

2/2 024

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0122270

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDN. OF GROUND UNSLAKED LIME IN AN UNSTATED AMT. TO THE TITLE CEMENTS GREATLY IMPROVED THEIR EXPANDING POWER, RESISTANCE TO PENETRATION OF GAS AND WATER, AND THEIR ADHESION TO STEEL AND STONE. SILICA IS ALSO ADDED TO COMBINE WITH THE $Ca(OH)_2$ SUB2 FORMED DURING DRYING. PRACTICAL TESTS IN STORAGE AREAS AT 100-168 ATM. GAVE GOOD RESULTS.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--M-CHOLINOREACTIVE STRUCTURES OF THE BRAIN AND CONDITIONED ACTIVITY
-U-
AUTHOR--(04)-KRYLOV, S.S., VINOGRADOV, V.V., KALNING, S.A., SNEGIREV, YE.A.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
541-546
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CONDITIONED REFLEX, NERVOUS SYSTEM DRUG,
ELECTROENCEPHALOGRAPHY, CHOLINOLYTIC, NOREPINEPHRINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1997/1924

STEP NO--UR/0247/70/020/003/0541/0546

CIRC ACCESSION NO--AP0120573

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120573

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SINGLE ADMINISTRATION OF AMYZIL (5 AND 40 MG-KG) PREVENTED ARECOLYNE TREMOUR IN RATS AND ARECOLYNE AND GALANTOMINE EEG DESYNCHRONIZATION IN CATS, AND EVOKED UNMOTIVATED MOTOR EXCITATION, A COMPLETE DISAPPEARANCE OF CONDITIONED REFLEXES AND A DIMINISHED NORADRENALINE CONTENT IN THE RATS BRAIN. WITH REPEATED DAILY INJECTIONS OF CHOLINDLYTICS, THE MOTOR EXCITATION, DISTURBANCES OF CONDITIONED REFLEXES AND THE DECREASE IN NORADRENALINE LEVEL IN THE BRAIN GRADUALLY WEAKENED, AND WERE NOT MANIFEST AT ALL ON THE 9TH TO 10TH DAY, ALTHOUGH EACH SUCCESSIVE AMYZIL INJECTION EXERTED THE USUAL ACTION OF THE CATS' EEG AND COMPLETELY PREVENTED DESYNCHRONIZATION REACTION IN CATS AND TREMOUR IN RATS. AT THE SAME TIME, IN THE CASE OF A FULL BLOCKADE OF THE M-CHOLINORECEPTORS OF THE BRAIN NEW CONDITIONED REFLEXES COULD NOT BE ELABORATED. THE DATA OBTAINED SHOW THAT THE ACETYLCHOLINE TRANSMITTER SYSTEM IN THE BRAIN UNITS IS OF A CONSIDERABLE SIGNIFICANCE FOR MEMORY FORMATION, BUT IS NOT NECESSARY FOR THE PERFORMANCE OF CONDITIONED REACTIONS ALREADY FORMED. FACILITY: INSTITUTE OF TOXICOLOGY, USSR MINISTRY OF HEALTH, LENINGRAD.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--STABILIZATION OF POLYCAPROLACTAM -U-
AUTHOR--(05)-SMIRNOV, L.N., KHARITONOV, V.M., KLYUYEV, V.N., SNEGIREVA,
E.P., KRAVCHENKO, M.P.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 263,136
REFERENCE--CTKRYTIYA, IZOBRET., PROM. OBRATSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--04FEB70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL STABILIZER, CAPROLACTAM, CHEMICAL PATENT, POLYNUCLEAR
HYDROCARBON, HETEROCYCLIC NITROGEN COMPOUND, HETEROCYCLIC SULFUR
COMPOUND, ORGANOMETALLIC COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--3004/1844 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AAC132109
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AAG132109

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EPSILON CAPROLACTAM IS POLYMD. IN THE PRESENCE OF 0.001-1 WT. PERCENT STABILIZER, SUCH AS A MACROCYCLIC COMPD. OF THE FORMULA I OR II, WHERE M IS A GROUP II OR III METAL OF VARIABLE VALENCE TO GIVE STABLE POLYCAPROLACTAMS. THESE MACROCYCLIC COMPS. ARE MIXED WITH METAL HALIDES.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--CHARACTERISTICS OF THE CHROMOPHORES OF THIO DERIVATIVES OF
MACROCYCLES AND THIOPHTHALOCYANINE BASED ON SPECTRAL DATA -U-
AUTHOR--(03)-KLYUYEV, V.N., BEREZIN, B.D., SNEGIREVA, F.P.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., KHIM. TEKHNIK. 1970, 13(2), 209-13
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHTHALOCYANINE, POLYNUCLEAR HYDROCARBON, HETEROCYCLIC NITROGEN
COMPOUND, ORGANIC SULFUR COMPOUND, COPPER COMPOUND, ABSORPTION BAND
SPECTRUM, COLOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0167 STEP NO--UR/0153/70/013/002/0209/0213
CIRC ACCESSION NO--AT0132445
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0132445

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REPLACEMENT OF C ATOMS BY S IN THE PHTHALOCYANINE (I) RING, AND THAT OF A MACROCYCLE (II) RESULTS IN A DISPLACEMENT OF ABSORPTION BANDS IN BOTH II AND ITS CU DERIV. THE PRINCIPAL ABSORPTION BANDS IN II, AND IN II WITH S ATOMS IN 1; 2 AND 3; AND 1, 2, AND 3 POSITIONS ARE 360 AND 510; 360 AND 500; 345 AND 480; 335 AND 430 NM WITH INTENSITIES (LOG EPSILON) IN THE RANGES 3.15-3.37 AND 2.95-3.06. BANDS FOR THE CORRESPONDING CU DERIVS. ARE : 379, 550, 687; 360, 490, 540, 655; 335, 450, 530, 650; AND 335, 430, 510, 615 NM WITH LOG EPSILON: 3.23-3.50 FOR THE 1ST BAND 2.84-2.99 FOR THE 2ND, 2.68-2.89 FOR THE 3RD (WHERE PRESENT), AND 2.06-2.38 FOR THE LAST. FOR CU (I), BANDS ARE FOUND AT 680, 614, AND 346 NM, WHILE IN ITS TETRATHIO DERIV. THE BAND POSITIONS ARE AT 455, 440, AND 310 NM. A THEORY EXPLAINING THE EFFECT OF S ATOMS ON THE CHROMOPHORIC CHARACTERISTICS IS PRESENTED. FACILITY: IVANOV. KHIM.-TEKHNOL. INST., IVANOV, USSR.

UNCLASSIFIED

UDC 581.143 + 547.379.52

USSR

PRILEZHAYEVA, YE. N., LUKIN, V. V., SNEGOTSKIY, V. I., NOVITSKAYA, N. N., LABA, V. I., SHMONINA, L. I., PETUNOVA, A. A., and LEBEDEVA, G. F., Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR, Moscow

"A New Group of Herbicidal Compounds -- Alkylvinyl Sulfones"

Moscow, Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 727-730

Abstract: A systematic study was made of the relation between herbicidal activity and structure for vinyl sulfones and substances similar to them under hothouse conditions on potted plants. It was found that the display of appreciable herbicidal action in these series is due to the presence of a double bond adjoining the sulfonyl group and possessing strong electrophilicity. The highest herbicidal activity was found in vinyl sulfones with normal primary radicals containing 8-10 atoms. These compounds, to which the authors have given the names Alvisone 8, 9, 10 respectively, showed selectivity of action in hothouse experiments. Some properties of Alvisone 8 and 10, obtained

1/3

- 148 -

USSR

PRILEZHAYEVA, YE. N., et al., Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 727-730

from chromatographically pure primary n-octyl and n-decyl mercaptans, were compared with the properties of Alvisone-K, obtained from mercaptan concentrate extracted from polysulfide petroleum of the Ishimbay type, as well as Alvisone 8-10 obtained from a mixture of synthetic alcohols C₈-C₁₀ (supplied by YU. B. KAGAN and S. M. LOKTEV). Alvisone-K was found to be only slightly inferior to Alvisones 8 and 8-10 in herbicidal activity. Data were obtained on the dosage of "Alvisone" herbicides under field conditions, based on three-year field plot tests conducted at the Pushkin base of the All-Union Institute of Plant Protection (Leningradskaya Oblast), as well as by the Chair of Agriculture of the Soil Biology Faculty of Moscow University (Moskovskaya Oblast).

The results indicate that Alvisone-K possesses a number of properties (e. g., low toxicity for warm-blooded animals, stability under storage) which make it promising for the control of annual di-

2/3

USSR

PRILEZHAYEVA, YE. N., et al., Doklady Akademii Nauk SSSR, Vol 194, No 3, 1970, pp 727-730

cotyledonous weeds in carrot plantings. Alvisone can be used as a contact herbicide as a supplement to soil preparations (of the propazine type etc.). The most convenient way of preparing these α, β -unsaturated sulfones is three-stage synthesis from mercaptans, either individual ones or mixtures thereof.

The authors thank T. YE. PIVOVAROVA, V. I. DRONOV, V. KH. SYUNDYUKOVA, T. S. PAPKO for taking part in the synthetic portion of the work, P. V. SABUROVA for taking part in the hothouse tests, A. V. ZAKORDONETS and YE. V. ARZAMASTSEV for determining the toxicity for warm-blooded animals, and Professor R. D. OBOLENTSEV and V. S. BURYI for their interest in the study.

3/3

- 149 -

Acc. Nr: **AP0040323**

Ref. Code: **UR0421**

PRIMARY SOURCE: Eksperimental'naya Khirurgiya i Anesteziologiya,
1970, Nr / , pp 71-75

VASCULAR TONUS IN CHRONIC INTOXICATION

G. V. Snegova

Changes in the vascular tonus are seen in chronic intoxication with lead and carbon sulphide. The tone of cerebral arteries and veins drops, that of the peripheral arteries (arm and leg), as well as in the temporal area rises. Caffein and No-Spa improve the well-being of patients in the majority of cases, decrease headache and normalize the arterial and venous tone in the areas mentioned. Hence, besides other pathogenetic mechanisms causing headache the vascular tone upset (especial hypotonicity of veins) play a considerable role. Therefore for persistent headaches due to chronic intoxication with lead and carbon sulfide No-Spa may be recommended. Caffein is indicated only for saturnism. Patients with chronic carbon sulphide poisoning tolerate poorly caffeine and a number of other drugs which is typical of this intoxication.

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UDC 533.6:536.24

SNEGOVA, N. P.

"Heat Exchange for Large Prandtl Numbers in a Steady State Turbulent Flow"

Trudy Leningradskogo Politekhnikheskogo Instituta, Aerotermodinamika
(Works of the Leningrad Polytechnical Institute, Aerothermodynamics),
No 313, 1970, pp 67-71

Translation: The generalized hypothesis of local nature of turbulent transport is used in this paper to calculate the heat exchange in the wall area of a steady state turbulent flow. The calculation is performed without breaking the flow down into discrete zones. The curves of the universal temperature distribution are presented for various values of the Prandtl number, and the Stanton numbers are determined for various Reynolds numbers on variation of the Prandtl number from 5 to 1,000. Comparison with the experimental results is observed in a wide range of Prandtl numbers. There are 2 illustrations and a 7-entry bibliography.

