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UNCLASSIFIED
TITLE--POLYMERIZATION OF ORGANOTRICHLOROSILANE HYDROLYSIS PRODUCTS -U- PROCESSING DATE--15OCT70
AUTHOR--(02)-ANDRIANOV, K.A., ~~MAKAROVA~~, N.N. *M*
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(3), 663-70
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HYDROLYSIS, ORGANIC SILANE, OLIGOMER, POLYMERIZATION,
SILOXANE, STERIC HINDRANCE, SOLUBILITY, ORGANIC SOLVENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1206 STEP NO--UR/0459/70/012/003/0663/0670
CIRC ACCESSION NO--AP0116671
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116671

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HYDROLYSIS OF RSICL SUB3 (I) (R IS 4,MEC SUB6 H SUB4 (IA), 4,CLC SUB6 H SUB4, 3,MEC SUB6 H SUB4 (IB), ISO,PRCH:CH (IC), F SUB3 CCH:CH, ISOHEXYL, ISOPENTYL, ISO,BU, ISO,PR, PR, F SUB3 C(CH SUB2) SUB2, MECH:CH, NC(CH SUB2) SUB2, ET, OR H SUB2 C:CH) IN ET SUB2 O WITH H SUB2 O AT 24-6DEGREES GAVE POLYCYCLIC OLIGOMERS (II). THE CATIONIC POLYMN. OF II AT 240-50DEGREES IN THE PRESENCE OF KOH GAVE LADDER POLYSILOXANES (III). HOWEVER, THE POLYMN. OF I (R IS 2,MEC SUB6 H SUB4, PHCH SUB2, ISO,AMYL) HYDROLYSIS PRODUCTS DID NOT GIVE III DUE TO STERIC HINDRANCE. THE POLYMERS PREPD. FROM IA-C ARE SOL. IN ORG. SOLVENTS. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 612.822.3

MAKAROVA, O. N., Laboratory of Age Physiology of the Central Nervous System,
Institute of the Brain, Academy of Medical Sciences USSR, Moscow

"Reactions of the Neurons of the Superior Colliculi to Visual Stimuli in
Intact and Visually Deprived Rabbits"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23,
Vyp 5, Sep/Oct 73, pp 1,051-1,059

Abstract: The functional characteristics of superior collicular neurons were compared for normal rabbits and those which had been subjected to visual deprivation by sewing the eyelids shut. Constant and intermittent static and dynamic light spots and illumination of the whole retina were the stimuli used. A dynamic stimulus along the horizontal axis was the most effective. Neurons sensitive to all motion, to motion in two or three directions or to one direction only were observed. Two dimensional receptive field maps showed that this field varied from a few to 40° or more. The fields were either homogeneous or heterogeneous. These findings were identical for normal rabbits and those which had been visually deprived from birth to 2.5
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MAKAROVA, O. N., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov,
Vol 23, Vyp 5, Sep/Oct 73, pp 1,051-1,059

to 3 or 5 months or binocularly to 6 months. From these results reactivity to movement is said to be a trigger property of tactile neurons, due to its importance to the organism. The retinotactile system is not considered to be changed by deprivation, nor to possess plasticity.

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- 80 -

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--ANTIMICROBIAL TIN CONTAINING CELLULOSIC MATERIALS -U-

AUTHOR--(05)-ARTEMOVA, YU.V., VIRNIK, A.D., PLOTKINA, N.S., ZEMLYANSKIY,
N.N., MAKAROVA, R.A.
COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. TEKST. PROM. 1970, (1), 93-6

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, MATERIALS

TOPIC TAGS--WOOD CHEMICAL PRODUCT, FABRIC, ORGANOTIN COMPOUND,
BACTERICIDE, STAPHYLOCOCCUS AUREUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0746

STEP NO--UR/0324/70/000/001/0093/0096

CIRC ACCESSION NO--AT0132848

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0132848

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CELLULOSIC FABRICS WITH 9PERCENT GRAFTED ACRYLIC ACID WERE SOAKED 10 HR AT 20DEGREES IN AQ. SOLNS. CONTG. 0.05-5PERCENT (BY WT. OF FABRIC) ME SUB3 SNOH, ET SUB3 SNOSNET SUB3, OR BU SUB3 SNOSMBU SUB3. ALTERNATELY, THE FABRIC WAS BOILED IN AN ACETONE SOLN. OF PH SUB3 SNOH. THE TREATED FABRICS INHIBITED THE GROWTH OF STAPHYLOCOCCUS AUREUS AND OTHER BACTERIA ON AGAR, AND THE EFFECT PERSISTED AFTER SEVERAL LAUNDERING CYCLES. BEST RESULTS WERE OBTAINED WITH ET SUB3 SNOSNET SUB3 AND BU SUB3 SNOSMBU SUB3. FACILITY: MOSK. TEKST. INST., MOSCOW, USSR.

UNCLASSIFIED

USSR

KOLESNIK, Ye. S., MAKAROVA, S. B., PAKHOMOVA, E. M., YEGOROV, Ye. V.

"Anomalies in Sorption in Phosphoric Acid Ionites"

Anomalii pri Sorbtsii na Fosfornokislykh Ionitakh [English Version Above], Moscow, 1971, 13 pages (Translated from Referativnyy Zhurnal, Khimiya, No 2, 1972, Abstract No 2 B1415 Dep. by the author's).

Translation: It is demonstrated that ordinary styrene bivinylbenzene phosphate resins (I) have low Th capacity; their ion-exchange equilibrium is established very slowly; the Th diffusion factor in I is very low, 10^{-11} cm²/sec. The Th distribution factor increases with increasing concentration of nitric acid and dispersion of I. After contact with Th solutions, I reduces its capacity for many multiply charged ions. As swelling ability increases, the rate of Th exchange and capacity of I for this ion increase sharply. Assumptions are made explaining the anomalous behavior of I for Th.

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- 51 -

USSR

UDC 632.952:543

MAKAROVA, S. V., and YELISEYEVA, M. A., All Union Scientific Research Institute of Chemical Plant Protective Agents

"Analysis of Fentiuram"

Moscow, Khimiya, v Sel'skom Khozyaystve, Vol 10, No 9 (119), 1973, pp 40-42

Abstract: An analytical method has been developed for determination of the content of tetramethylthiuram disulfide [TMTD], for the gamma isomer of HCH [hexachlorocyclohexane] and for copper 2,4,5-trichlorophenate [TCP] in the combined fungicide for grain -- fentiuram. TMTD is determined after decomposition of fentiuram with phosphoric acid in presence of ethylenediamino-tetraacetic acid tetranitrate to CS_2 which is then absorbed with methanolic KOH solution and the xanthogenate formed is titrated with a solution of iodine. The gamma isomer of HCH is determined by the hydrolysable chlorine after preliminary extraction with petroleum ether. The TCP content is calculated from the copper levels obtained iodometrically after mineralization of the preparation and digestion of the combusted residue.

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USSR

UDC 632.95

SUPIN, G. S., BEZUGLYY, S. F., ~~NAKAROVA, S. V.~~, OVSISHCHEER, M. R., KALASHNIKOVA, V. N., MINHEYEVA, S. YA., and ZAKS, F. G.

"Mercurometric Volumetric Method of Determining Phthalophos (With Visual and Amperometric Endpoint)"

V sb. Khim. sredstva zashchity rast. (Chemical Agents for Plant Protection -- collection of works), vyp 1, Moscow, 1970, pp 81-83 (from RZh-Khimiya, No 11, Jun 72, Abstract No 1117409)

Translation: A specimen containing phthalophos (I) is hydrolyzed in an alkaline medium, the resultant dimethyl dithiophosphate is volumetrically analyzed with 0.01 N $\text{Hg}(\text{NO}_3)_2$ in the presence of a 1% alcohol solution of diphenylcarbazone until the pink color becomes lilac blue. Amperometric titration is done with a vibrating platinum electrode or a dropping mercury electrode relative to a saturated Hg_2Cl_2 electrode. The sensitivity of amperometric titration is 0.06 mg of I, and that of the visual method is 0.6 mg of I.

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- 47 -

Pesticides

USSR

UDC 632.95

SOBOLEVA, D. A., and MAKAROVA, S. V.

"Determination of Some Organophosphorous Pesticides by Titration in Nonaqueous Media"

V. sb. Probl. analit. khimii, (Collection of Works: Problems of Analytical Chemistry), Vol 2, Moscow, Nauka, 1972, pp 136-138 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, No 23(II), 1972, Abstract No 23H409 by T. A. Belyayeva)

Translation: An extractive titrimetric method was developed for determination of metaphos, methylnitrophos, and trichlorometaphos-3 (I) in industrial products and compounds. To 0.1 g of I 5 ml. of 5% alkaline solution in MeOH is added, the mixture is heated on a water bath for 30 min, transferred into a glass containing 20 ml. of water, neutralized with 10% HCl solution until the $\sim + 300$ mV potential is obtained, extracted with 2 x 20 ml. C₆H₆, 10 ml. of alcohol is added, followed by the potentiometric titration until the second potential peak is obtained. The determination accuracy is $\pm 0.5\%$.

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USSR

UDC 632.95

MAKAROVA, S. V., and SOBOLEVA, D. A.

"Spectrophotometric Determination of the New Herbicide Meturin"

V sb. Problemy analot. khimii (Collection of Works: Problems of Analytical Chemistry, Vol 2, Moscow, Nauka, 1972, pp 73-76 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, No 23(II), 1972, Abstract No 23N452 by T. A. Belyayeva)

Translation: The analysis of commercial meturin (I) and 80% wetting agent is based on the reaction conditions of (I) and on extraction of the meturin complex with Fe^{+3} . The sample containing ~ 0.1 g I is dissolved in 10 ml. of alcohol, and the mixture is diluted with water to 1000 ml. Then 10 ml. of the obtained solution is diluted to 100 ml. with water. To 5 ml. of this solution 1 ml. of 1% solution of $FeCl_3 \cdot 6H_2O$ and 0.1 n. HCl is added, the mixture is brought to 10 ml. with water, and the complex is extracted with 10 ml. $CHCl_3$ for 3 min. The organic layer is filtered and the optical density of measured at 302 nm. The determination accuracy is $100 \pm 0.72\%$. The optical density of extracts in $CHCl_3$ is constant at pH of the aqueous solution equaling 1.8-2.6.

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USSR

UDC 616.981.553

GLADKOVSKIY, A. P., LESNIKOV, A. I., MAKAROVA, T. A., ZAROV, A. M., DINER, Z. S., KRUPINA, A. P., and VITIVKER, V. S., Leningrad Hospital Imeni S. P. Botkin, and Chair of Infectious Diseases, First Leningrad Medical Institute Imeni I. P. Pavlov, and Institute of Epidemiology and Microbiology Imeni Pasteur

"Clinical Symptoms and Etiology of Botulism"

Moscow, Klinicheskaya Meditsina, Vol 48, No 9, Sep 70, pp 79-83

Abstract: From 1959 to 1967 the authors treated 14 cases of botulism, most of which were caused by eating marinated or salted mushrooms or home-canned fish. The incubation period ranged from 2 hours to 3 days. The disease was incorrectly diagnosed in all but one case, owing to unfamiliarity with the symptoms on the part of the first doctors to see the patients (botulism has for sometime been virtually eradicated in the USSR). The initial symptoms are characteristic and readily detectable. They include a combination of indications of gastrointestinal disorders (vomiting, nausea, constipation, abdominal pains), with symptoms of impaired vision (anisocoria, mydriasis, diplopia, blepharoptosis, nystagmus, etc.), impaired swallowing, speech, and respiration. Prompt injection of antbotulinus serum usually prevents further development of the symptoms and, combined with antibiotics and hormones plus cardiovascular agents, strychnine, physostigmine, and pilocarpine, brings about recovery within about a month.

