

USSR

UDC 669.35:621.78

GOREV, K. V., TOPPENETS, R. L., and MALASHENKO, L. M., Physico
Technical Institute Academy of Sciences Belorussian SSR

"Electron Microscope Study of Stress Relief of a 3.2% Titanium
Alloy of Copper"

Minsk, Izvestoya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh
Nauk, No 4, 1971, pp 29-32

Abstract: Results are presented from a study of stress relief of deformed precipitation-hardening 3.2% titanium alloy of copper during various subsequent annealing temperatures. During repeated heating of deformed pre-aged alloy both processes connected with complete decomposition of the solid solution and the stress relief processes (recovery, polygonization, and recrystallization) take place. The curve for the variation of the alloy characteristics is in this case the resultant, and it cannot be used to describe the stress relief kinetics. The best method of studying recovery is the electron microscope. Results are presented from an electron microscope study of aging alloy Cu + 3.2%
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- 70 -

USSR

GOREV, K. V., et al., Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 4, 1971, pp 29-32

Tr permitting the variation of the dislocation structure of the alloy matrix to be traced during its deformation and complete recrystallization annealing. The structure of the deformed alloy is analogous to the structure of pure copper and is characterized by nonuniform dislocation distribution. For small annealing times at 350°C no significant changes in structure were observed. The possibility of developing polygonization at this temperature and during recrystallization at 600°C is demonstrated.

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1/3' 022 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--STRUCTURE AND MAGNETIC PROPERTIES OF A CONTROLLABLE FE-FE SUBX SB
EUTECTIC -U-
AUTHOR-(03)-GOREV, K.V., KUPCHENKO, G.V., NESTEROVICH, L.N.
COUNTRY OF INFO--USSR
SOURCE--VESTSI AKAD. NAVUK BELARUS. SSR, SER. FIZ.-TEKH. NAVUK 1970, (1),
79-81
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--EUTECTIC MIXTURE, IRON, ANTIMONY, HYSTERESIS LOOP,
CRYSTALLIZATION, ANISOTROPY, MAGNETIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/1967

STEP NO--UR/0201/7J/000/001/0079/0081

CIRC ACCESSION NO--AP0114379

UNCLASSIFIED

2/3 022

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0114379
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE FE-FE SUBX SB EUTECTIC, WITH THE COMPN. 48PERCENT FE AND 52PERCENT SB, WAS PREPD. BY MELTING 99.984PERCENT PURE CARBONYL FE AND 99.999PERCENT PURE SB IN QUARTZ CRUCIBLES IN A PURIFIED AR ATM. THE BOULES OBTAINED WERE ZONE REFINED. THE SAMPLES FOR METALLOGRAPHIC AND MAGNETIC STUDIES, 20 TIMES 20 TIMES 4 MM, WERE SECTIONED FROM THE BOULE PARALLEL TO ITS UPPER SURFACE AND PARALLEL TO THE CRYSTN. DIRECTION. THE CONTROLLABLE EUTECTIC CONSISTS OF FE FIBERS WHICH ARE ARRANGED IN THE FE SUBX SB MATRIX PARALLEL TO ONE ANOTHER AND TO THE GROWTH DIRECTION. AT A CRYSTN. RATE OF 6-12 CM-HR, THE PARALLEL ARRANGEMENT OF THE FIBERS IS PRESERVED, BUT THEIR DIAM. DECREASES FROM 1.5 TO 1 MU. THE FE PARTICLES ARE, AS A RULE, NOT COMBINED WITH ONE ANOTHER, BUT SIT IN THE MATRIX INDIVIDUALLY AND SEP. AS A RESULT OF THE PARALLEL ORIENTATION OF THE FE PARTICLES, THE MAGNETIZATION CURVES ALSO DIFFER. INFLECTION OF THE CURVE ON MAGNETIZATION ALONG THE FIBERS IS GENERALLY OBSD. AT MAGNETIC INDUCTION OF 3750-3950 G. MAGNETIZATION ACROSS THE FIBERS IS DIFFICULT TO ACHIEVE. IN THE STRUCTURE OF THE CAST EUTECTIC, THERE ARE NO PREFERRED ORIENTATIONS OF THE FE PARTICLES. SATN. INDUCTION IS REACHED IN A FIELD OF GREATER THAN 7 KOE. THE HYSTERESIS LOOPS OF THE FE-FE SUBX SB EUTECTIC ARE VERY NARROW. FOR SAMPLES WITH PARTICLES 1.5 MU IN DIAM., THE RESIDUAL INDUCTION ALONG THE FIBERS IS 1150-1210 G, AND THE COERCIVE FORCE IS 19-21 OE. DIRECTED CRYSTN. OF THE FE-FE SUBX SB EUTECTIC LEADS TO CONSIDERABLE ANISOTROPY IN ITS MAGNETIC PROPERTIES DUE TO UNIDIRECTIONAL ARRANGEMENT OF THE FE PARTICLES IN THE FE SUBX SB MATRIX.

UNCLASSIFIED

3/3 022 UNCLASSIFIED PROCESSING DATE--09OCT70
CIRC ACCESSION NO--AP0114379
ABSTRACT/EXTRACT--FACILITY: FIZ.-TEKH. INST., MINSK, USSR.

UNCLASSIFIED

89

Acc. Nr: **AP0052314**

Ref. Code: **UR0238**

PRIMARY SOURCE: Fiziologichnyi Zhurnal, 1970, Vol 16, Nr 2 ,
pp **228-236**

**ON REFLEX CARDIOGENOUS MECHANISMS FOR REGULATION
OF VASCULAR TONE**

M. M. Gorev, O. A. Moybenko

The A. A. Bogomoletz Institute of Physiology, Academy of Sciences, Ukrainian SSR, Kiev

Summary

The article deals with the analysis of reflex interrelations between the heart activity and periphery vessel tone.

In the experiments on dogs with applying the method of artificial circulation, the separate perfusion of systemic circulation and heart was realized.

The left-ventricle zone is shown to be a basic reflexogenic zone of heart taking part in regulating the tone of the systemic circulation vessels. Reflectory vasomotor shifts with stimulation of this zone receptors are of adaptive character.

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REEL/FRAME

19820893

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AP0052314

A high sensitivity is observed of the receptor apparatus of the left heart to the changes in its work regime, which makes possible to substantiate the statement on an important role of this reflexogenic zone in regulating the vascular tone under physiological conditions.

Essential differences in the character and manifestation of the vasomotor reflexes when stimulating different receptor zones of heart enable one to come to a conclusion on functional heterogeneity of the heart receptor field, on different role of its separate reflexogenic zones in regulating the vascular tone.

212

ldh

19820894

USSR

UDC 576.858.5.07

VAVILOVA, YU. G., GOREV, N. YE., and SMORODINTSEV, A. A., All-Union Scientific Research Institute of Influenza, Leningrad

"The Use of a Two-Phase Water-Polymer System for Concentrating Some Respiratory Viruses in Human Nasopharyngeal Swabs"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 72, pp 623-625

Abstract: The reagents used were a 30% aqueous solution of polyethylene glycol (M.W. 6000) and a 6% aqueous solution of dextran (M. W. 20,000). Ten-ml samples containing a known quantity of virus in a phosphate buffer of pH 7-7.5 were mixed with 8 ml of the first reagent and 2 ml of the second. The mixtures were repeatedly shaken for 1 hr and then centrifuged for 10-15 min at 1000-1500 rpm. The virus was recovered almost 100% from the bottom stratum of dextran. A 10-100-fold concentration was obtained on all virus strains used. A similar treatment of human nasopharyngeal swabs taken 3-4 days after administration of live anti-influenza vaccine increased the frequency of virus isolation of 75.4% for A2 Hong Kong-68, 61.5% for B-USSR, and 44.4% for B-Dushanbe; the corresponding control figures were 52.5%, 33.4% and 25%. The two-phase water-polymer system is recommended for routine laboratory procedures of isolating influenza virus, parainfluenza virus, and adenovirus from the respiratory pathways of patients.

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Miscellaneous

USSR

UDC 542.5

GOREV, V. A., GUSEV, P. A., and TROSHIN, YA. K., Institute of General and Inorganic Chemistry, Academy of Sciences UkrSSR, Kiev

"Modelling of the Rise and the Combustion of Light Gas Cloud in the Atmosphere"

Moscow, Doklady Akademii Nauk SSSR, Vol 205, No 4, Aug 72, pp 875-878

Abstract: The problem of the movement of a cloud of burning gas and its mixing with surrounding air is analyzed, the upward movement is due to the hydrostatic lifting force. On the strength of theoretical considerations the conclusion was reached that the modelling of such a system is possible on the basis of Frude numbers and geometrical similitude. Theoretical principles were examined through laboratory experiments with and without ignition; the agreement between the calculated and experimental values was found to be very good. Initially the cloud accelerates, reaching a maximum rate of rise, and then the upward movement becomes gradually slower.

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CSO: 1841-W

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USSR

UDC 617-001.18-08

ZHADENOV, I. I., CHUYENKOV, V. F., and COREINKEL', I. V., CHair of
Hospital Surgery, Therapeutic Faculty, Saratov Medical Institute

"Recovery of Patients from Deep Hypothermia"

Moscow, Khirurgiya, No 1, 1970, pp 126-127

Abstract: Excerpts from the case histories of two drunks brought to the hospital unconscious (the rectal and axillary temperatures were 24.6°C and 23.6°C in one and 22.8°C and 21.8°C in the other) and successfully resuscitated by active therapy are presented. Therapy included transfusions of whole blood, 10% glucose solution, blood substitute, protein hydrolysates, intravenous injection of sodium bicarbonate, vitamins, hydrocortisone, novocain block, and oxygen therapy.

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USSR

GOREVA, G. A.

"The Problem of Approximate Straightenability of Certain Sets of Lines"

Uch. zap. Ivanov. gos. ped. in-ta [Scientific Writings of Ivanov State Pedagogics Institute], 1972, 117, pp 125-135 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8 V676 by V. Mikheyev)

Translation: The problem is solved of the precise nomographability of a certain function and, in particular, the straightenability of its Cartesian abacus. The function is assumed sufficiently smooth. The question of approximate straightenability of certain sets of lines located in plane xy by a homeomorphism of the form $x'=\phi(x)$, $y'=\psi(y)$, $\phi(0)=\psi(0)=0$ of plane xy in plane $x'y'$ is studied without assuming differentiability of any functions.