1/1

1/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--USING THE ELASTIC PROPERTIES OF PLASTIC SLIDING BEARINGS -U-

AUTHOR--(02)-ALSHITS, I.YA., SNEGOVSKIY, F.P.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, VESTNIK MASHINOSTROYENIYA, NO 2, 1970, PP 39-42

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMAL EFFECT, LUBRICATION TECHNIQUE, SLIDE BEARING, ELASTIC
STRESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3003/1867

STEP NO--UK/0122/70/000/002/0039/0042

CIRC ACCESSION NO--AP0130694

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130694

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE AUTHORS SHOW THE POSSIBLE STRUCTURAL USE OF THE ELASTIC PROPERTIES OF PLASTICS FOR IMPROVING THE WORKING CONDITIONS OF A BEARING ASSEMBLY UNDER THE EFFECT OF POWER AND TEMPERATURE FACTORS AND FOR IMPROVING THE CONDITIONS OF BEARING LUBRICATION. ORIGINAL ARTICLE HAS FIVE ILLUSTRATIONS AND SIX BIBLIOGRAPHIC ENTRIES.

UNCLASSIFIED

USSR

UDC 621.391.74

S
SNETKOV, A. S.

"Criteria for Optimum Loading of a System of High-Frequency Communication of the Ministry of River Fleet When Scheduling the Operation of Long-Distance Channel Service With the Help of an Electronic Digital Computer"

Tr. Leningr. in-ta vodn. transp. (Works of the Leningrad Institute of Water Transportation), No 91, 1969, pp 68-72 (from RZh -- Elektrosvyaz', No 2, Feb 70, Abstract No 2.64.10)

Abstract: The system of high-frequency wire communication of the Ministry of the River Fleet is a complex network of communication channels with apparatus of various types. Selection of the optimum layout of a specific form of communication is determined not only by the magnitude of the load in a given section of the system, but also by the structure of the system. Methods are considered for an analysis of alternate forms of long-distance service and criteria are advanced for an evaluation of alternate layouts, taking into account the structure of the system and the overall load. Summary.
1/1

172 023 UNCLASSIFIED
TITLE--ON DEPENDENCE OF UNIT ACTIVITY IN THE INFERIOR COLLICULUS OF RATS
ON THE STIMULUS RISE TIME -U- PROCESSING DATE--30OCT70
AUTHOR--(02)--VARTANYAN, I.A., SNETKOV, V.I.
COUNTRY OF INFO--USSR
SOURCE--FIZIOLOGICHESKIY ZHURNAL SSSR IMENI I. M. SECHENOVA, 1970, VOL 56,
NR 5, PP 696-706
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BRAIN, ANESTHESIA, ELECTROPHYSIOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/0246 STEP NO--UR/0239/70/056/005/0696/0706
CIRC ACCESSION NO--AP0126020
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0126020
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. IN RATS ANAESTHETIZED WITH CHLORALOSE AND URETHANE IMPULSE ACTIVITY OF 95 UNITS WAS STUDIED. THE FOLLOWING CHARACTERISTICS OF UNIT RESPONSES WERE INVESTIGATED: 1) DISCHARGE PATTERNS AND THE NUMBER OF SPIKES FOR SOUNDS OF DIFFERENT INTENSITY AND RISE TIME; 2) LATENCY OF THE FIRST SPIKE AS A FUNCTION OF STIMULUS RISE TIME; 3) THRESHOLD OF RESPONSE AS A FUNCTION OF STIMULUS RISE TIME; 4) TURNING CURVES FOR SOUNDS OF TWO DURATIONS (2 AND 200 MSEC) AND SOUNDS OF 200 MSEC DURATION AND DIFFERENT RISE TIME. THE DATA OBTAINED SHOWED A GREAT DIFFERENCE IN REACTIONS OF TWO EXTREME GROUPS OF NEURONS TO THE INCREASING OF THE SOUND RISE TIME. THE FIRST GROUP (WITH SUSTAINED DISCHARGE, LONG LATENCY AT THRESHOLD INTENSITY, PRONOUNCED TEMPORAL SUMMATION) IS CHARACTERIZED BY THE DECREASE OF THE NUMBER OF SPIKES IN RESPONSE, THE INCREASE OF LATENCY, ESPECIALLY AT THRESHOLD INTENSITY OF NOISE OR CHARACTERISTIC FREQUENCY, THE ABSENCE OF CHANGING IN THRESHOLD VALUES AND THE SHARPENING OF TURNING CURVES WITH THE INCREASE OF THE STIMULUS RISE TIME. THE SECOND GROUP OF NEURONS (WITH INITIAL "CN" DISCHARGE, SHORT LATENCY AT THRESHOLD INTENSITY OF SIGNAL AND LOW TEMPORAL SUMMATION) IS CHARACTERIZED BY ABSENCE OF CHANGES IN DISCHARGE PATTERN AND LATENCIES, HIGH RISING OF THRESHOLDS AND ABSENCE OF THE SHARPENING OF TURNING CURVES WHEN THE STIMULUS RISE TIME INCREASES. FACILITY: PAVLOV INSTITUTE OF PHYSIOLOGY, ACAD. SCI. USSR, LENINGRAD.

UNCLASSIFIED

1/2 028
TITLE--KINETICS OF THE ELECTRODEPOSITION OF CADMIUM AND ADSORPTION
PHENOMENA -U-
AUTHOR--LOSHKAREV, YU.M., SNETKOVA, L.P.
COUNTRY OF INFO--USSR
SOURCE--UKR. KHIM. ZH. 1970, 36(1), 36-42
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTRODEPOSITION, CADMIUM, REACTION KINETICS, SURFACE ACTIVE
AGENT, ALIPHATIC SULFUR COMPOUND, SULFATE, ELECTRODE POTENTIAL,
POLAROGRAPHIC ANALYSIS, ELECTROLYTIC SOLUTION, SOLUTION CONCENTRATION,
ELECTRODE PROPERTY, ADSORPTION, AMINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/1336
CIRC ACCESSION NO--AP0107809
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UNCLASSIFIED
PROCESSING DATE--11SEP70
STEP NO--UR/0073/70/036/001/0036/0042

2/2 028

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107809

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF SURFACE ACTIVE INORG. ANIONS ON THE INHIBITORY ACTION OF ADDITIVES ON THE DISCHARGE OF CD AT HG AND SOLID ELECTRODES WAS STUDIED. THE ADDN. OF (BU SUB4 N) SUB2 SO SUB4 TO SOLNS. OF CU PRIME2 POSITIVE, BI PRIME3 POSITIVE, SN PRIME2 POSITIVE, AND CD PRIME2 POSITIVE PRODUCES VERY LITTLE EFFECT ON THE POLAROGRAPHIC HALF WAVE POTENTIAL IF THE SUPPORTING ELECTROLYTE IS N NaCl OF HCl AND THE CHANGE RANGE FROM 0.36 FOR SN TO 1.08 V FOR CU IF THE SUPPORT IS N Na SUB2 SO SUB4 OR H SUB2 SO SUB4. POLAROGRAPHIC CURVES ARE GIVEN FOR CD IN THE PRESENCE OF (BU SUB4 N) SUB2 SO SUB4 AND VARYING AMTS. OF CL PRIME NEGATIVE AND I PRIME NEGATIVE. I PRIME NEGATIVE IS MORE EFFECTIVE AT LOW CONCN. IN REDUCING THE INHIBITORY EFFECT OF THE AMINE. THE ACTION OF THE HALIDE IS MUCH LESS AT LOW TEMP. THE SHAPE OF THE POLAROGRAPHIC CURVES, WHICH HAVE A MAX. AT LOW NEG. POTENTIALS AND A MIN. AT MORE NEG. P.D. IS ATTRIBUTED TO THE ADSORPTION OF THE HALIDE ANION WHICH IS REDUCED BY A NEG. CHARGE. THE FACT THAT THE ANIONS ARE EFFECTIVE AT ALL WITH A NEG. P.D. IS ATTRIBUTED TO THE EFFECT OF THE ADSORBED POS. AND NEUTRAL SURFACE ACTIVE AGENTS.

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UNCLASSIFIED

USSR

UDC 669.71'721.042.6

SNETKOVA, Yu. I., and VARGA, I. I.

"Possible Evaluation of the Quality of AMg6 Alloy Ingots"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1970, No 3, pp 46-49 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 G205 by G. SVOITSEVA)

Translation: Heating tests reveal additional possibilities for evaluating the quality of AMg6 alloy ingots. The rate of the thermal diffusion processes on which the evaluation is based is determined by the presence of both primary dendritic porosity, which forms during crystallization and secondary porosity, which develops during homogenization, as well as by ingot gas-content level. Three illustrations. Bibliography of four titles.

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- 4 -

1/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--MECHANISM OF THE FORMATION OF LATEX FILMS FROM VINYLIDENE CHLORIDE
COPOLYMERS AT ROOM TEMPERATURE -U-

AUTHOR--(051)-GUL, V.E., DONTSOVA, E.P., SNEZHKO, A.G., ROSSINA, T.B.,
KISELEV, M.R.

COUNTRY OF INFO--USSR

S

SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(3), 671-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LATEX, VINYLIDENE RESIN, VINYL CHLORIDE, COPOLYMER, PHASE
TRANSITION, VISCOELASTICITY, POLYMER STRUCTURE, PLASTIC FILM,
PERMEABILITY MEASUREMENT/(U)VIKH65 VINYL CHLORIDE COPOLYMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0310

STEP NO--UR/0459/70/012/003/0671/0676

CIRC ACCESSION NO--AP0111504

UNCLASSIFIED

2/2 025

CIRC ACCESSION NO--AP0111504
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--16OCT70

DEFORMATION VS. TEMP.) SHOWED THAT VIKH-65 (35:65 VINYL CHLORIDE VINYLIDENE CHLORIDE COPOLYMER) FILMS HAVE A PHASE TRANSITION POINTS AT 3-8DEGREES (ONE GLASS STATE TO ANOTHER), 30-40DEGREES (GLASS TO VISCOELASTIC STATE), AND 70-80DEGREES (MELT FLOW POINT). THE KINETICS OF WATER VAPOR ADSORPTION, FILM DRYING, AND ELECTRON MICROSCOPY SHOWED THAT EVEN IN THE FILMS FORMED FROM MELTS PREHEATED LARGER THAN OR EQUAL TO 80DEGREES THE GLOBULES DO NOT COALESCE. THE PERMEABILITY OF THE FILMS DECREASES WITH THE TEMP. OF THE MELTS. THE MECH. STRONG FILMS OF LOW PERMEABILITY, PREPD. FROM MELTS PREHEATED TO 50-60DEGREES, HAVE A DIFFUSE BOUNDARY LAYERS WHICH PENETRATE INTO THE GLOBULES.
FACILITY: MOSK. TEKHNL. INST. MYAS. MOLOCH. PROM., MOSCOW, USSR.

UNCLASSIFIED

USSR

SNEZHKO, Ye. M.

"Transsynaptic Transfer of Excitation with Rhythmic Activity"

Probl. Bioniki. Resp. Mezhd. Temat. Nauch.-Tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 9, pp 119-124 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V723, by the author).

Translation: The transmission of a rhythmic series of pulses through a synapse is studied. Equations are produced and solved for the dynamics of the transient process and of the stable state. The process of transsynaptic transmission is modeled on an analog computer.

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- 114 -

USSR

SNEZHKO, Ye. M.

"Transsynaptic Transfer of Excitation with Rhythmic Activity"

Probl. Bioniki. Resp. Mezhved. Temat. Nauch.-Tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 9, pp 119-124 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V723, by the author).

Translation: The transmission of a rhythmic series of pulses through a synapse is studied. Equations are produced and solved for the dynamics of the transient process and of the stable state. The process of transsynaptic transmission is modeled on an analog computer.

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- 114 -

USSR

SNEZHKO, Ye. M.

"Transsynaptic Transfer of Excitation with Rhythmic Activity"

Probl. Bioniki. Resp. Mezhd. Temat. Nauch.-Tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 9, pp 119-124 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V723, by the author).

Translation: The transmission of a rhythmic series of pulses through a synapse is studied. Equations are produced and solved for the dynamics of the transient process and of the stable state. The process of transsynaptic transmission is modeled on an analog computer.