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Acc. Nr. AA0034551

Abstracting Service:
CHEMICAL ABST. 4-70

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700600 products. Rapid-drying foundry-core binders from organic by-products. Borskaya, E. A.; Kobzeva, Z. A.; Zotov, A. B.; Egorycheva, G. V.; Makarova, T. F.; Nisseleva, M. S.; Pavlov, M. I.; Andrienko, S. A.; Bryunov, V. I. (Scientific-Research Institute of the Technology of the Automotive Industry) Brit. 1,177,888 (Cl. B 22c), 14 Jan 1970, Appl. 13 Sep 1968; 2 pp. Binders having several years shelf life, for sand cores hardening in <1.5 min in core boxes heated to 240-60°, are obtained by mixing 60-70 parts sulfate liquor by wt. with 15-30 parts polyat. alc. mother soln. from pentaerythritol production, and adding to the mixt. 8-15 parts of an oxidn. catalyst slowly during 30-60 min with stirring or other means to suppress foam, and prevent temps. >60-70°. Suitable sulfite liquor or lye has 1.27 sp. gr. Hydrolysates of corn cobs or sawdust can be substituted for it. Suitable mother soln. contains saccharides 11-13, pentaerythritol 8-12, resins 4-10, acids 2-5, and H₂O 60-75%, and has at least 1.16 sp. gr. The oxidn. catalyst can be H₃PO₄ a persulfate, or H₂O₂, and if the latter, not over 3% of a 30% aq. soln. should be used, with a H₂O-cooling jacket for cooling below 25°. The mixed binder should have 1.25-1.3 sp. gr. and 4-4.8 pH. Cores thus bonded retain useful properties 3-4 days. When they also contain up to 3% clay, hardening is faster than 1.5 min and the core strength is increased 25% or more. The collapsibility of the cores after castings are cooled is not impaired by these binders. George F. Comstock

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UDC 543.545:546.65:539.173.8

USSR

GVOZDEV, B. A., GRITCHENKO, Z. G., MAKAROVA, T. P., OGANESYAN, Yu. Ts., and STEPANOV, A. V.

"Use of the Electromigration Method in Studying the Yields of Certain Rare-Earth Elements in the Reactions $U(^{12}C, f)$, $U(^{22}Ne, f)$ and $U(^{40}Ar, f)$ "

Leningrad, Radiokhimiya, Vol XIII, No 3, 1971, pp 421-429

Abstract: Fission reactions of the nuclei of heavy ions are important 1) in the theoretical treatment of the fission of strongly excited nuclei, and 2) in the practical synthesis of new elements and isotopes.

A thick target ($\sim 20 \text{ mg/cm}^2 \text{ U}_3\text{O}_8$) was irradiated for several hours with the inner beam of the 300 cm cyclotron of the Laboratory of Nuclear Physics, United Institute of Nuclear Research, with ^{12}C , ^{22}Ne or ^{40}Ar (energies of ~ 110 , 190 and 350 Mev, respectively); after which the irradiated target was dissolved in HNO_3 , and addition of a carrier of $\sim 50-100 \text{ } \mu\text{g La}^{3+}$, the La and rare earth fluorides were precipitated. The latter was transformed into hydroxides in 7.5 N HCl, the resulting solution was passed through a column filled with the anion exchanger Daux-1 in Cl^- -form to remove tetravalent

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GVOZDEV, B. A., et al., Radiokhimiya, Vol XIII, No 3, 1971, pp 421-429

elements captured by LaF_3 . The filtrate, containing all the rare earths and the tetravalent actinides, was heated to dryness, then separated by the electromigration method, with use of ordinary electrophoretic equipment. Relative yields of La, Ce, Pr, Nd, Pm, Sm, Eu and Gd isotopes, resulting from uranium fission by C, Ne and Ar ions, were measured. Tabular data accompany the paper.

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- 81 -

1/2 028
UNCLASSIFIED
TITLE--EFFECT OF LIGHT ON SOLUTIONS OF OPTICAL WHITENING AGENTS -U-
PROCESSING DATE--13NOV70

AUTHOR--(J4)--DARVINA, V.V., KOLODNER, D.I., IVANOVA, L.S., MAKAROVA, T.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VOLOKNA 1970, (2), 55-7

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--PHOTOEFFECT, LUMINESCENCE, UV LIGHT, OPTIC BRIGHTNESS/(U)UFO15
LAMP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/2009

STEP NO--UR/0183/70/000/002/0055/0057

CIRC ACCESSION NO--AP0125597
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

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CIRC ACCESSION NO--AP0125597
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. ALK. SOLNS. OF THE FLUORESCENT
WHITENING AGENT WHITE S WERE EXPOSED TO DAYLIGHT OR UV IRRADN. (LAMP
UFD-15) AND THEIR LUMINESCENCE INTENSITIES WERE DETD. THE DECREASE OF
THE LUMINESCENCE INTENSITY WITH TIME DECREASED WITH THE WHITENER CONCN.
E.G., SOLNS. CONTG. 0.1 G-L. OF THE WHITENER LOST THEIR LUMINESCENCE
AFTER 24 HR WHILE THE LUMINESCENCE OF SOLNS. CONTG. 25.6 G-L. OF THE
AGENT WAS UNCHANGED SMALLER THAN OR EQUAL TO 20 DAYS. THE STABILITY OF
THE WHITENER WAS HIGHER IN ALK. SOLNS. FACILITY: LENINGRAD.
FILIAL, VNIIV, LENINGRAD, USSR.

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Acc. Nr: APC046628 Abstracting Service: CHEMICAL ABST: 4/70

Ref. Code: UR 6131

22448a Technological production and properties of granular oxide refractories. Pokhobovarov, D. N.; Babitskiy, V. L.; Lemeshev, V. G.; Jaganov, D. B.; Makarova, L. M.; Vinnogradova, L. V. (Mosk. Khim. Tekhnol. Inst. im. Manuil'skaya, Moscow, USSR). Usp. Khim. 1970, 38(1), 11-14 (Russ.). The technol. of granular oxide refractories is based on the use of coarse-dispersive powders prepd. from preintered or elec. fused oxides. The ruling opinion that coarse-granular powders of pure elec. fused oxides are inert at sintering and that they do not form sufficiently dense and solid ceramics is faulty. If high pressures (1000-2000 kg/cm²) are used, and if the min. amt. of fine-dispersive powders of an oxide is added to the ceramic mass or even no binder is used when the porosity proper for refractories (i.e. 15-20%) is reached at the annealing temp. ordinary for a given oxide. The strength and deformation properties of these products are satisfactory. The deformation temp. of porous granular refractories under load prepd. from pure elec. fused oxides is 50-100% lower than that of nonporous materials. Refractories prepd. from elec. fused oxides show a substantially lower strength, however, sufficient for service at high temps. From the powders of elec. fused oxides one can prep. high-class products comparable in properties with products manifd. from powders of sintered oxides. The main technol. parameters of the manif. of oxide refractories are practically the

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same for both initial materials. The technol. by using sintered oxide powders needs: the preliminary thermal treatment of initial components (Al_2O_3 , MgO , ZrO_2), the fine grinding, the briquetting, the annealing of briquets, and their crushing and partial grinding. The elec. fusion permits using raw initial powders; further, it makes possible to realize the stabilization of ZrO_2 with CaO or the synthesis of complicated compds., namely spinels, zirconates, silicates, and other highly fire-resistant substances.

J. Jindra

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19781940

Acc. Nr. **AP0053747**

Abstracting Service:
CHEMICAL ABST.

6/70 Ref. Code
UR 0076

115686g Calculating the electrical conductivity of ion-exchange columns with a mixed layer of ion exchangers. Grebenyuk, V. D.; Gausin, N. P.; Makarova, V. A. (Inst. Obshch. Neorg. Khim., Kiev, USSR). Zh. Fiz. Khim. 1970, 44(1), 132-6 (Russ). Two methods for calcg. the elec. cond. of ion-exchange columns with a mixed layer of ion exchangers are suggested and exptl. verified. The 1st method is based on the neutralization of the elec. cond. of the ion-exchange columns with individual ion exchangers, while the 2nd is based on the neutralization of the elec. cond. of the individual ion exchangers sepd. from the equil. soln. The applicability and the region of mutual consistency of these methods are discussed. M. Braunovic]

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USSR

UDC: 669.14.

MAKAROVA, V. I., VELISHCHANSKIY, A. V., LESHKOVTSOVA, I. G.

"Influence of Heat Treatment and Cold Plastic Deformation on Temperature Frequency Factor of Longitudinal Oscillations of Type 44NKhTYu Alloy"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 9, 1973, pp 136-139.

Abstract: This work presents a study of the influence of heat treatment and cold plastic deformation on the component of the thermoelastic factor determined by the chemical composition of the basic solid solution. The influence of aging modes and degree of cold plastic deformation on the temperature factor of resonant frequency of longitudinal oscillations in 44NKhTYu alloy was studied in the presence of a magnetic field near the saturation field. It was established that cold plastic deformation with over 50% compression and subsequent aging at temperatures up to 650° C increases the value of the temperature frequency factor. Changes in the heat treatment mode and degree of cold plastic deformation result in changes of the frequency factor within limits of $10 \times 10^{-6} 1/^\circ \text{C}$ in the presence of a strong magnetic field.

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1/2 035

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--STUDY OF THE GAS SEPARATION OF STAINLESS STEELS -U-

AUTHOR--(02)-MAKAROVA, V.I., SKIBINA, G.B.

COUNTRY OF INFO--USSR

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SOURCE--MOSCOW, IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY, MASHINOSTROYENIYE,
NO. 1, 1970, PP 126-129
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--STAINLESS STEEL, ALLOY DESIGNATION, CHROMIUM STEEL, GAS
CONTAINING METAL, METAL CONTAINING GAS, HYDROGEN, NITROGEN, WATER VAPOR,
CARBON DIOXIDE, GAS DIFFUSION/(U)KH25 CHROMIUM STEEL, (U)KH17 CHROMIUM
STEEL, (U)KH17N2 CHROMIUM NICKEL STEEL, (U)KH18N1Q7 STAINLESS STEEL,
(U)KH12N2OT3RM STAINLESS STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/0483

STEP NO--UR/0145770/000/001/0126/0129

CIRC ACCESSION NO--AT0100961

UNCLASSIFIED

PROCESSING DATE--23OCT70

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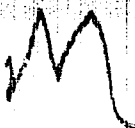
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CIRC ACCESSION NO--AT0100961

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

ABSTRACT. THE PHYSICAL NATURE OF PHENOMENA DETERMINING THE GAS SEPARATION OF HYDROGEN DURING ISOTHERMAL HOLDING AT TEMPERATURES FROM 20 TO 350DEGREESC WAS STUDIED FOR THE FOLLOWING FERRITIC, MARTENSITE, AND AUSTENITIC STEELS: KH12W2OT3RM, KH18NIOT, 1KH17N2, KH17, AND KH25. THE PURPOSE OF THE STUDY WAS TO DETERMINE THE EFFECT OF THE PERCENTAGE OF CHROME (12-25PERCENT) AND NICKEL (0-20PERCENT) CONTENT IN STAINLESS STEELS ON THE SEPARATION RATE OF H, H SUB2 O, AND CO PLUS N SUB2 FROM THE STEELS. AT TEMPERATURES UP TO 200DEGREESC, DESORPTION OF THE SURFACE GASES WAS SEEN TO PREVAIL; HOWEVER, AT HIGHER TEMPERATURES, DESORPTION OF THE GASES DIFFUSING FROM THE DEEPER LAYERS OF THE METALS WAS OBSERVED. IT WAS ESTABLISHED THAT THE GAS DIFFUSION RATE THROUGH THE OXIDE LAYER, AND NOT THE DIFFUSION RATE THROUGH THE METAL, AFFECTS THE GAS SEPARATION RATE AT HIGHER TEMPERATURES. IN STUDYING THE CHROME CONTENT, IT WAS SEEN THAT THE CHROME CONTRIBUTES TO THE DEVELOPMENT OF OXIDES WITH GOOD PROTECTIVE PROPERTIES, AND AT THE SAME TIME IT REDUCES THE GAS SEPARATION RATE. ON THE OTHER HAND, NICKEL INCREASES THE SEPARATION RATE, BUT IT POSSESSES POOR PROTECTIVES CHARACTERISTICS. IT IS MENTIONED THAT THE SEPARATION RATES GIVEN FOR THE FOUR STEELS CAN BE USED FOR CALCULATING THE OUTPUT OF VACUUM PUMPS FOR LARGE HOLDING CHAMBERS.

