

USSR

UDC 539.376+532.135

SVIRIDENOK, A. I., PETROKOVETS, M. I., BELYI, V. A.

"Introduction of a Single Unevenness in a Viscoelastic Halfspace"

V sb. Kontaktn. vzaimodeystviye tverd. tel i raschet sil treniya i iznosa (Contact Interaction of Solid States and Calculation of the Forces of Friction and Wear--collection of works), Moscow, Nauka Press, 1971, pp 101-105 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11V474)

Translation: An estimate of the possibility of using the known laws of deformation of viscoelastic bodies with coefficients determined from mechanical experiments to the calculation of the interaction of a smooth metal sphere with polymer materials is presented. This creates prospects for direct application of the results of developing the theory of deformation and strength of polymer materials to the solution of the problem of friction during metal-polymer contact. The bibliography has 23 entries.

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Acc. Nr

ATO101934

Abstracting Service:

CHEMICAL ABST.

6-72

Ref. Code

UR 0250

112136s Effect of the dimensions of spherulitic formations on the strength and strain capacity of polypropylene. Belyi, V. A.; Savkin, V. G.; Sviridenok, A. I. (Otdel Mekh. Polim., Minsk, USSR). *Dokl. Akad. Nauk Beloruss. SSR* 1970, 14(1), 40-2 (Russ). The strain capacity of the supramol. structure of PP-2 polypropylene films was investigated by monoaxial stretching on a specific app. which permitted continuous observation and recording on photographic film of the various stages in the deformation process. The rate of I film deformation was 1 mm/min. The nature of the supramol. structure had a pronounced effect primarily on the deformation mechanism and disintegration of the films. Stretching of I films whose supramol. structure consisted of clearly expressed spherulites with sharply defined boundaries caused deformation of the samples along the borders of the spherulites at low deformation of the spherulites themselves. During deformation of I films with finer supramol. structures in which sharply defined boundaries between the individual spherulites were absent, deformation growth began just as in the other films, but the zone of transition into the recessed portion had a broader, more diffuse form. The decrease in spherulite dimensions not only changed the nature of the deformation but also improved the mech. properties.

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REEL/FRAME

19851890

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USSR

UDC 632.95

RYZHKOV, A. A., GEYD, YU. P., BABIN, YE. P., SVIRIDENKO, A. S., CHEKAVSKAYA, L. A.

"Analysis of 2-Methoxy-3,6-dichlorobenzoic Acid by Gas-Liquid Chromatography"

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zapryazneniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on the Investigation of Pesticide Residues and Preventive

Contamination of Food Products, Fodder and Environment), Tallin, 1971, pp 116-119 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12N504)

Translation: For extraction of 2-MeO-3,6-Cl₂C₆H₂COOH (I) from an aqueous solution, 1 ml of dilute H₂SO₄ (1:1) is added to 100 ml of sample, it is agitated for 5 minutes, and extracted with 100 ml of ether. For extraction of the compound from the soil, 50 ml of ether and 1 ml of H₂SO₄ (1:1) are added to 50 grams, it is agitated for 5 minutes and filtered. By a mixture of ether and H₂SO₄, the I is extracted from the plant mass. The extracts are dried over Na₂SO₄, they are concentrated to a volume of 3-5 ml, methylated with a solution of CH₂N₂ in ether (15 minutes) and evaporated. The residue is analyzed on a chromatograph with a flame-ionization detector in a column with TND-TS-M of a 1/2

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RYZHKOV, A. A., et al., Tr. 2-go Vses. soveshch. po issled. ostatkov pesti-
tsidov i profilakt. zagryazneniya imi produktov pitaniya, kormov i vnesh.
sredy, Tallin, 1971, pp 116-119

0.17-0.18 mm fraction treated with a 4% liquid phase PMFS-4 or SKFT. For the calculation, the internal standard method was used for which $2,4\text{-Cl}_2\text{C}_6\text{H}_3\text{COOMe}$ was applied. The sensitivity of the method was 0.4-1.5 ng/kg.

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SVIRIDENKO, S. S., SEREGIN, YU. V.

UDC 621.391.14

"Output Voltage Determination in Pseudo-Random Signal Correlation Processing"
Moscow, Radiotekhnika, Vol 25, No 9, 1970, pp 1-3

Abstract: Pseudo-random signals are ordinarily received by means of a matched filter. The two methods usually used for determining the filter output voltage when the input signal is distorted by the line system involve mathematical difficulties, often to the point where recourse to an electronic computer is necessary. The first of these methods uses the Fourier integral, while the second is based on the use of the Duhamel integral. The author of this article proposes a new method, also using the Duhamel integral, which avoids the difficulties in either of the two earlier methods. To demonstrate how his solution is applied, he uses the example of the output voltage of a filter matched with an undistorted m-sequence of 31 elementary signals of the form -1-1-1-11-11-1111-111-11-111111-1-111-11-1-11 if, before the filter, the signal is put through a linear system. A graph showing the output signal as found by the method of the article and the signal plotted from the autocorrelation function of the undistorted signal for the m-sequence shows good correlation between the two.

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SVIRIDENKO, S.S., AGAFONOV, YU.S.

UDC 621.391.17

"Minimization Of Signal Search Time In Discrete Communication System"
Elektrosvyaz', No 9, Sept 1972, pp 61-63

Abstract: The paper considers a search for a discrete pseudorandom (noise-like) signal in a space of indeterminate parameters with respect to frequency and time in a synchronized communication channel. The problem of optimization of search by a multichannel receiver with a multistage procedure is solved by the method of dynamic programming. A comparison with respect to efficiency is made of search systems with various numbers of channels and stages. The values are obtained of the gain in the average signal search time in the frequency-time plane by a multi-channel two- and three-stage correlation receiver relative to a single-channel receiver with one search stage. The dependence is found of the rate of removal of indeterminacy in the state of the signal on the complexity (cost) of the receiver carrying out the search. It is shown that it is advisable to characterize the quality of operation of the search system by an efficiency equal to the ratio of the rate of removal of indeterminacy to the cost with a fixed probability of correct detection. 2 fig. 1 tab. 7 ref. Received by editors, 9 Feb 1971.
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USSR

SVIRIDENKO, V. A.

UDC 621.372.061

"Analysis of an FAPCh [Automatic Phase Frequency Control] System Under the Effect of an AM Signal and Normal Noise"

Tr. Mosk. elektrotekhn. in-ta svyazi (Works of Moscow Electrotechnical Communications Institute), 1970, vyp. 1, pp 61-65 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9A50)

Translation: This article contains an investigation of the effect of an AM signal with additive noise passing through a narrow band filter on the standard FAPCh system. Expressions are derived for the phase dispersion and energy spectrum of the signal. The bibliography has four entries.

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UDC 535.373.3

BELIKOVA, T. P., SAVCHENKO, A. N., ~~SVIRIDENKOV, E. A.~~
"Luminescence Kinetics of ZnS-Cu during a Pulse of Two-Photon
Excitation"

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya (News of the
Academy of Sciences USSR, Physics Series), Vol 35, No 7, 1971
pp 1454-1457

Abstract: A ruby laser is used to excite ZnS-Cu crystals. Two-photon absorption ionizes the copper centers. Electrons are promoted from these centers into the conduction zone. Free electrons in the conduction zone are captured by traps, are liberated by heat, and radiate light when they recombine with ionized centers. The luminescence intensity, which should be related as the fourth power to the excitation intensity in terms of a bimolecular model, is found experimentally to be more complex. It is suggested that one-photon absorption of red light should be taken into account because 1) this type of absorption can neutralize the copper centers with electrons from the valence zone, and 2) one-photon

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BELIKOVA, T. P. et al, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 7, 1971, pp 1454-1457

release of electrons from traps near the bottom of the conduction zone can result in luminescence.

One-photon processes were observed during two-photon excitation. Calculations of kinetic equations, taking these processes into account, agree well with experiment. Analysis of the one-photon processes made it possible to estimate the cross section of one-photon transitions of electrons from the valence zone to the ionized copper centers ($1.6 \times 10^{-17} \text{cm}^2$). Theoretical and calculated curves for the intensity of luminescence as a function of the intensity of excitation are in good agreement.

The authors thank M. D. Galanin for encouragement and L. A. Pakhomycheva for assistance in the work. Orig. art. has 4 figs. and 3 refs.

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USSR

UDC: 621.378.385

NOVGORODOV, M. Z., SVIRIDOV, A. G., SOBOLEV, N. N., and SHVARTS, P.

"The Energy of the Electrons in a CO Laser Discharge"

Leningrad, Zhurnal tekhnicheskoy fiziki, No 10, 1972, pp 2190-2197

Abstract: To understand and optimize the operation of CO lasers, one must know the characteristics of the plasma discharge electron component, particularly parameters like the full electron concentration and the electron energy distribution. With this assertion the authors present the results of their measurements of the distribution function of electron energies in CO-O₂-He laser in terms of the discharge current, pressure, and channel. The measurement method, involving the second derivative of the plasma probe current with respect to the voltage by the so-called second-harmonic method, is basically the same as that used in an earlier paper (M. Z. Novgorodov, et al, IEEE J., QE-7, No 11, 1971, p 508). Data is given for the CO-O₂-He combination in the proportions of 1:0.1:10 and 1:0.1:30, curves for the electron energy distribution are plotted, and the effects of adding Xe to the mixture are discussed. It is noted that computations of the distribution function from the

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NOVGORODOV, M. Z., et al, Zhurnal tekhnicheskoy fiziki, No 10,
1972, pp 2190-2197

UDC: 621.378.385

formula for elastic collisions give misleading results; an exact
solution of the kinetic equation with the correction of all pos-
sible processes taken into account is necessary.

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USSR

NOVGORODOV, M. Z., ~~SVIRIDOV, A. G.~~ and SOBOLEV, N. N. UDC: 621.378.385

"Electrical Characteristics of a CO Laser Discharge Plasma"

Leningrad, Zhurnal tekhnicheskoy fiziki, vol 42, No 7, 1972,
pp 1471-1478

Abstract: The experiments described in this paper are aimed at measuring the electronic concentration in the plasma of a carbon monoxide laser discharge and investigating the characteristics of the plasma. It is assumed that, as in the CO₂ laser, the process providing the pumping to the oscillatory level of CO is basically electronic shock. This hypothesis can only be verified if the concentrations and distribution functions of the electron energy are known. The experiments were conducted by the microwave method using cylindrical resonators, with the discharge realized with d-c current in quartz tubes of 3.4 or 2.0 cm diameter. A description of the experimental procedure is given, and the experimental results are presented in the form of curves for the electron concentration as a function of the discharge current in CO and He in various mixture proportions. The electron concentration is a direct linear function of the discharge current density, and a table of the proportionality constant for various combinations of

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UDC: 621.378.385

NOVGORODOV, M. Z., et al, Zhurnal tekhnicheskoy fiziki, vol 42,
No 7, 1972, pp 1471-1478

CO and He is presented. Curves are also given for the electric field intensity as a function of the discharge current with mixtures of CO + O₂ + He and CO + N₂. The authors, members of the P. N. Lebedev Physics Institute at Moscow, express their gratitude to V. Ya. Cherkasov and O. I. Baranova for their assistance with the experiments, and to A. A. Mikaberidze for assisting with the computations.