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- 85 -

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--USE OF MASS SPECTROMETRY FOR DETERMINING THE POSITION OF THE LABEL
IN CARBON 13 LABELED NAPHTHALENES -U-
AUTHOR--(03)-KOPTYUG, V.A., ISAYEV, I.S., GORFINKEL, M.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAO. NAUK SSSR, SER. KHIM. 1970, (4), 845-9
DATE PUBLISHED-----70
SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, CHEMISTRY
TOPIC TAGS--MASS SPECTRUM, CARBON ISOTOPE, CHEMICAL LABELLING,
NAPHTHALENE, GRIGNARD REACTION, KETONE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY KEEL/FAME--3006/1015 STEP NO--UR/0062/70/000/004/0845/0849
CIRC ACCESSION NO--AP0134727
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
 CIRC ACCESSION NO--AP0134727
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GRIGNARD SYNTHESIS STARTING
 WITH CARBOXYLATION OF PHCH SUB2 CH SUB2 CH SUB2 MGBR WITH PRIME13 CO
 SUB2, FOLLOWED BY DEHYDRATION OF THE ACID WITH POLYPHOSPHORIC ACID AND
 HEATING THE TETRAHYDRONAPHTHALONE WITH NaOH, KOH AT 220DEGREES GAVE
 ANPHTHALENE 1 PRIME13 C IN 54PERCENT RADIOCHEM. YIELD. FROM PHCH SUB2
 CH SUB2 MGBR AND PRIME13 CO SUB2 WAS PREPD. THE TAGGED PENYYLPROPANOL BY
 REDN. WITH LIALH SUB4 OF THE INTERMEDIATE ESTER; THE ALC. CONVERTED TO
 RBR AND THIS CONVERTED TO RMGBR, THEN CARBOXYLATED WITH ORDINARY CO SUB2
 GAVE AS ABOVE 50.6PERCENT NAPHTHALENE, 2 PRIME13 C. THESE WERE OXIDIZED
 CONVENTIONALLY TO 1,4,NAPHTHOQUINONE, PRIME13 C WHICH ON ELECTRON IMPACT
 DISSOCO. INTO PARTICLES WHOSE SPECTRUM WAS RECORDED IN A MASS
 SPECTROMETER. TYPICAL DISTRIBUTION PATTERNS WERE OBTAINED AND THESE,
 WITH SUITABLE EMPIRICAL EQUATIONS, WERE FOUND TO BE USEFUL FOR DETN. OF
 THE SITE OF THE PRIME13 C TAG IN NAPHTHALENE. FACILITY:
 NOVOSIBIRSK. INST. ORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

Superalloys

USSR

UDC 539.67

VLADIMIROVA, N. N., GLOTOVA, L. S., GORFINKEL', V. B., DUNAYEV, F. N.,
LOBANOVA, N. B., and YAKOVLEV, G. P.

"Effect of Magnetic Structure on Internal Friction of Nickel and Ferronickel Alloys"

Sb. "Vnutrenneye treniye v metallicheskih materialakh" (Internal Friction in Metallic Materials), Moscow, Izd-vo "Nauka," 1970, pp 187-191

Abstract: The effect of tensile stresses and heat treatment on the ferromagnetic internal friction of nickel, permalloy-66, and permalloy-50 is studied.

It is shown that the effect of external static tensile stresses on internal friction and vibration period depends on both the magnitude and sign of saturation magnetostriction of a given material. Hysteresis of the logarithmic decrement δ and of vibration period T was experimentally revealed from the magnitude of tensile stresses.

The effect of heat treatment for 66%Fe, 80%Ni alloys was determined. The magnetic structure obtained as a result of heat treatment affects the internal friction. 4 figures, 3 references.

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USSR

UDC 633.11

GORGIDZE, A. D., Institute of Botany, Georgian Academy of Sciences

"Main Routes of Origin and Development of Initial Species of Cultivated Wheat"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, No 2, 1973, pp 425-427

Abstract: Some existing wheat species were experimentally resynthesized in an effort to trace the main directions of evolution of *Triticum* L. The species *Triticum palaeo-colchicum* Men. Tr. macha Dok. et Men., Tr. timopheevi Zhuk. Tr. dicoccoides Körn., Tr. zhukowskyi Men. et Eritz., Tr. monococcum, Tr. timonovum Heslot et Ferrary, and *Aegilops squarrosa* were crossed with each other or exposed to X-irradiation to obtain mutants. The characters (karyology, embryology, morphophysiology, etc.) of the experimental biotypes obtained by hybridization and mutation were inheritable in most cases. The identity of the spontaneously and experimentally obtained species was confirmed by good crossability and production of highly fertile offspring.

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- 4 -

USSR

UDC: 51

GORGIDZE, I. A.

"On a Model of Intersectoral Planning of Agricultural Production"

Tr. Vychisl. tsentra AN GruzSSR (Works of the Computing Center of the Academy of Sciences of the Georgian SSR), 1972, 11, No 1, pp 34-45 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V592)

[No abstract]

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- 50 -

USSR
BURKOV, V. N. and GORGIDZE, I. A.

UDC: 62-506

"The Adaptive Planning Principle in Active Systems"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, vol 64, No 3, December 1971, pp 553-556

Abstract: A formal description of the active element as a model of the man-machine system is considered in which the state x of the active element is a scalar random quantity, and the limiting possibilities of the element are described by the limiting distribution $F(x)$. A characteristic of the man-machine system is the capability of operating below the limiting possibilities in the absence of interestedness. This characteristic can then be taken into account by determining the distribution function $F(\omega, x)$; where ω is a parameter of the selected active element; and $F(\omega, x)$ has the value of $F(x)$ if $x < \omega$, and 1 if $x \geq \omega$. The active element may be a business enterprise or a sovkhos, while x corresponds to the production output or the quantity of the harvest. The formal description thus developed serves as the starting point for analyzing the system in the adaptive planning mode. The authors express their gratitude to S. V. Yemel'yanov, Corresponding Member of the USSR Academy of Sciences, for his advice. They are

1/2

USSR

UDC: 62-506

BURKOV, V. N., et al, Soobshcheniya Akademii nauk Gruzinskoy SSR
vol 64, No 3, Dec 71, pp 553-556

affiliated with the Institute of Control Problems (Automation and
Telemechanics), USSR Academy of Sciences, and the Computer Center,
Georgian SSR Academy of Sciences.

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CSO: 1863-W

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- 84 -

USSR

BURKOV, V. N., IVANOVSKIY, A. G., GORGIDZE, I. A.

"Some Problems of Control of Active Systems"

Aktual'n. Vopr. Tekhn. Kibernetiki [Pressing Problems of Engineering Cybernetics -- Collection of Works], Moscow, Nauka Press, 1972, pp173-175 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V592, by the authors).

Translation: The application of the principles of "open control" to the solution of problems in control of active systems is studied. n active elements are given, the capabilities of which are defined by plans with priorities S_{ij} ($i = 1, 2, \dots, n, j = 1, 2, \dots, n$). Conditions of full agreement of the active system (agreement factor equal to unity) are defined. For the case $C_{ij} = C_j$, the possibility is proven of full agreement, and an algorithm for solution of the problem is presented.

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-- 71 --

USSR

BURKOV, V. N., IVANOVSKIY, A. G., GORGIDZE, I. A.

"Optimization of Models of Economics Based on the Principle of Open Control"

Vopr. Ekon.-mat. Modelir. [Problems of Economic and Mathematical Modeling -- Collection of Works], Moscow University Press, Moscow, 1971, pp 5-16, (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V616).

NO ABSTRACT.

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- 31 -

USSR

UDC 591.513+591.488.4

GORGILADZE, G. I. and KAZANSKAYA, G. S., Institute of Biomedical Problems, Moscow,

"Effect of Immobility on Habituation of the Vestibular Apparatus"

Moscow, Doklady Akademii nauk SSSR, No 4, 1973, pp 1,005-1,008

Abstract: A group of rabbits kept immobilized in special cages for 30 days were rotated once counter-clockwise, then 20 times clockwise at 5-minute intervals, and once again counter-clockwise. The nystagmic reaction of the control animals (maintained under normal vivarium conditions) varied in all the parameters examined. The rate of the slow phase, amplitude, frequency, total number of nystagmic movements, and duration of the reaction gradually decreased from rotation to rotation. In the case of the experimental rabbits the nystagmic reactions were the same as in the control during the first 7 tests, but thereafter remained at the same level, unlike the control where the intensity of the nystagmus progressively diminished. There was no perceptible weakening of the reaction of the hypokinetic animals according to all the parameters measured. The reason for the disappearance of habituation may be the marked lowering of adrenergic function following prolonged hypokinesia.

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- 61 -

USSR

UDC: 612.743

GORGILADZE, G. I., and KAZANSKAYA, G. S.

"Dynamics of Nystagmus, EEG, and Some Other Reactions Upon Repeated Brief Caloric Irritation of the Labyrinths of Rabbits"

Leningrad, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 57, No 1, 1971, pp 45-51

Abstract: Adaptation of the vestibular apparatus to repeated brief caloric (thermal) irritation by the irrigation of labyrinths with water at 20°C was studied on adult rabbits in a state of wakefulness. As shown by the nystagmus reaction indexes, some of the animals became adapted to the irritation after 14-20 irrigations (group I), while others developed adaptation after 70-90 irrigations (group II). Adaptation was retained by the rabbits for a certain length of time, particularly in group II, and was transferred to the contralateral labyrinth. Application of other stimuli (pain, auditory, or olfactory irritation) or intravenous injection of 0.1 ml of a 20% solution of Na caffeinate tended to restore the weakened nystagmus reactions to their initial level. The caloric irritation also produced changes in the EEG (desynchronization in the motor zones) and a drop in arterial pressure. Upon repeated caloric irritation, these changes gradually

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USSR

GORGILADZE, G. I., and KAZANSKAYA, G. S., Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova, Vol 57, No 1, 1971, pp 45-51

disappeared while the nystagmus was still pronounced. It may be assumed that the reticular formation of the brain stem plays a leading role in vestibular adaptation reactions.

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USSR

UDC 612.833.81+612.881

GORGILADZE, G. I., Moscow

"Significance of the Cortical Vestibular Projection Zones in the Formation of Vestibular Conditioned Reflexes and in Spatial Orientation of Cats"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 20, No 4, Jul/Aug 70, pp 663-665

Abstract: Conditioned reflexes (turning and tilting of the head) to a tone of 1000 Hz and differentiation (turning of the head in the opposite direction) in response to a tone of 500 Hz were formed in cats. The animals were also conditioned to find a feed box when blindfolded. The spatial orientation of the animals was studied after development of the reflexes and differentiation. The anterior portions of the ecto- and suprasylvian gyri were then bilaterally extirpated. The conditioned reflexes remained unimpaired after the operation, but the animals were unable to find the feed box with their eyes covered. In another series of experiments in which the same cortical zones were extirpated beforehand, the conditioned reflexes and differentiation were formed as readily as in normal animals, but the cats could not find the feed box when blindfolded. The cortical projection zones thus play no part in the formation

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USSR

GORGILADZE, G. I., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova,
Vol 20, No 4, Jul/Aug 70, pp 663-665

of relatively simple vestibular conditioned reflexes in cats, but they are
essential to the spatial orientation process in the animals.

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- 45 -

USSR

UDC 612.822.3

GORGILADZE, G. I., and KAZANSKAYA, G. S.

"Study of the Process of Habituation of the Vestibular Apparatus to Momentary Caloric Stimulation of Labyrinths in Rabbits"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlova, Vol 20, No 5, Sep/Oct 70, pp 1,086-1,088

Abstract: Caloric tests consisting of an application of 5 ml of water at 20°C for 1.5-2 seconds, carried out in one labyrinth during the prehabituation period, produced a nystagmic eye reaction which varied considerably from animal to animal. Some of the animals exhibited a rapid habituation process (14-20 applications), while others were slower (70-90 applications). Addition of an extra stimulus (pain, sound) led to dehabituation and a return of the original reaction. Tests carried out to determine the degree of preservation of habituation showed that within 24 hours the animals failed to show a nystagmic reaction to caloric stimulation. When contralateral labyrinths were stimulated to check the transfer of habituation from one vestibular apparatus to another, some animals showed a weaker nystagmic reaction and others a stronger one. The rabbit vestibular

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USSR

GORGILADZE, G. I., and KAZANSKAYA, G. S., Zhurnal Vysshey Nervnoy Deyatel'-nosti imeni I. P. Pavlova, Vol 20, No 5, Sep/Oct 70, pp 1,086-1,088

apparatus is thus clearly capable of habituation to caloric stimulation of the labyrinths.