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USSR

UDC 669.140

MAKAROVA, V. I. (Candidate of Technical Sciences, Docent), SKIBINA, G. V.
(~~Engineer~~)

"Study of Gas Separation of Stainless Steels"

Moscow, IVUZ Mashinostroyeniye, No 1, Jan 70, pp 126-129

Abstract: The article considers the following steels of austenite, ferrite and martensite class: Kh12N20T3RM, Kh18N10T, 1Kh17N2, Kh17 and Kh25. The physical nature of the phenomena which determine the gas separation of hydrogen during isothermal holdings in the temperature range 20-350° C is studied. The process of desorption of surface gases prevails at temperatures below 200° C, and at higher temperatures the desorption of gases diffused from the deep layers of metal takes place. It is established that the rate of gas separation at elevated temperatures, at which desorption of gases separated by metal prevails, is affected by the rate of gas diffusion through a layer of oxide and by the rate of diffusion through metal. Study of the effect of chromium content in stainless steels reveals that it promotes production of oxides which have good protective properties and thereby reduces

USSR

MAKAROVA, V. I., IVUZ Mashinostroyeniye, No 1, Jan 70, pp 126-129

the rate of gas separation. Nickel increases the rate of gas separation of stainless steels which leads to formation of oxides with weak protective properties. The obtained data can be used for the calculation of the efficiency of vacuum pumps during pumping out of large volume chambers. The article was presented by I. I. Sidorin, Doctor of Technical Sciences, Professor of the Moscow Higher Technical School imeni N. E. Bauman.

USSR

UDC 576.851.1

FAYZULINA, S. I., KHANDUYEV, Ts. Ts., IMANOV, E. D., GUSEV, B. N., and
MAKAROVA, Ya. V., Institute of Biochemistry and Physiology, Academy of
Sciences Kirgiz SSR

"Dynamics of Development of Negative Colonies of the Virus of Contagious
Ecthyza (Sheep Pox) in Cell Cultures"

Frunze, Izvestiya Akademii Nauk Kirgizskoy SSR, No 1, Jan/Feb 72, p 51

Abstract: Upon infection with the virus of contagious ecthyza or sheep pox (culture strains A and KI), monolayer cell cultures of the skin and kidney of sheep embryos, and the kidney epithelium of adult sheep grown on Hanks medium were treated with an agar solution, so that an agar coating formed and negative colonies (plaques) were observed in tissue cultures. The plaques had a round shape. After staining with methylene blue, degenerated and enlarged intensively stained cells were observed along the edges of the plaques, while in the central section of the plaques, only stained debris of destroyed cells were detected. In cultures of skin and kidney cells of sheep embryos, macroscopically visible plaques appeared on the 4th to 5th day of incubation. The maximum number of plaques not exceeding 1 mm in diameter had formed up to that time. Subsequently, the number of plaques increased at an insignificant 1/2

.YZULINA, S. I., et al., Izvestiya Akademii Nauk Kirgizskoy SSR, No 1, .
Jan-Feb 72, p 51

rate, reaching an upper limit on the 9-10th day of cultivation. In cultures of adult sheep kidney cells, the maximum number of plaques (60-70%) had formed on the 5-7th day. Their diameter was ≤ 1 μ m at that time. The number of plaques reached an upper limit on the 10-12th day. Their maximum diameter was 4-5 μ m on the 10th day of cultivation.

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- 93 -

USSR

UDC 612.823.5

BRYTVAN, Ya. M., VIYEV'SKIY, M. A., KROKHMAL', S. S., MAKAROVA, Z. O.,
NIKIFOROVA, I. P., POPLAV'SKA, L. I., and SLOVODYANYUK, Chair of Pathological
Physiology, Vinnitsa Medical Institute

"Functional Response of Different Sections of the Brain to Extreme Stimuli"

Kiev, Fiziologicheskiy Zhurnal, No 5, 1972, pp 644-653

Abstract: Experiments on cats and rabbits showed that electrical activity of the cortex and subcortex, respiration, and arterial pressure are dependent on the original and present functional state of the nervous system. The effects of prolonged compression of soft tissues, increased intracranial pressure, alcoholic intoxication, asphyxia, blood loss, and various forms of hypertension were studied. Functional shifts were induced by preliminary injection of amphetamine sulfate or chlorpromazine, electrocoagulation of the anterior hypothalamus, and denervation of the sinocarotid and aortic vascular zones. Along with generalized and phasic reactions of electrical activity, cortical-subcortical dissociations occurred with signs of induction of the adjacent regions. A stress rhythm appeared quite often in the dien-cephalon and brainstem. The onset and course of the experimental pathology and accompanying electrical activity were dependent on both the original and

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- 58 -

USSR

BRYTVAN, Ya. M., et al., Fiziologicheskiy Zhurnal, No 5, 1972, pp 644-653

present functional state of the nervous system. The mechanisms of the observed phenomena cannot be ascribed solely to the generalized influence of the reticular formation or to corticofugal impulses. Various neurogenic components are involved and it is through their interaction that the integral reaction of the brain is achieved.

2/2

USSR

UDC 621.791:669.419.4:669.046.552.5

POLYANSKIY, V. M., Candidate of Technical Sciences, PODGORSKIY, B. N., Engineer, and MAKAROVETS, O. D., Engineer

"Diffusion Processes in the Zones of the Bimetal Ti-Nb and the Trimetal Ti-Nb-Ti

Moscow, Svarochnoye Proizvodstvo, No 3, Mar 71, pp 9-10

Abstract: Metallographic and X-ray structural methods are used to establish that diffusion of niobium into titanium occurs in the Ti-Nb system, particularly in bi-metals. The concentration dependence of the mutual diffusion factor in the Ti-Nb system is determined. It is demonstrated that the maximum value of D is 7% niobium. Within the framework of the hypothesis of the circular mechanism of diffusion of metals with the body-centered cubic structure, experimental results on the preferential diffusion of niobium into titanium and the concentration dependence of D are explained by the temperature and concentration dependences of the shear modulus in the Ti-Nb system. Quantitative characteristics of the diffusion zone in Ti-Nb-Ti are produced as functions of heat treatment, as well as data on the distribution of niobium in welded seams of this material. It is demonstrated that the method of X-ray structural analysis is effective for selection of a welding method, providing good quality welded joints in the trimetal.

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1/2 C19
TITLE--BULKY YARN -U-

UNCLASSIFIED

PROCESSING DATE--20NOV70

AUTHOR--(04)--KHARKHAROV, A.A., ROSKIN, YE.S., MAKARGVSKAYA, N.I.,
GLAZDMITSKIY, K.L.
COUNTRY OF INFO--USSR

SOURCE--USSR 265,365
REFERENCE--OTKRYTIYA, IZOBRET., PROM OBRATZSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--09MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SYNTHETIC FIBER, ACRYLONITRILE, ACRYLAMIDE, POLYMER
CROSSLINKING, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3002/1421

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

CIRC ACCESSION NO--AA0128820

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0128820

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BULKY YARN IS PREPD. FROM A MIXT. OF FIBERS WITH DIFFERENT DEGREES OF SHRINKAGE. ONE OF THE COMPONENT MIXTS. IS FIBER FROM ACRYLONITRILE AND METHYLOLMETHACRYLAMIDE. THE FIBERS ARE CROSSLINKED BY HEATING AT 140DEGREES OR BY TREATING WITH HCL AT 80-90DEGREES. FACILITY: KIROV, S. M. INSTITUTE OF TEXTILE AND LIGHT INDUSTRY, LENINGRAD.

UNCLASSIFIED

USSR

UDC 669.14.018.44:620.178.382

POLOSIN, YU. V., and MAKAROVSKIY, N. L.

"Effect of Temperature on the Work Hardening of Parts Made of Heat-Resistant Alloys"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 5, May 73, pp 56-59

Abstract: The effect of high temperatures of short duration on the relaxation of residual stresses in alloys KhN77TYuR, EI929, and ZHS6K is investigated. Strength tests established that the effectiveness of work hardening by surface plastic flow decreases with an increase in the test temperature, and at 900°C work hardening does not result in increased plastic flow. Decreased effectiveness of heat-resistant work-hardened alloy parts is due to relaxation of favorable residual compressive stresses and changes in the surface layer. The results of experimental investigations of relaxation of residual stresses agree with data obtained after strength testing.

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1/6 014 UNCLASSIFIED PROCESSING DATE--11SEP70
 TITLE--SEPARATION OF MIXTURES OF C SUB6 HYDROCARBONS OF GASOLINE
 FRACTIONS. IV. PHASE EQUILIBRIUM IN SYSTEMS FORMED BY C SUB6
 AUTHOR--MAKAROVSKIY, YA.I., KOGAN, V.B., KONONOV, N.F., VAYNBERG, A.M.
 COUNTRY OF INFO--USSR
 SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2), 289-95
 DATE PUBLISHED-----70
 SUBJECT AREAS--CHEMISTRY, PROPULSION AND FUELS
 TOPIC TAGS--CHEMICAL SEPERATION, MULTICOMPONENT CHEMICAL MIXTURE,
 CYCLOHEXANE, BENZENE, CYCLOPENTANE, AROMATIC ALCOHOL, PHASE EQUILIBRIUM,
 GASOLINE
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRA--1990/2041 STEP NO--UR/0080/70/043/002/0299/0295
 CIRC ACCESSION NO--AP0109973
 UNCLASSIFIED
 ???????????

2/2 014

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0109973

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MUTUAL SOLY. OF BINARY SYSTEMS CONSISTING OF HYDROCARBONS (N-C SUB6 H SUB14 (I), METHYLCYCLOPENTANE (III), CYCLOHEXANE (III), C SUB6 H SUB6 (IV), OR N-C SUB7 H SUB16 (V)) AND TETRAHYDROFURFURYL ALC. (VI) (B. 175-6DEGREES, D PRIME20 1.0501, AND N PRIME2 SUBD PRIME0 1.4520), THE MUTUAL SOLY. OF THE TERNARY SYSTEM I II VI, THE INFLUENCE OF VI ON THE FUGACITY OF THE COMPONENTS OF THE SYSTEMS I II AND III C SUB6 H SUB6, PHASE EQUIL. AT ATM. IN THE BINARY SYSTEMS CONSISTING OF HYDROCARBONS (I, III, OR C SUB6 H SUB6) AND VI, AND THE PHASE EQUIL. IN THE TERNARY SYSTEM I II VI WERE STUDIED. AROMATIC AND NAPHTHENIC HYDROCARBONS DISOLVE COMPLETELY AT ROOM TEMP. IN VI; THE CRIT. SOLN. TEMPS. IN VI ARE 36DEGREES AND 42DEGREES FOR I AND V, RESP. THE PARTITION COEFF. OF II BETWEEN I AND VI IS 1.4-1.5. THE SELECTIVITY OF VI IS SO LOW THAT VI IS NOT A SELECTIVE SOLVENT FOR THE EXTN. OF THE PARAFFINIC AND NAPHTHENIC HYDROCARBONS. HIGHER SELECTIVITY IS OBTAINED IN EXTRACTIVE DISTN. THE DEPENDENCE OF THE FUGACITY COEFFS. OF THE CONSTITUENTS OF A BINARY MIXT. CONTG. PARAFFINIC AND NAPHTHENIC OR AROMATIC HYDROCARBONS ON THE CONC. OF VI IS CLEAR. THE SELECTIVITY OF VI IS 2.0-2.5 AND 1.55-1.6 FOR MIXTS. CONTG. III-IV AND I-II, RESP. VI IS EFFECTIVE FOR THE SEPN. OF PARAFFINIC, NAPHTHENIC, AND AROMATIC HYDROCARBONS BY EXTRACTIVE DISTN.