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1/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--HOME THERAPY OF PATIENTS WITH CHRONIC CARDIAC INSUFFICIENCY -U-
AUTHOR--(02)-SVIRIDOV, A.M., NIKITINA, V.G.
COUNTRY OF INFO--USSR
SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, NO 3, 1970, PP 41-44
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HEART DISEASE, PROPHYLAXIS, DRUG, BLOOD CIRCULATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0305 STEP NO--UR/0177770/000/003/0041/0044
CIRC ACCESSION NO--AP0154161
UNCLASSIFIED

472 023
CIRC ACCESSION NO--AP0134161
ABSTRACT/EXTRACT--(U) GR-D- ABSTRACT. CARDIAC INSUFFICIENCY IS ONE OF THE MOST FREQUENT CAUSES OF MORTALITY AND INVALIDISM IN CARDIOVASCULAR DISEASES. IN THE THERAPY OF CARDIAC INSUFFICIENCY THE MAIN ROLE BELONGS TO CARDIAC GLYCOSIDES. THE PROCEDURE OF THEIR APPLICATION UNDER CLINICAL CONDITIONS HAS BEEN DESCRIBED WELL ENOUGH (G. F. LANG, V. F. ZELENI, YE. M. TAREYEV, B. YE. BOTCHAL, A. L. MYASNIKOV, A. M. SIGAL, AND OTHERS). THE TREATMENT OF THEM PRESENTS A CERTAIN DIFFICULTY, HOWEVER. IT IS NO ACCIDENT THAT EDENS WROTE THAT DIGITALIS IN THE HANDS OF A THERAPEUTIST IS THE SAME AS A KNIFE IN THE HANDS OF A SURGEON, AND S. P. BUTKIN CONSIDERED EACH APPLICATION OF DIGITALIS A CLINICAL EXPERIMENT. ANALYSIS OF THE HISTORIES OF DISEASE OF PATIENTS WITH CHRONIC CARDIAC INSUFFICIENCY, TREATED IN ONE OF THE HOSPITALS, SHOWED THAT SEVERITY OF THE DISEASE OFTEN IS EXPLAINED BY INADEQUACY OF THE DOSING OF DIGITALIS PREPARATIONS IN THERAPY UNDER HOME AND POLYCLINIC CONDITIONS. V. S. SMOLINSKIY, OBSERVING PATIENTS WHO HAD BEEN TREATED IN A CLINIC, NOTED THAT A RARE PATIENT WITH CARDIAC INSUFFICIENCY ENTERS A CLINIC WHO HAS OBTAINED A FULL DOSE OF DIGITALIS AS A RULE IT MUST BE INCREASED 1.5-2 TIMES. OUR REPORT IS DEVOTED TO AN EXPERIMENT IN THE THERAPY OF PATIENTS WITH CARDIAC GLYCOSIDES UNDER HOME CONDITIONS. UNDER OBSERVATION WERE 70 PERSONS WITH INSUFFICIENCY OF THE BLOOD CIRCULATION, 46 MEN AND 24 WOMEN AGED FROM 45 TO 80 (4 WERE 45-50, 9 WERE 51-60, 33 WERE 61-70, AND 24 WERE 71-80 YEARS OF AGE). IN INSUFFICIENCY OF THE BLOOD CIRCULATION OF DEGREE IIA WAS DIAGNOSED IN 14, OF IIB IN 36 AND III IN 20 PERSONS.

UNCLASSIFIED

PROCESSING DATE--20NOV70

UNCLASSIFIED

1/2 045

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--THERMAL REGIME OF A PULSED CO2 LASER -U-

AUTHOR--(03)-YELETSKIY, A.V., LEVINSON, G.P., SVIRIDOV, A.N.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL PRIKLADNOI SPEKTROSKOPII, VOL. 12, MAR. 1970, P. 543-546

DATE PUBLISHED----MAR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CARBON DIOXIDE LASER, MOLECULE, GASEOUS STATE LASER, PULSE
EXCITATION, GAS RELAXATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1020

STEP NO--UR/0368/70/012/000/0543/0546

CIRC ACCESSION NO--AP0107534

UNCLASSIFIED

2/2 045

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107534

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

ABSTRACT. CALCULATION OF THE LIFETIME OF THE UPPER LASER LEVEL OF THE CARBON DIOXIDE MOLECULE, TAKING INTO ACCOUNT GAS HEATING DURING RELAXATION OF THIS LEVEL. IT IS FOUND THAT THIS TIME PRACTICALLY COINCIDES WITH THE RELAXATION TIME OF THE GAS TEMPERATURE AND THEREFORE DEPENDS ON THE PULSE ENERGY DURING PULSED EXCITATION OF A CARBON DIOXIDE LASER. THE RESULTS OF THE CALCULATION ARE COMPARED WITH EXPERIMENTAL DATA.

UNCLASSIFIED

USSR

SVIRIDOV, A. P.

UDC: 519.2

"Use of Tables for Choosing and Analyzing Plans for Programmed Control"
Moscow, Tr. Mosk. energ. in-ta (Transactions of the Moscow Power
Institute) No 82, 1972, pp 84-93 (from RZh---Matematika, No 6,
1972, Abstract No 6V209)

Translation: Plans are examined for programmed control of the one-shot and truncated one-shot sampling type. In using plans of the first type, a fixed number of problems is tested and an estimate made for each group of correct answers (5, 4, 3, 2, or "test" and "no test"); in the plans of the second type, the estimate may be made before all the problems are given. A detailed description is given of such plans, their similarity to plans for statistical control of production quality is stressed, questions of the use of various well-known tables for determining the parameters of a given plan and for the selection of a plan are analyzed, and the basis for selecting a plan possessing specified parameters -- the overestimation probability α (an error of the first kind), the underestimation probability β (an error of the second kind), and the average number of problems (the average sampling volume) -- is considered. A. Za-slavskiy

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USSR

SVIRIDOV, A. P.

UDC: 519.2

"Some Optimal Algorithms of Programmed Control With Many Error Sources Taken Into Account"

Moscow, Tr. Mosk. energ. in-ta (Transactions of the Moscow Power Institute) No 82, 1972, pp 94-104 (from RZh-Matematika, No 6, 1972, Abstract No 6V210)

Translation: The author considers problems in the use of standard methods for developing plans of programmed control (Abstract No 6V209) and concepts of mathematical statistics -- simple and complex hypotheses, uniformly powerful criteria, randomized and nonrandomized criteria, and criteria of the probability ratio. A. Zaslavskiy.

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UDC 621.3.051.025

SVIRIDOV, A. P.

"Transmitting Half-Wave Alternating Voltages Over 4500 Km"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR -- Seriya Tekhnicheskikh Nauk, No 3, Feb 70, pp 57-63

Abstract: The feasibility of adjusting lines for the transmission of electrical energy over very large distances has been demonstrated by the investigations of the Siberian Scientific Research Institute. Their experiments, conducted in 1967 over networks of 500 Kv, have shown that adjusted lines can be effectively used for transmitting power up to distances of 3500 km. In that work, operation modes, systems, and engineering indices of an electrical transmission line of 4500 km in length with a maximum voltage of 1200 Kv were studied. The computations assumed that the line phase consists of eight conductors, with the cross-sectional diameter of the conductors remaining constant and only their space factor varying. The present paper considers lines with a half-wave characteristic. The following possible systems for compensating for the line parameters were considered: by longitudinal capacitors along the line; by longitudinal capacitors and transverse inductors in the line; by T-circuits of the longitudinal capacitor and

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SVIRIDOV, A. P., Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR --
Seriya Tekhnicheskikh Nauk, No 3, Feb 70, pp 57-63

transverse inductor form connected at the terminal substations. The author concludes that such lines are economically completely acceptable; he estimates their cost, for the different variations, at 0.235 to 0.355 kopecks/kw-hr.

USSR

UDC 547.78 + 547.241

DRACH, B. S., and SVIRIDOV, E. P., Institute of Organic Chemistry, Academy of Sciences, Ukrainian SSR

"Reaction of Diethylamine With the Diethyl Ester of 1-Benzamido-2,2-dichlorovinylphosphonic Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 7, Jul 73, pp 1648-1649

Abstract: Heating triethyl phosphite with N-1,2,2,3-tetrachloroethylbenzamide yields the normal Arbuzov rearrangement product which in the presence of triethylamine is converted to the diethyl ester of 1-benzamido-2,2-dichlorovinylphosphonic acids. The latter reacts easily with primary and secondary amines; so that in case of dimethylamine, for example, a good yield of 2-phenyl-4-diethoxyphosphonyl-5-dimethylaminooxazole is obtained.

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USSR

UDC 547.288 + 547.495

DRACH, B. S., and SVIRIDOV, E. P., Institute of Organic Chemistry, Academy of Sciences UkrSSR

"Reaction of the Condensation Product of Bromal and Methylurethane with Phosphorus Pentachloride"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 5, May 73, pp 1074-1075

Abstract: The condensation product of bromal with methylurethane -- the methyl ester of N-1-hydroxy-2,2,2-tribromomethylcarbamic acid (I) reacts easily with phosphorus pentachloride yielding with the 1:1 ratio of the reagents the methyl ester of N-1-chloro-2,2,2-tribromoethylcarbamic acid (II). With a 1:2 ratio, the product is 1-chloro-2,2,2-tribromomethylisocyanate (III). Treatment of (II) with triethylamine yields N-carbomethoxybromalimine (IV). Both (III) and (IV) react exothermally with methanol yielding the same product -- N-1-methoxy-2,2,2-tribromomethylcarbamic acid.

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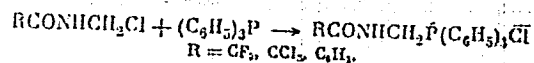
UDC 547.241

DRACH, B. S., SVIRIDOV, E. P., and KIRSANOV, A. V., Institute of Organic Chemistry, Academy of Sciences, Ukraine SSR

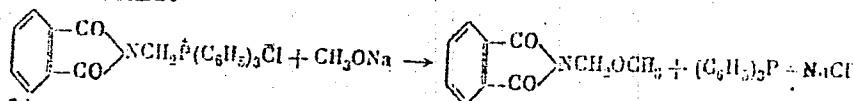
"Reaction of the N-chloromethylamides of Acids With Triphenylphosphines"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 4, 1972, pp 953-954

Abstract: N-chloromethylamides reacts with triphenylphosphines according to the following reaction:



If the phosphonium salt from the above reaction is treated with triethylamine in a dioxane solution, the hydrochloride but not the phosphinomethylene is formed. If the phosphonium salt has no H on the N, i.e., a tertiary N, the following reaction occurs:



The bromine salt reacts in an analogous manner.

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UDC 62-531.4

YEFREMEENKO, V.T., ZHURAKOVSKIY, T.D., MOROZOV, L.G., PERFIL'EV, L.M.,
RYAPOLOV, V.A., SVIRIDOV, G.S., TAREYEVA, V.N.

"Positional Tracking Drive"

USSR Author's Certificate No 262659, Filed 14/10/68, Published 19/05/70,
(Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'-
naya Tekhnika, No 12, 1970, Abstract No 12 A274P by T.R.)

Translation: A positional tracking pneumatic drive is patented, consisting of a power cylinder divided by a piston into two working cavities connected to the high-pressure channel through calibrated chokes. The power cylinder shaft contains a fluid distributor consisting of a cylindrical plunger with spiral grooves connected to the low-pressure chamber and through apertures in the shaft of the power cylinder with its working cavities. The distributor is rotated by the controller through the required angle. As the distributor rotates, a pressure difference is developed in the power cylinder cavities, acting on the piston until the holes in the shaft are moved to a symmetrical position relative to the distributor slots. The rotation of the sensor is converted to forward movement of the power cylinder shaft by the drive system. One figure.

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USSR

UDC: 616.981.49-092.9-085.849.11

SVIRIDOV, L.P., Military Medical Academy imeni Kirov

"The Effect of Ultrahigh-Frequency Radiation of Different Intensities on the Course of Salmonellosis in White Mice"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, 1970, pp 10-14

Abstract: Electromagnetic ultrahigh-frequency waves of thermal intensity (30 mv/cm²) aggravated the course of experimental salmonellosis in mice, whereas those of nonthermal intensity (5 and 8 mv/cm²) had the opposite effect. Morphological shifts following exposure of the animals to 30 mv for 15 days before or after infection included weak hyperplasia of reticular cells and late formation of granulomas in the liver and spleen. The incubation period was shorter and the mortality rate higher than in controls. Exposure to 5 or 8 mv for 15 days after infection resulted in a milder course of the disease, longer incubation period, lower death rate, and less intense bacterial contamination of the liver, spleen, and mesenteric lymph nodes. Morphological shifts were similar to those in controls, early signs of hyperplasia of the reticular cells and formation of numerous granulomas.

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USSR

S WDC 621.372.051

SVIRIDOV, N. G.

"Evaluating the Effectiveness of Filters with Slowly Changing Parameters in a Television System"

Tr. Ryazansk. radiotekhn. in-ta (Works of Ryazan' Radio Technical Institute), 1969, vyp. 17, pp 121-132 (from RZh-Radiotekhnika, No 3, Mar 70, Abstract No 3A124)

Translation: Considering the fact that a TV signal is a random process with slow nonstationary variations, the transfer characteristics of a self-tuning optimal linear filter (F) improving the TV image in the presence of noise are defined. Analysis of the effectiveness of the filter with changing parameters shows that it insures a lower mean square error of reproduction of the television signal than stationary noise. The weighted intensity of the noise at the output of the filter with variable parameters decreases to a half or a sixth of the function of the interval of correlation of the signal, the noise spectrum and the signal/noise ratio. The optimal filter considering the conditions of physical implementation has significant loss (33-66%) with respect to the magnitude of the weighted mean-square error as compared with the optimal filter without considering the conditions of physical implementation. There are three illustrations and a seven-entry bibliography.

