ALL COUNTRIES RESOLUTELY SUPPORT THE COMPLETE AND FINAL ELIMINATION OF COLONIAL REGIME IN ALL ITS FORMS AND MANIFESTATIONS. THE TRAINING OF NATIONAL SPECIALISTS IS ONE OF THE MOST IMPORTANT PROBLEMS IN THE DEVELOPING COUNTRIES. THE SOVIET UNION AND OTHER SOCIALIST COUNTRIES RENDER GREAT AID TO DEVELOPING COUNTRIES IN THE SOLUTION OF THIS PROBLEM. ONE OF THE EXAMPLES OF THIS AID IS PATRIS LUMUMBA UNIVERSITY OF PEOPLES FRIENDSHIP SET UP BY PUBLIC ORGANIZATIONS THE SOVIET COMMITTEE OF SOLIDARITY OF ASIAN AND AFRICAN COUNTRIES, UNION OF SOVIET SOCIETIES OF FRIENDSHIP AND CULTURAL RELATIONS WITH FOREIGN COUNTRIES AND ALL UNION CENTRAL COUNCIL OF TRADE UNIONS. THE UNIVERSITY ACCEPTS STUDENTS FROM COUNTRIES OF ASIA, AFRICA, LATIN AMERICA AND SOVIET UNION IRRESPECTIVE OF THE RACE, SEX, NATIONALITY AND RELIGION. THE UNIVERSITY HAS SEVEN FACULTIES. EACH OF THE FACULTIES TRAINS DIFFERENT SPECIALISTS WITH DUE CONSIDERATION OF THE REQUIREMENTS OF DEVELOPING COUNTRIES. FOR A SHORT PERIOD FROM THE UNIVERSITY 2363 DIFFERENT SPECIALISTS GRADUATED AND 187 PERSONS UNDERWENT POSTGRADUATE TRAINING. THE MEDICAL FACULTY IS ONE OF THE LARGEST. THE OVERWHELMING MAJORITY OF CHAIRS OF THE FACULTY ARE HEADED BY WELL KNOWN SCIENTISTS. MUCH ATTENTION IS PAID TO THE SCIENTIFIC WORK CARRIED OUT BY THE STUDENTS.

UNCLASSIFIED

3/3 024

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102649

ABSTRACT/EXTRACT--THUS, STUDENTS OF ONLY THE MEDICAL FACULTY PUBLISHED
OVER 200 SCIENTIFIC PAPERS. THE ARTICLE BRIEFLY DESCRIBES THE HISTORY
OF DEVELOPMENT AND PECULIARITIES OF TEACHING OTORHINOLARYNGOLOGY IN THE
UNIVERSITY.

89

UNCLASSIFIED

USSR

UDC: 621.317.772(088.8)

PREOBRAZHENSKIY, Yu. N., SOROKA, V. B., SHCHURIK, A. B.

"A Device for Measuring Fluctuations in the Phase of a Radio Signal"

USSR Author's Certificate No 263001, filed 1 Oct 68, published 8 Jun 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A321 E)

Translation: This Author's Certificate introduces a device for measuring fluctuations in the phase of a radio signal. The unit contains a radio receiver, a pulse shaping module, and a module for measuring phase difference. As a distinguishing feature of the patent, the time delay range is extended by adding a series circuit made up of a quartz-crystal oscillator, a trigger and reset module, and also a binary counter with a division coefficient determined by the amount of delay. The counter output is connected to the input of the module for phase difference measurement, and the controlling input of the trigger and reset module is connected to the output of the shaper module. E. L.

1/1

1/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--THEORY OF FINE SURFACE STATES IN SILICON AND GERMANIUM -U-
AUTHOR--PREPELITSA, B.V., CHEBAN, A.G., KARP, I.A., SKUTELNICHUK, I.M.
COUNTRY OF INFO--USSR P
SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(3), 528-32
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--SEMICONDUCTOR MATERIAL, SILICON, GERMANIUM, ELECTRON
STRUCTURE, SURFACE PROPERTY, CRYSTAL IMPURITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0642 STEP NO--UR/0368/70/012/003/0528/0532
CIRC ACCESSION NO--AP0107239
UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107239