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UNCLASSIFIED

USSR

UDC: 632.95

LOPYREV, V. A., VERESHCHAGINA, T. N., KONOMENKO, G. G., ~~MAKARSKIY, M. M.~~
KRUPIN, K. L., Leningrad Technological Institute of the Paper and Cellulose
Industry and Northwest Polytechnical Correspondence Institute

"A Method of Synthesizing 3-(5-Amino-1,2,4-triazolyl)-alkanoic Acids"

USSR Author's Certificate No 320496, filed 25 Dec 69, published 2 Feb 72
(from RZh-Khimiya, No 15, Aug 72, Abstract No 15N475P)

Translation: A method is proposed for synthesizing 3-(5-amino-1,2,4-triazolyl)-alkanoic acids (I) by reacting a dibasic aliphatic carboxylic acid with aminoguanidine salts. An effective and low-toxicity pesticide may be derived from compound I. Twenty three and eight tenths grams of aminoguanidine bicarbonate is gradually added to a solution of 20.8 grams of $\text{CH}_2(\text{COOH})_2$ in 200 ml of water at a temperature of 50-60°C, boiled for 6 hours, a solution of 10 grams of NaOH in 50 ml of water is added, boiled for 1 hour, evaporated to 50 ml, cooled, acidified with 10% HCl (acid) to a pH of about 3, the 3-(5-amino-1,2,4-triazolyl) acetic acid is filtered off; yield 60%, melting point 186-7°C (dissociation, water). 3-(5-Amino-1,2,4-triazolyl) propionic acid is also synthesized; yield 71%, melting point 184-5°C (dissociation, water).

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Physiology

USSR

UDC 612.176.4-0.6:/612.273.1+612.766/

MAKARTSEV, V. I., Institute of Mine Safety, Donetsk

"The Effect of Hyperoxia Combined with Intensive Muscular Loads on the Condition of the Cardiovascular System"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 8, Aug 70, pp 29-32

Abstract: Mine rescue workers must engage in intensive muscular exertion while inhaling O₂ from a respirator at raised partial pressures. The physical fitness of a group of these workers was studied, with particular reference to the functioning of the cardiovascular system, by subjecting the workers to the Harvard fitness test (treadmill version). A parallel study was conducted of miners doing ordinary work, which is comparable to that of mine rescue workers with respect to muscular effort but does not involve breathing O₂ at elevated pressures. The results obtained by electro- and ballistocardiographic measurements, oxyhemography, arterial oscillography, and determination of performance capacity indices showed that the physical fitness of mine rescue workers was lower than that of miners performing similar work under ordinary breathing conditions. The functioning of the cardiovascular system under conditions of physical stress was likewise inferior in the rescue workers. The physical fitness of mine rescue workers would be improved by regular physical exercises under normal breathing conditions.

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UDC 547.821+546.185

USSR

MAKITRA, R. G., MAKARUK, M. S., and DIDYCH, M. N., L'vov Polytechnic Institute

"Study of the Systems of Pyridine With Phosphorus Oxychloride, Phosphorus Trichloride, Thionyl Chloride, and Carbon Tetrachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 8, 1972, pp 1877-1878

Abstract: Pyridine forms a complex with phosphorus oxychloride having a melting point of -55.6° and a composition of 74.6% pyridine. The formula of this adduct is $\text{POCl}_3 \cdot 2\text{Pyr}$. or $\text{POCl}_3 \cdot 3\text{Pyr}$. PCl_3 forms an adduct having the formula $\text{PCl}_3 \cdot 2\text{Pyr}$ having a melting point at -42°C . The thionyl chloride forms two adducts: $\text{SOCl}_2 \cdot 2\text{Pyr}$ having a reported melting point of both -20°C and $+107^{\circ}\text{C}$, and $\text{SPCl}_2 \cdot \text{Pyr}$ with a melting point of -50°C . In the presence of moisture both complexes become hydrated with one molecule of water and the melting point is increased to about 100°C . CCl_4 forms a complex containing 18% pyridine, having a melting point of -56°C .

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USSR

UDC 541.13

KUDRYASHOV, I. V., KAMYSHCHENKO, S. D., and MAKARYAN, E. M., Moscow Chemical-Technological Institute Imeni D. I. Mendeleev

"Study of the Kinetics of Cathodic Evolution of Hydrogen Over Tungsten Monocrystals With Indexes (100), (110), (111)"

Moscow, Elektrokimiya, Vol 9, No 4, Apr 73, pp 478-480

Abstract: The kinetics and mechanism of hydrogen evolution from a cathode depend on the surface properties of the electrode metal. An attempt was made to find out the effect of the orientation of tungsten monocrystal and of the state of crystal surface on the overcharge of hydrogen evolution. The monocrystals and polycrystals were polished either mechanically or electrochemically. Mechanically polished crystals showed no difference in kinetic parameters; the specificity of their surface being probably destroyed by mechanical polishing. On the electropolished electrodes the overcharge was about 0.2 V higher than on the mechanically treated ones. Electropolished material showed differences in the kinetic parameters a and b in the following order: (110) > (100) > (polycrystal) > (111).

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- 2 -

Biophysics

USSR

UDC 591.112.1

BABSKIY, Ye. B., Academician, Academy of Sciences Ukrainian SSR, BERDYAYEV, S. Yu., and MAKARYCHEV, V. A., Institute of Normal and Pathological Physiology, Academy of Medical Sciences USSR, Moscow

"Automatic Activity of Myocardial Fibers Due to Shifts in the Ionic Conductivity of the Membrane"

Moscow, Doklady Akademii Nauk SSSR, Vol 195, No 2, 1970, pp 496-498

Abstract: The effect of shifts in the ionic conductivity of membranes of myocardial fibers on the automatic activity of the fibers was studied on a strip of myocardium from the ventricle of a frog heart. The action potentials of fibers in the strip were determined using glass microelectrodes. The strip exhibited no spontaneous activity after being kept in a Ringer solution of normal composition or a Ringer solution without Ca^{++} or K^+ . When Ca^{++} was excluded and K^+ simultaneously reduced in concentration or excluded entirely, a spontaneous action potential developed. Addition to the Ringer solution of tetraethylammonium chloride (which inhibits K^+ conductivity) induced spontaneous activity. This effect set in earlier in a Ringer solution without Ca^{++} . Spontaneous activity was also induced at a 1/2

USSR

BABSKIY, Ye. B., et al, Doklady Akademii Nauk SSSR, Vol 195, No 2, 1970,
pp 496-498

normal K^+ content by the addition of EDTA, which bound Ca^{++} and thus increased the Na^+ conductivity. Both the exclusion of Ca^{++} from the solution and the addition of EDTA produced spontaneous activity. The effect of EDTA, which took place at a normal K^+ concentration, was more pronounced, since EDTA bound traces of Ca^{++} that entered the solution from intercellular spaces of the myocardial fibers.

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USSR

UDC 533.6.011.8

MAKASHEV, N. K.

"Couette Flow of a Binary Mixture of Rarefied Gases"

Uch. zap. Tsentr. aero-gidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamic Institute), 1971, Vol. 2, No. 6, pp 119-123 (from RZh-Aviatsionnyye i raketnyye dvigateli, No 5, May 72, Abstract No 5.34.16)

Translation: The problem of the Couette flow of a binary mixture of rarefied gases is discussed on the basis of the model kinetic Boltzmann or arbitrary values of the Knudsen numbers of the mixture components. It is shown that the solution can be obtained for different Knudsen numbers from the familiar solution for a single-component gas and that the components of the mixture in this case move with the same macroscopic velocities. An expansion of the solution for a mixture with a small ratio of the masses of the component molecules in terms of this ratio is given. 3 ill. Resume.

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USSR

UDC 533.697

KOGAN, M. N., MAKASHEV, N. N.

"Flow of a Gas in a Flat Channel Caused by a Longitudinal Temperature Gradient with an Arbitrary Knudsen Number"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of the Central Aerodynamics Institute), 1970, Vol 1, No 2, pp 69-74 (from RZh-Mekhanika, No 10, Oct 70, Abstract No 10 B349)

Translation: This article contains a study of a gas between two infinite parallel stationary plates $-d/2 \leq x \leq d/2$ the temperature of which varies linearly $T_w = T_0(1 + \alpha z)$. A small perturbation of the distribution function satisfying the model Boltzmann equation is found in the form $\phi = \alpha z v^2 + v_z \psi(x, v)$; for ψ the following problem is obtained:

$$\frac{v_x d}{\alpha} \frac{\partial \psi}{\partial x} + \frac{\alpha d}{\alpha} v^2 = -\psi + 2u_1, \quad \psi\left(\pm \frac{d}{2}, v_x \gtrless 0\right) = 0$$

$$\alpha \approx Kn^{-1}$$

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USSR

KOGAN, M. N., et al., Uch. zap. Tsentr. aerogidrodinam. in-ta, 1970,
Vol 1, No 2, pp 69-74

in which the function u_1 satisfies the integral equation with a kernel having a logarithmic singularity; this permits u_1 to be taken from under the integral sign and an approximate explicit expression to be obtained for it. The volumetric gas consumption found in terms of the cross section of a "flat tube" increases monotonically with a decrease in pressure in contrast to the case of the Poiseuille flow. With a zero flow rate, the gas against the wall flows in one direction, and in the midplane $x = 0$, the gas flows in the other direction. The investigated phenomenon can have a noticeable effect, for example, on the accuracy of measuring the low pressure of a heated gas by a colder instrument since the zero flow rate through the measuring tube is established for a pressure drop on its ends. As was demonstrated in the paper, the latter can be up to 50% of the mean pressure with a temperature difference on the order of the mean temperature. The bibliography has 10 entries.

2/2

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--REACTIVITY OF A CEMENT RAW MATERIAL MIXTURE -U-
AUTHOR--MAKASHEV, S.D. *M*
COUNTRY OF INFO--USSR
SOURCE--TSEMENT 1970, (1), 14-17
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--CEMENT, ALUMINUM SILICATE MINERAL, CRYSTAL LATTICE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1682 STEP NO--UR/0101/70/000/001/0014/0017
CIRC ACCESSION NO--AP0125303

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125303

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTIVITY IS STUDIED ON THE BASIS OF RUSSIAN AND FOREIGN TEST DATA, AS A FUNCTION OF THE STRUCTURE AND THERMAL STRENGTH OF THE CRYSTAL LATTICE, AND OF THE ASSOC. TRANSFORMATION TEMP. RANGES OF THE ALUMINOSILICATE NATURAL MINERALS FOUND IN CEMENT MIXES. THE MAIN MINERALOGICAL FACTORS GOVERNING THE TECH. AND ECONOMIC EFFICIENCY OF CEMENT MANUF. ARE THE SP. SURFACE, PHASE COMPN., CHANGE TO AMORPHOUS STATE, BREAKDOWN OF CRYSTAL LATTICE, DISSOCN., AND DEHYDRATION.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--OUTER SPHERE AND INNER SPHERE COMPLEXES OF COBALT II, NICKEL II,
AND COPPER II -U-
AUTHOR--(04)--MIRONDOV, V.YE., MAKASHEV, YU.A., MAVRINA, I.YA.,
KRYZHANOVSKIY, M.M. M
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1301-4
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--COBLAT COMPLEX, NICKEL COMPLEX, COPPER COMPLEX, CHLROINE,
BROMINE, NITRATE, SULFATE, STABILITY CONSTANT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3008/0943 STEP NO--UR/0078/70/015/005/1301/1304
CIRC ACCESSION NO--AP0137971
UNCLASSIFIED

2/2 007 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0137971
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STABILITY CONSTS. WERE DETD. FOR
INNER AND OUTER SPHERE COMPLEXES OF CO(II), NI(II), AND CU(II) HEXAAQUA
IONS WITH HALIDES, THIOCYANATE, SULFATE, AND NITRATE IONS. THE TENDENCY
TO INNER AND OUTER SPHERE INTERACTION DECREASES IN GOING FROM CL PRIME
NEGATIVE TO BR PRIME NEGATIVE. THIS IS ATTRIBUTED TO THE ELECTROSTATIC
NATURE OF THE OUTER SPHERE BONDS. THE TENDENCY FOR NITRATE AND SULFATE
IONS IN THE CU COMPLEXES TO ENTER THE INNER SPHERE IS SMALL AND APPROX.
THE SAME. THE HIGHER STABILITY OF THE CU SULFATE COMPLEXES IS RELATED
TO THE HIGH STABILITY OF INNER SPHERE SULFATE ASSOCS. FACILITY:
LENINGRAD. GOS. PEDAGOG. INST. IM. GERTSENA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--INFRARED ABSORPTION SPECTRA OF 1,2,PROPYLENEDIAMINE COMPLEXES OF
THALLIUM,III -U-
AUTHOR--(04)-KULBA, F.YA., MAKASHEV, YU.A., MARKHAYEVA, D.M., BARSUKOV,
A.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(4), 983-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--IR SPECTRUM, PROPYLENE, DIAMINE, THALLIUM COMPOUND, COMPLEX
COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1215 STEP NO--UR/0078/70/015/004/0983/0987
CIRC. ACCESSION NO--AP0128633