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- 114 -

USSR

SNEZHKO, Ye. M.

"Transsynaptic Transfer of Excitation with Rhythmic Activity"

Probl. Bioniki. Resp. Mezhd. Temat. Nauch.-Tekhn. Sb. [Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection], 1972, No 9, pp 119-124 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V723, by the author).

Translation: The transmission of a rhythmic series of pulses through a synapse is studied. Equations are produced and solved for the dynamics of the transient process and of the stable state. The process of transsynaptic transmission is modeled on an analog computer.

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- 114 -

USSR

UDC 669.18:621.746.58

TULIN, N. A., Candidate of Technical Sciences, VAYNSHTEYN, O. Ya, Engineer,
KUZ'KINA, N. N., Engineer, KHUDEN'KIKH, A. A., Engineer, and SNEZHKO, B. Ya.,
Engineer, Chelyabinsk Metallurgical Plant

"The Use of Argon in the Production of Non-Aging Low-Carbon Steel"
Moscow, Stal', No 3, Mar 73, p 226

Abstract: Low-carbon non-aging steel at the Chelyabinsk Metallurgical Plant is melted by the scrap-ore process in 100-ton open-hearth furnaces with oxygen scavenging of the metal. Argon protects the metal flux against oxidation. This method makes it possible to lower the degree of contamination of 6.2-ton ingots by oxide aluminaceous impurities which give rise to laminations in sheet. Argon flux protection decreased sheet rejection by customers and plants by factors of 2.7-4.5 and 3-4, respectively, and increased annual output by 12%. Two figures.

1/1

USSR

SNEZHKO, O. B.

UDC 624.131+539.215

"On the Question of the Use of the Seismic Effect on Construction in Relation to the Bearing Capacity of the Ground"

Kiev, Seysmichnost', seysmich. opasnost' Kryma i seysmostoykost' str-va (Seismicity, Seismic Danger of the Crimea and the Seismic Stability of Construction, Collection of Works), Nauk. dumka, 1972, pp 94-97 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V803)

Translation: The dependence of the oscillation period obtained shows that it is directly proportional to the calculated resistance of the ground, and the height of the rigid structure, and inversely proportional to its weight. The accepted method of projecting standard projects according to the average ground conditions leads to the fact that on tying them to the rock foundation one has a sufficiently large margin, while on tying them to the soft ground this margin is significantly reduced. The method of calculation should consider the ground conditions, not only the coefficient of seismicity but also the period of oscillation. (Author's abstract)

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USSR

SNEZHKO, YE. M., Dnepropetrovsk Order-of-the-Red-Banner-of-Labor State University imeni 300-Letiya Vossoyedineniya Ukrainy s Rossiyei (300th Anniversary of the Reunification of the Ukraine with Russia)

"Neuron Modeling Device"

USSR Author's Certificate No 376787, Cl. G 06g 7/60; G 06k 9/02, filed 31 May 71, published 5 Apr 73 (from Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 17, 1973, p 155)

Abstract: The device contains a space-time input signal adder connected to a pulse generator using a thyristor with RC networks in the cathode and anode circuits. The distinctive feature of the device is that, to make it conform more to a biological neuron, it contains an axo-axon synapse modeling unit which consists of a shaping network and an amplitude transistor modulator which are series-connected, with the output of the modulator connected to one of the inputs of the space-time adder.

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- 54 -

1/3 011 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--FORECAST OF RESEARCH ON SCHIZOPHRENIA --U-
AUTHOR--SNEZHNEVSKIY, A.V.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK AKADEMII MEDITSINSKIKH NAUK SSSR, VOL 25, NO 6, 1970,
PAGES 83-88
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL
SCIENCES
TOPIC TAGS--SCHIZOPHRENIA, PSYCHOSIS, MENTAL DISORDER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3008/0740

STEP NO--UR/0248/70/025/006/0083/0088

CIRC ACCESSION NO--AP0137805

UNCLASSIFIED

2/3 011

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137805

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SCHIZOPHRENIA IS IN FIRST PLACE AMONG MENTAL DISEASES. FOREIGN INVESTIGATORS DEFINE ITS DISTRIBUTION AMONG THE POPULATION AT 0.8 TO 1.2PERCENT. THIS DISEASES DOES NOT SPARE PEOPLE OF ANY AGE FROM EARLY INFANCY TO ADVANCED OLD AGE. THE ONES MOST STRICKEN ARE INDIVIDUALS IN THE FLOWER OF THEIR LIVES. OF THE PATIENTS SUFFERING FROM CHRONIC PSYCHOSES WHO ARE HOSPITALIZED IN MENTAL HOSPITALS UP TO 70PERCENT ARE SCHIZOPHRENICS. AT THE SAME TIME ONLY 12-15PERCENT OF THEM ARE CONSTANTLY IN HOSPITALS. THIS CORRELATION IS INDICATIVE OF THE UNUSUAL POLYMORPHISM OF MANIFESTATIONS AND COURSE OF SCHIZOPHRENIA, WHICH LEADS TO REFERENCE TO IT BY A NUMBER OF AUTHORS AS "SCHIZOPHRENIA GROUP: RATHER THAN SIMPLY "SCHIZOPHRENIA". INVESTIGATIONS SHOW THAT ONLY IN 15PERCENT OF THE CASES IS THE COURSE VERY MALIGNANT TRANSFORMING ITS VICTIMS INTO PERMANENT INHABITANTS OF PSYCHIATRIC HOSPITALS, WHEREAS IN MOST CASES THE COURSE IS MORE BENIGN. YET DISABILITY REFERABLE TO THIS DISEASE REACHES 40PERCENT. WHILE HEART DISEASE AND CARCINOMA ARE THE MOST COMMON CAUSE OF DEATH, SCHIZOPHRENIA RESULTS IN THE HIGHEST DISABILITY RATE. HEREIN LIES ITS SOCIAL SIGNIFICANCE. THE GENERAL FORECAST WITH RESPECT TO DISTRIBUTION OF SCHIZOPHRENIA IN THE NEXT 15-20 YEARS AMOUNTS TO AN ASSUMPTION OF A TENDENCY TOWARD A RISE IN NUMBER OF CASES, A RISE IN NUMBER OF SOCIALLY DANGEROUS ACTS COMMITTED BY SCHIZOPHRENICS, AND FIRST OF ALL IN SUICIDES. AT THE SAME TIME THERE WILL BE A DECREASE IN NUMBER OF PATIENTS IN PSYCHIATRIC HOSPITALS.

UNCLASSIFIED

3/3 011

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137805

ABSTRACT/EXTRACT--ACCORDING TO THE PROJECTIONS OF BRITISH PSYCHIATRISTS, BY 1975 THE NUMBER OF BEDS OCCUPIED IN PSYCHIATRIC HOSPITALS WILL BE 25PERCENT LOWER THAN TODAY. THE JUSTIFICATION FOR SUCH A CONTRADICTORY PROGNOSIS IS, FIRST, THE GREATER LONEVITY OF THE POPULATION AND, SECONDLY, THE THERAPEUTIC PATHOMORPHOSIS OF SCHIZOPHRENIA. PROLONGATION OF THE LIFE EXPECTANCY HAS LED AND WILL CONTINUE TO LEAD TO AN INCREASE IN TOTAL NUMBER OF MENTAL PATIENTS IN GENERAL AND SCHIZOPHRENICS IN PARTICULAR. AT THE PRESENT TIME OVER 20PERCENT OF ALL OPERATIONAL BEDS IN PSYCHIATRIC HOSPITALS ARE OCCUPIED BY ELDERLY AND AGED MENTAL PATIENTS.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--ACTIVE METABOLITES IN PERSONS TREATED WITH BENZYL PENICILLIN -U-

AUTHOR--(03)--YAKOBSON, L.M., ASTANINA, L.N., SNEZHNOVA, L.P.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 455-457

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PENICILLIN, ANTIBIOTIC DRUG EFFECT, URINE, CHROMATOGRAPHY, UV
SPECTROPHOTOMETER, METABOLISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FAME--1994/1133

STEP NO--UR/0297/70/015/005/0455/0457

CIRC ACCESSION NO--AP0115152

UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0115152

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DATA PRESENTED INDICATE THAT URINE OF PERSONS TREATED WITH THERAPEUTIC DOSES OF SODIUM BENZYL PENICILLIN CONTAINS BESIDES THE ANTIBIOTIC ADMINISTERED ITS METABOLITES, I. E. 6 AMINOPENICILLANIC ACID, PARA OXYBENZYL PENICILLIN AND A NON IDENTIFIED BIOLOGICALLY ACTIVE METABOLITE. THE PRESENCE OF PARA OXYBENZYL PENICILLIN IN THE URINE WAS SHOWN BY PAPER CHROMATOGRAPHY AND CONFIRMED BY ULTRAVIOLET SPECTROPHOTOMETRY OF ELUATED FROM THE CORRESPONDING AREAS OF THE URINE CHROMATOGRAMS. THE NUMBER OF THE METABOLITES AND THEIR AMOUNTS ACCORDING TO THE GROWTH INHIBITION ZONES OF THE TEST MICROBES WERE DIRECTLY PROPORTIONAL TO THE DOSE OF THE ANTIBIOTIC ADMINISTERED. INACTIVATION BY PENICILLINASE OF THE METABOLITES FOUND IN THE URINE OF PERSONS TREATED WITH BENZYL PENICILLIN ONCE MORE CONFIRMED THEIR ORIGIN FROM BENZYL PENICILLIN. FACILITY: CONTROL INSTITUTE FOR MEDICAL BIOLOGICAL PREPARATIONS, MOSCOW.

UNCLASSIFIED

1/2 007 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--EXPERIENCE WITH INTERNATIONAL STANDARDIZATION OF BIOLOGICAL
ACTIVITY OF CHLORTETRACYCLINE -U-
AUTHOR--(04)-YAKOBSON, L.M., SHIRYAYEVA, V.L., SNEZHNOVA, L.P., YERMOLOVA,
O.B.
COUNTRY OF INFO--USSR, UNITED KINGDOM, WORLD WIDE
SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 3, PP 232-235
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TETRACYCLINE, TECHNICAL STANDARD, BIOLOGIC SCIENTIFIC SOCIETY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1985/0465

STEP NO--UR/0297/70/015/003/0232/0235

CIRC ACCESSION NO--AP0100943

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0100943

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE 2ND PROPOSED SERIES OF THE INTERNATIONAL ACTIVITY STANDARD OF CHLORTETRACYCLINE WAS STUDIED WITH THE THREE DOSE AGAR DIFFUSION METHOD. THE CAVES WITH THE WORKING CONCENTRATIONS OF THE TEST SOLUTION AND THE STANDARD WERE SITUATED ACCORDING TO THE LATIN SQUARE. AT P-95 ACTIVITY OF THE PREPARATION IN 13 TESTS WAS 1038 TO 1060 MUG-MG. THE DATA FROM 9 LABORATORIES IN 6 COUNTRIES WERE STATISTICALLY TREATED IN THE CENTER FOR ANTIBIOTIC STANDARDIZATION OF THE WORLD HEALTH ORGANIZATION IN LONDON. THE AVERAGE ACTIVITY OF THE PROPOSED STANDARD OF CHLORTETRACYCLINE WAS FOUND TO BE 1004 MU G-MG. THE WHO EXPERT COMMITTEE APPROVED THE NEW INTERNATIONAL STANDARD OF CHLORTETRACYCLINE AND ASSUMED ITS SUPPOSED ACTIVITY TO BE 1000 MU G-MG. THE UNIT OF ACTIVITY WAS EQUAL TO 1 MU G.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--THE VM-1 VACUUM DIFFRACTION MONOCHROMATOR AND ITS OPERATIONAL
PERFORMANCE -U-
AUTHOR-(03)-GERASIMOVA, N.G., SNIGIREV, YU.A., TVERITINOV, M.P.
COUNTRY OF INFO--USSR
SOURCE--LENINGRAD, OPTIKO MEKHANICHESKAYA PROMYSHLENNOST', NO 1, 1970, PP
58-62
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--VACUUM, MONOCHROMATOR, SPECTRAL DISTRIBUTION, PHOTOMETRIC
ANALYSIS, SPECTROMETER/(U)VM1 MONOCHROMATOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1999/1354 STEP NO--UR/0237/70/000/001/0050/0062
CIRC ACCESSION NO--AP0123312
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0123312

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE GIVEN OF A STUDY OF THE SPECTRAL CHARACTERISTICS AND OPERATIONAL PERFORMANCE OF THE VM-1 SERIES PRODUCED VACUUM MONOCHROMATOR. IN CONJUNCTION WITH A PHOTOMETRIC CHAMBER, THE UNIT PERFORMS THE FUNCTIONS OF A SINGLE BEAM SPECTROMETER USED TO MEASURE THE TRANSMISSION AND REFLECTIVITY FACTORS OF SOME MATERIALS.