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1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--SYNTHESIS OF BIS,2,FLUORO,2,2DINITROETHYL,AMINE AND
TRIS,2,FLUORO,2,2,DINITROETHYL AMINE -U-
AUTHOR-(04)-GAFUROV, F.G., SVIRIDOV, S.I., NATSIBULLIN, F.YA., YEREMENKO,
L.T.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 383-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS
TOPIC TAGS--CHEMICAL SYNTHESIS, FLUORINATED ORGANIC COMPOUND, AMINE,
FLUORONITRO COMPOUND, AMMONIUM SALT, CHEMICAL DECOMPOSITION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0822 STEP NO--UR/0062/70/000/002/0383/0387
CIRC ACCESSION NO--AP0119726
UNCLASSIFIED

018
CIRC ACCESSION NO--AP0119726 UNCLASSIFIED PROCESSING DATE--23OCT70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING 39.8 G (10 SUB2 N) SUB2 CH
SUB2 CH SUB2) NH AS THE DI,K SALT TO 200 G HNO SUB3 (D. 1.5) AND 50 G H
SUB2 SO SUB4 (D. 1.84) AT NEGATIVES TO NEGATIVE 10 DEGREES, FOLLOWED AT
0-5 DEGREES BY 850 G H SUB2 SO SUB4, AND KEEPING THE MIXT. 1 HR GAVE A
PPT., WHICH AFTER BEING WASHED WITH H SUB2 SO SUB4 OF GRADUALLY
DECREASING CONC. (FINALLY 5 PERCENT) YIELDED 0 SUB2 WHICH SUB2 CH (NO
SUB2) SUB2) SUB2, DECOMP. 100-1 DEGREES, WHICH IN MECH WITH ALC. KOH 0.5
HR GAVE THE DI,K SALT, DECOMP. 128 DEGREES; DI,NA SALT, PREPD.
SIMILARLY, DECOMP. 121 DEGREES; DI,NA SUB4 SALT DECOMP. 99 DEGREES.
THE DI,NA SALT IN H SUB2 O TREATED AT 0-5 DEGREES WITH F DILD. WITH 20
PARTS N GAVE 45 PERCENT 0 SUB2 WHICH SUB2 CF (NO SUB2) SUB2) SUB2 (I), M.
86 DEGREES. I FORMED FROM THE DI,NA SUB4 SALT IN 40 PERCENT YIELD AND
FROM THE DI,K SALT IN 44 PERCENT YIELD. TO 15.4 G CH (NO SUB2) SUB2 CH
SUB2 OH IN H SUB2 O WAS ADDED, AT 50 DEGREES OVER 4 HR, 34 ML 5 PERCENT NH
SUB4 OH AT PH 7.5-8 TO YIELD WHICH SUB2 CF (NO SUB2) SUB2) SUB2, M.
42-3 DEGREES, WHICH IN CONCD. H SUB2 SO SUB4 WITH HNO SUB3 (D. 1.5) AT
ROOM TEMP. 2 HR GAVE 70 PERCENT I. AW. SOLN. OF (10 SUB2 N) SUB2 CKCH
SUB2) SUB2 NCH SUB2 CH (NO SUB2) SUB2 TREATED WITH F,N GAVE 75 PERCENT
(CF (NO SUB2) SUB2 CH SUB2) SUB3 N, M. 78 DEGREES.
INST. KHIM. FIZ., MOSCOW, USSR.

FACILITY:

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AN0110877

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE IS PROMOTING THE USE OF AUTOMATIC SYSTEMS OF INDUSTRIAL MANAGEMENT (ASUP). THE INSTITUTE OF THE AUTHOR IS ACTIVELY ENGAGED IN ASSISTING THE ELECTROTECHNICAL INDUSTRY TO SET UP THE ASUP. THE PROJECT INVOLVES MORE THAN 30 RESEARCH LABORATORIES, DESIGN BUREAUS AND PILOT PLANTS UNDER THE DIRECTION OF DECENTS O V. NOVIKOV AND YU. SHAGAYEV. PROFESSOR A. VOLKOV AND DOCENT E. DEDIKOV, HEADED A TEAM OF ASSOCIATES OF THE CHAIR OF ENGINEERING CYBERNETICS THAT APPLIED THE METHODS OF LINEAR PROGRAMMING TO RESOLVE SOME PROBLEMS OF THE SUMY PLANT OF ELECTRON MICROSCOPES. FACILITY: INSTITUTE OF RADIOELECTRONICS.

UNCLASSIFIED

1/2 042
UNCLASSIFIED
PROCESSING DATE--04DEC70
TITLE--FORMATION AND STABILIZATION OF CHROMIUM V DURING THE RADIATION
CHEMICAL OXIDATION OF CHROMIC HYDROXIDE COPRECIPITATED WITH ZIRCONIUM
AUTHOR--(03)-LESNIKOVICH, A.I., SVIRIDOV, V.V., POZNYAK, A.L.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK BELORUSS. SSR 1970, 14(3), 240-2
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--RADIATION EFFECT, CHROMIUM COMPOUND, OXIDATION, HYDROXIDE,
ZIRCONIUM COMPOUND, ALUMINUM COMPOUND, RADIATION CHEMISTRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0866
STEP NO--UR/0250/70/014/003/0240/0242
CIRC ACCESSION NO--AT0129935
UNCLASSIFIED

2/2 042
CIRC ACCESSION NO--AT0129935 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COPPTD. MIST. OF CR-ZR OR CR-AL
HYDROXIDE GELS WERE INVESTIGATED AFTER IRRADN. BY A DOSE OF 10 PRIM7 R
AT ROOM TEMP. HIGH CR(IV) STABILIZATION OBSERVED MAY BE EXPLAINED BY A
SLOW DISPORPORTIONATION PROCESS IN COPPTD. HYDROXIDE. IMPERFECTION IN
THE HYDROXIDES STRUCTURE SUPPORTS THE EASE OF RADIATION CHEM. OXIDN. FO
CR(III) IONS.
USSR.
FACILITY: BELORUSS. GOS. UNIV. IM. LENINA, MINSK,

PROCESSING DATE--04DEC70

UNCLASSIFIED

USSR

UDC 621.398

SVIRIDOV, V. V., YEVTUSHENKO, I. N., and TOLKACHEV, V. YU.

"Choice of the Optimal Distribution Function in a Remote Information System for the Operational Collection of Integral Information"

V sb. Avtomatiz. sistemy upravleniya (Automated Management Systems--collection of works), Cheboksary, 1973, pp 9 - 16 (from RZh Avtomatika Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 73, abstract No 11 A467)

Translation: A calculation and choice of optimal distribution of primary integral information processing functions for a fixed structure and arrangement of a remote information system are carried out. Three variations of centralization are compared on a combination of information and cost characteristics, using a vector preference criterion. One illustration, one table, six bibliographic citations.

Abstract by the authors.

1/1

Simulations

USSR

UDC: 51

SVIRIDOV, V. V.; KOLYUSHENKOV, A. K.

"Definition of the Goal Function and Criterion of Effectiveness for a Certain Class of Network Systems"

Pribory i sistemy avtomatiki. Resp. mezhved. temat. nauch.-tekhn. sb. (Automation Devices and Systems. Republic Interdepartmental Thematic Scientific and Technical Collection), 1973, vyp. 27, pp 30-36 (from RZh-Matematika, No 9, Sep 73, abstract No 9V581 by the authors)

Translation: The paper notes the advantages and disadvantages of PERT methods. A definition is given of the network function and criterion of effectiveness for a certain class of network systems. The problem of controlling a set of operations is mathematically formulated. The method of dynamic programming is used in deriving the functional equation. The guaranteed probability of attaining the goal is taken as the criterion of effectiveness of operation of the control system.

1/1

USSR

SVIRIDOV, V. V. and KOLYUSHENKOV, A. K.

UDC: 51

"An Algorithm for Optimal Distribution of Resources in Complex Systems With a Specified Quality Function"

\ Pribery i sistemy avtomatiki. Resp. mezhved. temat. nauch.-tekhn. sb. (Automation Systems and Instruments, Republic Interdepartmental Thematic Scientific-Technical Collection) No 26, 1973, pp 96-99 (from RZh--Matematika, No 7, 1973, Abstract No 7V559)

Translation: The problem of optimizing the distribution of resources in planning and controlling complex operations is considered. The technological order of doing the work is determined by a grid graph. From the authors' introduction.

1/1

1/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--NIOBIUM IN METAGRANITES OF THE POLAR URALS. VITAL STATISTICAL
ERRORS, POLEMIC -U-
AUTHOR--SVIRIDOV, V.V.
COUNTRY OF INFO--USSR
SOURCE--GEOL. GEOFIZ. 1970, (2), 148-50
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--GEOCHEMISTRY, MINERALOGY, CHEMICAL ANALYSIS, NIOBIUM,
STATISTICAL ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0184 STEP NO--UR/0210/70/000/002/0148/0150
CIRC ACCESSION NO--AP0129440
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129440

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. E. P. KALININ, ET AL. (1968) BASED THEIR CONCLUSIONS ON 28 CHEM. AND 26 QUANT. MINERALOGICAL ANALYSES OF METAGRANITES, WHILE THE ACTUAL NO. OF ANALYSES WAS DIFFERENT IN THE TABLE CONTG. THE ANAL. DATA. E.G., THE ORTHOCLASE WAS CORRELATED WITH NB ONLY FROM 20 AND NOT 28 CHEM. ANALYSES. THEREFORE, THE SIGNIFICANCE LEVEL OF CORRELATION COEFFS. SHOULD BE DETD. FROM 20 AND NOT 28 ANALYSES. IN ADDN., THE TABLE ON CRIT. VALUES OF CORRELATION COEFFS. FROM THE YANKO MATH. STATISTICAL HANDBOOK (1961) WAS USED INCORRECTLY. K., ET AL. DID NOT CALC. THE NO. OF DEGREES OF FREEDOM, ALTHOUGH THE LATTER NOT ONLY DIFFER FROM THE NO. OF ANALYSES BUT ALSO DIFFER FOR PAIR AND INDIVIDUAL CORRELATION COEFFS. E.G., IN ONE OF THE TABLES A SIGNIFICANT CORRELATION OF NB IN MINERALS WAS GIVEN TO BE 0.37 FOR 95PERCENT SIGNIFICANCE LEVEL. BUT SIGNIFICANT CORRELATION COEFFS. SHOULD BE LARGER THAN OR EQUAL TO 0.382, IS ONE CONSIDERS THAT FOR QUANT. MINERALOGICAL ANALYSES, THE NO. OF DEGREES OF FREEDOM IS NOT 26 BUT 24 (FOR PAIRS OF CORRELATION COEFFS.). THE CORRELATION COEFF. OF NB WITH ORTHOCLASE WAS 0.489. THE CORELLATION COEFF. WAS RECALCD. AND PROVED TO BE 0.444. INCORRECT ALSO WERE THE FOLLOWING CORRELATION BONDS: FLUORITE WITH QUARTZ AND PLAGIOCLASE, OPAQUE ORES WITH MUSCOVITE, QUARTZ WITH K FELDSPAR. IN ADDN., STATISTICAL CHARACTERISTICS, MADE FROM A SMALL NO. OF ANALYSES (LARGER THAN 20-30), ARE NOT SUFFICIENTLY RELIABLE.