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 021

CIRC ACCESSION NO--AP0128633

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR SPECTRA OF $Tl(PN)_x$ SUBN X
SUB3 (WHERE PN EQUALS 1,2, PROPYLENEDIAMINE, N EQUALS 1, 2, OR 3, AND X
EQUALS CL, BR), $Tl(PN)_2$ I SUB3, AND $Tl(PN)_3$ (NO SUB3) SUB3 WERE
DETD. AND ASSIGNMENT OF THEIR MAX. ARE GIVEN. SPECTRA OF $(Tl(PN)_3)$
PRIME3 POSITIVE ARE VERY SIMILAR TO THE SPECTRA OF $Zn(EN)$ SUB3 CL SUB2
AND $Cd(EN)$ SUB3 CL SUB2; IT IS ASSUMED THAT IN THESE COMPLEXES, PN HAS
THE GAUCHE CONFIGURATION. MONO AND BIS-PN COMPLEXES HAVE SIMPLER
SPECTRA OWING TO CHAINLIKE STRUCTURE WITH TRANS COORDINATED PN BRIDGES.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE---13NOV70
TITLE--THERMODYNAMICS OF HYDROGEN HEXACYANOFERRATE, II -U-
AUTHOR--(03)-LAZAREV, A.N., MAKASHEV, YU.A., MIRONOV, V.YE.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 459-61
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--THERMODYNAMICS, HYDROGEN COMPOUND, CYANIDE, IRON COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1077 STEP NO--UR/0078/70/015/002/0459/0461
CIRC ACCESSION NO--AP0123070
UNCLASSIFIED

2/2 015 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0123070
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT, THE PROTONIZATION OF (FE(CN) SUB6)
PRIME4 NEGATIVE IN AN AQ. SOLN. HAVING A CONST. IONIC STRENGTH OF 3
(LICLO SUB4) WAS STUDIED POTENTIOMETRICALLY AND THERMOCHEM. DELTA H,
DELTA S, AND DELTA F VALUES FOR THE 1ST AND 2ND PROTONATION OF (FE(CN)
SUB6) PRIME2 NEGATIVE WAS NOT OBSD. FACILITY: LENINGRAD. GOS.
PEDAGOG. INST. IM. GERTSENA, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC: 678.744.3-139.01:53

AMELINA, M. A., MAKASHOV, G. F., KHRUSHILOVA, I. P., BOCHARNIKOV, V. K.,
and BUBLIK, V. A.

"Radiation Hardening of Oligomeric Esteroacrylates"

Plasticheskiye Massy, No 4, Apr 71, pp 5-7

Abstract: The use of ionizing radiation for polymerization of unsaturated polyesters, conducted at elevated temperatures in the absence of catalysts, enables one to change the rate and the extent of the polymerization process within a broad range, control rigorously the degree of hardness of the obtained products, improve purity, homogeneity, decrease internal stresses of the products and impart to them higher thermal stability and mechanical strength. The purpose of the article was to study the effect of chemical structure of polyesters, particularly oligomeric esteroacrylates on the rate of their radiation polymerization, physical and mechanical properties of radiation hardened products and the magnitude of radiation dose which is necessary to produce materials with optimum physical and mechanical indices. Commerical oligomeric esteroacrylates were investigated: MGF-7, MGF-8, MGF-9 and TMGF-11. A cobalt-60 gamma radiation source was used at room temperature. The dose rate was 180 rad/sec. Thermochemical polymerization
1/2

USSR

AMELINA, M. A., et al., *Elasticheskiye Massy*, No 4, Apr. 71, pp. 5-7

was conducted in parallel to radiation hardening for comparison. It was found that radiation polymerization of oligomeric esteroacrylates produces higher quality products than those obtained by ordinary thermochemical polymerization. Since the radiation doses which are needed in order to obtain radiation hardening of polymers are low the use of this method in certain cases is expedient.

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- 55 -

1/2 022 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--CHANGES OF THE COLOR VISUAL FIELD IN PATIENTS SUFFERING FROM
GLAUCOMA -U-
AUTHOR--MAKASHOVA, E.V. M
COUNTRY OF INFO--USSR
SOURCE--OPTALMOL ZH 25(1): 47-49. 1970
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--EYE DISEASE, VISUAL DEFECT, COLOR, OPHTHALMOLOGY

CENTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3007/0262 STEP NO--UR/0601/70/025/001/0047/0049
CIRC ACCESSION NO--AP0135758
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0135758

ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. THE WORK IS DEDICATED TO A STUDY OF RESULTS OBTAINED FROM THE EXAMINATION OF 128 PATIENTS (221 EYES) WITH GLAUCOMA OF VARIOUS FORM, STAGE AND DEGREE OF INTRAOCULAR COMPENSATION USING A METHOD OF CONTRASTLESS COLOR PERIMETRY AFTER ROSLAVTSEV, LINKEN PERFORMED UNDER PHOTOPIC CONDITIONS. IN A TOTAL, 1564 VISUAL FIELDS WERE SUBJECTED TO THE STUDY. THE FORM OF GLAUCOMA (SIMPLE OR CONGESTIVE) SHOWED NO INFLUENCE ON THE BORDER VALUE OF COLOR VISUAL FIELD. IT WAS ESTABLISHED THAT SUMMARY VALUES OF COLOR VISUAL FIELD ARE MORE CONSTRICTED IN PATIENTS WITH INITIAL GLAUCOMA AS COMPARED TO THOSE IN HEALTHY PERSONS. IN PATIENTS WITH ADVANCED STAGE OF GLAUCOMA THE BORDERS OF VISUAL FIELD APPEARED STILL MORE CONSTRICTED AS COMPARED TO THOSE IN PATIENTS WITH INITIAL GLAUCOMA. SIGNS OF INVERSION TO BLUE COLOR WERE FOUND AT INITIAL STAGE OF GLAUCOMA IN 89.03PERCENT, AND AT ADVANCED STAGE, IN 100PERCENT. IT WAS ALSO ESTABLISHED THAT A CHANGE IN INTRAOCULAR TENSION EFFECTED THE BORDERS OF VISUAL FIELD IN PATIENTS WITH INITIAL STAGE OF GLAUCOMA ONLY. IN PATIENTS WITH ADVANCED AND FAR ADVANCED STAGES OF GLAUCOMA THE CHANGE IN INTRAOCULAR TENSION HAD NO EFFECT ON THE VALUE OF COLOR VISUAL FIELD BORDER. THIS WAS MANIFESTED ITSELF IN THE FACT THAT A COMPENSATION OF INTRAOCULAR TENSION IN EYES WITH ADVANCED AND FAR ADVANCED GLAUCOMA PRODUCED NO WIDENING OF COLOR VISUAL FIELD BORDERS WHICH WAS THE CASE WITH INITIAL GLAUCOMA.
FACILITY: HELMHOLTZ MOSCOW RES INST. EYE DIS., MOSCOW, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ELECTRON MICROSCOPIC STUDY OF CLAYS FROM THE STARDINSK POTASH
DEPOSIT -U-
AUTHOR-(03)-ALEKSANDROVICH, KH.M., MAKATUN, V.N., PECHKOVSKIY, V.V.
COUNTRY OF INFO--USSR
SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. KHIM. NAVUK 1970, (1), 43-9
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--ELECTRON MICROSCOPY, FLOTATION REAGENT, POTASSIUM COMPOUND,
SODIUM CHLORIDE, CELLULOSE, PEPTIDE, AMINE DERIVATIVE/WICK CELLULOSE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1993/0708 STEP NO--UR/0419/70/000/001/0043/0049
CIRC ACCESSION NO--AP0113572
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0113572

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. METHODS ARE DESCRIBED FOR DETN. NOT ONLY OF FORM AND SIZE OF CLAY PARTICLES IN K DEPOSITS BY ELECTRON MICROSCOPY BUT ALSO FOR THE OBSERVATION OF THE EFFECT OF ADMIXTS. OF NA₂CO₃ AND KCL OR OF THE FLOTATION AGENTS CM CELLULOSE AND OCTADECYLAMINE ON FLOCCULATION AND OF NA₂CO₃ P SUB₂ O SUB₇ ON THE PEPTIZATION OF THE CLAY PARTICLES AND THE CONDITION OF THE DISPERSIONS. THE CLAYS PARTICLES WERE SPED. FROM KCL BY TREATMENT WITH BOILING H₂SO₄ AND FROM CARBONATES BY N HCL. FACILITY: INST. OBSHCH. NEORG. KHIM., MINSK, USSR.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INFRARED SPECTRA OF COPPER SELENITES -U-
AUTHOR--(04)-MAKATUN, V.N., PECHKOVSKIY, V.V., MELNIKOVA, R.YA., GUSEV,
S.S. *M*
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(3), 497-503
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--COPPER COMPOUND, SELENIUM COMPOUND, OXYGEN COMPOUND,
CHRYS TALLOGRAPHY, IR SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/F RAME--1997/0330 STEP NO--UR/0368/70/012/003/0497/0503
CIRC ACCESSION NO--AP0119317
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE—23OCT70

CIRC ACCESSION NO--AP0119317

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STATE OF H SUB2 O IN CRYST. CU SELENITE HYDRATES, AND THE CHANGES OF THE SPECTRAL CHARACTERISTICS OF SE0 SUB3 PRIME2 NEGATIVE ION BOUND TO ONLY ONE CATION WERE STUDIED AS A FUNCTION OF THE CHANGE OF CRYSTALLOGRAPHIC PARAMETERS. THE PREPN. OF CUSE0 SUB3.2H SUB2 O, CUSE0 SUB3.2D SUB2 O, CRYST. CUSE0 SUB3, AMORPHOUS CUSE0 SUB3, CUO.CUSE0 SUB3, AND CUO. 2SE0 SUB3 IS DESCRIBED IN GREAT DETAIL. THE IR SPECTRA WERE OBTAINED BETWEEN 400 AND 4000 CM PRIME NEGATIVE1.

UNCLASSIFIED

USSR

UDC: 681.333

KABLIS, E. P., SATKYAVICHUS, E. B., ~~MAKAVYATSKAS, R. A.~~, SHAULIS, V. I.,
Kaunas Polytechnical Institute

"An Impact-Modeling Device"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obratzsy, Tovarnyye Znaki,
No 4, Feb 72, Author's Certificate No 326600, Division G, filed 7 Aug 70,
published 19 Jan 72, p 184

Translation: This Author's Certificate introduces an impact-modeling de-
vice which contains an operational amplifier with a diode at the output.
As a distinguishing feature of the patent, the functional possibilities of
the device are extended by connecting a special circuit in parallel with
the amplifier feedback. The circuit is comprised of a star-connected first
resistor and diode with its anode connected through a second resistor to
the output of the amplifier, while the second plate of the capacitor is
connected to the zero bus.

1/1

- 78 -

Power

USSR

UDC 621.311.019.3

MARCHENKO, YE. A., Candidate of Technical Sciences, SIN'CHUGOV, F. I., Engineer

"Operating Reliability of Power Systems as a Scientific and Technical Problem"

Moscow, Elektricheskiye Stantsii, No 3, March 1971, pp 7-10

Abstract: The problem of considering a series of factors when investigating questions concerning the formation of electric power systems is stated in this article, and a basis is provided for the necessity of a scientific approach to gathering and processing statistical data on the reliability of electric power equipment. It is pointed out that it is necessary to develop and introduce a mandatory united method of estimating the operating reliability of electric power systems and individual power projects. The gathering and processing of the statistical data on the failure rate of equipment in the electric power systems and the consequences connected with this must be better organized. Attention must be given to studying the statistical laws of random phenomena and processes and providing a basis for the initial data used in reliability calculations.

The solution of the technical-economic problems of reliability must be

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USSR

MARCHENKO, YE. A., et al., Elektricheskiye Stantsii, No 3, March 1971, pp 7-10

accelerated. These problems include the development of engineering methods of estimating economic losses and optimization of reliability and stability of electric power systems, including cases of optimization with incomplete statistical data. Simultaneously, normative requirements on the reliability of electric power systems must be developed for planning, design and operational needs. These requirements would be more precisely defined or replaced as more refined procedures are developed or operating experience is accumulated. Finally, it is necessary to make the requirements on the reliability level and guarantees of industrially manufactured equipment for power engineering more rigid and include these requirements in the All-Union State Standards for equipment.