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- 44 -

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MORPHOLOGICAL AND FUNCTIONAL CHANGES OF THE MUCOSA OF THE STUMP OF
THE OPERATED STOMACH IN PATIENTS WITH ULCER DISEASE -U-
AUTHOR--GORGOL, V.A.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 52-56
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--STOMACH, SURGERY, DIGESTIVE SYSTEM DISEASE, MORPHOLOGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1729 STEP NO--UR/0475/70/000/005/0052/0056
CIRC ACCESSION NO--AP0129097
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129097

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

ABSTRACT. A MORPHOLOGICAL STUDY OF THE MUCOSA OF THE STUMP OF THE OPERATED STOMACH BY MEANS OF ASPIRATION GASTROBIOPSY IN 50 PATIENTS WITH ULCER DISEASE INDICATES THAT THIS METHOD REFLECTS THE CHARACTER OF THE PATHOLOGICAL PROCESS IN THE MUCOUS MEMBRANE. IT WAS FOUND THAT THE MAJORITY OF PATIENTS OPERATED FOR ULCER SUFFER OF DIFFERENT FORMS OF GASTRITIS: SUPERFICIAL, DEEP AND ATROPHIC, WHICH RESULTS IN A DECREASE OF THE FUNCTIONAL CAPACITY (REDUCTION OF ACIDITY UP TO HISTAMINE RESISTANT ACHLORHYDRIA). FACILITY: KAFEDRA GASTROENTEROLOGII I DIYETOTERAPII, KIYEVSKOGO INSTITUTA USQVERSHENSTVUVANIYA VRACHEY.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EVALUATING THE WATERPROOFING CAPACITY OF PAINT AND VARNISH COATINGS
APPLIED ON CAPILLARY POROUS MATERIALS -U-
AUTHOR-(03)-LEPARSKIY, L.O., MYSHELOVA, G.N., GORGUNOVA, R.I.
COUNTRY OF INFO--USSR
SOURCE--LAKOKRASOCH. MATER IKH PRIMEN. 1970, (1), 57-8
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--WATERPROOFING, PAINT, VARNISH, WOOD, ENAMEL, ALKYD RESIN, UREA
RESIN, POLYESTER RESIN/(U)MALT OIL BASE COATING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0425 STEP NO--UR/0303/70/000/001/0056/0058
CIRC ACCESSION NO--AP0119361
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119361

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN APP. IS DESCRIBED FOR DETG. THE INTERNAL STRESS (SIGMA) DUE TO SWELLING WHEN A MATERIAL ABSORBS WATER. THE SAMPLE IS KEPT AT A CONST. TEMP. AND VOL. IN WATER AND THE INCREASE IN SIGMA WITH TIME IS DETD. ALTERNATIVELY, THE DECREASE OF SIGMA DURING DRYING AT CONST. VOL. CAN BE DETD. THE APP. WAS USED TO DET THE SIGMA OF UNCOATED PINWOOD AND OF PINWOOD COATED WITH VARIOUS ENAMELS. NATURAL OIL BASED COATING MA-11H WAS FOUND TO PREVENT WOOD SWELLING IN WATER BETTER THAN COM. ALKYD UREA OR POLYESTER COATING.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--EFFECT OF SOME IMPURITIES ON THE PHOTO MECHANICAL EFFECT IN SODIUM
CHLORIDE -U-
AUTHOR-(02)-GLRIDKO, N.YA., NOVIKOV, N.N.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(4), 1268-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--SODIUM CHLORIDE, PHOTOEFFECT, FUSED SALT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0478 STEP NO--UR/0181/70/012/004/1268/1269
CIRC ACCESSION NO--AP0126230

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126230

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IMPURITIES IN NaCl WERE ADDED TO THE MELTS AS SALTS (0.5 MOLE PERCENT Na SUB2 CO SUB3, 0.5 NaNO SUB3, AND 0.5 NaPO SUB3), HYDROXIDES (0.1 MOLE PERCENT NaOH AND 1 NaOH), OR AS GASES (O, H) INTRODUCED BY DIFFUSION. ANNEALING OF THE SPECIMENS IN VACUO LEADS TO COMPLETE DISAPPEARANCE OF THE PHOTOMECH. EFFECT AND ANNEALING OF DEGASSED SPECIMENS IN AN O ATM. DOES NOT LEAD TO ITS REAPPEARANCE, INDICATING THAT O IONS ALONE DO NOT GIVE RISE TO THE PHOTOMECH EFFECT. ANNEALING IN A H ATM. LEADS TO PARTIAL REAPPEARANCE OF THE EFFECT WHICH IS COMPLETELY REESTABLISHED IN O-H TREATMENT TO THE SPECIMENS. THIS SHOWS THAT THE PHOTOMECH. EFFECT IS RELATED TO THE PRESENCE ON THE SURFACE LAYERS OF H PRIME POSITIVE AND OH PRIME NEGATIVE IONS. THOSE SPECIMENS WHICH CONTAIN IMPURITY OH PRIME NEGATIVE IONS POSSESS THE GREATEST EFFECT. FACILITY: KIEV. GOS. UNIV. IM. SHEVCHENKO, KIEV, USSR.

USSR

UDC 537.312.62:621.318.3

LAZAREV, B. G., LAZAREVA, L. S., GOLIK, V. R., GORIDOV, S. I.,
Physicotechnical Institute, Ukrainian Academy of Sciences

"Experiences in the Development and Application of Laboratory
Superconductive Solenoids With Fields of up to 119 kOe"

Moscow, Izvestiya Akademii Nauk SSSR -- Seriya Fizicheskaya, No 11,
1972, pp 2475-2478

Abstract: An account is given of the work in the laboratory of the Physics Institute, USSR Academy of Sciences, on superconductive water-cooled solenoids capable of generating magnetic fields of as much as 175 kOe in the limit, and in the range of 100-120 kOe for average operation. There are many such laboratory solenoids operating throughout the country. Some of the results of the production work on these solenoids and of the experiences of the personnel involved are presented. It is noted that conductors of 25% Nb, 25% Zr, and Ti have been replaced by 60% Nb and Ti alloy, the critical magnetic field for which is 118 and 145 kOe at 4.2 and 2° K respectively and is 165 kOe when the temperature is extrapolated to 0° K. Thirty-five such solenoids generating fields of up to 90 kOe are now in use in scientific establishments in Moscow,
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USSR

LAZAREV, B. G., et al, Izvestiya Akademii Nauk SSSR -- Seriya Fizicheskaya, No 11, 1972, pp 2475-2478

Leningrad, Kiev, Donetsk, Sverdlovsk, Riga, Vil'nyus, Sukhumi, Makhachkala, and Kharkov. Technical data for some of the solenoids in operation is given in two tables. It is noted that this paper was presented before the All-Union Conference on Magnetism, held in 1971.

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- 86 -

1/2 016 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--A 115-KOE, 157-KOE WITH DYSPROSIUM CONCENTRATOR, SUPERCONDUCTING
SOLENOID MADE FROM DUCTILE ALLOYS -U-
AUTHOR-(04)-LAZAREV, B.G., LAZAREVA, L.S., GOLIK, V.R., GORIDOV, S.I.
COUNTRY OF INFO--USSR
SOURCE--FIZIKA METALLOV I METALLOVEDENIE, APR. 1970, 29, (4), 874-876
DATE PUBLISHED---APR70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., MATERIALS
TOPIC TAGS--SUPERCONDUCTOR, SOLENOID, BINARY ALLOY, TERNARY ALLOY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0674 STEP NO--UR/0126/70/029/004/0874/0876
CIRC ACCESSION NO--AP0129839
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0129839

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CREATION OF SUPERCONDUCTING SOLENOIDS FROM DUCTILE BINARY AND TERNARY ALLOYS (NB-TI, NB-ZR-TI, ETC.) IS DESCRIBED. BY CAREFUL ATTENTION TO THE CONDITIONS OF MANUFACTURE AS WELL AS AN OPTIMUM CHOICE OF ALLOY COMPOSITION AND PROCESSING, A SOLENOID WITH A MAX. FIELD OF 115 KOE IN A SPACE OF 12 MM IN DIA. WAS ACHIEVED. BY INCORPORATING A SIMPLE DY FIELD CONCENTRATOR IN THE FORM OF A PAIR OF CYLINDERS WITH A 1-MM GAP BETWEEN THEIR ENDS, THE FIELD WAS INCREASED TO 157 KOE.

UNCLASSIFIED

Acc. Nr:

AP0051924

Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 69, Nr 2, pp 41-44

CONCERNING THE METHOD OF PRODUCING EXPERIMENTAL CHRONICAL
PATHOLOGY OF THE LIVER

K. S. Koval'skaya, M. V. Rudenskaya, A. S. Gorin

Sklifosovsky First-Aid Institute

To elucidate the action of sodium salicylate on the functional and morphological state of the liver, two experimental procedures were employed. In acute experiments, sodium salicylate was administered fractionally into the portal vein. In chronic experiments, the liver was examined after single, double and triple administrations of the agent. Observation was carried out during 2 years after the last administration. As evidenced from these experiments, sodium salicylate induces chronic pathology of the liver with sclerosis, dystrophic alterations and reorganization of the parenchyma. increase in the portal pressure and enlargement of the spleen.

REEL/FRA

19820407

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USSR

UDC 550.83:622.241:581.3

GORIN, A. Z., and CHURINOVA, I. M., Central Geophysical Expedition of the Ministry of the Petroleum Industry

"Perfecting of the Program and the Technology of the Operational Interpretation of Industrial-Geophysical Data on Electronic Computer"

Moscow, Neftegazovaya Geologiya i Geofizika, No 9, 1973, pp 3-6

Abstract: Information is given of the experimental-industrial perfecting, started in the year 1970, of programs of processing industrial-geophysical data on electronic computers of BESM-4 and M-222 types. The Ts-1 complex of programs of operational interpretation with the yield of a plastic table was introduced into production. Since the Ts-1 complex operation analyses revealed a series of indicated imperfections, the improved Ts-2 complex of operational interpretation is now in the development at the All-Union Scientific Research Institute of Geophysical Exploration Methods. It proceeds from the necessity to include programs providing an interpretation of the processing of industrial-geophysical and geological data by a separate slit and into

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USSR

GORIN, A. Z. and CHURINOVA, I. M., Neftegazovaya Geologiya i Geofizika, No 9, 1973, pp 3-6

a sole storage system. The technological schema of the operational interpretation by the Ts-2 complex of programs is demonstrated. This new developed control program performs not only the function of subsequent call of processing programs but it secures also the call from the magnetic band of intermediate tables needed for the work of each program and their return. Five bibliographic references.