UNCLASSIFIED

1/2- 020 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SENSITIZATION OF HYDRAZINE PHOTOOXIDATION IN AN AQUEOUS SOLUTION BY
LEAD AND TITANIUM OXIDES AND HYDROXIDES -U-
AUTHOR--SHEVCHENKO, G.P., PUSHKAREVA, T.M., SVIRIDOV, V.V. S
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(2) 546
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HYDRAZINE, TITANIUM OXIDE, HYDROXIDE, LEAD OXIDE,
PHOTOOXIDATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1993/0274 STEP NO--UR/0076/70/044/002/0546/0546
CIRC ACCESSION NO--AP0113205
ZZZZZZZZZZ UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0113205

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF EFFECTIVE
PHOTOXIDN. OF N SUB2 H SUB4 IN AERATED AQ. SOLNS. CONTG. SOLID ADDNS.
OF PB HYDROXIDE AND OXIDE, TI HYDROXIDE, AND ONE OF THE CRYST.
MODIFICATIONS OF TIO SUB2, ANATASE, IS SHOWN. THESE ADDITIVES ARE
SENSITIZERS OF THE PHOTOREACTION MAKING THE REACTION POSSIBLE UNDER THE
ACTION OF LIGHT NOT ABSORBED BY N SUB2 H SUB4 SOLN. BUT ABSORBED BY THE
ADDITIVES. RUTILE TIO SUB2 HAS NO SUCH ACTIVITY. IN AN ACIDIC MEDIUM
NH SUB3, N SUB2, AND H SUB2 O ARE PRODUCED, AND IN A NEUTRAL OR WEAKLY
ALK. MEDIUM N SUB2 AND H SUB2 O. THIS DIFFERENCE IS DUE TO THE PRESENCE
OF N SUB2 H SUB5 PRIME POSITIVE IN ACIDIC MEDIA AND N SUB2 H SUB4 IN
NEUTRAL OR ALK. MEDIA. THE SENSITIZED ACTIVITIES OF PB(OH)SUB2 AND
VARIOUS CRYST. MODIFICATIONS OF PBO (TETRAGONAL AND RHOMBIC) THAT WERE
NOT CALCINED DURING PREPN. ARE COMPARABLE. CALCINATION AT 600DEGREES
INCREASES THE ACTIVITY NOTICERABLY AND IN SPITE OF A CERTAIN DECREASE IN
SP. SURFACE. DEHYDRATION OF TI HYDROXIDE AT 400DEGREES FORMS ANATASE
WITH A BADLY ORDERED CRYSTAL LATTICE AND INCREASES THE SENSITIZING
ACTIVITY. AT HIGHER TEMP. THE ACTIVITY IS DECREASED. THE IONS AG PRIME
POSITIVE, MN PRIME2 POSITIVE, AL PRIME3 POSITIVE, CR PRIME3 POSITIVE, LI
PRIME POSITIVE, CU PRIME2 POSITIVE HAVE A COMPLEX EFFECT ON PBO ACTIVITY
THAT DEPENDS ON THE METHOD OF PREPN. OF THE SENSITIZER. THESE IONS,
EXCEPT FOR CR PRIME3 POSITIVE, WHEN ADDED TO TIO SUB2 AT 800DEGREES HAVE
AN ACTIVATING EFFECT. SENSITIZING ACTIVITY IS ALSO FOUND WITH
FE(OH)SUB3, ZNO, ZNS, HGS (RED), HGS (BLACK), HGSE, HGBR SUB2, HGI SUB2,
HG SUB3 SE SUB2 I SUB2, HGBR SUB2, NHGSE, HG SUB3 S SUB2 I SUB2.

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UNCLASSIFIED

USSR

UDC 662.236+536.46

KONDRIKOV, B. N., and SVIRIDOV, Ye. M., Moscow

"Burning of Aromatic Nitrocompounds"

Novosibirsk, Fizika Goreniya i Vzryva, Vol 7, No 2, Jun 71,
pp 204-211

Abstract : The burning of aromatic nitrocompounds was experimentally investigated in a bomb of constant pressure in argon atmosphere. The investigation included: hexanitro-derivatives of diphenyl, diphenylamine, and diphenylsulfide; trinitro-derivatives of benzene, aniline, chlorobenzoyl, benzoic acid, m-xylol, and resorcinol; dinitro-derivatives of benzene, toluene, resorcinol, diphenyl, and naphthalene; and also paramononitrotoluene. For all mentioned compounds, including the last, a steady-state burning was produced and the burning rate dependence on pressure was established. The investigation results are discussed by reference to photograms of burning and diagrams of burning rate depending on pressure. Most of investigated compounds show two characteristic types of burning: a uniform burning at high pressures, where the burning rate dependence on pressure is characterized by

$u = b \times p^{\nu}$, by $\nu =$ constant and near to 1, and a less uniform burning at lower pressures and with a complexly varying burning rate. Probable reasons for the different burning characters are discussed. Four illustr., one table, six biblio. refs.

1/2 021
TITLE--INTRAGRANIC LYMPHATIC CAPILLARIES OF THE HUMAN SUBMAXILLARY GLAND
-U-
AUTHOR--SVIRICOVA, I.K.
COUNTRY OF INFO--USSR
SOURCE--ARKH ANAT GISTOL EMBRIOL 58(1): 41-46. ILLUS. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LYMPHATIC SYSTEM, CAPILLARY, BLOOD CIRCULATION,
HISTOCHEMISTRY, BIOLOGIC STAIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1085
CIRC ACCESSION NO--AP0128512
STEP NO--UR/9076/70/058/001/0041/0046
UNCLASSIFIED

2/2 021

CIRC ACCESSION NO--AP0128512
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT. INTRAORGANIC LYMPHATIC CAPILLARIES AND VESSELS WERE STUDIED IN 100 BODIES OF PERSONS OF BOTH SEXES AGED 20-70. GEROTA'S METHOD OF INTERSTITIAL INJECTION OF GLAND TISSUE WITH BLUE DYE WAS USED. LYMPHATIC CAPILLARIES FORM SINGLE LAYERS OF SMALL MESH NETS ABOUT THE LOBULES OF THE SUBMAXILLARY SALIVARY GLAND AND ITS DUCTS OF 2ND, 3RD, 4TH AND 5TH ORDER. WITHIN THE WALL OF THE MAIN DUCT LYMPHATIC CAPILLARIES FORM A 1-LAYER NET, AS A CUFF SURROUNDING THE MAIN DUCT. THE LYMPHATIC CAPILLARY NET LYING NEXT TO THE DUCT LUMEN IS MADE UP OF SMALL MESHES, WHILE THE OUTER NET IS OF LARGER MESH. LYMPHATIC CAPILLARY NETS SURROUNDING ADJACENT DUCTS OF THE SAME ORDER HAVE MUTUALLY COMMUNICATING ANASTOMOSES. LYMPHATIC VESSELS ARE FORMED FROM LYMPHATIC CAPILLARIES THAT SURROUND 2ND, 3RD, 4TH AND 5TH ORDER DUCTS, AS WELL FROM THE CAPILLARY NET OF THE MAIN EFFERENT DUCT OF THE GLAND. FACILITY: DEP. HUM. ANAT., I. M. SECHENOV 1ST MOSCOW MED. INST., MOSCOW, USSR.

UNCLASSIFIED

1/2 030

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--COAGULATION AND ANTICOAGULATION SYSTEMS OF THE BLOOD IN PATIENTS
WITH UNCOMPLICATED CEREBRAL ATHEROSCLEROSIS -U-

AUTHOR-(03)-BORISENKO, R.I., OVSOV, V.V., SVIRIDOVA, L.P.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 2, PP 89-92

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD COAGULATION, ATHEROSCLEROSIS, BRAIN, PROTHROMBIN, BLOOD
PLASMA, HEPARIN, CHOLESTEROL, LIPID METABOLISM, LIPOPROTEIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1982/0800

STEP NO--UR/0475/70/000/002/0089/0092

CIRC ACCESSION NO--AP0052237

UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0052237

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY OF 201 PATIENTS WITH CEREBRAL ATHEROSCLEROSIS REVEALED A MODERATE DECREASE OF THE PROTHROMBINE ACTIVITY, AN INCREASE OF BLOOD PLASMA HEPARIN TOLERANCE, INCREASE OF CHOLESTEROL AND BETA LIPOPROTEIDS. UNDER THE EFFECT OF DRUG THERAPY NO SIGNIFICANT CHANGES OF THE COAGULATION PROPERTIES OCCURRED. FOLLOWING TREATMENT WITH HYDROSULFIDE BATHS THE PROTHROMBINE ACTIVITY DECREASED AND THE CHOLESTEROL LEVEL MODERATELY INCREASED. CONIFEROUS BATHS EXERTED NO DISTINCT EFFECT ON BLOOD COAGULATION AND LIPOID METABOLISM. IN PLANNING COMPLEX TREATMENT THE COAGULATION AND ANTICOAGULATION SYSTEMS OF THE BLOOD AND LIPOID METABOLISM SHOULD BE CONSIDERED.

UNCLASSIFIED

020

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--DIORGANYLSILOXANE, ALPHA, OMEGA, DIOLS -U-

AUTHOR--(03)-VORONKOV, M.G., SVIRIDOVA, N.G., BORISOV, S.N.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,595

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRATZSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--10FEB70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANOSILICON COMPOUND, SILOXANE, FLUORINATED ORGANIC
COMPOUND, CHEMICAL PATENT, ALCOHOL, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1596

CIRC ACCESSION NO--AA0135237

STEP NO--UR/0482/70/000/000/0000/0000

UNCLASSIFIED

272 020
CIRC ACCESSION NO--AA0135237 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPS. ARE PREPD. BY
PROCESSING DATE--27NOV70
TREATING 1,3,DIACETOXYTETRAMETHYLDISILOXANE OR
ALPHA,OMEGA,DIACETOXYDIORGANYLSILOXANES CONTG. A CF SUB3 CH SUB2 CH SUB2
GROUP WITH H SUB2 O IN THE PRESENCE OF AN ACID ACCEPTOR, E.G. CACO SUB3,
NAOH.

UNCLASSIFIED

Recorders and Transducers

USSR

UDC: 621.385:530.145.6.77

KOTOSONOV, N. V., KHRIPCHENKO, I. A., CHERNOV, Ye. A., SVIRIDOVA, O. A.
"Resolution of Thermoholograms"

V sb. Radiofiz. i mikroelektronika (Radio Physics and Microelectronics--
collection of works), Voronezh, 1970, pp 40-46 (from RZh-Radiotekhnika,
no 6, Jun 71, Abstract No 6D421)

Translation: The paper deals with recording devices (thermoholograms)
on which the exposing irradiation is recorded in the form of a temperature
relief which reproduces the distribution of the irradiating flux intensity.
The operating principle of the thermogram is based on the transparency of
the material as a function of temperature. The device consists of a heat-
-sensing element (thermoplate) which absorbs the exposing irradiation, and
a thin semiconductor film which is in thermal contact with the thermoplate.
With a change in temperature, the long-wave edge of the absorption band
is displaced. If radiation from an auxiliary transillumination source
with a wavelength close to the edge of the absorption band is sent through
this layer, the intensity of the emission after passing through the layer
will depend on the position of the absorption band, and hence on the tem-

1/2

KOTOSONOV, N. V. et al., Radiofiz. i mikroelektronika, Voronezh, 1970, pp 40-46

perature of the layer. For a semiconductor layer with linear temperature dependence of the displacement, the process of restoration of the wave front from the thermohologram is analogous to restoration from amplitude holograms on photographic emulsions. The resolution of a thermogram is evaluated, and its value is calculated for a device in which the thermoplate is "Muscovite" mica, while the semiconductor plate is a selenium layer vaporized onto the mica substrate. A. K.

2/2

- 147 -

1/2 C19
UNCLASSIFIED
PROCESSING DATE--20NOV70
TITLE--DETERMINATION OF THE DIMERIZATION, DISTRIBUTION, AND ACID
DISSOCIATION CONSTANTS OF DIALKYL HYDROGEN PHOSPHATES AND THE
AUTHOR--(C2)--ULYANOV, V.S., SVIRIDOVA, R.A.
COUNTRY OF INFO--USSR
SOURCE--RADIOKHIMIYA 1970, 12(1), 47-64
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--DIMERIZATION, DISSOCIATION CONSTANT, ORGANIC PHOSPHATE,
PERCHLORATE, OCTANE, HEXANE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1203
CIRC ACCESSION NO--AP0128621
STEP NO--UR/0166/70/012/001/0047/0064
UNCLASSIFIED

2/2

C19

CIRC ACCESSION NO--AP0128621
ABSTRACT/EXTRACT--(U) CP-0-

UNCLASSIFIED

PROCESSING DATE--20NOV70

ABSTRACT. EXPTL. VALUES OF THE DISSOCN. CONSTS. (IN AQUEOUS PERCHLORATE SOLNS.), THE DIMERIZATION CONSTS., AND THE DISTRIBUTION COEFFS. (BETWEEN HOLD SUB4 NACLO SUB4 SOLYS. AND V OCTANE, ISODUCIANE, N HEXANE, OR CHLOROFORM) OF (ETO) SUB2 P(ODOH) (DEPA), (BOO) SUB2 P(ICH) (DBPA), DIOCTYL H PHOSPHATE (DHPA), DIETHYL H PHOSPHATE (DEHPA) AND BIS(2,ETHYLHEXYL) H PHOSPHATE (BEHPA) ARE TABULATED AS A FUNCTION OF THE PH AND THE DIALKYL H PHOSPHATE CONCN. THE DISSOCN. CONSTS. DECREASE WITH INCREASING MOL. WT., AND GENERALLY INCREASE WITH BRANCHING; THE DIMERIZATION CONSTS. AND DISTRIBUTION COEFFS. DEPEND BOTH ON THE MOL. WT. (OF THE ACID) AND THE NATURE OF THE EXTRACTANT. THE VALUES OF LOG K SUBB (WHERE K SUBB IS THE ASSOCN. CONST.) FOR THE ASSOCN. OF DEPA, DBPA, DHPA, AND BEHPA WITH TRIETHYLPHOSPHINE OXIDE ARE 4.89, 4.45, 4.25, AND 3.9, RESP., AND LOG K SUBB FOR THE ASSOCN. OF THOSE ACIDS WITH TRIBUTYL PHOSPHATE ARE 3.4, 2.66, 1.85, AND 2.46, RESP.