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- 136 -

AA0040708- Makedonskiy, V.M. UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3/70

236222 POINT MICRO-WELDER contains a cylinder
1 with a wire 4, and a clamping device 8.
In order to reduce the possibility of ruptures
of wire by eliminating the dynamic loads, which
appear in the beginning of the unwinding of wire
from the cylinder and in the process of it, the
clamping device has a rack 7 which interacts with
the friction cylinder 3. The friction cylinder is
fixed on the same axis as the cylinder, and is
prevented from turning backwards by a ratchet 2.
The diameter of the cylinder is equal to the
diameter of the friction cylinder. 29.5.67.
as 1159581/25-7. V.M.MAKEDONSKII et alia.
E.O.Paton electrowelding Inst. (16.6.69.) Bul.6/
24.1.69. Class 49h, Int.Cl. B.3k.

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18
LD

19750343

AA0040708

AUTHORS: Makedonskiy, V. M.; Movlyan, G. A.; and
Moyseyenko, Ye. G

Institut Elektrosvarki imeni Ye. O. Patona

19750344

Agriculture

USSR

UDC 581.13.04:632.95.024.4

CHKANIKOV, D. I., MAKEYEV, A. M., PAVLOVA, N. N., and DJBOVOY, V. P., All-Union Scientific Research Institute of Phytopathology, Bol'shiye Vyazemy, Moscow Oblast

"The Behavior of 2,4-D in Plants With Different Resistance to This Herbicide"

Moscow, Fiziologiya Rasteniy, Vol 18, No 6, Nov/Dec 71, pp 1,253-1,259

Abstract: In plants sensitive to 2,4-D (sunflower and mustard), the herbicide is quickly carried away from the leaves to which it is applied and accumulates in the growth tips and stalks, almost without being metabolized. In moderately sensitive plants (bean, soya, pea, coleus, beechwheat, and common lamb's-quarters), the herbicide is transported at a lower rate, and a portion of it is metabolized to low molecular-weight water-soluble or ether-soluble metabolites. In resistant plants (wheat, maize, plantain, lady's mantle, and strawberry), the herbicide remains in the leaves either in the initial, free form or conjugated with large molecules. Immobilization of the herbicide in the leaf tissue is one important mechanism of resistance, and this fixation can be achieved not only by conjugation but also by other means.

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USSR

UDC 624.131.43+539.21.084-492.3

MAKEYEV, A. M.

"Method of Determining the Maximum Vertical Stresses under a Conical Fill"

Sb. nauchn. tr. Vses. n.-i. in-t transp. str-va (Collective Scientific Works of the All-Union Scientific Research Institute of Transport Construction), 1970, vyp. 32, pp 37-42 (from RZh-Mekhanika, No 10, Oct 70, Abstract No 10 V521)

Translation: The fill material is simulated by an elastic uniform isotropic solid state. By using the known expression for the distribution of the normal vertical stress σ_z inside an elastic halfspace (the Boussinesq problem), the author obtains the formula for determining the maximum vertical stresses under conical fills in the form $\sigma_z^k = \alpha_k(\phi)\gamma H$.

Here, γ denotes the specific weight of the soil, H is the height of the cone, $\alpha_k(\phi)$ is the coefficient of decrease in magnitude of the maximum stress caused by the natural weight which depends on the angle ϕ of

USSR

MAKEYEV, A. M., Sb. nauchn. tr. Vses. n.-i. in-t transp. str-va, 1970,
vyp. 32, pp 37-42

inclination of the inclines of the fill to the horizontal. For the most widespread slope angles (in the majority of cases these are the natural slope angles) ($20^\circ < \phi < 50^\circ$ the value of the coefficient α_k varies within the limits of 0.763-0.527. The experimental determination of the coefficient α_k is discussed for a pile of rubble with a natural slope angle of 39° . The experimentally obtained values of α_k differ from the calculated values by 9-10%.

2/2

- 47 -

USSR

UDC 581.198:632.951

CHKANIKOV, D. I., MAKEYEV, A. M., PAVLOVA, N. N., and DJBOVOY, V. P., All-Union Scientific Research Institute of Phytopathology, Bol'shiye Vyazeny Moscow Oblast

"N-(2,4-Dichlorophenoxyacetyl)-L-Glutamic Acid, A New Metabolite of 2,4-D"

Moscow, Fiziologiya Rasteniy, Vol 19, Vyp 2, Mar/Apr 72, pp 436-442

Abstract: A new metabolite, N-(2,4-dichlorophenoxyacetyl)-L-glutamic acid, was separated by paper chromatography along with N-(2,4-dichlorophenoxyacetyl)-L-aspartic acid from extracts of soya bean plants treated with 2,4-D-2-¹⁴C. These conjugates of 2,4-D had the same mobility during paper chromatography in different solvents (20 were used). They were separated by gas-liquid chromatography. Both of these compounds were identified by UV, IR, NMR, and mass spectra. The compounds underwent complete hydrolysis in 6 N HCl at 100° in 2 hr yielding 2,4-D and equimolar amounts of aspartic and glutamic acids. Amino acid derivatives of 2,4-D were accumulated mainly in the treated leaves of soya and, presumably, were not transferred into other organs. The amino acid derivatives of 2,4-D were absent in the phloem sieve tubes of aphids feeding on soya bean plants treated with 2,4-D. It is assumed that the production of amino acid derivatives is one of the ways in which the soya leaf tissues immobilize the 2,4-D. 1/1

- 30 -

UDC 539.3.01

USSR

ZHEMKOV, L. I., MAKEYEV, A. S.

"Nonstationary Thermocontact Problem for a Composite Body of T-Shaped Cross Section"

Tr. Kuybyshev. aviats. in-t (Works of Kuybyshev Aviation Institute), 1972, No. 63, pp 70-75 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V71)

Translation: It is proposed that the solution be found by the method of finite integral transformations and Laplace transformation that makes it possible to reduce the initial problem to finding the solution of a computational system of algebraic equations. Authors' abstract.

USSR

UDC 616.006.02

KOZHANOV, N. G. and MAKEYEV, D. A., Chair of Biophysics

"Effects of Polycyclic Hydrocarbons in the Initial Stage of Carcinogenesis"

Moscow, Vestnik Moskovskogo Universiteta, No. 1, Jan/Feb 71, pp. 104-106

Abstract: A study performed on rats into which polycyclic hydrocarbons were injected subcutaneously revealed that oxidation of liver lipids in the presence of polycyclic hydrocarbons may result in the formation of a compound whose antioxidative activity is proportional to the carcinogenic activity of the hydrocarbon. The probable substrates formed are tocopherol and other lipid antioxidants. Changes in lipids take place in the early stages of chemical carcinogenesis.

I/T

1/2 026

UNCLASSIFIED

PROCESSING DATE--300CT7:

TITLE--SOME ASPECTS IN THE STUDY OF IMMUNOLOGICAL REACTIVITY IN
SCHIZOPHRENIA AND OTHER NEURO PSYCHIATRIC DISORDERS -U-

AUTHOR--MAKEYEV, G.A.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KURSAKOVA, 1970.
VOL 70, NR 6, PP 891-896

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--COMPLEMENT FIXATION TEST, PHAGOCYTOSIS, NEUROSIS, PSYCHOSIS,
SCHIZOPHRENIA, IMMUNOLOGY, PSYCHIATRY, DIAGNOSTIC MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1089

STEP NO--UR/0246/70/070/006/0891/0896

CIRC ACCESSION NO--AP0126720

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30UCT71

CIRC ACCESSIGN NO--AP0126720

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDIED THE NONSPECIFIC IMMUNOLOGICAL REACTION (THE INDICES OF NATURAL IMMUNITY, COMPLEMENT, PROPERDIN, PHAGOCYTOSIS, BACTERIAL SERUM ACTIVITY), THE AUTOIMMUNE PROCESS (COOMB'S REACTION), SKIN ALLERGICAL TESTS WITH BACTERIAL ALLERGENS IN 110 SCHIZOPHRENIC PATIENTS, HAVING IN VIEW THE TYPE OF DEVELOPMENT OF THE DISEASE (CONTINUOUS AND PERIODICAL). FOR CONTROL PURPOSES THE AUTHOR STUDIED AS WELL 74 PATIENTS WITH NEUROSIS AND REACTIVE PSYCHOSES AND 36 PATIENTS WITH RESIDUAL ORGANIC PSYCHOSES. THE MOST STRIKING IMMUNOLOGICAL CHANGES WERE SEEN IN PATIENTS WITH A CONTINUOUS COURSE OF THE SCHIZOPHRENIC PROCESS (AN INHIBITION OF MOST OF THE REACTIONS). THE IMMUNOLOGICAL REACTIVITY IN PATIENTS WITH PERIODICAL SCHIZOPHRENIA WAS THE LESS CHANGED, REFLECTING NOT ONLY THE PATHOLOGICAL, BUT THE COMPENSATORY CHANGES. IN SCHIZOPHRENIA AND IN SOME OF THE RESIDUAL ORGANIC PSYCHOSES THERE MAY ALSO BE AUTOIMMUNE REACTIONS. THE CHANGES OF IMMUNOLOGICAL REACTIVITY EXERT A SIGNIFICANT INFLUENCE ON THE DEVELOPMENT OF SCHIZOPHRENIA. FACILITY:
 KAFEDRA PSIKHIATRII, KARAGANDINSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

USSR

UDC 621.373.826:621.396

ZARKEVICH, YE. A., MAKEYEV, O. N., SULTAN-ZADE, T. S.

"Results of Experimental Operation of a Photoreceiver for Open Communications Lines"

V sb. Ispol'z. optich. kvant. generatorov v sovrem. tekhn. i med. Ch. 2-3 (Utilization of Lasers in Modern Engineering and Medicine, Parts 2-3 collection of works), Leningrad, 1971, pp 33-43 (from RZh-Radiotekhnika, No 1, 1972, Abstract No 1D652)

Translation: A photoreceiver is described. It is noted that the service life of the receiver significantly exceeds 500 years and is on the average > 1,000 hours. The basic cause for the drop in sensitivity is a decrease in the quantum efficiency of the photocathode which "fatigues." The peak of the spectral characteristic can be shifted to the shorter wave range. The current amplification coefficient of the dynode system does not change in practice. The total effect of the inductions for Moscow is 3-6 decibels. The amplification coefficient of the dynode system is incompletely used. It is limited by the limiting allowable value of the anode current of the photomultiplier (100 microamps). The application of a linear optico-mechanical automatic level control circuit is not justified. On the whole, during the operating process the photoreceiver
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USSR

ZARKEVICH, YE. A., et al., Ispol'z. optich. kvant. generatorov v sovrem. tekhn. i med. Ch. 2-3, Leningrad, 1971, pp 38-43

has recommended itself as one of the most reliable units of the linear channel of the optical communications line. There are 3 illustrations, 1 table and a 1-entry bibliography.

2/2

38

USSR

UDC 621.575.626:772.99

BAKHRAKH, L.D., MAKEYEV, V.A., FRIDMAN, G.KH.

"Preparation Of Holographic Matched Filters In Systems Using Ultrasonic Light Modulator"

V sb. Ispol'z. optich.kvant.generatorov v sovrem.tekhn. i med. Ch.2-3 (Use Of Lasers In Contemporary Technology And Medicine. Parts 2-3--Collection Of Works), Leningrad, 1971, pp 64-67 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A462)

Translation: Equipment is described which makes it possible to perform both preparation of matched filters and optical processing of signals (pattern identification). An ultrasonic cell is used as a light modulator, with six emitters immersed in distilled water. The emitters are excited from a standard signal generator at a frequency of 10 MHz. The converting lens of the reference channel has a focal length $F = 150$ mm, and an aperture $D \approx 20$ mm. The converting lens of the signal channels have, respectively, $F = 600$ mm and $D \approx 70$ mm. A LG-75 laser in a one-mode regime serves as the light source. It is possible

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- 48 -

USSR

BAKHRAKH, L. D. et al, V sb. Ispol'z. optich.kvant.generstorov v sovrem.tekhn. i med. Ch.2-3, 1971, pp 64-67 (From REZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A462)

to attain optimum selectivity of the system by changing the frequency characteristic of the filter. The system has great sensitivity to transverse shifts and to a change of the signal parameters. In view of the fact that for preparation of the filter only one of the diffraction orders of the signal spectra is used, the size of the filter even with a longfocused optice ($F = 600 \text{ mm}$) amounts to $< 1 \text{ mm}^2$. This makes it possible to record a larger number of the filters on one area of the photorecording medium. The theoretical development and a schema of the unit are given. 1 ill. 5 ref. L.K.