UNCLASSIFIED

Acc. Nr.

AP0055632

Abstracting Service:

CHEMICAL ABST. 6-70

Ref. Code

4R 0460

111850h Radiation polymerization of dioctylvinylphosphine oxide. Chikishev, Yu. G.; Snimshchikova, A. A.; Tasilin, B. L. (Inst. Elementoorg. Soedin., Moscow, USSR). *Vysokomol. Soedin., Ser. B* 1970, 12(2), 149-50 (Russ). The radiation polymn. of the title monomer (I) in the melt, initiated by 65 megarads of γ -rays at a dose rate of 2000 rads/sec, was studied at 100°. The polymer obtained had a mol. wt. of 4.8×10^4 and was sol. in many org. solvents. Graft polymn. of I on Aerosil at a dose rate of 100 rads/sec gave 10% graft copolymer and 4% homopolymer.

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REEL/FRAME
19840934

706

UDC 621.391.2

USSR

TUZOV, G. I., SHIRIN, V. V., KOTOV, V. A.

"Dynamics of a Filtration System for a Pseudorandom Signal with an Arbitrary Manipulation Angle"

Moscow, Radiotekhnika i elektronika, Vol XVII, No 2, 1972, pp 295-300

Abstract: A study was made of the nonlinear dynamics of a tracking receiver which is optimal for a pseudorandom phase-manipulated signal with an arbitrary manipulation angle described by a system of second order nonlinear dependent differential equations. Using the method of numerical integration of the differential equations, the dynamics of the system and the lock-on band of one of the subsystems of the tracking receiver -- the automatic frequency control circuit -- were determined as functions of the system parameters and initial conditions: the initial phase, the initial delay, the values of the amplification coefficients of the subsystem and the manipulation angle. All these parameters must be considered during initial synchronization of the tracking receiver.

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Radiobiology

USSR

UDC 577.1:615.787:612.8.015:616-001.28

SNISAR', I. A., REVA, A. D., Biochemistry and Biophysics Department of
Dnepropetrovsk University

"Synthesis of Acetylcholine in Functionally Different Areas of the Spinal Cord
in the Dynamics of Acute Radiation Sickness"

Kiev, Ukrain's'kiy Biokhimichnyi Zhurnal, Vol 44, No 4, 1972, pp 497-499

Abstract: A study was made of the intensity of acetylcholine synthesis in morphologically and functionally different areas of the lumbar enlargement of the spinal cord of cats -- the gray matter of the anterior and lateral horns, the gray matter of the posterior horns and the white matter -- and also in the anterior and posterior cerebrospinal radix at different times after total x-radiation with a dosage of 1,200 roentgens.

A significant increase in the intensity of acetylcholine synthesis in the investigated tissues is detected during the initial periods of acute radiation sickness on the 5th and 6th days, and in the terminal stage (8th to 10th days) its inhibition is observed.

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USSR

Radiobiology
UDC 577.153:612.8.015:616.001.28

SNISAR, I. A., and REVA, O. D., Chair of Biochemistry and Biophysics, Dnepropetrovsk University

"Cholinesterase Activity of the Spinal Cord in the Dynamics of Radiation Sickness"

Kiev, Ukrainskiy Biokhimicheski, Zhurnal, Vol 42, No 4, 1970, pp 469-471

Abstract: Total cholinesterase activity was studied in functionally and morphologically different regions of lumbar enlargement of the cat spinal cords, including the gray matter of the frontal and lateral horns (motor zone), gray matter of the posterior horn (sensory zone), white matter representing the neural conductivity network, and frontal and posterior roots consisting principally of cell axons of the motor centers of spinal ganglia. Cholinesterase activity was determined by the electrometric method. Animals were subjected to whole-body irradiation of 1200 r. Considerable inhibition of enzymatic activity was noted 1 hour after irradiation and again 5-6 days later. Cholinesterase activity 24 and 48 hours and 9-10 days after irradiation was somewhat lower but still in the range of normal values. Local irradiation of the lumbar-sacral region only produced the same changes after 1 hour as the total dose. Intramuscular injection of cysteine before irradiation exerted a protective effect.

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1/2 029 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--THE CHOLINESTERASE ACTIVITY OF THE SPINAL CORD OF ANIMALS AFTER X
RAY IRRADIATION -U-
AUTHOR--(02)--SNISAR, I.A., KEVA, A.O.
COUNTRY OF INFO--USSR
SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49,
NR6, PP 47-49
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SPINAL CORD, CHOLINESTERASE, X RAY RADIATION BIOLOGIC EFFECT,
RADIATION DOSAGE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0705 STEP NO--UR/0219/70/049/006/0047/0049
CIRC ACCESSION NO--AP0131304
UNCLASSIFIED

272 029

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131304

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE TOTAL CHOLINESTERASE ACTIVITY OF DIFFERENT STRUCTURES OF THE SPINAL CORD IS DISSIMILAR: IT IS HIGHEST IN THE GREY MATTER OF THE ANTERIOR AND POSTERIOR HORNS. PHASIC CHANGES IN THE LE ENZYMATIC ACTIVITY ARE SEEN 1,24 AND 48 HOURS AFTER WHOLE BODY X RAY IRRADIATION WITH A SINGLE DOSE OF 1200 R. FACILITY: CHAIR OF BIOCHEMISTRY AND BIOPHYSICS OF THE DNEPROPETROVSK STATE UNIVERSITY.

UNCLASSIFIED

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USSR

UDC 612.83.015.14.014.481.1

SNISAR', I. A. and REVA, A. D., Chair of Biochemistry and Biophysics, Dnepro-
petrovsk University

"Spinal Cord Cholinesterase Activity in X-ray irradiated Animals"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 6, 1970, pp 47-49

Abstract: Total cholinesterase activity undergoes phase changes in various structures of the cat spinal cord after whole-body X-ray irradiation with a single dose of 1200 r; it decreases in the gray matter of the anterior and posterior horns an hour after exposure, returns to the original level after 24 hours, and again decreases after 48 hours. Phase changes also take place in cholinesterase activity in the white matter and substance of the anterior and posterior roots after irradiation, but they are less pronounced and in the opposite direction of the changes in the gray matter.

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- 16 -

USSR

STARODETKO, Ye. A., SHMELEVA, Z. P., ~~SNISAR', I. A.~~

"Translator for the INKANEL-2A Geometric Language"

Tr. N.-i. i. Proekt. In-ta ,ekhaniz. i Avtomatiz. upr Proiz-vom v Avtomob. Prom-sti [Works of Scientific Research and Planning Institute for Mechanization and Automation of Production Control in the Motor Vehicle Industry], No 1, 1971, pp 57-68, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V529 by the author's).

Translation: A translator with a geometric language, designed for description of flat figures limited by straight lines and circular arcs is described. The language can be used in systems for automatic construction and technological planning, in particular in programming systems for machine tools with programmed control.

USSR

UDC 621.791.042:669.15-194

GOTAL'SKIY, YU. N., and SNISAR', V. V.

"ANZhR-2 Electrodes for Welding Various Types of Steels Operating at 450-550°C"

Kiev, Avtomaticheskaya Svarka, No 3, Mar 71, p 73

Abstract: This article contains a brief report on ANZhR-2 electrodes for welding heat-resistant steels to austenitic steels. These electrodes ensure no less than 31% Ni in the weld metal. Developed by the Institute of Electric Welding imeni Ye. O. Paton; the electrodes not only guarantee the required nickel content but also rule out the formation of structural inhomogeneities during prolonged operation under heating conditions up to 550°C. The highly desirable mechanical properties of the electrodes and the purely austenitic deposited metal they produce are discussed. The electrodes are manufactured from EP673 wire according to Institute of Electric Welding specifications IES-26E-69.

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1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ANISOTROPY OF TRANSVERSE MAGNETORESISTANCE OF THIN N,SI FILMS -U-
AUTHOR-(03)-KLIMOVSKAYA, A.I., SNITKO, O.V., KIRILLOVA, S.I.
COUNTRY OF INFO--USSR
SOURCE--JETP LETTERS (USA), VOL. 11, NO. 2, P. 119-23, JAN. 1970
DATE PUBLISHED----JAN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--MAGNETORESISTANCE, THIN PLATE, SILICON SINGLE CRYSTAL, LOW
TEMPERATURE EFFECT, MAGNETIC ANISOTROPY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1089 STEP NO--US/0000/70/011/002/0119/0123
CIRC ACCESSION NO--AP0136509

UNCLASSIFIED

2/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0136509
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ANISOTROPY OF
MAGNETORESISTANCE IN THIN PLATES OF N-SI AT LOW TEMPERATURES
(20-77DEGREESK) WAS INVESTIGATED AND THE POSSIBLE EXISTENCE OF A SIZE
EFFECT OVER THE COOLING LENGTH AND THE MEAN FREE PATH WAS DEMONSTRATED.
THE SAMPLES WERE CUT FROM SINGLE CRYSTAL SILICON IN SUCH A WAY THAT THE
SURFACE WAS ORIENTED PARALLEL TO THE (100) CRYSTALLOGRAPHIC PLANE AND
THE CURRENT DIRECTION COINCIDED WITH THE MAGNITUDE OF 010° . SINCE THE
PRESENCE OF MACROINHOMOGENEITIES IS IMPORTANT IN MAGNETORESISTANCE
MEASUREMENTS, THE RESULTS WERE SUBDIVIDED INTO TWO GROUPS. (1) RESULTS
OBTAINED FOR HOMOGENEOUS SYSTEMS, NAMELY, THE BENDING OF THE BANDS AT
THE SAMPLE SURFACE IS ZERO OR DEPLETING. (2) RESULTS OF INHOMOGENEOUS
SYSTEM STRONG ENRICHMENT ON THE SURFACE. FACILITY: UKRAINIAN
ACAD. SCIS., USSR.

UNCLASSIFIED

USSR

UDC 621.315.592

ROZUMNYUK, V. T., NESTERENKO, B. A., TSBULYA, G. G., LISITSA, K. P., SNITKO, O. V., Institute of Semiconductors, Academy of Sciences of the URSS, Kiev

"Optical Properties of Germanium with a Clean Surface and with an Oxidized Surface"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 4, No 9, Sep 70, pp 1770-1775

Abstract: The authors investigate the effect which the physicochemical state of the surface has on the reflectivity of semiconductors. The study specimens were single crystals of germanium with atomically clean and oxidized (etched) surfaces. In addition to reflection, the specimens were studied for edge absorption and photoconductivity. It was found that the reflection spectra of germanium with an atomically clean surface have two peaks with energies of 2.6 and 2.8 eV in addition to the peaks at 2.1 and 2.3 eV inherent in specimens with oxidized surface. A surface origin is attributed to the maxima at 2.6-2.8 eV, while the maxima at 2.1-2.3 eV are assumed to stem from transitions within the specimen. The atomically clean surface also shows a shift of 0.02 eV toward the short-wave region as compared with the oxidized surface in studies of edge absorption and photoconductivity. This

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ROZUMNYUK, V. T., et al., Fizika i Tekhnika Poluprovodnikov, Vol 4, No 9,
Sep 70, pp 1770-1775

shift is attributed to the simultaneous effect of various mechanisms involving optical transitions on surface levels, quantum effects associated with the strong electrical field on the atomically clean surface and simple physical changes such as surface tension.