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Television

UDC 551.594.221.001.4

USSR

GORIN, B.N., Candidate Of Technical Sciences; LEVITOV, V.I., Dr. Of Technical Sciences, Professor; SHKILEV, A.V., Engineer (all from Power Engineering Institute imeni G.M. Krzhizhanovskiy)

"Lightning Discharges At Ostankinskiy Television Tower"

Elektrichestvo, No 2, Feb 1972, pp 24-29

Abstract: The results are presented of observations conducted from June 1968 to October 1970 (i.e., during approximately 2.5 thunderstorm seasons) of strikes by lightning of the Ostankinskiy television tower (537 m) of the All-Union Radio-Television Transmitting Station in Moscow. Discharges at the television tower were recorded with the aid of discharge counters located directly on the television tower and of automatic photorecorders located close to the television tower and aimed at it. In 1970, combined with the photorecorders, oscillographic measurements were made with the aid of an automatic oscillographic device of the pulses of intensity of the magnetic field of the major stage of the lightning during discharges at the television tower. Some results are given of the oscillographic registration of the pulses of intensity. An account is given of the direction of subsequent comprehensive studies of lightning which will be conducted with the aid of photographic, electron-optical, oscillographic and other

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USSR

GORIN, B. N., et al., Elektrichestvo, No 2, Feb 1972, pp 24-29

apparatus with the use of the television tower as a fixed striking point. The authors note the great assistance rendered them by the administration and staff of the All-Union Radio-Television Transmitting Station. S.G. Obolduyev, M.A. Peskin, and G.S. Sakharova assisted in the observations. The authors are grateful to the workers of the Central High-Altitude Hydrometeorological Observatory for the presentation of data concerned with meteorological parameters. 6 fig. 5 ref. Received by editors, 21 Oct 71.

2/2

- 154 -

Single Crystals

USSR

UDC 669-172

VOROB'YEV, G. M., GORIN, D. I., and KHOROSHUN, L. K., Minsk

"Anisotropy of Wear Resistance of a Single Crystal"

Moscow, IAN SSSR, M tally, No 2, Mar-Apr 71, pp 176-177

Abstract: Anisotropy in wear resistance of single crystals was studied using a single crystal of Fe + 4% Si with the friction surface corresponding to the crystallographic planes along which sheet usually occurs in metals with a body centered cubic lattice: (110), (112). Wear tests were studied with a specific load of 150 kg/cm², slipping rate 0.94 m/sec. The experiments established that the minimum wear is observed when the plane of friction and slipping plane are parallel and there are no steps on the friction surface. The maximum wear is observed when plastic deformation is facilitated in the surface layer, accompanied by the formation of steps.

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USSR

UDC 616.988.25-022.395.42-036.22(571.53+571.54)

VASENIN, A. A., CORIN, O. Z., and BEREZIN, V. G., Irkutsk Institute of Epidemiology and Microbiology

"Epidemiological Assessment of the Threat of Tickborne Encephalitis in the Cisbaykal Region"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 3, 1972, pp 269-247

Abstract: New tourist facilities and sanatoria are being built along the shores of Lake Baykal in Eastern Siberia, an area in which an average of 1.6 cases of tickborne encephalitis per 100,000 population is recorded every year. In order to evaluate the danger to the increasing human population presented by the disease, the authors analyzed the incidence of tickborne encephalitis in Irkutskaya Oblast and the Buryat ASSR over the last 15 years, ran serological tests, and interviewed some 2000 persons living in 23 villages. They found that infected ticks are most likely to attack humans and animals in a band 10 to 100 m wide around Lake Baykal due to the mitigating influence of the water on the local climate. The growing season extends for 15 to 25 days into the autumn and the period of activity of the main vector Ixodes persulcatus P. sch. is shifted to mid-summer. The disease peaks toward the end of July.

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USSR

UDC 616.988.25:313.13(571.55)

GORIN, O. Z., L'VOV, D. K., VASENIN, A. A., BOL'SHEV, L. N., KRUOPIS, Yu. I., and KORYAKOVITSEVA, K. M., Irkutsk Institute of epidemiology and microbiology, Ministry of Health RSFSR, Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow, Mathematics Institute imeni V. A. Steklov, Academy of Sciences USSR Moscow, and Republic Sanitary Epidemiological Station, Buryatskaya ASSR, Ulan-Ude

"Calculating the Intensity of Infection With Tickborne Encephalitis of the Population of Zabaykal'"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 3, May/Jun 70, pp 259-263

Abstract: The intensity of infection of the population with tickborne encephalitis in the Zabaykal' was calculated, and also the rate of infection of ticks with the virus (9-13%). The analysis was based on data of serological examination of 6,420 persons by the hemagglutination test, and on data from questioning of 26,781 subjects about their exposure to tick and attacks by ticks during the epidemic season. Specimens were collected in 1966-1968 in Chitinskaya Oblast and the Buryatskaya ASSR. According to the intensity of infection, it was possible to combine the territories situated in different physical geographical and land-

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USSR

GORIN, O. Z., et al, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 3, May/Jun 70, pp 259-263

scape conditions into two main landscape-epidemiological areas. One of these areas, distinguished by an extremely low intensity of infection (0.4-0.9%), includes the Central Asian and Priselenginskaya steppes and the North Zabaykal mountain taiga. The other area, with higher intensity of infection (2-2.1%), includes the territories within the Dauriskaya mountain taiga and subtaiga, as well as the Priбайkal and South Zabaykal taiga and subtaiga.

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USSR

UDC 911.3.616.831-002(571.5)

GORIN, O. Z.

"Some Characteristics in the Formation of Anthropurgic Foci of Tickborne Encephalitis in the Trans-Baikal Territory"

V sb. 5-ya Mezhvuz. zoogeogr. konferentsiy "Vliyanie antropogen. faktorov na formir. zoogeogr. kompleksov." Ch. I. (Fifth Joint Higher Education Institution Zoogeographic Conference on the Effect of Anthropogenic Factors on the Formation of Zoogeographic Complex." Part I), Kazan, 1970, pp 78-80 (from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.89)

Translation: A description is given of the initial stage in the formation of anthropurgic foci of tickborne encephalitis, with a low level of epidemic activity, resulting from removal of summer cattle grazing grounds from population centers (15-40 km).

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1/2 016 UNCLASSIFIED PROCESSING DATE—30OCT70
TITLE—CALCULATION OF THE INTENSITY OF INFECTION WITH TICK BORNE
ENCEPHALITIS IN THE POPULATION OF ZABAIKALIE —U—
AUTHOR—(05)—GORIN, G.Z., LVOV, D.K., VASENIN, A.A., BOLSHEV, L.N.,
KRUCNIC, YU.I.
COUNTRY OF INFO—USSR

SOURCE—MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYYE BOLEZNI, 1970, VOL
39, NR 3, PP 259-263
DATE PUBLISHED—70

SUBJECT AREAS—BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS—ENCEPHALITIS, TICK, SEROLOGIC TEST, HEMAGGLUTINATION
INHIBITION TEST

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—2000/0222

STEP NO—UR/0358/70/039/003/0259/0263

CIRC ACCESSION NO—AP0123986

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123986

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. ON THE BASIS OF PREVIOUSLY PUBLISHED METHODS BY THE AUTHORS CALCULATION OF THE INTENSITY OF INFECTION RATE OF THE POPULATION WITH TICK BORNE ENCEPHALITIS IN THE ZABAIKALIE WAS MADE, AS WELL AS CALCULATION OF THE INFECTION RATE OF TICKS WITH THE VIRUS (9-13PERCENT). THE ANALYSIS WAS BASED ON THE DATA OF SEROLOGICAL EXAMINATION OF 6420 PERSONS BY THE HI TEST, AS WELL AS ON THE DATA OF QUESTIONING OF 26,781 SUBJECTS WITH REGARD TO TICK EXPOSURE AND ATTACK DURING THE EPIDEMIC SEASON. SPECIMENS WERE COLLECTED IN 1966-1968 IN THE CHITA REGION AND THE BURYAT ASSR. ACCORDING TO INTENSITY OF INFECTION, IT WAS FOUND POSSIBLE TO COMBINE TERRITORIES SITUATED IN DIFFERENT PHYSICO GEOGRAPHICAL AND LANDSCAPE CONDITIONS INTO 2 MAIN LANDSCAPE EPIDEMIOLOGICAL AREAS. ONE OF THEM IS DISTINGUISHED BY AN EXTREMELY LOW INTENSITY OF INFECTION (0.4-0.9PERCENT) AND INCLUDES CENTRAL ASIAN AND THE PRISELENGINSKAYA STEPPE AND NORTH ZABAICAL MOUNTAIN TAIGA. THE OTHER AREA HAS HIGHER INTENSITY OF INFECTION (2-2.1PERCENT) AND INCLUDES TERRITORIES WITHIN THE DAURSKAYA MOUNTAIN TAIGA AND SUBTAIGA AS WELL AS THE PRIBAIKAL AND SOUTH ZABAICAL TAIGA AND SUBTAIGA. FACILITY: IRKUTSKIY INSTITUT EPIDEMIOLOGII I MIKROBIOLOGII, MZ RSFSR. FACILITY: INSTITUT VIRUSOLOGII IM D. I. IVANOVSKOGO, AMN SSSR. FACILITY: MOSKVA MATEMATICHESKIY INSTITUT IM. V. A. STEKLOVA, AN SSSR. FACILITY: MOSKVA REPUBLIKANSKAYA SANEPIIDSTANTSIIYA, BURYATSKOY ASSR, ULAN-UDE.

UNCLASSIFIED

USSR

UDC 537.311.3:546.26'23

GEYTSI, I.I., GORIN, S.I., NESTEROV, A.A., PLETYUSHIN, A.A.

"On The Nature Of The 'Red' Band Of Cathodoluminescence Of Irradiated β -SiC"

V sb. Radiats. fiz. nemet. kristallov (Radiation Physics Of Nonmetallic Crystals-Collection Of Works), Vol 3, Part 2, Kiev, "Nauk.dumka," 1971, pp 97-105 (From RZh--Elektronika i yeye primeneniye, No 10, October 1971, Abstract No 10B33)

Translation: The effect was studied of fast electrons on the spectra of cathodoluminescence (CL) of β -SiC. Crystals of β -SiC (n-type; $\rho \sim 0.1 - 1.0 \text{ ohm.cm}$) were irradiated by 3.5 Mev fast electrons, with doses from 10^{12} to 10^{17} cm^{-2} at room temperature. After irradiation by doses of $\sim 10^{15} - 10^{16} \text{ cm}^{-2}$, in the red region of the spectrum ($2 - 1.5 \text{ ev}$), an intensive band of CL appears with good development of the thin structure, which is connected with recombinations of the localized excitons at the ionized acceptors. 1.1.

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- 113 -

GORIN, S. N.

SPR 5 543068
6-73

IX-7. EFFECT OF GROWTH CONDITIONS ON THE STRUCTURE AND MORPHOLOGY OF FILAMENTARY CRYSTALS OF SILICON CARBIDE

[Article by A. V. Iskhulova, N. S. Burkov, S. N. Gorin, I. V. Novikova, I. I. Simoniuk, and P. A. Shteyn, Dokl. Akad. Nauk SSSR, 1972, p. 122]

A study was made of the dependence of the structure and morphology of filamentary silicon carbide crystals on the growth conditions when growing them by the method of thermal reduction of methyl trichlorosilane on graphite and polydendron substrates.

For optical values of the concentration of the initial substance in the gas phase, the temperature, intervals of obtaining crystals in the cubic and hexagonal versions were defined, and it was established that the introduction of defined impurities stimulates the growth of acicular crystals of silicon carbide of the 2H polytype with the hexagonal structure of urtite at temperatures of 1,400-1,550°C.