UNCLASSIFIED

USSR

UDC: 537.226.33

GRODSHTEYN, A. Ye., MANAKOVA, N. A., NIKITINA, T. A., SVIRIDOVA, T. P.
"A Ferroelectric"

USSR Author's Certificate No 283344, filed 2 Jun 69, published 22 Dec 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V472 P)

Translation: A ferroelectric is proposed which is based on oxides of barium, manganese and titanium dioxide. As a distinguishing feature of the patent, the thermal stability of the material is improved by adding aluminum oxide to the charge and taking the initial components in the following proportions (in percent by weight): barium oxide 33-31, manganese oxide, 18-17, titanium dioxide 48-46, and aluminum oxide 1-6.

1/1

- 173 -

1/2 009
UNCLASSIFIED
PROCESSING DATE--20NOV70
TITLE--EFFECT OF COPPER ON THE FERMENTATIVE CONVERSION OF MOLASSES TO
CITRIC ACID -U-
AUTHOR--(05)--FEDOSEYEV, V.F., ALEKSEYEV, I.N., KORUTCHENKO, A.V.,
KULBASKIKOVA, A.N., SVIRIDOVA, T.V.
COUNTRY OF INFO--USSR
SOURCE--KHLEBCEK. KONDITER. PRGM. 1970, 14(1), 33-5
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SUCROSE, FERMENTATION, ASPERGILLUS, CITRIC ACID, COPPER
SULFATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0639
STEP NO--UR/0344/70/014/001/0033/0035
CIRC ACCESSION NO--AP0131244
UNCLASSIFIED

CIRC ACCESSION NO--AP0131244
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--20NOV70

ABSTRACT. LAB. EXPTS., VERIFIED AT THE
INDUSTRIAL SCALE, REVEALED THAT ADDN. OF CUSO SUB4 AT CONCNS.
CORRESPONDING TO 4-7 MG-100 G MOLASSES RESULTED IN BETTER FERMENTATIVE
CONVERSION OF THE LATTER TO CITRIC ACID (4-23PERCENT HIGHER YIELDS) BY
ASPERGILLUS NIGER (SURFACE CULTURE).

UNCLASSIFIED

Instrumentation and Equipment

USSR

UDC: 620.17:62-416

UMANSKIY, E. S., Engineer, SVTRIDOVSKIY, Yu. M., Engineer, ALEKSYUK, M. M.,
Engineer, KARPINOS, D. M., Engineer, KADYROV, V. Kh., Engineer, Institute
of Problems of Strength, Academy of Sciences UkrSSR

"An Installation for Studying the Mechanical Properties of Metal Foil Ma-
terials"

Kiev, Tekhnologiya i Organizatsiya Proizvodstva, No 4, Jul/Aug 72, pp 108-109

Abstract: The paper describes an installation for studying the strength
and deformability characteristics of foils and fibers over a wide tempera-
ture range. The device is basically a water-cooled vacuum chamber mounted
on a special table. A control panel is provided with instrumentation for
various kinds of tests. A vacuum of 10^{-6} - 10^{-5} mm Hg ($1.33 \cdot 10^{-4}$ - $1.33 \cdot 10^{-3}$
N·m⁻²) is produced by the exhaust system. Micromechanical tests are done
on a precision breaking machine with maximum breaking force of 250 kgf
(2450 N). A diagram of the unit is given and its operation is described.
Test results are given for the mechanical properties of aluminum foil of
two different thicknesses as a function of temperature.

1/1

FILE--A DAM MADE OF WATER -U- UNCLASSIFIED
AUTHOR--SVIRIN, I. S
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, STROITEL'NAYA GAZETA, 15 MAR 70, P 4
DATE PUBLISHED--15MAR70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MECH., IND., CIVIL AND
MARINE ENGR, MATERIALS
TOPIC TAGS--PLASTIC, BAG, RIVER WATER, FLOOD CURRENT, HYDRAULIC
ENGINEERING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1994/0492
CIRC ACCESSION NO--AN0114746
STEP NO--UR/9024/70/000/000/0004/0004
UNCLASSIFIED

272 013
CIRC ACCESSION NO--AN0114746 UNCLASSIFIED PROCESSING DATE--02OCT70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A BRIEF DESCRIPTION AND A DRAWING
ARE GIVEN TO REPORT THE WORK DONE BY V. VASIL'YEV, V. SAMARIN, V.
FILATOV AND OTHERS IN THE HYDRAULIC EQUIPMENT DEPARTMENT AT THE MOSCOW
STATE INSTITUTE FOR PLANNING OF RIVER TRANSPORT ON INVESTIGATING THE
FEASIBILITY OF DAMMING WATERWAYS WITH "PLASTIC DAMS" MADE OF LARGE
PLASTIC BAGS FILLED WITH WATER. THE BAGS WOULD BE FILLED BY PUMPING
STATIONS, WOULD BE ANCHORED TO THE BOTTOM OF THE WATERWAY AND, WHEN
FILLED WITH WATER, WOULD ACT AS A BARRIER OR DAM TO THE FLOW OF WATER IN
DRY SEASONS. IN TIMES OF FLOOD, THE PUMPING STATION WOULD REMOVE THE
WATER FROM THE BAGS, AND THE BAGS WOULD LIE FLAT ON THE BOTTOM OF THE
STREAM, ALLOWING THE WATER TO FLOW PAST. LARGE SCALE EXPERIMENTS WITH
SUCH A SYSTEM ARE PLANNED FOR THE ANDREYEVKA HYDRAULIC COMPLEX ON THE
MOSCOW RIVER SYSTEM, BUT THE FINANCIAL BACKING FOR EXPERIMENTAL WORK IS
LACKING AT THE MOSCOW INSTITUTE, AT THE ANDREYEVKA COMPLEX, AND AT THE
MANUFACTURING PLANTS WHERE INTEREST IN THE PLASTIC BAG MANUFACTURING
TECHNOLOGY IS NEVERTHELESS HIGH.

USSR

Hydraulic

SVIRIN, I.

"A Dam Made of Water"

Moscow, Stroitel'naya Gazeta, 15 Mar 70, p 4

Abstract: A brief description and a drawing are given to report the work done by V. Vasil'yev, V. Samarin, V. Filatov and others in the Hydraulic Equipment Department at the Moscow State Institute for Planning of River Transport on investigating the feasibility of damming waterways with "plastic dams" made of large plastic bags filled with water. The bags would be filled by pumping stations, would be anchored to the bottom of the waterway and, when filled with water, would act as a barrier or dam to the flow of water in dry seasons. In times of flood, the pumping station would remove the water from the bags, and the bags would lie flat on the bottom of the stream, allowing the water to flow past. Large-scale experiments with such a system are planned for the Andreyevka Hydraulic Complex on the Moscow River system, but the financial backing for experimental work is lacking at the Moscow Institute, at the Andreyevka complex, and at the manufacturing plants where interest in the plastic bag manufacturing technology is nevertheless high.

1/1

USSR

UDC: 681.3.055

KUPRIYANOV, Ye. M., SVIRIN, V. N.

"A Single-Cycle Reversible Shift Register"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratztsy, Tovarnyye Znaki,
No 32, 1970, Soviet Patent No 284038, Class 21, filed 13 Aug 69, pp 24-25

Abstract: This Author's Certificate introduces a single-cycle reversible shift register based on ferrotransistor elements. The device contains a memory cell. As a distinguishing feature of the patent, the speed, reliability, and resistance to interference are improved by using a delay cell with self-excitation where the input winding is connected to the output of the memory cell for the first digital place, while the output of this cell is connected, for instance, to the initial end of one of the input windings of the memory cell for the $n+1$ and $n-1$ digital places. The terminal ends of all the corresponding input coils of the memory cells are connected, for instance, through isolating diodes and keys to one of the supply lines.

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USSR

UDC 621.373.431(088.8)

GOLOVANOV, A. A., INYAKOV, V. G., SVIRIN, V. P.

"Pulse Generator"

USSR Author's Certificate No 252391, Filed 1 Dec 67, Published 17 Feb 70
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9G243P)

Translation: A pulse generator is proposed which contains a DC charge source, an ion commutator using a three-electrode discharger, a source of ignition pulse voltage, a storage element and a load. In order to decrease the transient process time between partial and complete ionization of the discharger, a limiting inductance is connected to the cathode circuit of the discharger.

1/1

UNCLASSIFIED
TITLE--FABRICATION OF LARGE SCALE PARTS BY VACUUM HOLDING -U-
AUTHOR--(03)--SHILKIN, O.D., SVIRINA, R.D., ZILBERLEY, B.P.
COUNTRY OF INFO--USSR
SOURCE--PLAST. MASSY 1970, (3), 60
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--PLASTIC-FABRICATION, POLYSTYRENE RESIN, TEXTILE INDUSTRY
MACHINERY/(U)UP IE POLYSTYRENE RESIN, (U)ATPR120 WEAVING MACHINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0580
CIRC ACCESSION NO--AP0119498
STEP NO--UR/0191/70/000/003/0060/0060
UNCLASSIFIED

272 011
CIRC ACCESSION NO--AP0119498 UNCLASSIFIED
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FENCES FOR A WEAVING MACHINE
ATPR-120 WERE MANUFD. FROM HIGH IMPACT POLYSTYRENE UP-IE (I) BY VACUUM
MOLDING. MOLDED 1 SHEETS (3.8-4.0 MM THICK) WERE SUCCESSFULLY TESTED IN
INDUSTRY. PROCESSING DATE--13NOV70

UNCLASSIFIED

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002203220011-8

UNCLASSIFIED
TITLE--ZEOLITE CONTAINING METAL CATIONS -U-
PROCESSING DATE--04DEC70
AUTHOR--(05)-KARZHEV, V.I., PIGUZOVA, L.I., GONCHAROVA, N.V., SVIRINA,
V.P., KRIVUZUBOVA, N.V.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 265,078
REFERENCE--OTKRYTIYA, IZOBREET., PROM. OBRAZTSY, TOVARNYE ZNAKI, 1970 47
DATE PUBLISHED--09MAR70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ZEOLITE, METAL ION, LANTHANUM COMPOUND, CHEMICAL PATENT,
THERMAL EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0860
CIRC ACCESSION NO--AA0136294
STEP NO--UR/0482/70/000/000/0000/0000
UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002203220011-8"

2/2 016

CIRC ACCESSION NO--AA0136294

UNCLASSIFIED

PROCESSING DATE--04DEC70

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

ABSTRACT. ZEOLITE, CONTG. CATIONS OF GROUP VI AND VIII METALS AND LANTHANIDES INTRODUCED IN THE REACTION OF CATION EXCHANGE, IS PREPD. BY MULTIPLE SATN. OF SOLNS. OF SALTS OF THE CORRESPONDING METALS. AFTER EACH SATN., THE ZEOLITE IS THERMALLY TREATED AT 140-550DEGREES. THIS ZEOLITE HAS A HIGH DEGREE OF NA CATION SUBSTITUTION.