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1/2 030 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--IMPURITY PHOTOCONDUCTIVITY OF A GERMANIUM SURFACE DOPED WITH METALS
-U-
AUTHOR--PASECHNIK, YU.A., SNITKO, O.V. S
COUNTRY OF INFO--USSR
SOURCE--UKR. FIZ. ZH. (RUSS. ED.) 1970, 15(1), 70-6
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GERMANIUM SEMICONDUCTOR, IR PHOTOCONDUCTOR, PHOTOCONDUCTIVITY,
SEMICONDUCTOR IMPURITY, GOLD, COPPER, ZINC, CRYSTAL SURFACE,
SEMICONDUCTOR BAND STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1344

STEP NO--UR/0185/70/015/001/0070/0075

CIRC ACCESSION NO--AP0107817

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PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107817

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IMPURITY IN PHOTOCOND. (SIGMA SUBPH) OF N AND RHO, GE SURFACE DOPED WITH AU, CU, AND ZN FORM CP. SOLN. WAS STUDIED AT 80 DEGREES K. THE SPECTRAL DISTRIBUTION OF SIGMA SUBPH, SIGMA SUBPH VS. LIGHT INTENSITY, AND SIGMA SUBPD VS. TIME CURVES WERE OBTAINED AND ARE DISCUSSED. AN EXTERNAL ELEC. FIELD CHANGED CONSIDERABLY THE STEADY STATE SIGMA SUBPH VALUE AND AFFECTED SLIGHTLY THE UNSTEADY STATE SIGMA SUBPH VALUE OF THE AU DOPED SURFACE. A QUANT. INTERPRETATION OF THE EXPTL. DATA WAS MADE FOR AU DOPED GE SURFACES IN TERMS OF A SIMPLE MODEL OF THE SURFACE WITH A BAND OF TAU LEVELS CREATED BY AU MICROPARTICLES AT THE SEMICONDUCTOR OXIDE INTERFACE. THE POSITION OF THE TAU LEVELS WAS ESTD. AS 0.30-0.32 EV ABOVE THE VALENCE BAND, AND THEIR CONC. WAS DETD. TO BE $3 \times 10^{19} \text{ CM}^{-3}$ NEGATIVE. FROM THE EXPTL. RESULTS, SOME GE SURFACE PARAMETERS WERE OBTAINED, AND THE SPECTRAL DEPENDENCE OF THE CAPTURE CROSS SECTION OF PHOTONS ON THE SURFACE CENTERS WAS CALCD.

UNCLASSIFIED

Acc. Nr:

AP0044473

Abstracting Service:
CHEMICAL ABST.

Ref. Code:
NE0000

70980e Investigation of germanium surface properties under successive adsorption of gold and silver. Matsas, E. P.; Dyner, L. L.; Primachenko, V. E.; Saitko, O. V. (Inst. Semicond., Kiev, USSR). *Surface Sci.* 1970, 19(1), 109-14 (Eng). Field effect and surface recombination velocity have been studied on real Ge surfaces under adsorption of Au and Ag from aq. solns. Adsorption of Au changes the properties of the Ge surface radically. The effect of Ag deposition was insignificant. The most essential result of the work is that subsequent adsorption of Ag on a Au-covered Ge surface leads to the neutralization of the peculiar properties caused by Au itself. The absence of mutual influence of Ag and Au on the magnitudes of adsorption was established by the radioactive method.

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19771096

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USSR

UDC 632.95

SNITKOVSKAYA, T. M.

"Determination of Trace Amounts of Crotonic Acid Derivatives in Air, Water and Biological Environments"

Tr. 2-go Vses. Soveshch. po issled. ostatkov pestitsidov i profilakt. zagryazneniya imi produktov pitaniya, kormov i vnesh. sredy (Transactions of the Second All-Union Conference on the Study of Pesticide Residues and Prevention of Their Contamination of Food Products, Fodder and the External Environment), Tallinn, 1971, pp 197-200 (from RZh-khimiya, No 13, 10 Jul 72, Abstract No 13N481 by T. A. Belyayeva)

Translation: To determine trace amounts of nuvacron, dimecron and carbicron in air, water and biological material, the preparations are extracted from samples with CHCl_3 and chromatographed in a thin layer of silica gel KSK [expansion unknown], fixed with starch, in a CHCl_3 -acetone system (1:1), the plates are kept for 45 min. at 80-90° and treated with diazotized p-nitroaniline and a 20% aqueous solution of NaOH.

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- 76 -

USSR

UDC 577.1:615:779

LYSENKO, N. M., and SNITKOVSKAYA, E. M.

"Interaction of S-acetyl-a-aminothiols with Heptachlor"

V sb. Gigiyena primeneniya toksikol. pestitsidov i klinika otravl.
(Hygiene of Use and Toxicology of Pesticides and Clinical Symptoms of
Poisoning), No 8, Kiev, 1970, pp 156-160 (from RZh-Biologicheskaya
Khimiya, No 10, May 71, Abstract No 10 F1691 by M. Shuster)

Translation: After incubation of a mixture of diethylaminomethylthioacetate (I) with heptachlor (II) at 20 to 22 and 37° and subsequent determination of the concentration of II in the mixture, it was found that I binds 50 to 70% of II. In the authors' view, I is of interest as a possible antidote for II.

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3NITKOVSKIY, A.I.

meteorology

INTRATROPICAL ZONE OF CONVERGENCE IN THE EASTERN PART OF THE PACIFIC OCEAN
 Forensic by Candidate of Geographic Sciences, A. I. 3NITKOVSKIY, USSR Hydrometeorological Scientific Research Center, Moscow, ~~USSR~~ USSR Meteorology, No. 11, 1972, published 23 May 1972, pp 12-26

UDC 551.513 (200)

11/11/74
 Sever: 30854.524
 19/Jan/73

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A study was made of the characteristic features of the wind, pressure, cloud and precipitation fields in the intra-tropical zone of convergence. This zone, just as a specific object can be observed not only in the vicinity of the equator but also in the northern and southern tropics in one direction and in the absence of convergence of the wind on a wave surface. The latter can occur in the western part of the cloud belt of the intratropical zone of convergence when there is displacement of the clouds in a westerly direction in the easterly trade winds. In the equatorial zone of the Northern and Southern Hemispheres in the lower 2-2.5 km, low-level jet streams can exist -- baroclinic -- the wind velocity on the axis of which exceeds 15 m/sec.

From December 1971 to March 1972, the scientific research ship Akademik Shkolyov completed a thematic expedition in the Pacific Ocean along 150° west longitude from 50° north latitude to 17° south latitude on the problem of the meridional asymmetry in the equatorial troposphere and its effect on the processes and features of the extratropical belt.

The expedition was faced with two basic goals:

Continuation of the research with respect to the evolution and development of the quasi-stationary wind cycle in the equatorial troposphere;

Study of the meso and micro-scale characteristics of the intratropical zone of convergence.

In order to fulfill the stated goals, on the Akademik Shkolyov scientific research ship quadrupole radiosonde sounding of the atmosphere and also rocket sounding of the atmosphere were carried out. Hourly weather observations were

128. USSR *SNOPIK, B.I.*

nc SEREDA, G. K., and *nc* SNOPIK, B. I., Khar'kov University

Cybernetics

"On the Identity of Mechanisms in Short Term and Long Term Memory"

Moscow, Voprosy Psikhologii, Vol 6, Nov-Dec 70, pp 60-74

SOI FOREIGN PRESS DIST
21 MAR 71

Abstract: This is an attempt to refute Broadbent's thesis that short term memory is a process essentially different from long term memory, involving the classification of materials by its sensory qualities. If this were the case, short term memorization would be essentially independent of any use the subject might make of the material presented. This hypothesis was tested by four experiments, in all of which the subjects were presented with identical material -- sets of fourteen randomly organized letters and numerals. The instructions in the four experiments were: 1a) "Try to make words from the letters presented;" 1b) "Count the number of odd and even integers presented;" 2a) "Place check marks in a blank matrix for all the positions occupied by letters;" 2b) "Place check marks in a blank matrix for all the positions occupied by numerals;" 3) "This is a sample of the material to be used in the next experiment;" 4) "Memorize as much of the material presented as possible."

After each presentation the subjects were asked to recall the material presented. The results showed that in the first experiment recall was much better for the

1/2 032 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--APPROXIMATE COMPUTATION OF THE EFFICIENCY OF BUNCHERS OF HYBRID
TYPE C DEVICES -U-
AUTHOR--(02)-SHESTOPEROV, A.N., SHUPKO, K.N.
COUNTRY OF INFO--USSR
SOURCE--V SB. VOPR. ELEKTRON. TEKHNIKI (PROBLEMS OF ELECTRONICS
REFERENCE--EZH-ELEKTRONIKA I YEYE PRIMENENIYE, NO 6, JUNE 1970, ABSTRACT
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--TRAVELEING WAVE TUBE, KLYSTRON, DRIFT CURRENT, HARMONIC
ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605023/803 STEP NO--UR/0000/70/000/000/0007/0013
CIRC ACCESSION NO--AR0141239

UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AR0141239

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY THE APPROXIMATE INTEGRATION OF A SYSTEM OF EQUATIONS FOR A TRAVELING WAVE TUBE AS APPLIED TO A KLYSTRON, EXPRESSIONS ARE OBTAINED FOR THE PHASE AND VELOCITY OF ELECTRONS IN PARTS OF THE DRIFT. THE CURRENT OF THE FIRST HARMONIC IS COMPUTED FOR A 3 CAVITY BUNCHER. AN APPROXIMATE FORMULA IS OBTAINED FOR THE INDICATOR QUALITY OF AN N RESONATOR BUNCHER.

UNCLASSIFIED

1/2 040
UNCLASSIFIED
TITLE--IONIZATION NONEQUILIBRIUM STATE DURING THE COOLING OFF OF A PULSED
DISCHARGE PLASMA -U-
AUTHOR--(02)-SNOPKO, V.N., RAZUVAYEVA, L.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. SPEKTROSK, 1970, 12,2, 203-7
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--IONIZATION, DISCHARGE PLASMA, COOLING, SPECTRAL LINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1015
CIRC ACCESSION NO--AP0107529
STEP NO--UR/0368/70/012/002/0203/0207
UNCLASSIFIED

2/2 040

CIRC ACCESSION NO--AP0107529

UNCLASSIFIED

PROCESSING DATE--23OCT70

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

ABSTRACT. A STUDY WAS MADE WITH A PULSED PLASMA CURRENT WITH PULSES OF ALMOST CONST. CURRENT OF 300 A WITH 0.5 MSEC DURATION. THE DISCHARGE RADIATION WAS ANALYZED SPECTROGRAPHICALLY. THE INTENSITIES OF 2 LINES OF Cu I WERE MEASURED AND COMPARED. ONE LINE, 4586.97 ANGSTROM (Z PRIME4 F SUBSEVEN HALVES-E PRIME4 D SUBFIVE HALVES), IS CAUSED BY A TRANSITION FROM A LEVEL WITH A HIGH PROBABILITY OF AUTOIONIZATION, AND THE OTHER, 4651.12 ANGSTROM (Z PRIME4 F SUBSEVEN HALVES-E PRIME4 D SUBSEVEN HALVES), BY A TRANSITION FROM A LEVEL WITH NO AUTOIONIZATION. THE INTENSITIES OF THESE 2 LINES WERE COMPARED IN DIFFERENT TIME PHASES DURING AND AFTER THE PULSE DISCHARGE AND ALSO IN DIFFERENT SECTIONS OF THE PLASMA CURRENT. THIS ENABLED ONE TO MEASURE THE AMT. OF IONIZATION AND RECOMBINATION PROCESSES. DURING THE COOLING PHASE, THE IONIZATION DECREASES MORE RAPIDLY THAN THE RECOMBINATION, AND IT CAUSES A DEVIATION FROM IONIZATION EQUIL. IN THE PLASMA.