The variation in the faceting of the crystals with variation of the structural version is discussed. By using the studies in polarized light of plane-parallel sections corresponding to longitudinal and transverse cross sections of the crystals of different forms, the internal structure is demonstrated both for the crystals themselves and for the characteristic fibrous outgrowths on crystals of the 2H polytype with which the growth by the vapor-liquid-solid-state mechanism is connected in a number of published papers on filamentary crystals of silicon carbide. On the basis of the research, the conclusion was drawn that the globules occur apparently as a result of destruction of these phenomena and not a direct proof of the growth of crystals by the vapor-liquid-solid state mechanism.

1/3 020 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DIURNAL CHANGE IN DIRECTION OF THE POLARIZATION AXIS OF PCL
PULSATIONS -U-
AUTHOR-(03)-VINOGRADOV, P.A., VINOGRADOVA, V.N., GORIN, V.I.
COUNTRY OF INFO--USSR
SOURCE--MCSCCW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 3, 1970; PP 557-558
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--DIURNAL VARIATION, MICROPULSATION, GEOMAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0524

STEP NO--UR/0203/70/010/003/0557/0558

CIRC ACCESSION NO--AP0132719

UNCLASSIFIED

2/3 020

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132719

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THERE IS A DIURNAL CHANGE IN THE MAIN AXIS OF THE POLARIZATION ELLIPSE FOR PCL PULSATIONS: CONSTRUCTION OF POLARIZATION ELLIPSES OF THE H VECTOR OF THE PCL FIELD FOR SOGRA AND IRKUTSK STATIONS REVEALED THAT THE DIRECTION OF THE MAIN AXIS OF THE POLARIZATION ELLIPSE CHANGES AT 0500-0800 (LOCAL SOLAR TIME). IN THE EVENING AND NIGHTTIME HOURS THE AXIS OF PCL POLARIZATION IS DIRECTED TO THE NE, EARLY IN THE MORNING; PRIMARILY TO THE N, AND DURING THE DAYTIME NNW. HOWEVER, UNTIL NOW THERE HAS BEEN EXPERIMENTAL DOCUMENTATION ONLY FOR A MORNING INTERVAL OF ROTATION OF THE SIGN OF THE ANGLE OF DEVIATION OF THE MAIN AXIS OF THE POLARIZATION ELLIPSE FROM THE MAGNETIC MERIDIAN, ALTHOUGH IT HAS BEEN POSTULATED THAT THIS ALSO OCCURS IN THE INTERVAL 1700-2000 HOURS. PCL PULSATIONS ARE SPORADIC AND THEIR APPEARANCE CANNOT BE PREDICTED, ALTHOUGH TIMES FAVORABLE FOR OBSERVATION ARE KNOWN. MOREOVER, THE PERIOD 1700-2000 IS THE MINIMUM ON THE CURVE OF DIURNAL DISTRIBUTION OF PCL OCCURRENCE. CAREFUL STUDY OF RECORDS REVEALED THAT AT ABOUT 1800 THERE IS A GRADUAL STABILIZATION OF $\Delta\phi$ AND $E_{SUBX} - E_{SUBY}$; $\Delta\phi$ EQUALS 180DEGREES IS TYPICAL, ALTHOUGH 140DEGREES LESS THAN OR EQUAL TO $\Delta\epsilon$ LESS THAN OR EQUALS TO 230DEGREES IS ALSO OBSERVED. THE MEAN DIRECTION OF THE POLARIZATION AXIS WITH THE EASTWARD DIRECTION FORMS AN ANGLE MINUS 9DEGREES (AXIS DEFLECTED TO THE SOUTH). THE DIRECTION OF THE POLARIZATION AXIS AT DIFFERENT TIMES WAS: 1600-1630, PLUS 30DEGREES; 1630-1700, PLUS 36DEGREES; 1700-1730, PLUS 39DEGREES; 1750-1800, MINUS 10DEGREES; 1800-1815, MINUS 7DEGREES.

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3/3 020

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132719

ABSTRACT/EXTRACT--THUS, THERE IS A REGULAR CHANGE IN THE DIRECTION OF THE PCL POLARIZATION AXIS DURING THE DAY WITH INTERVALS OF ROTATION OF THE SIGN OF THE ANGLE (BETWEEN THE AXIS OF POLARIZATION AND THE MAGNETIC MERIDIAN) AT 0500-0800 AND 1700-1800, COINCIDING IN TIME WITH THE MAXIMUM AND MINIMUM FREQUENCY OF APPEARANCE OF PCL IN THE MIDDLE LATITUDES. FACILITY: SIBERIAN INSTITUTE OF TERRESTRIAL MAGNETISM, IONOSPHERE AND RADIO WAVE PROPAGATION.

UNCLASSIFIED

UDC 547.341

USSR

FRIDLAND, S. V., and GORIN, Ya. A., Kazan' Chemical-Technological Institute
Imeni S. M. Kirov

"Reaction of Phosphorus Pentachloride With Compound Esters"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 4, Apr 73, p 949

Abstract: Phosphorus pentachloride reacted with ethyl and phenylacetates
yielding β -(ethoxy)- β -chlorovinylphosphonic acid dichloride b.p. 120-124°/
10 mm, d_{4}^{20} 1.7234, n_{D}^{20} 1.5200, and β -(phenyloxy)- β -chlorovinylphosphonic acid
dichloride, b.p. 145-146°/ 0.1 mm, d_{4}^{20} 1.5120, n_{D}^{20} 1.5770.

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USSR

UDC 678.7:547.124

GORIN, Yu. A., All Union Scientific Research Institute of Synthetic Rubber
imeni S. V. Lebedev

"Research Performed at the All Union Scientific Research Institute of Synthetic Rubber on the Production of Base Monomers for Rubber Synthesis"

Moscow, Kauchuk i Rezina, No 2, 1971, pp 15-17

Abstract: The article describes research done at the All Union Scientific Research Institute of Synthetic Rubber (VNIISK) on methods for the production of base monomers for divinyl and isoprene. As a result of work done by S. M. MONOZON et al, the catalyst K-5 was created. The results of this research, which was subsequently continued at the Scientific Research Institute of Monomers for Synthetic Rubber (NIIMSK), gave synthetic rubber plants a number of new effective industrial processes for the dehydrogenation of n-butane in a fluidized bed of K-5. This catalyst is now being successfully used by large-capacity production facilities in new synthetic rubber plants for the production of divinyl from butane, isoprene from isopentane, as well as for the dehydrogenation of isobutane into isobutylene. In 1946 work was resumed at VNIISK and NIIMSK on the development of a two-stage method for obtaining isoprene from isobutylene and formaldehyde. The VNIISK laboratory and pilot plants developed processes for the synthesis of dimethyl dioxane (DMD) from

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USSR

GORIN, Yu. A., Kauchuk i Rezina, No 2, 1971, pp 15-17

isobutylene and formaldehyde (M. S. NEMTSOV, K. U. NERUSH et al) and the catalytic decomposition of DMD into isoprene (M. S. NEMTSOV, N. A. KALINICHEVA et al). These studies resulted in the construction and start-up of a pilot isoprene production shop at the Yefremov Synthetic Rubber Plant. (In 1964 work on the synthesis of isoprene from isobutylene and formaldehyde was continued at the All Union Scientific Research Institute of Petrochemical Processes.) In 1964-1965 large-capacity isoprene production facilities were put into operation at the Kuybyshev and Volzhsk Synthetic Rubber Plants. A nontoxic method was developed at VNIISK during the period 1950-1956 for the vapor-phase hydration of acetylene into acetaldehyde with the use of catalysts containing no mercury (Yu. A. GORIN, A. N. TROITSKIY, I. K. GORN et al). The process was successfully tested on a pilot production scale at the Karagandinsk Synthetic Rubber Plant, following which large-capacity acetaldehyde production facilities were put into operation at the Northern Donets Chemical Combine in 1963 and at the Nevinnomyssk Chemical Combine in 1968. Analogous facilities are being assembled and are under construction at some other chemical combines. These same combines are processing the acetaldehyde into acetic acid and acetic anhydride for subsequent production of vinyl acetate and acetate fiber.

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- 92 -

1/2 010 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--REACTION OF VINYLACETYLENE WITH CARBOXYLIC ACIDS UNDER THE
INFLUENCE OF CADMIUM PHOSPHATE -U-
AUTHOR-(02)-AREFYEVA, T.G., GORIN, YU.A. 6

COUNTRY OF INFO--USSR

SOURCE--ZH. DRG. KHIM. 1970, 6(3) 625-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TEPIC TAGS--ACETYLENE, CARBOXYLIC ACID, VINYL COMPOUND, PHOSPHATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY RELL/FRAME--1992/1527

STEP NO--UK/0366/70/006/003/0625/0625

CITE ACCESSION NO--AP0112521

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112521

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF RCD SUB2 H (1) WITH H SUB2 C:CHC:CH GAVE SIMILAR TO 1:1 MIXTS. OF RCD SUB2 CH:CHCH:CH SUB2 AND H SUB2 C:CIO SUB2 CR)-CH: CH SUB2. THE REACTIVITY OF I INCREASED IN SERIES (R GIVEN): ME SMALLER THAN ET SMALLER THAN PR, I.E. WITH THE INCREASE OF THE INDUCTIVE EFFECT OF R.

UNCLASSIFIED

USSR

GORIN, Yu. N.

"The Construction of an Optimal Algorithm for Calculation of Stable Frames of Regular Closed Systems"

Stroit. Mekh. Soyoruzh. [Construction Mechanics of Structures -- Collection of Works], Leningrad, 1971, pp 85-93, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V553 by V. Mikheyev).

Translation: The possibility is discussed of constructing an optimal algorithm for calculation of the stability of regular closed frame systems by digital computer. The algorithm is based on the method of deformations in canonical form. A flow chart of the algorithm is presented. It is noted that the algorithm suggested has been tested in a program composed for the Minsk-22 computer, the total length of which was 3240 codes, i.e., about one-third of one memory section.