2/2

USSR

UDC 536.46:533.6

KRIVULIN, V. N., LOVACHEV, L. A., BARATOV, A. N., MAKEYEV, V. I.

"Study of the Effect of Acceleration on the Concentration Limits of Ignition"

V sb. Gorenive i vzryv (Combustion and Explosion -- Collection of Works),
Moscow, "Nauka", 1972, pp 296-298 (from RZh-Mekhanika, No 3, Mar 73, Abstract
No 3B943)

Translation: Experimental results from a study of the effect of acceleration on the ignition limits of natural gas in air are presented. The experiments were conducted on a device that consisted of a rotating reaction vessel. It was established that under plane propagation along the acceleration vector the ignition limits are compressed and upon achieving an overload of 100 g_0 ($g_0 = 9.8 \text{ m/sec}^2$) the hot mixtures lose the ability to propagate flames. At the same time the ignition limits are weakly dependent on the overload upon the propagation of flame counter to the acceleration vector. 6 ref. Authors' abstract.

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USSR

UDC: 621.317.3(088.8)

KARAU'NIK, M. Ye., MAKEYEV, V. I., ALEKSANDROV, A. F., LEBEDEV, B. M.,
METELITSIN, I. V., PLATONOV, F. V., FEDIN, V. F.

"A Device for Measuring the Electrical Parameters of Piezoelectric
Resonators"

USSR Author's Certificate No 264547, filed 5 Jul 68, published 17 Jun 70
(from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A315 P)

Translation: It is pointed out that conventional devices for measuring
the electrical parameters of piezoelectric resonators do not allow for
direct measurement of piezoelectric current. In the proposed device there
is a special coil with an auxiliary indicator whose scale is graduated in
piezoelectric current values. The resonator to be tested is placed inside
the coil. E. L.

1/1

USSR

UDC: 621.396.67.001.05(088.8)

MAKEYEV, Yu. V.

"A Method of Determining the Mode Makeup of Fields"

USSR Author's Certificate No 248019, filed 2 Jun 66, published 15 May 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6B126 P)

Translation: A method is proposed for determining the mode makeup of fields in the aperture of a radiating antenna with the aid of an auxiliary antenna. To improve accuracy and simplify measurements, a horn which moves perpendicular to the direction of the radiation is used as the auxiliary antenna. The opening of the horn is of the same order of magnitude as the size of the aperture of the radiating antenna.

1/1

USSR

UDC: 621.372.8:535

M

MAKEYEV, Yu. V., SMOLOVIK, V. S.

"Determining the Amplitudes of Modes in a Lens Waveguide"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific and Technical Collection. SHF Electronics), 1970, vyp. 1, pp 117-127 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7B198)

Translation: A method is proposed for determining the numbers and amplitudes of waves which propagate through a lens waveguide by using an open spherical resonator with spherical reflectors. The resonator is coupled to the lens waveguide by a weakly reflecting dielectric plate located on the bisector of the angle between the axes of resonator and waveguide. Formulas are given for calculating the parameters of such a device, called a wave mode analyzer. The design of the analyzer is described, and experimental data obtained by using it are given. Six illustrations, one table, bibliography of eight titles. Resumf.

1/1

- 307 -

USSR

UDC 678.674.004.14:621.397

6

SEDOV, L. N., VLADIMIROVA, Z. V., SAPOZHNIKOVA, YE. I., MAKEYEVA, A. A., SEMENOV, L. G., MAK-MILLIN, D. M., BAKANOV, YU. A., DIDZHYULENE, D. I., MALKINA, F. S., and ZHLABIS, S. B.

"Polyester Hermetic-Sealing Compounds"

Moscow, Plasticheskiye Massy, No 6, 1970, pp 61-62

Abstract: The authors studied compounds for the hermetic sealing of horizontal output transformer coils for television receivers. These compounds should have low viscosity in the initial state and a high hardening rate up to 100°C. In the hardened state they should possess self-extinguishability, water resistance, good mechanical and electric insulation properties, and stability of properties up to 120°C. The principal components chosen were polyester resins PN-1 and PN-69. Because of the requirement of self-extinguishability, special additives (antimony trioxide and chlorine- or fluorine-containing polymers) were introduced into the resins. In addition, mineral fillers (talc, mica, powdered quartz, titanium dioxide, powdered silica gel, etc.) were added to give the sealing compounds

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USSR

SEDOV, L. N., et al, Plasticheskiye Massy, No 6, 1970, pp 61-62

the requisite viscosity and to lower their cost. The article gives data on the hermetic sealing process. These self-extinguishing compounds are being used for the hermetic sealing of horizontal output transformers for black-and-white (1 class) and color television sets and viewing monitors.

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- 93 -

AA0039840- MAKEYEVA AN UR 0482 *4*

Soviet Inventions Illustrated, Section I Chemical, Derwent,

3/70

237081 APPARATUS FOR CULTIVATING MICROORGANISMS
such as fungi, comprises a rotating drum
1 provided with a charging hatch 2, and two hollow
pivots 3, through which tubes 4 and 5 are passed.
Steam, sterile water, air and vaccination prepar-
ations are consecutively fed through tube 4
Tube 5 serves as an outlet for steam, and culture
suspension. The end of tube 5 is branched, and one
of the branches is provided with pins 6. The drum
is equipped with blades 7 fixed to springs, which
improves the mixing and aeration of the medium.
The charging hatch 2 is provided with a filter
made, e.g. of Petryanov's fabric. The medium is

4
3

6

0001217

AA0039840

charged through hatch 2, and then sterilised with steam at 2-3 atm. gauge for 60-70 mins. The medium is allowed to cool, then sterile water and the vaccination preparation are introduced through tube 4. When the drum rotates, the blades 7 strike pins 6, and vibrate, thus agitating the medium and the air

in the drum. A considerable intensification of the cultivation process is achieved. 16.10.67. as 1190489/28-13. S.P. KOLOSKOV et alia. All-Union Institute of Alcohol and Liqueur Industry. (20.6.69.) Bul. 8/12.2.69. Class 6a. Inv. Cl. C12k.

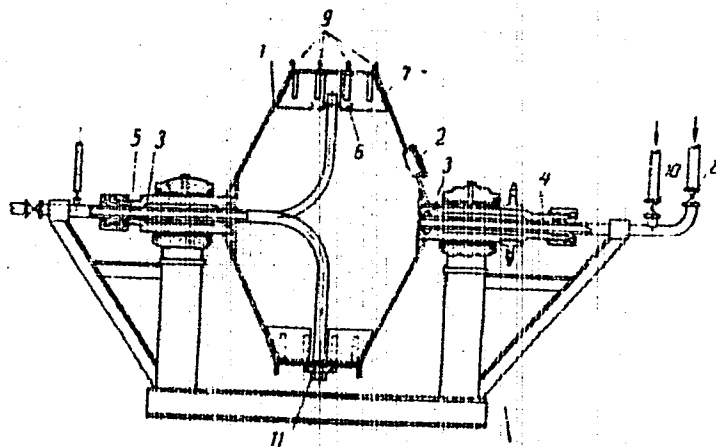
AUTHORS: Koloskov, S. P.; Yarovenko, V. L.; Kalunyants, K. A.;
Makeyeva, A. N. and Golger, L. I.

Vsesoyuznyy Nauchno - Issledovatel'skiy Institut
Spirtovoy i Likero - Voduchnoy Promyshlennosti

2/3

19741218

AA0039840



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USSR

NEL'NIKOV, N. N., MANDEL'BAUM, YA. A., ABRAMOVA, G. L., SMIRNOVA, N. S., GAR, K. A., BOKAREV, YE. M., ORLOVA, V. I., and MAKEYEVA, Y. F.

"Synthesis and Pesticidal Activity of Dithiophosphoric Acid Amides"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protective Agents -- collection of works), No 2, Moscow, 1972, pp 210-214 (from RZh-Khimiya, No 19, Oct 73, Abstract No 19N479)

Translation: Studying the relationship of structure-pesticidal activity a series of amides $R'R''N(ClCH_2CH_2O)P(S)SR'''$ (I) has been synthesized and evaluated (R-alkyl; R'-H or alkyl; R''-alkyl, Ph, substituted phenyl) the compounds showing insecticidal and acaricidal activity. The following I have been obtained (R', R'', R''', d_4^{20} , n_D^{20} , m.p. °C being reported):

Me, H, Pr, 1.2210, 1.5450, -; Et, H, Pr, 1.1956, 1.5380, -;
Pr, H, Pr, 1.1660, 1.5300, -; iso-Pr, H, Pr, 1.1735, 1.5318, -; Bu, H, Pr, 1.1485, 1.5320, -; iso-Bu, H, Pr, 1.1505, 1.5280, -; Me, H, Bu, 1,2018, 1.5410, -; Et, H, BU, 1.1795, 1.5360, -; Pr, H, Bu, 1.1500,

1/4

(4)

USSR

MEL'NIKOV, et al., V sb. Khim sredstva zashchity rast., No 2, Moscow, 1972,
pp 210-214

1.5285, -; iso-Pr, H, Bu, 1.1295, 1.5310, -; Bu, H, Bu, 1.1285, 1.5280,
-; iso-Bu, H, Bu, 1.1285, 1.1545, -; Me, Me, Pr, 1.2123, 1.5450, -;
Et, Et, Pr, 1.1313, 1.5180, -; Pr, Pr, Pr, 1.0831, 1.5040, -; Bu, Bu,
Pr, 1.0601, 1.5031, -; Me, Me, iso-Pr, 1.1900, 1.5325, -; Et, Et, iso-
Pr, 1.1233, 1.5160, -; Pr, Pr, iso-Pr, 1.0910, 1.5080, -; Bu, Bu, iso-
Pr, 1.0732, 1.5090, -; Me, Me, Bu, 1.2133, 1.5500, -; Et, Et, Bu,
1.1123, 1.5160, -; Pr, Pr, Bu, 1.0827, 1.5160, -; Bu, Bu, Bu, 1.0581,
1.5060, -; Me, H, Ph, -, -, 124; Et, H, Ph, -, -, 65; Pr, H, Ph, -,
-, 60; iso-Pr, H, Ph, -, -, 74-5; Bu, H, Ph, -, -, 45; iso-Bu, H, Ph,
-, -, 78-9; Me, H, C₆H₄Cl-4, -, -, 118-9; Et, H, C₆H₄Cl-4, -, -,
2/4

USSR

MEL'NIKOV, et al., V sv. Khim sredstva zashchity rast., No 2, Moscow, 1972
pp 210-214

71-2; Pr, H, C₆H₄Cl-4, -, -, 59-60; iso-Pr, H, C₆H₄Cl-4, -, -, 60-1; ...
Bu, H, C₆H₄Cl-4, -, -, 60-1; iso-Bu, H, C₆H₄Cl-4, -, -, 61-62; Me, Me,
C₆H₄Cl-4, 1.3632, 1.6081, -; Et, Et, C₆H₄Cl-4, 1.2700, 1.5705, -; Pr,
Pr, C₆H₄Cl-4, 1.2261, 1.5565, -; Bu, Bu, C₆H₄Cl-4, 1.1821, 1.5530, -;
Me, Me, Ph, 1.2561, 1.5720, -; Et, Et, Ph, 1.2223, 1.5675, -; Pr, Pr,
Ph, 1.1700, 1.5520, -; Bu, Bu, Ph, 1.1610, 1.5500, -; Me, Me, C₆H₃Cl₂-
2,5, -, -, 74-75; Et, Et, C₆H₃Cl₂-2,5, -, -, 70-1; Pr, Pr, C₆H₃Cl₂-2,5,
-, -, 66-7; Bu, Bu, C₆H₃Cl₂-2,5, 1.2763, 1.5660, -; Me, H, Ph, -, -,
74-5; Et, H, Ph, -, -, 73-4; Pr, H, Ph, -, -, 64-5; iso-Pr, H, Ph, -, ...
3/4

(4)

USSR

MEL'NIKOV, N. N., et al., V sb. Khim. sredstva zashchity rast., No 2, Moscow, 1972, pp 210-214

-, 69-70; Bu, H, Ph, -, -, 59-60; iso-Bu, H, Ph, -, -, 83-4; Me, Me, Ph, -, -, 78-9; Et, Et, C₆H₅, -, -, 61-3; Bu, Bu, C₆Cl₅, -, -, 40-1; Me, H, C₆H₄NO₂-4, -, -, 69-70; Et, H, C₆H₄NO₂-4, -, -, 65-6; Pr, H, C₆H₄NO₂-4, -, -, 62-3; iso-Pr, H, C₆H₄NO₂-4, -, -, 60-1; Bu, H, C₆H₄NO₂-4, -, -, 62-3; iso-Bu, H, C₆H₄NO₂-4, -, -, 60-2; Me, Me, C₆H₄NO₂-4, -, -, 73-4; Et, Et, C₆H₄NO₂-4, -, -, 70-1; Pr, Pr, C₆H₄NO₂-4, -, -, 69-70; Bu, Bu, C₆H₄NO₂-4, -, -, 65-6.