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN APPROXN. METHOD FOR EFFECTIVE MASS VARIATION IN SEMICONDUCTORS WAS STUDIED BY USING ENERGY CALCNS. OF THE 1ST 3 ELECTRON STATES FOR FINE DONOR IMPURITY CENTERS LOCALIZED CLOSE TO THE SEMICONDUCTOR SURFACE. BY USING DERIVED FORMULAS, THE ENERGY, E, AND VARIATION PARAMETERS A AND B WERE CALCD. FOR GE AND SI. BECAUSE OF THE APPROXNS. MADE, THE RESULTS APPLY NOT TO REAL CRYSTALS OF SI AND GE, BUT TO IDEALIZED SEMICONDUCTORS WITH AN ANISOTROPIC TENSOR EFFECTIVE MASS OF THE SI AND GE TYPE. SINCE THE PRECISE CALCN. OF THE REAL SURFACE STATE PRESENTS CONSIDERABLE DIFFICULTIES, IT IS CONCLUDED THAT THE APPROACH USED REPRESENTS A REASONABLE APPROXN.

UNCLASSIFIED

USSR

PRESMAN, A. S., Candidate of Biological Sciences

Moscow, Elektromagnetnyye Polya v Biosfere (Electromagnetic Fields in the Biosphere), "Znaniye," 1971, 64 pp

Translation: Annotation: The pamphlet is dedicated to one of the problems of the century -- the problem of the effect of electromagnetic fields (EMF) on nature.

The author describes the vast amount of work done by scientists of all countries to determine the effect of EMF on living things.

Table of Contents

	<u>Page</u>
Foreword	
Problem of the Biological Organization and Study of the Biosphere	3
Electromagnetic Spectrum of the Biosphere and Living Organisms	4
	8

1/2

USSR

PRESMAN, A. S., Elektromagnetnyye Polya v Biosphere, "Znaniye,"
1971, 64 pp

Regulation of Biological Rhythms by the Electro- magnetic Fields of the Biosphere	16
Orientation of Organisms with Respect to Magnetic and Electric Fields of Earth	23
Orientation of Birds in Flight with Respect to the Geomagnetic Field	28
Electromagnetic Disturbances and Vital Activity of Organisms	35
Radiophone in the Biosphere and Nature	42
Mechanisms of Reactions of Organisms to the Magnetic Fields of the Biosphere	50
Conclusion	63

2/2

USSR

UDC: 519.2

PRESMAN, E. L., SONON, I. M.

"The Problem of Best Choice in the Case of a Random Number of Objects"

Teoriya veroyatnostey i yeye primeneniya (Probability Theory and its Applications), 1972, 17, No 4, pp 695-706 (from RZh-Kibernetika, No 5, May 73, abstract No 5V95 by R. Liptser)

Translation: The solution of the following problem is known. Let there be n objects arranged according to quality. The objects are presented to an observer in random order in an equally probable manner. It is required to select the object of best quality with maximum probability. The authors consider a generalization of this problem to the case where the number of objects n is random. If the number n is known beforehand, the solution of the problem consists in the following: there exists a number k^* such that the first $k^* - 1$ objects must be allowed to pass, and then presentation will be stopped on the first object (after the k^* -th) which is

1/2

USSR

PRESMAN, E. L., SOSIN, I. M., Teoriya veroyatnostey i yeye primeneniya, 1972, 17, No 4, pp 695-706

better than all preceding ones. However, if the number of objects is random, then the stop number, generally speaking, may be confused with numbers in which stopping is unnecessary. Conditions are established under which the number of sets of stop numbers is finite. In particular it is shown that for uniform distribution on $[1, n]$ there is a single geometric Poisson set of stop numbers which has the form $[k^*, \infty]$. For these same distributions which depend on the parameter λ the authors study the behavior of the quantity $k/\lambda = k^*(\lambda)/\lambda$, and also present formulas for the probability of detecting (as $\lambda \rightarrow \infty$) the best object when the optimum strategy is used.