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USSR

USSR

BALOSHIN, O. N., BLAGORODOV, A. M., BOLONKIN, B. V., VLADIMIRSKIY, V. V.,
 CORIN, YU. P., GRIGOR'YEV, V. K., GRISHIN, A. P., YEROFEYEV, I. A., KOROL'KOV,
 I. YA., LUZIN, V. N., MILLER, V. V., NIKOLAYEVSKIY, YE. S., PETRUKHIN, V. N.,
 PLIGIN, YU. S., PONOMAREV, L. A., SIROTKIN, S. M., SOKOLOVSKIY, V. V., TARASOV,
 YE. K., TIKHOMIROV, G. D., TROSTINA, K. A., TURCHANOVICH, L. K., and SHKURENKO,
 YU. P., Institute of Theoretical and Experimental Physics GKI AE (State
 Committee for the Use of Atomic Energy)

"The $K^-p \rightarrow K^0n$ Charge Exchange Reaction at a Pulse of 39 GeV/sec"

Moscow, Yadernaya Fizika, Vol 18, No 3, Sep 73, pp 542-544

Abstract: The authors present the measurement results from studying the charge exchange reaction of K^- -mesons on protons ($K^-p \rightarrow K^0n$) at a pulse of 39 GeV/sec. The study was carried out using the ITEP 6-m magnetic track spectrometer. The working volume of the magnetic field of the spectrometer was $1.0 \times 1.5 \times 6$ m. Twelve optical spark chambers were located inside the magnet, with each chamber having eight spark gaps (10 mm each). The chamber electrodes consisted of two layers of aluminum foil 14 microns thick. The photographs were taken through a special slit in the magnet yoke. A mirror system made it possible to obtain three stereoprojections of all of the chambers

1/2

USSR

18

BALOSHIN, O. N., et al., Yadernaya Fizika, Vol 18, No 3, Sep 73, pp 542-544

with one camera. The reaction was studied on the negative particle beam of the IFVE accelerator. The K^- -mesons were distinguished by a differential Cerenkov counter. The beam was focused on a liquid hydrogen target 40 cm long which was set approximately three meters from the first chamber of the spectrometer. Approximately $5 \cdot 10^7 K^-$ -mesons were passed through the equipment and 1020 photographs taken. Pairs of uniformly charged tracks were measured on the photographs. The measurement results were then processed on the Razdan-3 computer. Only 270 intersecting tracks were found. A graph is given for the differential cross section of the reaction. The results show that the cross section value of 7.4 ± 1.2 microbarns obtained by the authors in comparison to data obtained for lower energies elsewhere shows the logarithmic dependence of the charge exchange cross section on the pulse, equal to -1.58 ± 0.05 . The authors thank K. G. Borekov, A. M. Lapidus, S. T. Sukhorukov, and K. A. Ter-Martirosyan for their presentation of the computational results as the dependence of the differential cross section on pulse transfer (do/dt). This dependence is compared with predictions of the Regge pole model.

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- 82 -

USSR

UDC: 621.384.664

GORIN, Yu. P., DENISOV, S. P., MITIN, A. A., STOYANOV, D. A., SYTNIK, V. V.,
Institute of High-Energy Physics, Serpukhov

"A Target for Precise Measurements of the Cross Sections of the Interaction
of Particles With Protons and Deuterons"

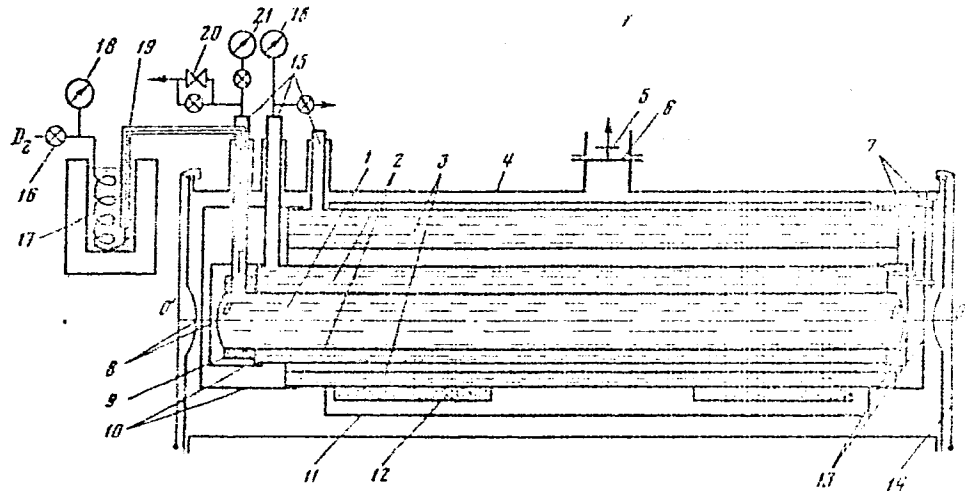
Moscow, Priory i Tekhnika Eksperimenta, No 2, Mar/Apr 72, pp 29-31

Abstract: The paper describes the design and gives the characteristics
of a target used for measuring the complete cross sections of interaction
of pions, kaons, and protons with protons and deuterons on the accelerator
at the Institute of High-Energy Physics in Serpukhov. A diagram of the
target is shown in the figure. The target is made entirely of stainless
steel, with the exception of the shields and windows. The operating pro-
cedure for determining interaction cross sections is described. Measure-
ment errors are analyzed. One figure, bibliography of four titles.

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USSR

GORIN, Yu. P. et al., Pribory i Tekhnika Eksperimenta, No 2, 1972, pp 29-31



1--working space, 2--guard space, 3--nitrogen volume, 4--vacuum jacket, 5--knife, 6--diaphragm, 7--cables, 8--mylar windows, 9--neolite, 10--copper shields, 11, 12--aluminized mylar shields, 13--activated charcoal, 14--plumb line, 15--filler tubes, 16--valve, 17--coil, 18--manometric vacuum meter, 19--siphon, 20--safety valve, 21--reference instrument.

2/2

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1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--ELECTRON MICROSCOPIC STUDY OF THE MULTIAXIAL STRAIN OF
POLYPROPYLENE THIN FILMS -U-
AUTHOR-(02)-KARGIN, V.A, GORINA, I.I.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(5), 353-8

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELECTRON MICROSCOPY, POLYPROPYLENE, PLASTIC FILM, MOLECULAR
STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3006/1236

STEP NO--UR/0460/70/012/005/0353/0358

CIRC ACCESSION NO--AP0134910

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134910

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MULTIDIRECTIONAL DEFORMATION UP TO 130PERCENT IN THIN FILMS OF ISOTACTIC POLYPROPYLENE DID NOT CHANGE THE SHAPE OF THE SPHERULITES. FURTHER DEFORMATION CONVERTED THE SPHERULITES INTO SINGLE FIBRILS WITH CROSS SECTIONS LESS THAN OR EQUAL TO 100 ANGSTROM. FACILITY: INST. NEFTEKHIM, SIN. IM. TOPCHIEVA, MOSCOW, USSR.

UNCLASSIFIED

UDC 669.236

USSR

SAVITSKIY, Ye. M., GORINA, N. B., POLYAKOVA, V. P., and SHELYAKIN, L. B.

"Use of the Method of Ion Bombardment to Determine Fine Structure of Noble Metals"

Monokristally Tugoplavkikh i Redkikh Metallov [Single Crystals of Refractory and Rare Metals -- Collection of Works], Nauka Press, 1971, pp 60-62

Translation: The use of the method of ion bombardment is used to determine the fine structure of ruthenium single crystals. The fine structure is determined on prismatic planes of the crystal. A comparative estimate is made of the etching pictures observed. The possibility is shown of using this method to determine the structure of the noble metals. 5 Figures; 10 Bibliographic References.

1/1

- 47 -

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--AFTERNOON AND EVENING MAXIMA IN THE F2 LAYER -U-

AUTHOR-(02)-SERAFIMOV, K.B., GORINOV, N.

COUNTRY OF INFO--USSR

SOURCE--IN: IONOSPHERIC STUDIES. NUMBER 19 (IONOSFERNYE ISSLEDOVANIYA.
NUMBER 19). (A70-32076 15-13), MOSCOW, IZDATEL'STVO NAUKA, 1970, P.
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, ASTRONOMY, ASTROPHYSICS

TOPIC TAGS--F LAYER, IONIZATION, SOLAR ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1069

STEP NO--UR/0000/70/000/000/0109/0113

CIRC ACCESSION NO--AT0124726

UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0124726

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE DEPENDENCE OF THE PARAMETERS OF THE AFTERNOON AND EVENING IONIZATION MAXIMA IN THE F2 LAYER ON THE SEASON, ZENITH ANGLE, AND SOLAR ACTIVITY LEVEL. IT IS SHOWN THAT THESE MAXIMA INCREASE DURING A SOLAR ACTIVITY MINIMUM WHILE THE TIME OF THEIR OCCURRENCE IS NOT SUBSTANTIALLY AFFECTED BY VARIATIONS IN SOLAR ACTIVITY.

UNCLASSIFIED

USSR

UDC 669.3.539.4

G
GORLENKO, N. P., RAKHSHTADT, A. G., and ROZENBERG, V. M., Giprotsetmetkhranobka,
MOSCOW

"Effect of Deformation Temperature and Grain Size on the Work Hardening of a Copper-Aluminum Alloy During Preecrystallization Annealing"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 29, No 5, May 79, pp 1093-1099

Abstract: A copper-aluminum alloy (15 at % Al), characterized by low energy of packing defects ($\gamma = 2-4 \text{ erg/cm}^2$), was used in a study of the effect of grain size and deformation temperature on the work hardening immediately during deformation and after annealing. The alloy, which was melted in a vacuum furnace, was subjected to hot and cold rolling. The difference in grain size (60 and 200 micron) was obtained after rolling; deformation of the strip to a thickness of 0.9 mm and annealing at 650 and 850°C. The temperature of deformation was 20 and -100°C, and the degree of deformation 50%. The results obtained showed that the decrease in grain size from 200 to 60 micron had no effect on the plastic limit of the alloy deformed at 20°C, but increased it considerably after annealing in the 250-275°C temperature range. Lowering of the rolling temperature from 20 to -100°C increased the plastic limit of the alloy in the deformed state, particularly after pre-crystallization annealing. The range of annealing temperatures, which corresponds to a maximum increase of the plastic limit, was reduced to 220-240°C.

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USSR

UDC: 681.14

GORINSIITEYN, A. M.

"Numerical Solutions of Problems in Electronic and Communications Engineering with the Electronic Digital Computer"

Moscow, 200 pages, 1972, "Svyaz'" p 2.

Translation: This book acquaints the reader with the fundamentals of solving problems in communications and radio engineering with the electronic digital computer. The principles of computing procedures, the reliability of numerical solutions, and the characteristics of computing procedure organization are examined. The book is designed for use by scientific personnel, design engineers, and communications engineering students in VUZ schools.

1/1

- 20 -

USSR

UDC: 681.14

GORINSHTEYN, A. M.

"Numerical Solutions of Problems in Electronic and Communications Engineering With the Electronic Digital Computer"

Moscow, 200 pp, 1972, "Svyaz'" pp 7-9, Introduction

Abstract: Emphasizing the point that the specifics of machine computing with digital devices differ essentially from traditional, manual computations, this book discusses the general principles of solving engineering problems with such devices and describes the numerical solution of a number of practical problems of this type. In the first chapter, information is given concerning the digital computer, programming methods and the principles of their use, and problems of error. Unlike the nonmathematical first chapter, the second assumes that the reader has mastered mathematical programming on the VUZ level; it deals with the mathematical formulation and evaluation of the computational qualities of the problem, and with factors lending themselves to the employment of the numerical method of solution and to reduction in the computation volume. The third chapter considers the characteristics and structure of digital computer algorithms and discusses the problem of checking the quality of the computed results. The fourth and final

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USSR

UDC: 681.14

GORINSHTEYN, A. M., "Numerical Solutions of Problems in Electronic and Communications Engineering With the Electronic Digital Computer," Moscow, 1972, pp 7-9

chapter in the first part of the book contains information on programming, on the algorithmic languages and their use, and on preparation of data for their insertion into the computer. The second section of the book is given over to specific problems in electronic engineering and their numerical solutions, with procedures on the computer recommended for use in particular cases.

2/2

- 21 -

USSR

UDC: 681.14

GORINSHTEYN, A. M.

"Numerical Solutions of Problems in Electronic and Communications Engineering with the Electronic Digital Computer"

Moscow, 200 pages, 1972, "Svyaz'" pp 3-5 (chapter headings)

Translation:

TABLE OF CONTENTS

Chapter 1. Computing Possibilities of the Electronic Digital Computer and Their Use in Solving Engineering Problems.	
Chapter 2. Mathematical Statement and Analysis of the Problem	
Chapter 3. Algorithmization and Numerical Methods.	
Chapter 4. Programming and Performing the Computations	
Chapter 5. Numerical Harmonic Signal Analysis.	
Chapter 6. Computing Transient Processes in Lumped-Parameter Circuits.	