UNCLASSIFIED

UDC: None
SVIRINA, Ye. P., NEMCHINOV, Yu. V., and KARNEYEVA, S. S.
"Tensor Nature of the Hall Effect in Metallic Ferromagnetics"

Leningrad, Fizika Tverdogo Tela, No 6, 1973, pp 1665-1667

Abstract: The experiments described in this paper were performed to help resolve the contradictions in the literature regarding the anisotropy of the ferromagnetic Hall coefficient. The experiments consisted in measuring the Hall emf in iron silicide single crystals with 3% Si and in 50/50 iron-nickel alloys -- FeNi -- of the hypernec type. The iron single crystal was in the form of a rectangular plate measuring 20X3.5X0.4 mm, and the hypernec single crystal took the form of a parallelepiped of 15X3X2 mm. The results of the experiments are given in the form of two curves, the first showing the magnetization and the Hall emf coefficient as functions of the magnetic field intensity for the iron silicide single crystal at 200 C, the second giving the magnetization and the coefficient E_H for the spontaneous Hall field as functions of the magnetic field intensity of the hypernec crystal at the same temperature. The factor E_H appears in the tensor for the anisotropy of odd galvanomagnetic effects and is given here in matrix form. The authors

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USSR

UDC: None

SVIRINA, Ye. P., et al, Fizika tverdogo tela, No 6, 1973, pp 1665-1667

find that all inversion pairs of the Hall field components differ from zero in both materials under the condition of technical saturation. They thank K. P. Belov and M. I. Kaganov for their comments on the work.

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USSR

SVIRINA, Ye. P.

"The Hall Effect, Magnetic Resistance, and Electrical Conductivity in Ferrite Spinel"

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 34, No 6, 1970, pp 1,162-1,175

Abstract: Works dealing with the Hall effect, magnetic resistance, and the electrical conductivity of magnetite and ferrite spinels with an excess of Fe^{2+} ions are discussed. Experimental results were obtained in a wide temperature range from 100 to 800° K. The zonal model and the jump-over model (according to Vervey) of electrical conductivity are discussed. Conclusions are drawn concerning the dominating part played by the zonal mechanism of conductivity in ferrite spinels. It is shown that the dependence of the spontaneous Hall coefficient R_s on temperature is determined by the change of the number of current carriers and by their dispersion by magnetic inhomogeneities; this is in qualitative agreement with the theory of the anomalous Hall field in magnetic semiconductors.

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Acc. Nr. **AP0048295** Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code

4R0181

S

105310r Transverse $\Delta\rho/\rho$ effect in nickel ferrites. ~~Svirina, E. P.; Alieva, M. S. (Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR). Fiz. Tverd. Tela 1970, 12(2), 593-6 (Russ).~~ A new method is proposed for the description of the ($\Delta\rho/\rho$) effect (magnetoresistance) as a function of the magnetic field, H, and magnetization, I, with the introduction of spontaneous (C_s) and true magnetization (C_t) coeffs. of the $\Delta\rho/\rho$ effect. With increasing temp., the values of C_s decrease and C_t remain practically independent of temp. In the investigated Ni ferrites, the temp. dependence of carrier mobility is mainly detd. by magnetic scattering. A. Libackyj

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REEL/FRA
19792017

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Acc. Nr: **AP0037236**

Ref. Code: UR 0301

PRIMARY SOURCE: Voprosy Meditsinskoy Khimii, 1970, Vol 16,
Nr 1, pp 36-38

ADENOSINE DEAMINASE IN HUMAN LEUCOCYTES

Svirnovskiy, A. I.

Laboratory of Leucosis, Byelorussian Research Institute of Hematology and Blood
Transfusion, Minsk

In the course of study of adenosine aminohydrolase in leucocytes obtained from the blood of 14 healthy men and 40 patients with various forms of leucosis it was established that blast cells of patients with acute leucosis are characterized by the most enzymatic activity. The content of enzyme in leucocytes of patients with chronic myeloleucosis is higher as compared to leucocytes of healthy men. The least activity from all groups of leucocytes tested possessed lymphocytes of patients with chronic lympholeucosis. It was suggested that the content of enzyme is connected with the intensity and peculiarities of changes in nucleic acid metabolism and with the proliferative capacity of cells.

D.n.

REEL/FRAME
19730161

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USSR

UDC 547.555+547.297

SVIRSKAYA, P. I., STRESBULAYEVA, A. I., NEGREBETSKIY, V. V.,
TIBANOV, P. V., VASIL'YEV, A. F., and BASKAKOV, Yu. A., All-
Union Scientific Research Institute of Chemical Agents for Plant
Protection

"Hydroxylamine Derivatives With Herbicidal Activity. 42. Reactions
of Derivatives of N-Carbamoyl-N-arylhydroxylamines with Halides of
Haloalkylcarboxylic Acids"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 6, Jun 73,
pp 1163-1171

Abstract: N-Carbamoyl-N-arylhydroxylamine derivatives, on reacting with halides of alpha- and beta-halopropionic acids, formed N-substituted O-alpha- or O-beta-halopropionyl derivatives of carbamoyl-N-arylhydroxylamines. Under the action of bases, O-beta-chloropropionylhydroxylamines were hydrolyzed to the initial hydroxylamines. Depending on the conditions of the reaction and the nature of the substituents, the N-substituted O-alpha-halopropionyl derivatives of carbamoyl-N-arylhydroxylamines, on being subjected to the action of bases, either split off hydrogen halide with the formation of O-acryloyl derivatives or underwent cyclization with the formation of 2-aryl-4-(alkyl)aryl-5-methyl-1,2,4-
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USSR

SVIRSKAYA, P. I., et al., Zhurnal Organicheskoy Khimii, Vol 9, No 6, Jun 73, pp 1163-1171

oxadiazine-3,6-diones. At high temperatures the O-alpha-halopropionyl and O-acryloyl derivatives readily underwent rearrangement into the corresponding derivatives of o-aminophenol. In the presence of triethylamine the O-alpha-halopropionyl-N-alkylcarbamoyl-o-aminophenols were converted as a result of recyclization into N-alpha-halopropionyl-N-alkylcarbamoyl-o-aminophenols. The compounds that have been synthesized and their physical properties are listed in tables.

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- 57 -

USSR:

UDC 547.238+547.435.2+632.954

VSEVOLOZHSKAYA, N. B., SVIRSKAYA, P. I., and BASKAKOV, Yu. A., All Union Scientific Research Institute of Chemical Plant Protection Agents

"Herbicidal Derivatives of Hydroxylamine. XXXIX. N-Carbamoyl-N-Arylhydroxylamines and Their Reactions"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 7, No 5, May 71, pp 923-929

Abstract: N-carbamoyl-N-arylhydroxylamines (I) were synthesized by reacting N-arylhydroxylamines with potassium cyanate in aqueous ether solution and in presence of an equivalent quantity of hydrochloric acid. (I) Could also be obtained in anhydrous medium using gaseous isocyanic acid produced by pyrolysis of cyanuric acid. (I) Could be easily O-carbamoylated by alkyl or arylisocyanates in anhydrous acetone in presence of catalytic amounts of triethylamine; this reaction was not observed in aqueous medium. The hydroxyl group of (I) reacts with aryl chlorides and anhydrides, with esters of chlorocarboxylic acids and with chloroacetylchlorides. All of the O-derivatives of carbamoylhydroxylamines, with exception of the 3-4-dichloro- and 3-nitrophenylhydroxylamine derivatives, when treated with HCl yield N-arylsureas with a chlorine substituent in the nucleus. O-carbalkoxy-N-carbamoyl-N-arylhydroxylamines are used in synthesis of N(4) unsubstituted 2-aryl-1,2,4-oxadiazolidinediones-3,5.

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USSR

UDC

SVIRSKAYA, P. I., STREBULAYEVA, A. I., TIBANOV, P. V. and BASKAKOV, Yu. A.,
All Union Scientific Research Institute of Chemicals for the Protection of Plants

"Hydroxylamine Derivatives with Herbicidal Properties. XLI. Halogenation
Reactions of N-Carbamoylhydroxylamine Derivatives

Zhurnal Organicheskoy Khimii, Vol. VIII, No. 6, June 1972, pp 1217-1224

Abstract: Bromination of N-alkyl(aryl)carbamoyl-N-aryl(alkyl)-hydroxylamines with molecular bromine in aprotic inert solvent media produced corresponding n-bromo substituted derivatives. In the case of N-arylcarbamoyl-N-aryl-hydroxylamines the bromine atom attacks, first of all, the ring adjoining the hydroxylamine group. Only in the case of N-alkylhydroxylamines and para substituted N-aryl-hydroxylamines bromination of aryl radical of the carbamoyl group occurs. The structure of bromination products was proven by reverse reaction synthesis and synthesis of derivatives. The IR spectra contain OH and NH bonds which correspond to the appropriately located NOH, NH and CO groups. Bromination of N-allylcarbamoyl-N-arylhydroxylamines involves initially the addition of Br₂ to the double bond and subsequent halogenation of the ring. At 20 - 30° C the reaction is more complex due to simultaneous rearrangement involving the migration of hydroxyl group from the nitrogen to the ring. At lower temperatures the rate of bromination reaction is too low. Bromination of N-allylcarbamoyl-N-aryl-hydroxylamines produces N-2,3-dibromopropylcarbamoyl-N-arylhydroxylamines and

USSR

Svirskaya, P. I., et al, Zhurnal Organicheskoy Khimii, Vol. VIII, No. 6, June 1972, pp 1212 - 1224

the products of their rearrangement -- N-2,3-dibromopropylcarbamoyl-O-aminophenols. In concentrated hydrochloric acid or in acetone solution saturated with HCl gas N-allylcarbamoyl-N-arylhydroxylamines form N-allyl-N¹-n- or -O-chloroarylurea. Reaction with hydrogen bromide results in the formation of the reduction products: N-allyl-N¹-arylurea.

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USSR

UDC 632.95

VORONKOVA, V. V., BASKAKOV, YU. A., CHEKAREVA, T. G., SVIRSKAYA, P. I.

"A Method of Making Derivatives of N-Carbamoyl-o-phenylene-diamine"

USSR Author's Certificate No 292965, filed 24 Sep 69, published 5 May 71
(from RZh-Khimiya, No 1(II), Jan 72, Abstract No 1N378

Translation: Physiologically active derivatives of o-phenylene diamine of the general formula $X_nC_6H_{4-n}NHR-2-NHCONR'R''-1$ (I) ($R = \text{alkyl}$, $R' = H$, $R'' = H$, $X = Cl, Br, Me, MeO, NO_2$, $n = 1-2$) are obtained by heating an aqueous suspension of O,N-biscarbamoylated arylhydroxylamines at 35-100°C. A solution of 0.496 g of O,N-bis-(methylcarbamoyl)-phenyl-hydroxylamine in 10 ml of water is heated at 40-45°C until CO_2 is no longer evolved, and the mixture is extracted with EtOAc (15 ml x 5) yielding 0.39 g of I from the organic layer ($R = R' = Me$, $R'' = X_n = H$). The yield is 97% mp 136°C. The compounds (I) ($R = Me$, $X_n = H$) are similarly obtained (given are $R' = R''$, yield in %, mp in °C): Me, 99, 184; H, 86,). I. A. Mel'nikova.

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1/2 013 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--HERBICIDE DERIVATIVES OF HYDROXYLAMINE. XXXI. SYNTHESIS AND
REACTIONS OF O,N-DIACYLATED N-ARYLHYDROXYLAMINES -U-
AUTHOR-(03)-FADDEYEVA, V.K., SVIRSKAYA, P.I., BASKAKOV, YU.A.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL ORGANICHESKOY KHIMII, 1970, VOL 6, NR 2, PP 285-291
DATE PUBLISHED--08JUL68
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--HERBICIDE, HYDROXYLAMINE, ACYL RADICAL, ARYL RADICAL, CHEMICAL
SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1403 STEP NO--UR/0366/70/006/002/0285/0291
CIRC ACCESSION NO--AP0130361

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0130361

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. THE TITLE COMPOUNDS WERE PREPARED BY THE REACTION OF N,ACYL,N,ARYLHYDROXYLAMINES WITH THE ACYL CHLORIDES OF HALOPHENOXYCARBOXYLIC AND ARENESULFONIC ACIDS AS WELL AS WITH ALKYL AND ARYL ISOCYANATES: SHOWN ON MICROFICHE. PREPARATION OF COMPOUNDS OF TYPE II WAS COMPLICATED BY COMPETING TRANSACYLATION; IN THE REACTION OF N,ACETYL,N,P,TOLUYLHYDROXYLAMINE WITH 2,4,5,TRICHLOROPHENOXYACETYL CHLORIDE TRANSACYLATION PREDOMINATED. TRANSACYLATION OF TYPE II COMPOUNDS WAS ALSO OBSERVED ON RECRYSTALLIZATION AND ON MELTING. UNDER GREENHOUSE AND FIELD CONDITIONS TYPE II COMPOUNDS WERE SHOWN TO BE ACTIVE HERBICIDES, EQUAL IN ACTIVITY AND SUPERIOR IN SELECTIVITY TO THE CORRESPONDING HALOPHENOXYCARBOXYLIC ACIDS. FACILITY: VSESOUZNIY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT KHEMICHESKIKH SREDSTV ZASHCHITY RASTENIY.