UNCLASSIFIED

USSR

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SNOPKO, V. N., RAZUVAYEVA, L. A.

"Ionization Nonequilibrium in the Cooling of the Plasma of a Pulsed Discharge"
Minsk, Zhurnal Prikladnoy Spektroskopii, February 1970, pp 203-207

Abstract: The interrelationship of the departure from ionization equilibrium during the cooling of a plasma and the relative intensity of lines with negative levels was considered. An experimental study was made of the behavior of the ratio of the intensity of an auto-ionization line to that of a nonauto-ionization line along a quasi-stationary plasma jet and with spherical dispersion of the plasma. The principle established was explained by hypothesizing the destruction of ionization equilibrium and the predominance of the role of recombination in the population of auto-ionization levels during the cooling of the plasma.

The article includes 3 illustrations. There are 11 references.

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- 69 -

Acc. Nr.: **AP0029807**

Ref. Code: UR 0475

PRIMARY SOURCE: *Vrachebnoye Delo*, 1970, Nr 1, pp 40-43

GASTRIC JUICE CONTENT OF K⁺ AND Na⁺ IN PATIENTS
WITH HYPERTENSIVE DISEASE

Yu. P. Snopkov and L. F. Chirva (Kharkov)

Patients with hypertensive disease showed certain differences in gastric juice potassium and sodium contents as compared with healthy persons. The concentration of potassium proved decreased and by the end of treatment it tended to increase in patients with hypertensive disease (stages II and III). Advance of hypertensive disease is characterized by decreased elimination of sodium with the gastric juice and sodium concentration remains stably decreased in the process of treatment of hypertension (stages II and III). The treatment plan of patients with severe clinical course of hypertension should include drugs favouring excretion of sodium from the organism.

An inverse dependence was found between the concentration of sodium and partially potassium and the gastric acidforming function.

mk

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REEL/FRAHE
19681493

1/2 008 UNCLASSIFIED
TITLE--ISOTOPIC ANALYSIS OF NITROGEN -U- PROCESSING DATE--04DEC70
AUTHOR-(02)-SNOPOV, N.G., BEZLYUDNYY, N.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 259-63
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NITROGEN ISOTOPE, METAL CHEMICAL ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/1203 STEP NO--UR/0368/70/012/002/0259/0263
CIRC ACCESSION NO--AP0138218
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138218

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

ABSTRACT. ISOTOPE CONTENT OF N WAS DETD. ON THE EQUIPMENT DESCRIBED EARLIER (N. G. SNOPOV AND N. N. BEZLYUDNYI, 1969). ZERO METHOD OF SIGNAL MEASUREMENT WAS SUGGESTED INSTEAD OF SCANNING SPECTRA TO IMPROVE THE ACCURACY. THE SIGNAL WAS MEASURED AT 297.9 NM. THE METHOD COULD BE USED AT GREATER THAN OR EQUAL TO 2PERCENT PRIME15 N CONTENT. AT LOWER CONCNS. THE ERROR BECOMES HIGH AND AT 0.4PERCENT PRIME15 N THE SIGNAL IS EQUAL TO NOISE. ROUTINE ANAL. TAKES 2-3 MIN. THE PRINCIPAL ADVANTAGE OF ZERO METHOD IS THE USE OF PHOTOMETRIC WEDGE WHOSE PROPERTIES ARE NOT TIME DEPENDENT. WITH THE DESCRIBED VACUUM SYSTEM AT 10 PRIME NEGATIVE 4 MM HG THE SAMPLE SIZE COULD BE REDUCED TO 0.02 MG N WITH NO LOSS OF ACCURACY.

UNCLASSIFIED

USSR

UDC: 621.372.412

SNOPOV, Yu. S., KOCHETYGOV, V. V.

"On the Problem of Measuring the Static Capacitance of Piezoceramic Resonators of Radial Oscillations"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 5, pp 107-112 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A289)

Translation: A theoretical basis is given for measuring the static capacitance C_0 of piezoceramic resonators of radial oscillations on a frequency above the main resonance frequency, and experimental data are presented.
Résumé.

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- 94 -

USSR

SNURNIKOVA, G. K.

UDC 621.372.825

"Propagation of Electromagnetic Waves in Ridge Wave Guides"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 15, pp 115-122 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B107)

Translation: The problem of propagation of H-waves in H-, Π - and other ridge structures is investigated. There are 2 illustrations and a 6-entry bibliography.

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- 149 -

USSR

UDC 621.372.825

SNURNIKOVA, G. K., TRET'YAKOV, O. A.

"Channel Wave Guide"

Radiotekhnika. Resp. mezhved. nauchno-tekhn. sb. (Radio Engineering. Republic Interdepartmental Scientific and Technical Collection), 1970, vyp. 15, pp 19-24 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B108)

Translation: The problem of propagation of H-waves in a channel wave guide is solved in the strict statement. There is 1 illustration and a 4-entry bibliography.

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1/2 020
TITLE—ELECTRONIC PROPERTIES OF (3),1,2, AND (3),1,7, DICARBOLLIDE IONS -U-
AUTHOR—(03)—ZAKHARKIN, L.I., KALININ, V.N., SNYAKIN, A.P.
COUNTRY OF INFO—USSR
SOURCE—DOKL. AKAD. NAUK SSSR 1970, 190(2), 341-4
DATE PUBLISHED—70
SUBJECT AREAS—CHEMISTRY
TOPIC TAGS—ELECTRON PROPERTY, NMR SPECTRUM, CARBORANE, FLUORINATED ORGANIC COMPOUND, CESIUM COMPOUND
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—2000/1080
CIRC ACCESSION NO—AT0124737
STEP NO—UR/0020/70/190/002/0341/0344
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124737

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. FROM NMR CHEM. SHIFTS FOUND IN THE SPECTRA OF THE TITLE SUBSTANCES THE FOLLOWING VALUES WERE CALCD. FOR INDUCTIVE AND RESONANCE CONTRIBUTIONS OF THE IONS WITH THE INDICATED STRUCTURES: (FORMULA SHOWN ON MICROFICHE). THE PLAUSIBLE REASONS FOR THE VALUES WERE DISCUSSED BRIEFLY. HEATING 3, (P, FLUOROPHENYL), O, CARBORANE WITH ALC. KOH UNTIL H EVOLUTION HAD STOPPED AND TREATING THE EVAPD. SOLN. WITH H SUB2 O, THEN WITH CSNO SUB3 GAVE THE CS SALT OF 6, (P, FLUOROPHENYL), O, DICARBAUNDECABORANE (13), M. 348-50 DEGREES. SIMILARLY WAS PREPD. CS SALT OF 6, (M, FLUOROPHENYL), O, DICARBAUNDECABORANE (13), M. 176-80 DEGREES. FACILITY: INST. ELEMENTORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

USSR

Recorders and Transducers

SNYTKO, A. YA.

UDG 534.232.45-8

"Investigation Of Some Dynamic Parameters Of Nickel And Permendur Transducers"

V sb. Ul'trazvuk. metody intensiv. tekhnol. protsessov (Ultrasonic Methods Of Intensification Of Technological Processes) [Mosk.in-t stali i splavov, 60 -- Moscow Steel And Alloys Institute, 60], Moscow, 1970, pp 57-63 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A425)

Translation: The dependence is investigated of the parameters of equivalent circuits for Permendur and nickel transducers at a mechanical resonance frequency, on the amplitude of the excitation induction B_m and the mechanical vibrations of the end face. The methodology is described and the dependences are presented of the equivalent resistance of the mechanical losses in a nickel transducer, on the amplitude of the mechanical vibrations, and in the Permendur transducer on the excitation amplitude at various magnetization regimes. It is shown that the dynamic parameters of the nickel transducers depend strongly on the amplitude of the mechanical vibrations and strongly on the amplitude of the excitation inductance (with the exception of sufficiently large or too small excitation inductances). The dynamic parameters of the Permendur emitters is more sensitive to change of the excitation induction. 2 ill. 10 ref. N.B.

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USSR

UDC 547.26'118

PUDOVIK, A. N., ZIMIN, M. G., SOBANOV, A. A., and EVSTAF'YEV, G. I., Kazan' State University imeni V. I. Ul'yanov-Lenin

"Reactions of α -Hydroxyallylphosphonic Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 1910-1915

Abstract: It was shown that the dimethyl ester of α -hydroxyallylphosphonic acid upon heating with catalytic amounts of alkoxides or trimethylamine are converted to the propionate of the dimethyl ester of α -hydroxyallylphosphonic acid. A route of the formation of the propionate was proposed including the initial isomerization of the α -hydroxyallylphosphonic ester into the ester of propionephosphonic acid followed by its reaction with a second molecule of α -hydroxyallylphosphonic ester. It was shown that the reaction of α -ketophosphonic acid esters with α -hydroxyalkylphosphonates takes place with the formation of dialkyl phosphites, esters of carboxylic acids, and dialkyl esters of α -dialkylphosphonalkylphosphonic acid. Heating the dialkylesters of α -hydroxyallylphosphonic acid in acetic acid or anhydride in presence of sulfuric acid leads to their acetylation.

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- 36 -

USSR

UDC 547.26'118

PUDOVIK, A. N., ZIMIN, M. G., and SOBANOV, A. A., Kazan' State University
imeni V. I. Ul'yanov-Lenin

"Reactions of Dialkyl Phosphites With Ketones Activated by Electronegative
Groups"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 2174-2180

Abstract: As a result of the reaction of dimethyl- and diethyl phosphites with 2-carbethoxycyclopentanone, 2-carboethoxycyclohexanone, diethylphosphonoacetone, desoxybenzoin, and the nitrile of alpha-phenylacetoacetic acid, in the presence of diethylamine, 1-hydroxy-2-carboethoxycyclopentyl (or hexyl)-, 1-hydroxy-2-diethylphosphonoisopropyl-, 1-hydroxy-1,2-di-phenylethyl-, and 1-hydroxy-2-cyano-2-phenylisopropylphosphonates were formed. Structures of the products were confirmed by elemental analysis and IR and NMR (Nuclear Magnetic Resonance) spectra, and various characterizing constants were determined. The presence of hydroxyl groups was also confirmed by reacting the esters with acetic anhydride or acetyl chloride; the constants of the resulting acetates were determined, and their IR and NMR spectra taken. On heating these esters in the presence of alkali metal alkoxides or without a catalyst, decomposition to their

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USSR

PUDOVIK, A. N., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 2174-2180

original components and sometimes partial dehydration were observed, rather than a phosphonatephosphate rearrangement. Heating dialkyl 1-acetoxy-2-diethylphosphonoisopropyl-, and 1-acetoxy-2-carboethoxycyclopentyl(or hexyl)phosphonates in the presence of sodium carbonate yielded dialkyl 2-diethylphosphonopropenyl- and 2-carboethoxycyclopentenyl(or hexenyl)-phosphonates. It was demonstrated that on reacting alpha-hydroxyalkyl-phosphonates with thionyl chloride dialkyl alpha-chloroalkylphosphonates are formed, which eliminate hydrochloric acid on heating with pyridine to form vinylphosphonates.