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USSR

GORINSHTEYN, A. M., "Svyaz'" pp 3-5

- Chapter 7. Computing Transient Processes in Long Lines
- Chapter 8. Analysis of Characteristic Oscillations in Wave
Systems
- Chapter 9. Inverse Problems in the Solution of the Passage
of Pulses Through Linear Systems.
- Chapter 10. Computing Nonlinear Spectral Transformations . . .
- Chapter 11. Computing the Characteristics of Inertialess
Nonlinear Elements
- Chapter 12. Optimization of Circuit Parameters
- Chapter 13. Statistical Data Processing.
- Chapter 14. Statistical Modeling of Instruments and
Communications Systems

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- 23 -

USSR

UDC 621.37/.39:681.322.06(07)

GORINSHTEYN, A. M.

"Numerical Solution of Problems in Electronic Engineering and Communications Technology on the Digital Computer"

Moscow, "Svyaz'," 1972, 200 pp, one illustration (from RZh-- Radiotekhnika, No 10, 1972, Abstract No 10A6K)

Translation: The book discusses the principal solutions of problems in communications and electronics on the digital computer. The principles of constructing computation procedures, the stability of numerical solutions, the peculiarities of computer process organization, are examined. The book is designed for scientific personnel, design engineers, and students of the electrical engineering VUZ communications schools. Annotation

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- 15 -

Acc. Nr: AP0046352

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Ref. Code: UR0000

PRIMARY SOURCE: Razdel V, Ionosfernyye Issledovaniya, 1970,
Nr 19, pp 109-113

K. B. Serafimov, N. Gorinov. About afternoon and evening maximum
in layer F2.

As is known an afternoon increase of ionization is a specific element of around
the clock motion of F2.

It is shown that specific parameters of afternoon and evening maximum depend
on a season, zenith angle of the sun and solar activity. So with maximum activi-
ty the value of this maximum is the greatest and changes of solar activity do not influen-
ce greatly upon a moment of appearance of this maximum.

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USSR

UDC: 629.78.018.1

GORISLAVSKIY, V. S. and STEPCHENKOVA, Z. A.

"Experimental Study of Flow Separation Zones on a Plate in a Hypersonic Gas Flow"

Uch. zap. Tsentr. aero-sidrodinam. in-ta (Scientific Notes of the Central Aero-hydrodynamics Institute), 1971, 2, No 5, pp 1-8 (from RZh-41. Raketostroyeniye, Moscow, No 3, Mar 1972, Abstract No 3.41.154.)

Translation: The authors study the distribution of pressure on a plate with a sharp leading edge in a hypersonic helium flow. Strong perturbations set up by a falling compression shock from an external wedge or by the deflection of the shield cause the boundary layer to break away. The study was conducted in a hypersonic tunnel at $M=23.3$, $Re_0 = 1.9 \cdot 10^4$ and $6.85 \cdot 10^4$ and at a temperature factor $T_w/T_0=1$. It is shown that regions with large pressure gradient arise in the field of flow during break away from the leading edge. Because of this the use of a model based on the approximate integration method of the boundary layer theory is not justified for a complete description of the developed flow separation zones. The similitude relationship is upheld for flows with propagation of perturbations upwards along the flow and with strong interaction regimes. Original article: seven illustrations and eight bibliographic entries. Resume.

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USSR

GORISLAVSKIY, V. S., STEPCHENKOVA, Z. A.

"Experimental Study of Separation Zones on a Plate in a Hypersonic Gas Flow"

Uch. zap. Tsentr. Aero-gidrodinam. In-ta [Scientific Writings of Central Aero-Hydrodynamic Institute], Vol 2, No 5, 1971, pp 1-8, (Translated from Referativnyy Zhurnal, Mekhanika, No 4, 1972, Abstract No 4 B208 from the Resume).

Translation: The distribution of pressure on a plate with a sharp leading edge in a hypersonic flow of helium is studied. Strong perturbations created by the incident compression jump from the external wedge or deflection of the shield cause separation of the boundary layer. The study was performed in a hypersonic helium tunnel at $M = 23.3$, $R_0 = 1.9 \cdot 10^4$, $6.85 \cdot 10^4$ with temperature factor $T_w/T_0 = 1$. It is demonstrated that with separation from the leading edge, areas arise in the field of flow with high pressure gradient, so that the application of a model based on the approximate integral method of the theory of the boundary layer for description of developed separation zones is generally not justified. The rule of similarity is confirmed for flows with propagation of perturbations upward through the flow in the mode of strong interaction. 9 Biblio. Refs.
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- 20 -

1/2 010 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--DISCOVERY OF THE MOSQUITO AEGES THIBAUTI, DIPTERA, CULICIDAE, IN
THE SOVIET UNION -U-
AUTHOR--(02)-GUTSEVICH, A.V., GURITSKAYA, V.V.
COUNTRY OF INFO--USSR
SOURCE--PARAZITOLOGIYA 4(1): 72-73. ILLUS. 1970
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--MOSQUITO, ANATOMY, GEOGRAPHIC LOCATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FILM NO----FD70/605014/C03 STEP NO--UK/9057/70/004/001/0012/0013
CIRC ACCESSION NO--AP0140469
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--11DEC79

CIRC ACCESSION NO--AP0140469

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MALE TERMINALIA OF A MOSQUITO WHICH WAS PRELIMINARILY IDENTIFIED AS A. (OCHLEROTATUS) THIBAULTI DYAR ET KUAB IS DESCRIBED. THIS SPECIES IS SPREAD IN THE SOUTH EAST USA AND HITHERTO HAS NEVER BEEN FOUND IN PALAEARCTIC. FACILITY: ZOOL.
INST., ACAD. SCI. USSR, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC: 519.2

GORITSKIY, Yu. A.

"Evaluating Parameters From Inexact Measurements of a Set of Certain Functions of These Parameters"

Tr. Mosk. energ. in-ta (Works of Moscow Power Engineering Institute), 1972, vyp. 96, pp 8-11 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V151)

Translation: It is assumed that there are values Q of the functions $\alpha_1, \dots, \alpha_Q$ at a point of R -dimensional space $x = (x_1, \dots, x_R)$, $Q > R$ which are measured with normal errors. It is further assumed that there are $Q - R$ relations between α_q , $F_k(\alpha_1, \dots, \alpha_Q) = 0$, $k = 1, \dots, Q - R$. The author considers the problem of obtaining an approximate estimate of least squares for x assuming the condition $F_k(\alpha_1, \dots, \alpha_Q) = 0$. The resultant estimate (for α_q) is written in explicit form. Yu. Gromak.

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USSR

UDC 616.41/.42-056-02:616.45-001.1/.3

GORIZONTOV, P. D.

"Patterns of the Nonspecific Reaction of the Hematopoietic Organs to Extreme Stimuli (Stressors)"

Moscow, Arkhiv Patologii, No 8, 1973, pp 3-11

Abstract: Wistar rats, mice, and guinea pigs were subjected to electroshock, immobilization, bleeding, ionizing radiation, cold, toxic chemicals, etc. with a view to determining the effect of these stressors on the cellular composition of bone marrow, thymus, and spleen. The following changes occurred in response to all the stressors: decrease in number of mature granulocytes and increase in number of lymphoid and immature myeloid cells (myeloblasts and myelocytes). The stimulation of leukopoiesis causes a transient hyperplasia of myeloid tissue that reaches a peak in the resistance stage. The process develops into hypoplasia in the exhaustion stage or the cellular composition of bone marrow becomes normal upon the return to the original state. Thus, it is conjectured that hyperplasia of myeloid tissue plays a major role in increasing nonspecific resistance to stress.

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- 74 -

USSR

UDC 616-092:612.014.482

GORIZONTOV, P. D.

"Basic Problems in the Pathogenetic Action of Ionizing Radiation"

Moscow, Patologicheskaya fiziologiya i eksperimental'naya terapiya, No 4, 1972,
pp 6-13

Abstract: This article is a survey of previous work done on the effect of ionizing radiation on the mammalian organism. Radiation sensitivity and damage of cells, problems of radiation damage to organisms, the recovery problem, the role of humoral factors in the recovery process, and the values of certain systems for varying the radiation sensitivity of the organism are discussed. A bibliography of 63 titles is appended. Results of 30-day irradiation of mice, cell damage in the thymus of rabbits and guinea pigs as a function of dosage, and the change in the number of thymus cells in rats under a dosage of 700 roentgens, are presented.

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- 64 -

USSR

UDC 616.34-001.29-092

GORIZONTOV, P. D.

"The Pathogenesis of the Enteric Form of Acute Radiation Sickness"

Moscow, Arkhiv Patologii, Vol 33, No 11, 1971, pp 3-12

Abstract: Whole body doses from 1,000 to 5,000 r and local doses from 2,250 r cause a special enteric form of radiation sickness which is fatal within 3-5 days to animals and 6-9 days to humans. The intestine is the critical organ. The primary morphological changes are: depletion of the epithelium of the intestinal mucosa as a result of delayed mitosis, which impairs DNA synthesis; interphase death of cells in the resting stage; and genetic death resulting from cells incapable of division due to a damaged chromosome system. Impaired absorption of water, electrolytes, fatty acids, carbohydrates, and amino acids has been found, as well as evidence of impaired neurohumoral regulation. Experiments on the negative effects of toxins, bile, and disorders of the micro-circulatory system are discussed. Research on the role of biogenic amines seems to indicate that histamine is detrimental, while serotonin may have a beneficial effect on irradiated tissue.

The basic pathogenic mechanism seems to be denuding of the intestinal mucosa
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USSR

GORIZONTOV, P. D., Arkhiv Patologii, Vol 33, No 11, 1971, pp 3-12

following loss of epithelial villi, leading to infection. There is evidence that bacteria are involved in the development of radiation pathology. Most researchers consider dehydration and loss of electrolytes the fundamental cause of death. A dissenting opinion defines cause of death as shock resulting from bacterial and tissue intoxication. Positive results in radiation therapy have been achieved by slowing the metabolism, excluding the intestine from digestion, and removing pancreatic juice and bile from the intestine. Shielding various portions of the body during total body irradiation and treating the hemopoietic organs has been moderately successful. It is concluded that it is not only direct cellular damage but also factors affecting functional shifts in the intestine which cause this form of radiation pathology.