UNCLASSIFIED

USSR

UDC 632.95

BASKAKOV, YU. A., BAKUMENKO, L. A., MEL'NIKOV, N. N., SYTESKAYA, R. I.,
STONOV, L. D., SIMONOV, V. D., SHVINDLERMAN, G. S., SHCHERBAKOV, YU. I.

"Meturin -- a New Herbicide for Cotton and Potatoes"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp. 1, Moscow, 1970, pp 179-187 (from RZh-Khimiya, No 11, Jun 72, Abstract No 11N446)

Translation: A new herbicide -- meturin (I) (N-phenyl-N'-hydroxy-N'-methylurea) -- was synthesized. The compound can be produced with a high yield by reacting phenylhydroxylamine with MeNCO. Treatment of vegetating plants with I is not highly effective. The best results are obtained when the herbicide is introduced into the soil before planting. As a rule, dicotyledons are more effectively suppressed by I than monocotyledons. Highly sensitive to I (70-100% inhibition of growth from a dose of 0.5 kg/hectare) are corn may-weed, sheep sorrel, wild beets, pigweed, wild rice, buckwheat, soybeans, tomatoes, cabbage, cucumbers, radishes, clover and alfalfa. Sensitive to I (70-100% death from a dose of 1.5 kg/hectare) are field pennycress, field wintergrass, barley grass, beans, vetch, carrots, beets and flax. Moderately sensitive (complete control with a dose of 3 kg/hectare) are oats, wheat, corn

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USSR

BASKAKOV, YU. A., et al., V sb. Khim. sredstva zashchity rast., vyp 1, Moscow, 1970, pp 179-187

beans, seed onions, and sunflowers. Rough snakeweed is among the weeds resistant to I, while potatoes and cotton are resistant crops. The compound retains high activity throughout the entire vegetative period in the upper layer of soil (0-5 cm). The activity of the herbicide begins to decline within 2 months after introduction in the lower and middle layers of soil. In doses of 3-4.5 kg/hectare, I destroyed 70-90% of the annual weeds in cotton fields, but in some instances caused temporary chlorosis in a dose of 4.5 kg/hectare. In potato fields, the compound in doses from 2 to 3 kg/hectare destroyed annual weeds throughout the entire season, which meant that potatoes could be grown without hilling. The compound has low toxicity for human beings. It is authorized in the Soviet Union for experimental production use on potatoes.

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1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--HERBICIDE DERIVATIVES OF HYDROXYLAMINES. XXXII. SYNTHESIS AND
REACTIONS OF N,ARYLCARBAMOYL,N,ARYLHYDROXYLAMINES -U-
AUTHOR--(05)-SVIRSKAYA, P.I., BASKAKOV, YU.A., VASILYEV, A.F., TIBANOV,
P.V., STREBULAYEVA, A.I.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL ORGANICHESKOY KHIMII, 1970, VOL 6, NR 2, PP 292-300
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HERBICIDE, HYDROXYLAMINE, CHEMICAL SYNTHESIS, INSECTICIDE,
FUNGICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/1201

STEP NO--UR/0366/70/006/002/0292/0300

CIRC ACCESSION NO--AP0130215

UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70
 CIRC ACCESSION NO--AP0130215
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPOUNDS CONTAINING
 VARIOUS SUBSTITUENTS IN BOTH AROMATIC RINGS WERE PREPARED BY THE
 REACTION OF ARYLHYDROXYLAMINES WITH ARYL ISOCYANATES X SUBN C SUB6 H
 SUB5MINUSN NHOH PLUS Y SUBM C SUB6 H SUB5MINUSN NCO YIELDS X SUBN C SUB6
 H SUB5MINUSN H(OH)CONHC SUB6 H SUB5MINUSN Y SUBM. COMPOUNDS I WHERE X
 EQUALS 4,CH SUB3 ARE THE LEAST STABLE AND DECOMPOSE ON SLIGHT HEATING,
 OR EVEN ON RECRYSTALLIZATION FROM METHYLENE CHLORIDE. THE FREE
 HYDROXYL GROUP IN COMPOUNDS I CAN BE READILY ACYLATED WITH ACID
 ANHYDRIDES AND ACYL CHLORIDES TO FORM COMPOUNDS II X SUB N C SUB6 H
 SUB5MINUSN N9OCOR)CONIIC SUB6 II SUB5MINUSN Y SUBM. COMPOUNDS I AND II
 ARE PRACTICALLY INACTIVE AS INSECTICIDES, BUT SOME OF THEM ARE SYSTEMIC
 FUNGICIDES. FACILITY: VSESOUZNY NAUCHNO-ISSLEDOVATEL'SKIY
 INSTITUT KHIMICHESKIKH SREDSTV ZASHCHITY RASTENIY.

UNCLASSIFIED

USSR

UDC 547.435.2 + 547.238 + 632.954

SVIRSKAYA, P. I., BASKAKOV, YU. A., VASIL'YEV, A. F., TIBANOV, P. V.,
and STREBULAYEVA, A. I., All-Union Scientific Research Institute for
Chemical Means of Plant Protection, Moscow, State Committee for
Chemistry USSR

"Herbicidal Derivatives of Hydroxylamines
XXXII. Synthesis and Reactions of N-arylcarbamoyl-N-arylhydroxyl-
amines"

Moscow, Zhurnal Organicheskoy Khimii, Vol 6, No 2, Feb 70, pp 292-300

Abstract: The authors synthesized a series of variously substituted
N-arylcarbamoyl-N-arylhydroxylamines and their acetates by reacting
arylhydroxylamines with arylisocyanates in anhydrous organic solvents.
The products were checked for herbicidal activity but were practically
inactive. Some exhibited fungicidal activity of the systemic type.
The acetates proved to be more stable compounds with high melting
points. Studies of IR spectra have shown that in solution these hy-
droxylamines prefer a trans form; when the concentration is increased
the cis form begins to show up. The acetates showed spectra which
led to the conclusion that they may have cis-trans conformations not
only of the CONH group, but also of aryl and acyl groups.
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USSR

UDC 547.238+632.954

SVIRSKAYA, P. I., BASKAKOV, YU. A., SHVINDLERMAN, G. S., KUSKOVA, N. B., VASIL'YEV, A. F., and TIBANOV, P. V., All-Union Scientific Research Institute for Chemical Means of Plant Protection, Moscow, State Committee for Chemistry USSR

"Herbicidal Derivatives of Hydroxylamine
XXIX. N-Arylcarbamoyl-N-alkylhydroxylamine and Their Derivatives"

Moscow, Zhurnal Organicheskoy Khimii, Vol 6, No 2, Feb 70, pp 274-280

Abstract: The N-arylcarbamoyl-N-alkylhydroxylamines were obtained by reacting arylisocyanates with N-alkylhydroxylamines or their chlorohydrates in inert organic solvents such as benzene, toluene, ethyl acetate, in which the reaction is quite energetic. The products formed are insoluble in these solvents, giving almost quantitative yields of quite pure materials. The reaction of arylisocyanates with alkylhydroxylamines hydrochlorides could be carried out in aqueous ether or aqueous ethyl acetate. Acetates were prepared by known methods but proved to be unstable in presence of acids and bases. Some of the O-acyl-N-arylcarbamoyl-N-methylhydroxylamines exhibited high and quite selective herbicidal activity.

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USSR

S

UDC 547.555

FADDEYEVA, V. K., SVIRSKAYA, P. I., and BASKAKOV, YU. A., All Union Scientific Research Institute for Chemical Means of Plant Protection, Moscow, State Committee for Chemistry USSR

"Herbicidal Derivatives of Hydroxylamine
XXXI. Synthesis and Reactions of O,N-Diacylsubstituted N-Arylhydroxylamines"

Moscow, Zhurnal Organicheskoy Khimii, Vol 6, No 2, Feb 70, pp 285-291

Abstract: The authors found that the acylation of N-carboalkyl-N-aryl-hydroxylamines with halophenoxyacyl chlorides is possible when the reaction is carried out in an anhydrous organic solvent -- methylene chloride. The reaction is then accompanied by evolution of gaseous hydrogen chloride. In some cases this reaction becomes hindered by a cross-acetylation reaction; for example with 2,4,5-trichlorophenoxyacetylchloride this becomes even the primary reaction. It goes very well at -20 to -10° in an anhydrous medium. In some cases this cross-acetylation occurs on recrystallization or even on taking the melting point. This reaction is also possible with phenyl-

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FADDEYEVA, V. K., et al, Zhurnal Organicheskoy Khimii, Vol 6, No 2, Feb 70, pp 285-291

sulfonyl chlorides. The O-halophenoxyacyl-N-carboalkyl-N-arylhydroxylamines are highly active herbicides comparable to or better than halophenoxy-carboxylic acids.

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USSR

UDC 547.435.2+532.954

BASKAKOV, YU. A., FADDEYEVA, V. K., ZHURAVSKAYA, T. S., and SVIRSKAYA, E. I., All Union Scientific Research Institute for Chemical Means of Plant Protection, Moscow, State Committee for Chemistry USSR

"Herbicidal Derivatives of Hydroxylamines
XXX. O-Substituted N-halophenoxyacyl-N-alkyl(aryl)hydroxylamines"

Moscow, Zhurnal Organicheskoy Khimii, Vol 6, No 2, Feb 70, pp 281-285

Abstract: O-Acylhydroxylamines were obtained by reacting hydroxylamines with anhydrides of alkylcarboxylic acids in presence of acid catalysts (phosphoric acid or a mixture of phosphoric acid and carboxylic acid anhydrides). The N-methylhydroxylamines react under slightly more drastic reaction conditions than corresponding N-phenyl derivatives. Reaction rate drops with higher molecular weight of the anhydride. O-Carboethoxy-N-haloaryloxyacyl-N-phenyl(methyl)hydroxylamines could be obtained from the reaction of ethylchlorocarbonate and hydroxylamine in an inert solvent at 0 to 20° and in presence of organic bases (pyridine, triethylamine). At room temperature hydroxylamines react with isocyanates to yield O-carbamoyl-N-haloaryloxyacyl-

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Feb 70, pp 281-285

N-phenyl(methyl)hydroxylamines. Most of the compounds proved to be
quite stable.

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1/2 020
UNCLASSIFIED
TITLE--ON THE HYSTERO ORGANIC COORDINATIONS -U- PROCESSING DATE--02OCT79
AUTHOR--(03)--SVIRSKAYA, Z.V., KUZNETSOVA, YE.A., KHRAPUNOVICH, YE.A.
COUNTRY OF INFO--USSR
SOURCE--ZDRAVOOKHRANENIYE BELORUSSII, 1970, NR 2, PP 48-50
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DIAGNOSTIC METHODS, REPRODUCTIVE SYSTEM, NERVOUS SYSTEM
DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1515 STEP NO--UR/0477/70/000/002/0048/0050
CIRC ACCESSION NO--AP0106271
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106271

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIAGNOSIS OF HYSTERO ORGANIC COORDINATIONS IS OFTEN RATHER EMBARRASSING. A WRONG INTERPRETATION OF THE COORDINATED SYMPTOMS LEADS TO A LATE DETECTION OF THE NATURE OF THE DISEASE, TO A TARDY BEGINNING OF THE PATHOGENETICALLY INDUCED TREATMENT. THE ARTICLE GIVES AN ANALYSIS OF 19 CLINICAL OBSERVATIONS OVER VARIOUS HYSTERO ORGANIC COORDINATIONS. THE THERAPY IN ALL CASES MUST BE COMBINED, STRICTLY DIFFERENTIATED.