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- 32 -

USSR

UDC 547.26'118

PUDOVIK, A. N., ZIMIN, M. G., SOBANOV, A. A., VINOGRADOV, L. I., and
SAMITOV, Yu. Yu., Kazan' State University imeni V. I. Ul'yanov-Lenin

"Reaction of Dialkyl Phosphites With Ethyl Acetoacetate and the
Dehydration of Esters of Alpha-hydroxyalkylphosphonic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 2167-2174

Abstract: As a result of the reaction of dimethyl, di-n-propyl, diisopropyl, di-n-butyl phosphites and the partial ethyl ester of phenylphosphorous acid with ethyl acetoacetate in the presence of diethylamine, dialkyl alpha-hydroxy-beta-carbethoxyisopropylphosphonates and the ethyl ester of alpha-hydroxy-beta-carbethoxyphenylisopropylphosphonic acid were formed. The IR and PMR (Proton Magnetic Resonance) spectra of the products were studied and constants recorded. The PMR spectrum of the diethyl ester showed that it had two nonequivalent hydrogen atoms at the beta carbon, said to be due to an internal hydrogen bond. The concentration dependence of the IR spectrum of this compound was reported to indicate intermolecular bonds between the phosphorus-oxygen double bond and the hydroxyl group in the solid state and concentrated solutions. This was confirmed by ebullioscopy and cryoscopy. On heating the esters with a catalytic amount

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USSR

PUDOVIK, A. N., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 2167-2174

of piperidine or sodium alkoxide they were dehydrated to dialkyl alpha-methyl-beta-carbethoxyvinylphosphonates. The capacity for this dehydration depends on the presence of a mobile methylene group. Beta-dialkylphospho-beta-butyrolactone was also formed as an impurity from more vigorous thermal action, but could be converted to the vinyl ester by heating with ethanol in the presence of sodium ethoxide. The dehydration was also carried out by heating in the presence of sodium carbonate.

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- 33 -

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UNCLASSIFIED
PROCESSING DATE--27NOV70
TITLE--REACTION OF DIETHYL PHOSPHITE WITH ACETOACETIC ESTER -U-
AUTHOR--(03)-PUDOVIK, A.N., ZIMIN, M.G., SOBANOV, A.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 936-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ALKYL PHOSPHITE, ACETOACETATE, CHEMICAL DECOMPOSITION,
CARBONYL COMPOUND, HYDROXYL RADICAL, ORGANIC PHOSPHORUS COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1518
CIRC ACCESSION NO--AP0135179
STEP NO--UR/0079/70/040/004/0936/0937
UNCLASSIFIED

2/2 015
 CIRC ACCESSION NO--AP0135179 UNCLASSIFIED PROCESSING DATE--27NOV70
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REACTION OF ACCH SUB2 CO SUB2 ET
 WITH (ETO) SUB2 PHO IN THE PRESENCE OF ETONA FAILED TO YIELD
 IDENTIFIABLE PRODUCTS, BUT THE SAME REACTION RUN AT ROOM TEMP. WITH ET
 SUB2 NH AS THE BASE GAVE 95PERCENT (ETO) SUB2 P(O)CME(OH)CH SUB2 CO SUB2
 ET (I), M. 46DEGREES, WHICH WITH ACCL AR AC SUB2 O AND A CATALYTIC AMT.
 H SUB2 SO SUB4 GAVE 96PERCENT CORRESPONDING ACETATE, B SUB10
 169-70DEGREES, N PRIME20 SUBD 1.4425, O PRIME10 1.1447. AN ATTEMPT TO
 VERIFY THE EARLIER REPORT OF DEHYDRATION OF (RO) SUB2 P(O)CH(R)OH (US
 2,579,810) SHOWED THAT LOSS OF WATER FROM THEM UNDER THE REPORTED
 CONDITIONS DID NOT OCCUR, BUT THAT THE ESTERS SMOOTHLY DECOMPD. INTO THE
 CARBONYL COMPD. AND (RO) SUB2 PHO; DEHYDRATION ALSO FAILED FOR (RO) SUB2
 P(O)NHCH(OH)CCL5 UB3, BUT HYDROXYPHOSPHONATES IN WHICH A CH SUB2 GROUP,
 ACTIVATED BY AN ELECTRON ACCEPTOR GROUP, IS PRESENT DID UNDERGO AT LEAST
 PARTIAL DEHYDRATION. THUS (ETO) SUB2 P(O)CME:CHCO SUB2 ET, 10PERCENT, B
 SUB15 156-70DEGREES, 1.4500, 1.0986, WAS FORMED FROM I BY HEATING WITH A
 TRACE OF PIPERIDINE IN C SUB6 H SUB6. THE SAME PRODUCT FORMED IN
 63PERCENT YIELD FROM I ACETATE ON HEATING WITH DRY NA SUB2 CO SUB3.

UNCLASSIFIED

USSR

UDC 547.26'118

PUDOVIK, A. N., ZIMIN, M. G., and SOBANOV, A. A.

"Interaction of Diethyl Phosphite With Acetoacetic Ester"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 936-937

Abstract: The authors were unable to isolate pure addition products with a satisfactory yield as a result of the reaction of acetoacetic ester with diethylphosphorous acid in the presence of sodium ethylate. However, when the reaction was staged at room temperature in the presence of diethylamine, an addition product was obtained, viz. diethyl ester of α -hydroxy- α -methyl- β -carboethoxyethylphosphonic acid (I). Heating of I with acetyl chloride or with acetic anhydride in the presence of a catalytic amount of sulfuric acid gives its acetate. I undergoes partial dehydration on heating with a catalytic amount of piperidine in a benzene medium to give diethyl ester of α -methyl- β -carboethoxyvinylphosphonic acid.

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USSR

UDC 612-019

CHIKVAIDZE, V. N., IORDANISHVILI, G. S., and SOBCHINSKAYA, N. M., Institute of Physiology, Georgian Academy of Sciences

"Effect of Neurotropic Agents on Monoamine Oxidase and 5-Hydroxytryptophan Carboxylase Activities in Brain Tissue"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, No 1, 1973, pp 201-203

Abstract: In acute experiments on rats, chlorpromazine, melipramine, nardil, reserpine, haloperidol, and iprazid inhibited monoamine oxidase activity in brain tissue in varying degrees, while benactizine slightly stimulated it. The results were the same in chronic experiments, but the inhibitory effect of the neurotropic agents was more pronounced. In both acute and chronic experiments, chlorpromazine and nardil strongly inhibited 5-hydroxytryptophane carboxylase activity, while reserpine stimulated it. Benactizine and melipramine inhibited the enzyme in chronic and acute experiments, respectively. Haloperidol had no effect. Thus, the drugs tested have a selective effect on monoamine oxidase and 5-hydroxytryptophane carboxylase activities in brain tissue. Some inhibit both enzymes; others stimulate one and inhibit the other.

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USSR

UDC 547.241.07

RAZUMOV, A. I., SAVICHEVA, G. A., and SOBCHUK, T. I., Kazan' Institute of Chemical Technology imeni S. M. Kirov

"A Method of Making Phosphorylated Diacetals"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329183, Division C, filed 6 Jul 70, published 9 Feb 72, p 101

Translation: This Author's Certificate introduces: 1. A method of making phosphorylated diacetals. As a distinguishing feature of the patent, a mixed neutral phosphite reacts with an haloacetal in the presence of heat in an inert gas atmosphere with subsequent isolation of the product by conventional methods. 2. A modification of this method distinguished by the fact that the process is conducted at 140-150°C.

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- 26 -

USSR

UDC 621.355.82

ALEKSEYEV, V. A., ANDREYEVA, T. I., SOBEL'MAN, I. I.

"On the Theory of Nonlinear Resonances of Gas Laser Power"

Preprint No 175, Physical Institute of the Academy of Sciences of the USSR,
Laboratory of Quantum Radio-Physics, Moscow, 1972, 22 pp, RZh-Fizika, No 9,
Sep 73, Abstract No 9D717

Translation: The form of the Lamb shift as a function of pressure is
theoretically examined, taking into account the effect of collisions on the
external and internal degrees of freedom of the atoms. It is shown that a
consideration of the change in velocity of the atoms in collision leads to a
nonlinear expression for the width and extent of the Lamb shift as a function
of pressure. Twelve bibliographic citations.

Yu. M.

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- 15 -

AP0032929

Abstracting Service:
CHEMICAL ABST. 3-70

Ref. Code
UK0000

49203u Broadening of spectral lines in highly rarefied homogeneous gases. Alekseev, V. A.; Vinogradov, A. V.; Sobelman, I. I. (P. N. Lebedev Phys. Inst., Moscow, USSR). *J. Quant. Spectrosc. Radiat. Transfer* 1970, 10(1), 55-60 (Russ). The problem of the enhancement of radiation linewidth produced by a "coupling effect" is discussed in connection with exptl. results of Kuhn, Lewis and Vaughan. For N atoms in a small vol. ($V \ll \lambda^3$), when the interat. distances are small compared with the resonance wavelength λ , this effect produces an "N-time increase" in the radiation linewidth. On the other hand, for a gas in a large vol. ($V \gg \lambda^3$) the effect is completely absent; and the radiation linewidth is the same as for an isolated atom. As a possible explanation for the anomaly in self-broadening observed at low pressure by Kuhn, Lewis, and Vaughan, a statistical dependence between Doppler and impact broadening is suggested. RCTT

REEL/FRAME
19701282

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UDC 681.3.06:51

SOBEL'MAN, V. I.

"Software for the ICL System for Machines"

Tsifr. Vychisl. Tekhnika i Programmir. [Digital Computer Equipment and Programming
-- Collection of Works], No 6, Moscow, Sovetskoye Radio Press, 1971, pp 68-78,
(Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V607
by the author).

Translation: A brief review is presented of the software of the system for
machines produced by the British ICL Company. The terminology used by the
manufacturing firm is retained whenever possible.

Waveguides

USSR

UDC 621.385.6

SOBENIN, N.P., SHKOL'NIKOV, E. Ya.

"Some Problems Of The Calculation Of Nonperiodic Structures"

V sb. Uskoriteli (Accelerators--Collection Of Works), No 12, Moscow, Atomizdat, 1970, pp 96-101 (from RZh--Elektronika i yeye primeneniye, No 10, October 1970, Abstract No 10A25)

Translation: The solution is presented of a problem devoted to determination of $B_{\phi}(z)$ and $E_z(z)$, taking account of the strong coupling between units [yacheyka] in the iris waveguide of a linear electron accelerator. An earlier problem was solved for a weak coupling between units and with the absence of reflected waves. In the present solution, moreover, an expression is obtained for the modulus of the coefficient of reflection from the irregular part of the iris waveguide. The results of the calculation agree well with experiment. 7 ref. Zh.N.

1/1

GOLOVIN, V.N., SOBENIN, N.P.

UDC 621.384.6

"Grouping Of Electrons In Section With Constant Phase Velocity And Constant Intensity Of Accelerating Field"

V sb. Uskoriteli (Accelerators--Collection Of Works), No 12, Moscow, Atomizdat, 1970, pp 111-116 (from RZh--Elektronika i yeye primeneniye, No 10, October 1970, Abstract No 10A326)

Translation: The paper considers the requirements imposed on the phase-energy distribution of particles at the input of a section with constant phase velocity so that at its output all the particles fall into the phase interval

$$(\phi_{2k0} + \Delta_{2k/2}) - (\phi_{2k0} - \Delta_{2k/2})$$

where ϕ_{2k} and Δ_{2k} are respectively the phase of the equilibrium particle and the phase of the extended particle at the output of the aforementioned section. The phase of the zero accelerating field is taken as the beginning of readout of angles. A.K.