2/2

- 29 -

USSR

UDC 616-056.3(082)

GORIZONTOV, P. D., and KLEMPARSKAYA, N. N., Moscow

"Variation in Reactivity of an Irradiated Organism"

Moscow, Problemy Immunologicheskoy Reaktivnosti i Allergii (Problems of Immunological Reactivity and Allergy), Moscow, "Meditsina," 1971, pp 19-29

Abstract: A study was made of the change in allergic reactivity and the induction of autoallergic processes as a result of ionizing radiation. A survey of the work in this field including research procedures and results is presented. Two different procedural paths are considered: 1) the discovery and description of certain changes in the structure and function of individual organs and systems and 2) evaluation of the integral index of reactivity of the organism as a whole, that is, the adequacy of coordinated functioning of all its systems. Graphs are presented showing the effect of homosensitization on the survival rate of irradiated mice, the increase in the death rate of irradiated mice under the effect of subcutaneous injection of 0.5 ml of 25% spleen extract 5 hours after irradiation, leukocyte damage in a rabbit irradiated with 600 roentgens 30 days after irradiation on contact with homologous tissue antigen, the dynamics of appearance of autoantibodies in irradiated (600 roentgens) and sensitized rabbits (fivefold intra-abdominal injection of 10 ml of a mixture 1/2

USSR

GORIZONTOV, P. D., and KLEMPARSKAYA, N. N., Problemy Immunologicheskoy Reaktivnosti i Allergii, Moscow, "Meditsina," 1971, pp 19-29

of equal parts of 10% homogenate of homologous tissue of the liver, kidneys and intestine), and the titration dynamics of autoantibodies in rabbits after irradiation with 800 roentgens for DNA and renal antigen and for the renal antigen of dogs after repeated irradiation with a lethal dose of 360 roentgens. Experimental results are analyzed and the mechanisms discussed.

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- 71 -

USSR

UDC 616.45-001.113-092.9-07:616.15-07

GORIZONTOV, P. D., and FEDOTOVA, M. I.

"Hematological Shifts in Rats Induced by Repeated Application of a Weak Stimulus: The Stress Problem"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 15, No 4, Jul/Aug 71, pp 35-38

Abstract: The stress reaction to weak stimuli was studied in young rats. Repeated (3-19) intravenous injections of 0.25 ml of a sterile, isotonic sodium chloride solution constituted the weak stimulus, because such injections are often performed on animals serving as controls. This stimulation precipitated a distinct stress reaction, involving loss of body weight, hypertrophy of the adrenal glands, involution of the thymolymphatic system, and a gradually progressing bone marrow hypoplasia. Contrary to the stress reaction observed in rats after daily application of strong electric stimuli, the weak stimulus used in this investigation produced no leukocytosis, no increase in the number of lymph cells in the bone marrow, and no activation of myelopoiesis in the mobilization stage, as well as no transitory marrow hypertrophy in the resistance stage. However,
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USSR

GORIZONTOV, P. D., and FEDOTOVA, M. I., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 15, No 4, Jul/Aug 71, pp 35-38

the injections induced a reduction in the number of parenchymal cells in the thymus and in the lymph node as well as an activation of lymphopoiesis and an increase in the number of lymph cells in the spleen. The results suggest that the physiological significance of the above-mentioned organs varies depending on the circumstances.

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- 64 -

USSR

UDC 616.155.394-02:617-001.282-085.273.3

GORIZONTOV, P. D., KALYAYEVA, T. V., and ROGOZKIN, V. D.

"Leukocytin, a New Agent for the Treatment of Radiation Leukopenia"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 54-59

Abstract: The recently developed hematopoiesis stimulant leukocytin (containing the glycosidal alkaloid solanine) was administered orally to rabbits (15 ml) and dogs (30 mg) every other day from 1 to 20 days after whole-body X-ray irradiation (450 to 500 r and 400 r, respectively). The preparation diminished the degree of leukopenia and degenerative changes in the spleen and bone marrow, preserved mitosis, and accelerated the regeneration of hematopoietic cells. Leukocytin, approved by the USSR Pharmacological Committee for use in the treatment of acute radiation sickness, is not a specific antiradiation agent and it can apparently be used for leukopenia due to other causes than radiation. The preparation is nontoxic (the authors tested it on themselves).

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- 23 -

USSR

GORIZONTOVA, M. B.

UDC: 8.74

"Some Principles of Organizing Factographic Information Retrieval Systems With Tabular-Form Representation of Information and Library Software"

Moscow, V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Techniques and Programming--collection of works) "Sov. Radio," No 7, 1972, pp 75-83 (from RZh--Matematika, No 8, 1972, Abstract No 8V623)

Translation: A description is given of the principles of constructing factographic information retrieval systems with the information represented in the form of object-characteristic tables. A short sketch is given of the composition of the information reservoir and the procedural means of the system providing for the retrieval and processing of the information, and the central problem for dynamic systems of the absence of information is considered; specific methods for solving that problem are proposed. Author's abstract

1/1

- 21 -

USSR

GORIZONTOVA, M. B.

UDC: 8.74

"On Some Principles of Organizing Factographic Data Retrieval Systems With Tabular Form of Data Representation and a Library Software System"

V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Technology and Programming--collection of works), vyp. 7, Moscow, "Sov. radio", 1972, pp 75-83 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V623)

Translation: The paper describes the principles of synthesizing a factographic data retrieval system with data representation in the form of object-characteristic tables. The make-up of the information store is briefly described, the procedural facilities of the system which take care of data retrieval and processing are enumerated, the no-data problem which is important for dynamic systems is considered, and specific ways are proposed for solving it. Author's abstract.

1/1

USSR

UDC 617-001.20-035.356:577.164.3-032.9-07:616-018.1-003.6-07

GORIZONTOVA, M. P., Institute of Normal and Pathological Physiology, Academy of Medical Sciences, USSR, Moscow

"The Effect of Esculamin on Permeability of the Membranes of Nuclei and Mitochondria in Cells of Irradiated Animals"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 3, May/Jun 70, pp 22-25

Abstract: Esculamin (6- β - β' -dihydroxydiethylaminomethyl-4-methylesculetin) is a preparation with vitamin P activity. Its barrier effect on the action of sub-cellular particles in the cells of animals irradiated with x-rays was studied. For this purpose the Mg accumulation in thymus cells of rats was studied at various intervals after irradiation. One hour after irradiation, a drop in the Mg ion accumulation in thymus cells of irradiated rats treated with esculamin was found. This was explained by a decrease in the permeability of the cell membranes with respect to Mg ions. In vivo tests showed that 24 hours after irradiation, prophylactic introduction of esculamin reduced Mn⁵⁴ accumulation by liver mitochondria in irradiated mice. Corresponding in vitro tests showed that this is caused by a reduction in permeability of mitochondrial membranes with respect to Mn⁵⁴. The data show that a barrier-protective action of esculamin exists at the vessel-tissue level, as well as at the cell-membrane level.

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1/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--THE EFFECT OF ESCULAMINE ON THE PERMEABILITY OF THE MEMBRANES OF
THE NUCLEI AND MITOCHONDRIA IN THE CELLS OF IRRADIATED ANIMALS -U-

AUTHOR--GGRIZCNTOVA, M.P.

COUNTRY OF INFO--USSR

SOURCE--PATAOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970,
VOL 14, NR 3, PP 22-25
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROCESSED PLANT PRODUCT, ANTIIRRADIATION DRUG, MAGNESIUM
COMPOUND, THYMUS GLAND, MANGANESE ISOTOPE, LIVER, MITOCHONDRIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3001/1920

STEP NO--UR/0396/70/014/003/0022/0025

CIRC ACCESSION NO--AP0127321

UNCLASSIFIED

2/2 016

CIRC ACCESSION NO--AP0127321
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT. ESCULAMINE, A PREPARATION WITH P
VITAMINIC ACTIVITY WAS GIVEN PER OS TO RATS (5 DOSES) FOR 3 DAYS BEFORE
IRRADIATION WITH A DOSE OF 1,000 R. THIS PREPARATION REDUCED THE MG ION
ACCUMULATION IN THE NUCLEI OF CELLS OF THE THYMUS IN GAE AND 24 HOURS
AFTER THE IRRADIATION. IN MICE IRRADIATED WITH A DOSE OF 800 R
ESFULAMINE GIVEN PROPHYLACTICALLY BY THE SAME SCHEME DIMINISHED MN
PRIME54 ACCUMULATION BY MITOCHONDRIA OF THE LIVER, BOTH WHEN THE ISOTOPE
WAS GIVEN IN VIVO, AND IN VITRO (IN INCUBATION OF MITOCHONDRIA IN
ESFULAMINE CONTAINING MEDIUM); EXAMINATION WAS CARRIED OUT 24 HOURS
AFTER THE IRRADIATION. IN INTACT RATS GIVEN ESCULAMINE, MG ION
ACCUMULATION BY THE NUCLEI OF RAT THYMUS, AND MN PRIME54 ACCUMULATION BY
THE MITOCHONDRIA OF MOUSE LIVER ALSO PROVED TO DIMINISH. THE DATA
OBTAINED INDICATE A BARRIER PROTECTIVE ACTION OF ESCULAMINE AT THE LEVEL
OF THE MEMBRANES OF THE NUCLEI AND MITOCHONDRIA OF CELLS.
FACILITY: INSTITUT NORMAL'NOY I PATOLOGICHESKOY FIZIOLOGII AMN SSSR,
MOSKVA.

UNCLASSIFIED

USSR

UDC 591.1.15

GORKIN, V. Z., AKOPYAN, ZH. I., KULYGINA, A. A., and ZEYNALOV, T. A.

"Disturbances of Deamination of Some Nitrogen Compounds and a Method of Normalizing Them Experimentally"

Byul. eksperim. biol. i med. (Bulletin of Experimental Biology and Medicine), 1971, 72, No 11, pp 42-45 (English summary) (from RZh-Biologicheskaya Khimiya, No 4, 25 Feb 72, Abstract No 4F1256 from summary)

Translation: White rats which had been x-irradiated (1000 rad dose) were used in the experiments. Diminution of monoaminoxidase activity, accompanied by the appearance of histamine and AMP deaminase activity, occurs in rat liver mitochondria after irradiation or intraperitoneal injection of oxidized oleic acid. Repeated injections of rats with adenosine-2'(3')-monophosphate result in normalization of these disturbances of the deamination of nitrogen compounds.

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- 17 -

1/2 015 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--SYNTHESIS, PHARMACOLOGICAL PROPERTIES, AND EFFECT OF SOME SYNDROME
IMINES ON MONAMINE OXIDASE ACTIVITY -U-
AUTHOR-(05)-YASHUNSKIY, V.G., MASHKOVSKIY, M.D., GORKIN, V.Z., KOLODOV,
L.E., ALTSULER, R.A.
COUNTRY OF INFO--USSR
SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW) 1970, 33(3), 297-302
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CENTRAL NERVOUS SYSTEM STIMULANT, CHEMICAL SYNTHESIS, DRUG
EFFECT, OXIDASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD7C/605C01/F10 STEP NO--UR/0390/70/033/603/0297/0302
CIRC ACCESSION NO--AP0139586
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0139586

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A NO. OF 3-PHENYLALAKYL DERIVS. OF
SYDNONE IMINE, WHEN GIVEN TO MICE, STIMULATED THE CENTRAL NERVOUS SYSTEM
AND ACTED AS PERIPHERAL ADRENOMIMETICS. THEY ALSO INHIBITED MONOAMINE
OXIDASE IN VITRO. FACILITY: VSES. NAUCH.-ISSLED. KHIM.-FARM.
INST. IM. ORDZHCNIKIDZE, MOSCOW, USSR.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--MONOAMINE OXIDASE ACTIVITY IN LIVER AND ASCITES HEPATOMA NUCLEAR
MEMBRANES --U-
AUTHOR--(03)--GORKIN, V.Z., KUZMINA, S.N., ZBARSKIY, I.B.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 472-3
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RAT, LIVER, OXIDASE, NUCLEUS, TUMOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605006/F01 STEP NO--UR/0020/70/191/002/0472/0473
CIRC ACCESSION NO--AT0139813
UNCLASSIFIED