4/4

Acc. Nr: AP0044022

M

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 2, pp 49-52

COMBINATION OF THORIUM WITH BLOOD CONSTITUENTS
DEPENDING UPON THE CHEMICAL NATURE
OF THE COMPOUND INTRODUCED

Pavlovskaya, N. A.; Makeyeva, L. G.; Orlyanskaya, R. L.

The results of experimental investigations on albino rats produced evidence that thorium is primarily present in the blood plasma, regardless of the method of its administration, chemical nature of the compounds introduced and the time lapsed since their entrance into the organism. With entrance of a noncomplex thorium compound its main bulk in the blood is bound with globulins, while in the instance of a stable complex compound its distribution in the plasma depends upon the mode of its introduction. With intravenous administration thorium is found predominantly in the non-protein part of the blood.

111

REEL/FRAME
19770459

4th 2

USSR

UDC 616.001.4-08

SHCHUR, V. V., MAKEYEVA, N. S., ARENBERG, A. A., GOL'TS, M. V., and NIKANOROV, YU. A., Fryazino Central Municipal Hospital

"Use of a Laser to Treat Wounds"

Leningrad, Vestnik Khirurgii imeni I. I. Grekova, No 6, 1972, pp 85-89

Abstract: A helium-neon laser (output power 10 milliwatts, wavelength 6328 Å) was used to treat 25 patients with persistent non-healing wounds and trophic ulcers of the lower extremities that had previously shown no response to conservative treatment, physical therapy, or surgery. The course of treatment included 12 to 25 daily sessions with the initial exposure of 20 to 30 seconds gradually increased to several minutes. The results showed complete healing of the wounds with the formation of a rather elastic connective-tissue scar and epithelization in 19 and marked contraction of the wound area in 4. In the great majority of patients, active growth of granulations in the wound and start of epithelization at the margins were evident after 3 to 5 sessions. Neither the microflora of the wound nor the main hematological indexes (except a slight decrease in the WBC after 70 to 10 procedures and near normalization by the end of treatment) were significantly affected by the laser radiation. Follow-up of 16 patients for 3 to 7 months revealed no recurrences of the wounds.

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USSR

M UDC 615.281.221.1:547.757 3

AVRAMENKO, V. G., PERSHIN, G. N., MUSHULOV, P. I., MAKEYEVA, O. O.,
YERYSHEV, B. YA., SHAGALOV, L. B., SUVOROV, N. N., Moscow Institute
of Chemical Technology imeni D. I. Mendeleev, Moscow, Ministry of
Higher and Secondary Specialized Education RSFSR; All-Union Scien-
tific Research Chemical and Pharmaceutical Institute imeni S.
Ordzhonikidze, Moscow, Ministry of Health USSR

"Indole Derivatives. Part V. Synthesis and Tuberculostatic Acti-
vity of Omega-Indolyl-3-Alkannic Acids"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol. IV, No 3, 70, pp.
15-18

Abstract: Indolylalkannic acids have been the subject of numerous
studies for quite some time. Most of this research, however, has
been devoted to lower members of the series of indolylalkannic acids,
namely indolyl-3-acetic, β -indolyl-3-propionic and γ -indolyl-3-butyric
acids. It is expected that some of these compounds may possess
physiological activity. Of particular interest is ω -indolyl-3-
undecanoic acid, which is the indole analog of hydnoic acid.
Indole alkylation with haloalkannic acids shows considerable promise.
Earlier research describes the synthesis of heteroauxin from indole
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USSR

AVRAMENKO, V. G., et al, Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol IV, No 3, 70, pp 15-18

and chloroacetic acid. In recent years ω -chloroalkannic acids with an odd number of carbon atoms have become readily available. Indole was alkylated with ω -haloalkannic acids in a strongly alkaline medium by heating in an autoclave; 240 -- 250 °C, 18 -- 20 atm pressure and a 1:2 indole-to-haloalkannic acid ratio appear to be the optimum reaction conditions. The yield of ω -indoly-3-alkannic acids was 42 -- 90%. The tuberculostatic activity was determined in vitro in a Soton medium with and without blood serum of a horse. Use was made of human microbacteria Academia and H37Rv. The compounds were found to have tuberculostatic activity.

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- 26 -

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INDOLE DERIVATIVES. V. SYNTHESIS AND TUBERCULOSTATIC ACTIVITY OF
INDOLE, 3, ALKANOIC ACIDS -U-
AUTHOR--(05)-AVRAMENKO, V.G., PERSHIN, G.N., MUSHULOV, P.I., MAKEYEVA,
O.O., YERYSHEV, B.YA. UNCLASSIFIED
COUNTRY OF INFO--USSR
SOURCE--KHIM.-FARM. ZH. 1970, 4(3), 15-18
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--INDOLE DERIVATIVE, ORGANIC ACID, CHEMICAL SYNTHESIS, MOLECULAR
STRUCTURE, TUBERCULOSIS
CONTROL MARKING--NO RESTRICTIONS.
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0361 STEP NO--UR/0450/70/004/003/0015/0018
CIRC ACCESSION NO--AP0121049
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121049

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MIXT. OF 0.05 MOLE INDOLE, 0.1 MOLE OMEGA CHLORO OR BROMOALKANECARBOXYLIC ACID, 0.4 MOLE KOH AND 50 ML H₂O WAS PLACED IN AN AUTOCLAVE, TEMP. RAISED TO 240-50 DEGREES DURING 2-2.5 HR AND KEPT 12 HR AT THIS TEMP. TO YIELD I AND THEIR ESTERS AND HYDRAZIDES. THE TUBERCULOSTATIC ACTIVITY OF I AND I HYDRAZIDES IS GIVEN. FACILITY: MOSK. FHIM.-TEKHNOL. INST. IM. MENDELEEVA, MOSCOW, USSR.

UNCLASSIFIED

MAKEYEVA, V. F.

JPRS 57517
15 NOV 72

Accordingly, acceleration is among the factors capable of causing labile the membranes of subcellular structures. The lability of these membranes is usually accompanied by the setting free of enzymes from

It is known that transverse accelerations cause functional, structural and biochemical shifts in the animal body. There is a definite correlation between structural impairments and biochemical changes in the cells of animals subjected to high accelerations (M. I. Resunov and I. M. Shadrin). Animals exhibit a decrease in oxygen concentration in the tissues and this results in a decrease in the level of cell respiration with manifestations of hypoxia (A. S. Gazer, et al., 1963). A shortage of energy resources cause an impairment in functioning of cell membranes. Data published by Moorek and Broody show that during liver hypoxia there is a disturbance in oxidative phosphorylation and a decrease in the K⁺ level in the cytoplasm. It is also known that an oxygen shortage in the tissue causes damage to membranes of lysosomes and mitochondria with an impairment in their permeability (De Duve, 1959, 1960; Federick, Chevremont-Gombalres).

Abstract: Exposure of rats to transverse accelerations of 25 g, imparted for six minutes, resulted in a 20% decrease in the DNA content in their spleens and caused no changes in liver DNA content. The exposure brought about no variations in uric acid levels in tissue homogenates or their supernatants. However, the total activity of the five amino acid bound enzyme in the liver measured in the homogenate after treatment with Triton X-100 was 17% lower in the experimental animals than in the controls. The physicochemical properties of DNA (molecular weight and secondary structure) from tissues of animals which were exposed to accelerations remained unaltered in comparison with normal levels.

Article by G. S. Komolova, V. F. Makeyeva, Ya. V. Pelikova, I. D. Iordaniya and I. A. Yegorov; Moscow, ~~Kosmos~~ *Biophysics*, Vol. 1, No. 5, September-October 1972, pp. 14-17, submitted for publication August 1972.

DNA CATABOLISM IN THE ORGANS OF RATS UNDER THE INFLUENCE OF TRANSVERSE DIRECTED ACCELERATIONS

UDC 612.348.125.1.012.4:791.113

1/2 011 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--SEPARATION OF RIBONUCLEASE PHOTOLYSIS PRODUCTS BY A GEL FILTRATION
METHOD -U-
AUTHOR--(04)-KOMOLOVA, G.S., YEGOROV, I.A., VASILYEVA, T.B., MAKEYEVA, V.F.

COUNTRY OF INFO--USSR

SOURCE--DCKL. AKAD. NAUK SSSR 1970, 191(1)

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RIBONUCLEASE, PHOTOLYSIS, CHEMICAL SEPARATION, GEL, FILTRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1477

STEP NO--UR/0020/70/191/001/0223/0230

CIRC ACCESSION NO--A10130406

UNCLASSIFIED

2/2 011 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AT0130406
ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. GEL FILTRATION ON A SEPHADEX G-100 COLUMN WAS USED TO SEP. THE FRACTIONS OF RIBONUCLEASE AFTER ILLUMINATION WITH UV LIGHT. ILLUMINATION TO THE POINT OF 15PERCENT INACTIVATION PRODUCED A SECONDARY PEAK ON THE CHROMATOGRAM IN WHICH THE ENZYMIC ACTIVITY WAS TOTALLY LACKING. FURTHER INACTIVATION LED TO ENHANCEMENT OF THIS PEAK, FOLLOWED BY DEVELOPMENT OF YET ANOTHER NEW PEAK WHICH HAS SOME ENZYMIC ACTIVITY. EVIDENTLY IN THE EARLY STAGE OF ILLUMINATION AN SS BOND IS RUPTURED AND FURTHER DENATURATIONAL CHANGES IN THE ENZYME ARE NOT ACCOMPANIED BY BREAKS OF OTHER SS BRIDGES. THE TOTAL SH CONTENTS IN NATURAL AND ILLUMINATED SPECIMENTS PROVED TO BE EQUAL. THE LOSS OF ACTIVITY CANNOT BE ASCRIBED TO DENATURATION PER SE OF ALL ENZYME MOLS. BUT ONLY OF SPECIFIC PARTS OF THESE. FACILITY: INST. BIKHIM. IM. BAKHA, MOSCOW, USSR.

UNCLASSIFIED

M
USSR

UDC 621.396.6.002.621.793

KUMLEVA, L. A., NIKOLAYEVA, N. M., KOROLEV, A. L., MAKSYEVA, Ye. D., LEVCHENKO, B. N.,
ABAKUMOVA, G. S., LIPOVSKAYA, N. I.

"Lubricating Grease"

USSR Author's Certificate No 253961, Filed 27 Jul 68, Published 26 Feb 70 (from
RZh-Radiotekhnika, No 10, Oct 70, Abstract No 1QV295 P)

Translation: The authors propose a lubricating grease based on a dispersion medium thickened with silica gel, to which liquid polyoxyalkyleneglycol is added as the dispersion medium. In order to loosen and remove oxide films from metals, polyatomic phenol is added to the lubricant in quantities of 0.1-10%, silica gel is used in quantities of 5-15%, and liquid polyoxyalkyleneglycol -- 95-85%.

1/1