1/1

USSR

UDC 615.9:612.019

KRASOVSKIY, G. N. and SOBINYAKOVA, O. R., Chair of Communal Hygiene, First Moscow Medical Institute imeni I. M. Sechenov

"Comparative Sensitivity of Man and Animals to Various Substances According to the Indices of Acute Toxicity"

Moscow, Gigiyena i Sanitariya, No 4, 1970, pp 29-34

Abstract: A review of the literature on forensic medicine yielded 386 compounds for which lethal doses for man have been established. But lethal doses for animals (when administered perorally) were found for only 260 of the substances. Analysis revealed that man is approximately as sensitive to the compounds as animals or, in some cases, only slightly more so. The differences in sensitivity can be equated if toxicity tests are run on animals that are most sensitive to the particular substance under study. There is no "universal," highly sensitive animal because of structural and metabolic differences between species.

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UNCLASSIFIED

PROCESSING DATE--11SEP70

TITLE--THE COMPARATIVE SENSITIVITY OF MAN AND ANIMALS TO THE ACTION OF
VARIOUS SUBSTANCES ACCORDING TO THE INDICES OF ACUTE TOXICITY -U-

AUTHOR--KRASOVSKIY, G.N., SOBINYAKOVA, J.R.

COUNTRY OF INFO--USSR

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CIRC ACCESSION NO--AP0101735

UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN ORDER TO ASCERTAIN CERTAIN ASPECTS OF THE PROBLEM OF INTERSPECIFIC SENSITIVITY AN ATTEMPT WAS MADE TO COMPARE THE LEVELS OF LETHAL DOSES OF 260 SUBSTANCES FOR MAN AND LABORATORY ANIMALS. INFORMATION ON THE HUMAN LETHAL DOSES WAS TAKEN FROM THE LITERATURE ON FORENSIC MEDICINE. THE SENSITIVITY OF MAN TO TOXIC SUBSTANCES PROVED TO BE APPROXIMATELY EQUAL TO THAT OF LABORATORY ANIMALS OR EXCEEDED (2 TO 3 TIMES) IT TO AN INSIGNIFICANT EXTENT. THE FINDING WAS THAT DIFFERENCES IN THE SENSITIVITY COULD BE LEVELLED IF EXPERIMENTS WERE CARRIED OUT ON ANIMALS MOST SENSITIVE TO THE INVESTIGATED SUBSTANCE. IT IS SHOWN THAT THERE IS NO "UNIVERSAL" MOST SENSITIVE SPECIES OF ANIMALS THAT COULD BE USED IN THE SANITARY TOXICOLOGICAL EXPERIMENTS.

UNCLASSIFIED

USSR

PISKULOV, Ye. A., SHIMBIREV, P. N., SOBKIN, B. L.

"Use of a Method of Digital Modeling to Study Voltage-Code Converters Using the Principle of Continuous Logic"

[Tr.] Mosk. Aviats. In-ta [(Works) of Moscow Institute of Aviation], 1972, No 249, pp 130-136 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V602, by A. Muchnik).

Translation: In the work of E. I. Titis and P. N. Shimbirev, "Application of Continuous Logic to Analog-Digital Conversion" (Tr. Region. Nauch.-Tekhn. Sem. po Preobr. i Obrab. Informatsii. [Works of Regional Scientific and Technical Seminar on Conversion and Processing of Information], Taganrog, 1971), problems of the construction of voltage-code converters (VCC) using the principles of continuous logic are discussed. Theoretical problems arise (development of methods of VCC synthesis), as well as practical problems such as increasing reliability and economy of equipment in VCC. This article suggests a method of digital modeling for determination of the parameters of the continuous logic function (CLF) realized by the VCC. A flow chart is presented of the algorithm of the VCC. In the process of construction of

1/2

USSR

Piskulov, Ye. A., Shimbirev, P. N., Sobkin, B. L., [Tr.] Mosk. Aviats. In-ta, 1972, No 249, pp 130-136.

this algorithm, the process of formation of the CLF is made somewhat simpler than in the article mentioned above. Concerning CLF, see the book of S. A. Ginzburg and Yu. Ya, Lyubarskiy, Funktsional'nyye Preobrazovateli s Analogo-Tsifrovym Predstavleniyem Informatsii [Functional Converters with Analog-Digital Representation of Information] in the series "Automation Library," No 481, Energiya Press, Moscow, 1973. 5 biblio. refs.

2/2

- 76 -

USSR

UDC 669.184.244.66

TRAVIN, O. V., ZIN'KO, B. F., SHUMOV, M. M., ISAYEV, V. A.,
ZHUKAYEV, G. M., and SOBKIN, S. I.

"Kinetic Specifics of the Process of Deoxidation During Production of Low-Carbon Rimming Steel"

Proizvodstvo Chernykh Metallov [Production of Ferrous Metals--Collection of Works], No 75, Metallurgiya Press, 1970, pp 93-100

Translation: The mass transfer conditions between slag and metal in the process of deoxidation of low-carbon rimming steel in the ladle are studied. It is established that during the process of deoxidation the loss of manganese is determined by both the thermodynamic and the kinetic conditions. The influence of the pouring time, slag viscosity, moment of addition of deoxidizers, and other kinetic parameters on manganese loss is determined. An equation is presented, allowing the manganese loss to be determined in advance on the basis of known parameters of the converter process, notch condition and other factors. 4 figures.

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USSR

UDC 669.18:621.746

SOBKIN, S. I., NOSOV, V. A., ISUPOV, V. F., BREUS, V. M., CHEPURNOVA,
A. A., GROMOV, G. P., and ISMANOVA, T. A.

"Certain Factors Influencing the Increase in Density and Purity of Boiler
Steel Ingots"

Proizvodstvo Chernykh Metallov (Production of Ferrous Metals--- Collection
of Works), no 75, Metallurgiya Press, 1970, pp 240-251.

Translation: A study is made of four ingots melted by the scrap process,
the scrap ore process, and from a high-carbon semi-finished product of
100% cast iron with synthetic slag treatment of the semi-finished product
and steel, cast under a layer of slag with heating of the riser of the
ingot by lunkerite or an exothermic mixture and lunkerite in combination
with heat insulation of the mold with asbestos.
The influence of these factors on the segregation of chemical ele-
ments, gas content, content of nonmetallic inclusions, density and dendritic
structure of the ingot is established. 8 figures, 2 biblio. refs.

1/1

USSR

UDC 619:616.988.43:576.807.7

SOBKO, A. I., PROKHOROV, V. N., SOKOLOV, L. N., and KOSHETSYAN, E. G.,
All-Union Scientific Research Institute of Foot-and-Mouth Disease

"Antigenic Properties of Foot-and-Mouth Disease Virus Concentrated by
Means of Polyethyleneglycol"

Moscow, Veterinariya, No 5, May 73, pp 67-68

Abstract: On being concentrated by precipitation with 10% polyethylene-glycol (mol. wt. 6000), lapinized foot-and-mouth disease virus of types O, A, and C and subtypes O₁ and A₂₂ retained its antigenic properties. Upon inactivation of the concentrated virus with 0.2% beta-propiolactone, highly effective type-specific complement-fixing and precipitating antigens of types O, A, and C and subtypes O₁ and A₂₂ were obtained. These antigens were suitable for the complement fixation and diffuse precipitation reactions.

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USSR

UDC 619.576.858.4:576.807.7

CHERNYAYEV, Yu. A., and SOBKOV, A. I., All-Union Scientific Research Institute
of Foot and Mouth Disease

"Determination of the Correspondence Between Epizootic and Production Strains
of Foot-and-Mouth Disease Virus"

Moscow, Veterinariya, No 1, Jan 73, pp 43-46

Abstract: By applying the reaction of passive hemagglutination, in which
stable erythrocyte diagnostic preparations derived from antisera were used,
the antigenic correspondence between epizootic strains of the virus of foot-
and-mouth disease and production strains of this virus used in specific pro-
phylaxis was determined. Determinations were reliable and preferable to those
carried out by other methods because of the short time (2.5-3 hrs) required
for a determination.

1/1

- 67 -

USSR

UDC 619.611.9-022.6+636.1+636.2+636.4+636.52/.58

SOBKO, A. I.; SIDOROV, I. V.; SOKOLOV, L. N.; BELOKON, I. K.;
OVCHARENKO, I. V.

"Determination of the Optimum Dose of Foot-and-Mouth Disease
Saponin Aluminum Hydroxide Formol Vaccine for Swine"

Vladimir, V sb. Yashchur. T. 1 (Foot-and-Mouth Disease, Vol 1 --
Collection of Works), 1970, pp 69-71 (from RZh-58. Zhivotno-
vodstvo i Veterinariya, No 4, Apr 71, Abstract No 4.58.572 by
A. Musin)

Translation: Three experiments in swine immunization were con-
ducted with different variants and different doses of the vaccine.
Single immunization does not guarantee stable immunity. Double
administration of the same vaccine (20 and 40-50% immunizing
doses for guinea pigs) with an interval of 14 days) produced a
high level of immunity in 100% of the 6-10 month-old pigs.

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USSR

UDC 619.611.9-022.6+636.1+636.2+636.4+636.52/.58

SOBKO, A. I.; PROKHOROV, V. N.; OVCHARENKO, I. V.

"Experimental Study of Production of Type Specific Foot-and-Mouth Disease Antibodies and Sera From Naturally Susceptible Animals"

Vladimir, V sb. Yashchur. T. 1 (Foot-and-Mouth Disease, Vol 1 -- Collection of Works), 1970, pp 3-10 (from RZh-Zhivotnovodstvo i Veterinariya, No 4, Apr 71, Abstract No 4.58.570)

Translation: Virus strains of foot-and-mouth disease variant Ai, adapted to swine and sheep, were obtained. These strains can be used in production of homologous, virus-containing material for hyperimmunization of donors of diagnostic foot-and-mouth disease immune sera. These virus strains may be used to study the activity of foot-and-mouth disease vaccines for these types of animals. The complement-fixing activity of antigens from various virus-containing organs and tissues of newborn pigs and lambs was studied during the adaptation process of

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USSR

SOBK0, A. I., et al, V sb. Yashchur. T. 1, 1970, pp 3-10

foot-and-mouth disease virus variant Ai. The most pronounced complement-fixing activity was observed with antigens prepared from the heart. Antigens from skeletal muscles of lambs retained complement-fixing activity only in the first passage. It was established that active, type-specific, diagnostic foot-and-mouth disease sera could be obtained from sheep by hyperimmunization with homologous, virus-containing tissue.

2/2

- 90 -

UDC 619:576.858.4-807.7

USSR

CHERNYAYEV, Yu. A. and SOBKOV, A. I., All-Union Scientific Research Foot-and-Mouth Disease Institute

"The Passive Hemagglutination Test to Identify Foot-and-Mouth Disease Virus"

Moscow, Veterinariya, No 1, 1972, pp 102-104

Abstract: Formalized, tannin-treated sheep erythrocytes treated with hyper-immune guinea pig serums in the presence of bis-diazobenzidine are agglutinated upon contact with homologous foot-and-mouth disease antigen. The reaction is sufficiently specific to permit determination of the type and variant of the virus. It is more sensitive than the complement fixation reaction. The agglutination is best detected when the test is run in special plates possessing wells with a conical bottom because the agglutinates are very small (they have only 2 or 3 erythrocytes). The formation of such agglutinates requires a very small amount of antigen. This accounts for the high sensitivity of the reaction. Formalized and tannized erythrocytes can be stored for 6 to 12 months and sensitized erythrocytes for 1 to 6 months.

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- 60 -