2/2

- 9 -

AA0046992

P

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent, 2-70

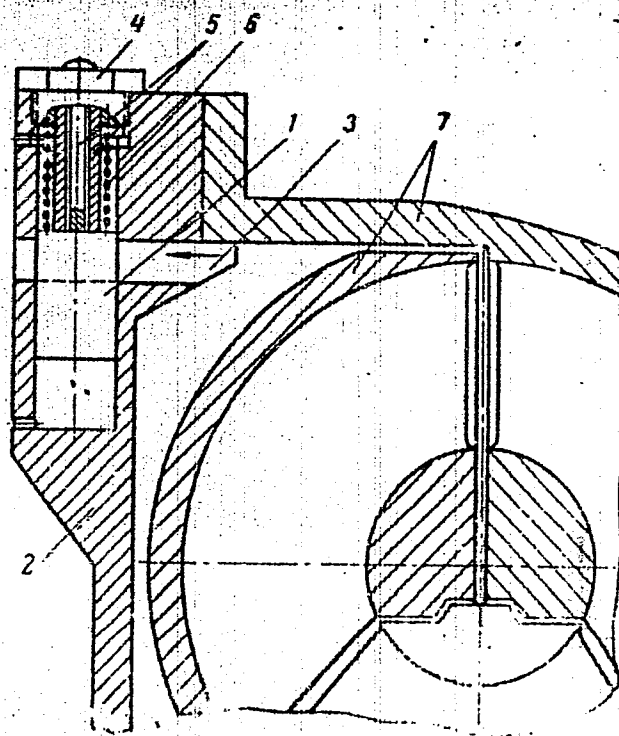
244041 AUTOMATIC RELEASE VALVE for hydrodynamic transmission contains plunger 1 in the radial hole of part 2 which closes the release channel 3. The hole is closed by a plug 4 which contains permanent magnet 5 and presses the helical tension spring 6 which displaces the plunger and opens the release channel. The transmission is activated when wheels 7 attain the prescribed speed, the plunger 1 is by centrifugal force pressed against the spring and closes the release channel. For switching off - when the speed of wheels 7 is reduced, the springs 6 can move the plunger only suddenly, overcoming the magnet's attraction. 13.8.68. as 1264006/25-8. M.S.PRESMAN (30.10.69.) Bul.17/14.5.69. Class 47g. Int.Cl. F16k.

1/2

18

19790403

AA0046992



2/2

JC

19730404

USSR

UDC: 669.295.053.4.068

FAVORSKAYA, L. V., PRESNETSOVA, V. A., KOSHUL'KO, L. P.

"Extraction of Titanium (IV) and Iron (II) by Di-2-Ethylhexylphosphoric Acid"

Tekhnol. Mineral'n. Syr'ya [Technology of Mineral Raw Materials -- Collection of Works], Alma-Ata, 1972, pp 181-187 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G214, by G. Svodtseva).

Translation: The influence of H_2SO_4 and HCl concentration and O:A ratio on extraction of Ti and Fe by di-2-diethylhexylphosphoric acid (D2EHPA) is studied. The extraction curve of Ti passes through a minimum (23%), corresponding to 24% H_2SO_4 and 3n HCl. As the O:A ratio changes during extraction of solutions containing Ti, Fe and Sc, from 1:20 to 1:50, the Sc can be practically completely converted to the organic phase, separating it from accompanying impurities. 3 figures, 3 tables, 12 biblio. refs.

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EXTRACTION OF SCANDIUM FROM CHLORIDE SOLUTIONS USING TRIBUTYL
PHOSPHATE -U-
AUTHOR--(05)-FAVORSKAYA, L.V., PRESNETSOVA, V.A., PUTILIN, YU.M., BAYBEKOV,
M.K., VDROBYEV, L.I. P
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(5), 1158-60
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--SOLVENT EXTRACTION, SCANDIUM, ORGANIC SOLVENT, PHOSPHATE ESTER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0940 STEP NO--UR/0080/70/043/005/1158/1160
CIRC ACCESSION NO--AP0131525

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 012

CIRC ACCESSION NO--AP0131525

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT, THE EXTN. OF SC FROM HCL SOLNS. WAS STUDIED IN THE PRESENCE OF FE(II), FE(III), AND OTHER IONS GENERALLY PRESENT WITH SC IN ITS ORES. THE COMPN. OF THE ARTIFICIALLY PREPD. SAMPLE WAS MGCL SUB2 30, FECL SUB2 9, TICL SUB4 2, FECL SUB3 2, KCL PLUS NACL 21, CACL SUB2 3, SC SUB2 0 SUB3 0.02, ALCL SUB3 3PERCENT. THE EXTN. WAS WITH 70PERCENT BU SUB3 PD SUB4 SOLN. IN KEROSENE. THE RATIO OF THE ORG. AND AQ. PHASES WAS 1:3. THE MIXT. WAS STIRRED MECH. FOR 5 MIN. THE SC WAS REEXTD. WITH 3:1 ORG. TO WATER PHASE RATIO 1ST WITH 2N HCL AND THEN WITH H SUB2 0. HYDROXIDE WAS PPTD. BY NH SUB3 FROM THE 1ST REEXT. SC CAN BE EFFECTIVELY EXT. FROM THE ABOVE ARTIFICIALLY PREPD. MIXT. IN A TYPICAL EXPT. THE 1ST REEXTD. PORTION CONTD. 5.3-6PERCENT SC SUB2 0 SUB3 AND THE 2ND, 20-30PERCENT SC SUB2 0 SUB3. FACILITY: KAZ. NAUCH.--ISSLED. INST. MINER. SYR'YA, ALMA-ATA, USSR.