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UNCLASSIFIED

1/2 019
UNCLASSIFIED
TITLE--DATA FOR HYGIENIC ASSESSMENT OF ASBOZURITE AND SOVELITE DUST
CONTAINING ASBESTOS -U-
AUTHOR--(03)--KOGAN, F.M., SVIRSKIY, E.L., POCHASHEV, YE.N.
COUNTRY OF INFO--USSR
SOURCE--GIGIYENA I SANITIARIYA, 1970, NR 3, PP 19-23
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ASBESTOS, INDUSTRIAL HYGIENE, RESPIRATORY SYSTEM DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/0458
CIRC ACCESSION NO--AP0100936
STEP NO--UR/0240/70/000/003/0019/0023
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100936

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

ABSTRACT. THE ASBOZURITE DUST CONTAINING ASBESTOS IN FREE MIXTURE WITH DIATOMITE WAS FOUND TO BE MORE FIBROGENIC THAN SOVELITE DUST CONTAINING FIBERS COVERED WITH A BINDING SUBSTANCE (WHITE MAGNESIUM AND CALCIUM CARBONATE). AMONG PERSONS WITH A SUFFICIENTLY LONG RECORD OF WORK UNDER EXPOSITION TO ASBOZURITE DUST SEVERAL MEN PRESENTED SUSPICIOUS SIGNS OF PNEUMOCONIOSIS. IN HYGIENIC ASSESSMENT OF DUST CONTAINING ASBESTOS IT IS NECESSARY TO CONSIDER, BESIDES ITS CONTENT, THE PRESENCE OF A BINDING COMPONENT AND THE TYPE OF CONNECTION EXISTING BETWEEN THEM.

UNCLASSIFIED

USSR

UDC 539.23

SVIRSKIY, I. D., BELIK, Ya. G., KROKHIN, V. P., and GORDIYENKO, Ya. I.,
Khar'kov

"Spraying NiO With Argon Plasma"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 5, Sep-Oct 71, pp 56-59

Abstract: The possibility of producing layers of NiO by spraying it with argon plasma was experimentally investigated. According to thermodynamic calculation data, bunsenite (NiO) can be reduced to metallic Ni by heating over 2460 °C in an argon plasma jet. X-ray structural analysis of sprayed layers revealed the presence of NiO and ~10 wt % metallic Ni. By petrographic investigation of the composition and structure of sphere-like drops originated by spraying and forming the layer, the concentration tendency of Ni and the relative grouping of NiO and metallic Ni on the surface layer could be established. The mutual contacting of NiO and metallic Ni in the volume of sphere-like drops is explained with the help of rapid motion-picture filming of the spraying process. Three illustr., seven biblio. refs.

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USSR

UDC 629.78.015:533.6.011.5

GRODZOVSKIY, G. I., LASHKOV, YU. A., SVISHCHEV, G. P., and SOKOLOVA, I. P.

"Investigation of the Effect of Perforated Nozzles With Longitudinal Slots on the Resistance of a Body Rotating at Supersonic Velocities"

Uch. Zap. Tsentr. Aerogidrodinam In-ta (Scientific Writings of the Central Aerohydrodynamics Institute), Vol 3, No 2, 1972, pp 21-27 (from Referativnyy Zhurnal--Raketostroyeniye, No 8, 1972, Abstract No 8.41.92)

Abstract: Results of an investigation on the effect of rear, thin-wall perforated nozzles with a different number of longitudinal slots on the bottom resistance of a body rotating at Mach numbers of 1.75, 2.25 and 4.0 have been presented. It was shown that the use of thin-wall nozzles with longitudinal slot perforation gives a noted decrease of the total resistance of a rotating body at Mach 1.75-2.25. The change of total resistance of a rotating body agrees well in this instance with increased bottom pressure. Author's view, 9 illustrations, 5 bibliographical references.

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USSR

UDC 632.95

SVISHCHUK, A. A., BASALKEVICH, Ye. D., VYSOTSKIY, N. N., SHAPOVALENKO, V. F.

"Insecticidal Properties of Methylated Quinones, Hydroquinones and 6-oxychroman Derivatives"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Substances. Republic Interdepartmental Collection), 1972, No 4, pp 85-87 (from RZh-Khimiya, No 2 (II), Feb 73, Abstract No 2N471)

Translation: Results are presented from tests under laboratory conditions run on greenbug, red spider mites, rice weevils and flies using methylated hydroquinones, their products of condensation with tertiary isoprenoidal carbinols and the products of their oxidation. Against greenbugs, 2,5,6-Me₃-1,4-(HO)₂C₆H₂ (contact effect) and 2,5-Me₂-1,4-(HO)₂C₆H₂ (systemic effect) and 2,5-dimethylbenzoquinone, 5-methyltolcol have an expressed selective effect. The given compounds do not have phytotoxicity. The results of the study indicate the possibility of the occurrence of natural self-protection of grass crops against their pests.

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USSR

UDC: 620.179.15

GORBUNOV, V. I., ~~SVIRYAKIN, D. I.~~, BUKREYEV, V. G., KOLUPAYEV, A. N.,
YEGORENKO, Yu. A., Scientific Research Institute of Electronic Internal
Inspection Affiliated With Tomsk Polytechnical Institute

"Radiation-Type Internal Inspection Units for Checking Materials and Parts"

Sverdlovsk, Defektoskopiya, No 3, May/Jun 71, pp 112-117

Abstract: The paper presents block diagrams and gives descriptions of
some devices based on radiation methods of internal inspection. The
basic technical characteristics of the devices are given, their advantages
and disadvantages are noted, and recommendations are made on using them.
Four figures, bibliography of three titles.

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USSR

UDC 582.282.195.232-115.1+575.23

KVASNIKOV, Ye. I., PODDUBNYI, F. N., SVISHCHUK, A. A., GRINEERG, T. A.,
BITYUKOVA, L. B., DUBKOVA, O. M., and GRINEERG, B. G., Institute of Micro-
biology and Virology, Academy of Sciences Ukrainian SSR, and Institute of
Organic Chemistry, Academy of Sciences Ukrainian USSR

"Adenine-Dependent Mutants of the Yeast *Rhodotorula gracilis* and Their Fat-
Forming Ability"

Kiev, Tsitologiya i Genetika, No 2, 1971, pp 112-115

Abstract: The ability to synthesize lipids was studied in adenine-deficient mutants of *Rhodotorula gracilis* induced by ultraviolet radiation. The survival rate of cells decreased with increasing dose of UV rays: from 52.4% at a dose of 500 erg/mm² to 0.0028±0.0022% at a dose of 10,000 erg/mm². UV irradiation induced six auxotrophic mutants which required the presence of adenine hydrochloride (from 10 to 100 µg/ml) in the medium for good growth. The optimum dose for inducing adenine-dependent mutants was 4,000 erg/mm² which gave rise to one mutation per 5,755 cells (0.055±0.045%). The adenine-dependent mutants were found to have a low capacity for synthesizing lipids. While the control strain formed 52.4% of the lipids, the adenine-dependent mutants formed only 10.4 to 24.4%.

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USSR

Corrosion

UDC 669.14.017

MINDYUK, A. K., and SVIST, YE. I., Physicomechanical Institute, Academy of Sciences Ukrainian SSR, L'vov

"Effect of Inhibitors and Anions and Their Combined Action on Hydrogen Absorption of Steel Under Conditions of Sulfuric Acid Corrosion at Elevated Temperatures"

L'vov, Fiziko-Khimicheskaya Mekhanika Materialov, Vol, No 4, 1973, pp 17-23

Abstract: The effect of inhibitors (BA-6, I-1-A, PB-5, ChM(r), catapine K, KPI-1 and AGMIB) on hydrogen absorption in steel 40Kh from 6N H_2SO_4 was studied under steady-state conditions without stirring and with free access of air at temperatures of 30, 60, and 90°C. Overall hydrogen absorption of the steel was minimum in a medium of anions I^- and CNS^- at 30°C, Br^- and CNS^- at 60°C, and Cl^- and Br^- at 90°C. The greatest absorption at all temperatures occurs in the presence of hydrogen sulfide (upon adding Na_2S). In studying cation inhibitors (BA-6, I-1-A, PB-5 and ChM(r)) in the sulfuric acid corrosion of steel 40Kh, it was found that BA-6, PB-5 and I-1-A with I^- anions provide the best protection at 30°C, BA-6 and I-1-A with I^- are best at 60°C, and at 90°C, inhibitor ChM(r) with I^- and I-1-A and BA-6 with Cl^- provides the best protection. Thus, halide anions, effectively retarding corrosion at room and elevated temperatures,

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MINDYUK, A. K. and SVIST, YE. I., Fiziko-Khimicheskaya Mekhanika Materialov,
Vol, No 4, 1973, pp 17-23

will be in these conditions, by their nature, stimulators of hydrogen absorption. Even highly effective inhibitors AGMIB, KPI-1 and catapine K, containing Br^- and Cl^- , by the nature of their action are hydrogen absorption stimulators. 3 figures, 3 tables, 17 bibliographic references.

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USSR

UDC: 621.375.121:621.375.4

SVISTOV, N. K., PANOV, A. Ye.

"Experimental Study of Tunnel-Diode Microwave Amplifiers With Circulators
Based on LC Elements"

Tr. Mosk. energ. in-ta (Works of the Moscow Power Engineering Institute),
1972, vyp. 110, pp 154-157 (from RZh-Radiotekhnika, No 8, Aug 72, Abstract
No 8D19)

Translation: Pilot models of single-channel and five-channel amplifiers
with ferrite Y-circulators on LC elements were experimentally studied on
frequencies of 0.6-1.2 GHz. A conclusion is drawn concerning the possi-
bility of developing a direct-amplification receiver with a single-stage
tunnel-diode amplifier connected at the input and a regenerative tunnel
diode detector with a voltage of 100 μ V at the detector output for an
input signal power of $\sim 10^{-10}$ W and a noise factor of 4-6 dB. Bibliog-
raphy of two titles. V. Ch.

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USSR

UDC 621.315.592

BRANDT, N.B., SVISTOV, YE.A., SVISTOVA, YE. A., YAKOVLEV, G.D. [Moscow State University imeni M.V. Lomonosov]

"Electrical Instabilities In BiSb Alloys"

Fizika i tekhnika poluprovodnikov, Vol 6, No 4, Apr 1972, pp 654-660

Abstract: The instability is experimentally investigated of voltage originating in the electron-hole plasma created as the result of an interband breakdown in the semiconductor alloy $\text{Bi}_{0.912}\text{Sb}_{0.088}$ at $T = 4.2^\circ \text{K}$. The 10 specimens used were cut from a monocrystalline ingot with a purity of components greater than 99.9999 percent, produced at the LGPI [Leningrad Semiconductor Institute] in the laboratory of G.A. Ivanov. In weak electrical fields at $T = 4.2^\circ \text{K}$ the specimens had an electron conductivity $\sigma_0 = 3 \cdot 10^{14} \text{cm}^{-1}$ and a mobility $\mu_0 \approx 10^5 \text{cm}^2/\text{v. sec}$. The dependences were measured of the amplitude and frequency variations on the magnitude of the current through the specimens I and also the region of existence of instability with various intensities of the exterior magnetic field H and the relative orientation of H and I . On the basis of the results obtained an assumption is made concerning the nature of the instabilities discovered: the variations originate in the region of the existence of the pinch effect and are connected with oscillations of the pinch. 9 fig. 13 ref.

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USSR

UDC 621.315.592

BRANDT, N.B., SVISTOV, YE.A., SVISTOVA, YE. A., YAKOVLEV, G.D. [Moscow State University imeni M.V. Lomonosov]

"Electrical Instabilities In BiSb Alloys"

Fizika i tekhnika poluprovodnikov, Vol 6, No 4, Apr 1972, pp 654-660

Abstract: The instability is experimentally investigated of voltage originating in the electron-hole plasma created as the result of an interband breakdown in the semiconductor alloy $\text{Bi}_{0.912}\text{Sb}_{0.088}$ at $T = 4.2^\circ \text{K}$. The 10 specimens used were cut from a monocrystalline ingot with a purity of components greater than 99.9999 percent, produced at the LGPI [Leningrad Semiconductor Institute] in the laboratory of G.A. Ivanov. In weak electrical fields at $T = 4.2^\circ \text{K}$ the specimens had an electron conductivity $n_0 = 3 \cdot 10^{14} \text{cm}^{-3}$ and a mobility $\mu \approx 10^6 \text{cm}^2/\text{v.sec}$. The dependences were measured of the amplitude and frequency variations on the magnitude of the current through the specimens I and also the region of existence of instability with various intensities of the exterior magnetic field H and the relative orientation of H and I. On the basis of the results obtained an assumption is made concerning the nature of the instabilities discovered: the variations originate in the region of the existence of the pinch effect and are connected with oscillations of the pinch. 9 fig. 13 ref. Received by editors, 12 July 1971.

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