UNCLASSIFIED

1/2 C25 UNCLASSIFIED PROCESSING DATE--11DEC70
 TITLE--EFFECT OF ZIRCONIUM, ALUMINUM, IRON, AND TITANIUM ON THE
 PRECIPITATION OF SCANDIUM FLUORIDE -U-
 AUTHOR--(CZ)-PAVORSKAYA, L.V., PRESNETSOVA, V.A. P
 COUNTRY OF INFO--USSR
 SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(5), 985-90
 DATE PUBLISHED-----70
 SUBJECT AREAS--CHEMISTRY, MATERIALS
 TOPIC TAGS--CHEMICAL-PRECIPITATION, ZIRCONIUM, ALUMINUM, IRON, TITANIUM,
 SCANDIUM COMPOUND, FLUORIDE, SPECTROPHOTOMETRIC ANALYSIS, METAL COMPLEX
 COMPOUND
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROJ. REEL/FRAME--3C04/0952 STEP NO--UR/0080/70/043/005/0985/0990
 CIRC. ACCESSION NO--AP0131537
 UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--A0131537

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DEGREE OF PPTN. OF SCF SUB3 DECREASES IN THE PRESENCE IN THE SOLN. OF SIGNIFICANT AMTS. OF FE, AL, TI, AND ZR. THESE ELEMENTS CAN BE ARRANGED IN THE FOLLOWING ORDER OF DECREASING EFFECT: ZN PRIME4 POSITIVE IS LARGER THAN TI PRIME4 POSITIVE IS LARGER THAN AL PRIME3 POSITIVE IS LARGER THAN FE PRIME3 POSITIVE. SPECTROPHOTOMETRIC INVESTIGATIONS INDICATE THE FORMATION IN THE SOLNS. OF 1:1 COMPS. CNTG. SC AND ZR AND SC AND AL. AT THE TOTAL CONC. (SC PRIME3 POSITIVE) PLUS (AL PRIME3 POSITIVE) AND (SC PRIME3 POSITIVE) PLUS (ZR PRIME4 POSITIVE) EQUALS TO 0.8 TIMES 10 PRIME NEGATIVE 8 MOLE-L., THE DEGREE OF DISSOCN. OF THE COMPS. FORMED IS 0.7 AND 0.4, RESP. THE DECREASE IN THE DEGREE OF PPTN. OF SC FLUORIDES IN THE PRESENCE OF EXTRANEOUS IONS IS CAUSED BY THE FORMATION OF COMPLEX SOL. COMPS. FACILITY: KAZ. NAUCH.ISSLED. INST. MINER. SYR'YA, ALMA-ATA, USSR.

UNCLASSIFIED

Veterinary Medicine

USSR

UDC 614.9-084.48 6

POLYAKOV, A. A., TRZHETSETSKAYA, T. A., BOSH'YAN, G. M., PRESNOV, I. N.,
IVANOVA, V. I., TARAKANOV, Yu. I., SMIRNOV, A. M., KULIKOVSKIY, A. V. SHUVAYEVA,
O. N., and DMITRIYEVA, T. A., All Union Scientific Research Institute of
Veterinary Sanitation, Moscow

"Advances in the Disinfection of Objects Associated With Livestock Raising"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 8, 1971,
pp 20-24

Abstracts: An outline is given of the results of recent research conducted by the All Union Scientific Research Institute of Veterinary Sanitation. Some of the practical and theoretical accomplishments are: (a) synthesis of 5 disinfectants (caspos, demp, molaran, gudronol, hypochlor); (b) electron microscope study of the effects of different classes of disinfectants (alkalies, acids, chlorine preparations) on bacterial cells (E. coli, Salmonella, Staphylococci) (c) discovery that soil can be completely or partly disinfected by growing timothy and sweet clover; (d) development of methods for disinfecting wool and hides by means of gases (ethylene oxide, methyl bromide); and (e) successful testing of various gases (ethylene oxide, methyl bromide, war gases) and gamma rays to combat some bee diseases (foulbrood, nosema disease, Isle of Wight disease) found in hives.

1/1