

KHACHATUROV, G.S.

MEDICAL SERVICE

J-9605

UDK 614.824/616-083.98

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REPORT OF REGISTRATION IN THE TREATMENT

OF SEVERE CASES

OF CARBON MONOXIDE POISONING

50: Military Medical Journal

*[Handwritten name]* G.S. Khachaturov, Major, Medical Service

NOV 1979

Among the various types of acute poisoning — by an on the job and in emergency living — cause of carbon monoxide poisoning is the most important from the point of view of its prevalence. The most frequent cause of carbon monoxide poisoning is the operation of internal combustion engines. As is known, the exhaust gases from gasoline-humane engines contain from 0.5 to 13.5 percent of carbon monoxide. From 1.5 to 3 percent of this quantity can enter the interior of the vehicle because of defective motor adjustment. In the winter, conditions arise which permit an even greater accumulation of carbon monoxide in the driver's compartment (T.L. Denisov). This is precisely the time of the year when drivers, leaving their vehicles during breaks in their journeys, prefer not to turn off the motor so as to keep their cabs warm. The drivers themselves, remaining in the cab, frequently fall asleep, which leads to cases of carbon monoxide poisoning. In addition, the driver's compartment is airtight and severe poisoning in vehicles occurs because the motor was in perfect condition but which the driver left running in the open air. In such a position that the exhaust gases were being blown back into the cab.

The present article reports on the treatment of patients admitted to the military hospital for treatment of acute carbon monoxide poisoning. There were 10 patients, aged from 19 to 35. In most cases, the patients were brought to the hospital in a state of unconsciousness or after a period of unconsciousness. The patients were brought to the hospital in a state of unconsciousness or after a period of unconsciousness. The patients were brought to the hospital in a state of unconsciousness or after a period of unconsciousness.

When all cases could be divided into two groups: 1) patients with moderate consciousness and whose condition improved rapidly (7 cases); 2) patients with severe consciousness at the site of the accident, but who rapidly regained consciousness after first-aid measures, and received as cases of "healed severely", "severely injured", and 3) those in a state of coma with symptoms of pronounced disturbance of breathing and heart action, who were regarded as having suffered an "extremely severe" level of intoxication.

Although the severity of the patients' condition generally corresponded to the duration of exposure to the poisoned atmosphere. Thus, in turn, depending on the duration of subsequent treatment required and the general length of time which it took to return the patient to his job (Table 1).

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UDC 621.397.62:621.317.799

KHACHATUROV, N. A. **K**

"Use of the Frequency Method for Measuring the Vertical Parameters of a Television Raster"

Dokl. Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970. Sekts. radiotekhn. Podseks. televid. (Reports of the Scientific-Engineering Conference on the Advances in Scientific-Research Studies in 1968-1969. Moscow Energetics Institute, 1970. Section on Radio Engineering. Subsection on Television), Moscow, 1969, pp 58-67. (from RZh-Radiotekhnika, No 2, Feb 70, Abstract No 2G151)

Translation: The frequency spectrum is studied of the video signal obtained from an inclined test pattern under conditions of non-linear vertical distortions. It is shown that in the low frequency components of this spectrum there is quantitative information on the vertical raster nonlinearity. A block diagram is presented of a device which makes it possible to measure the  
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USSR

KHACHATUROV, N. A., Dokl. Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970. Sekts. radiotekhn. Podseks. televid., 1969, pp 58-67, (from Rzh-Radiotekhnika, No 2, Feb 70, Abstract No 2G151)

nonlinearity by analysis of the test signal frequency spectrum.  
Five references. A.M.

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1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--COMPARATIVE CYTOCHEMICAL STUDY OF MITOCHONDRIA AND KINETOPLASTS IN  
SOME TRYPANOSOMIDS -U-  
AUTHOR--(02)--KHACHATUROV, YE.N., SUKHAREVANEMAKOVA, N.N.  
COUNTRY OF INFO--USSR K  
SOURCE--TSITOLOGIYA 1970, 12(1), 77-84  
DATE PUBLISHED--70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--MITOCHONDRIUM, TRYPANOSOMA CRUZI, DNA  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAHE--3002/0425 STEP NO--UR/9053/70/012/001/0077/0084  
CIRC ACCESSION NO--AP0127996  
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127996

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MANY INVESTIGATORS ARE OF THE OPINION THAT KINETOPLASTS ARE DERIVED FROM THE MITOCHONDRIAL CRISTAE IN TRYPANOSOMIDS, AS BOTH CAN BE STAINED BY JANUS GREEN. STRIGOMONAS ONCOPELTI AND TRYPANOSOMA CRUZI WERE CULTURED IN VITRO AND COMPARATIVE CYTOCHEM. REACTIONS WERE PERFORMED TO INVESTIGATE THE NATURE OF THE KINETOPLASTS. INTRACELLULAR SUCCINIC DEHYDROGENASE (I) WAS LOCALIZED BY BLUE TETRAZOLIUM SALTS AND DNA (II) BY MODIFICATION OF FEULGEN'S FLUORESCENCE METHOD. I IS A SPECIFIC ENZYME OF MITOCHONDRIA, WAS ABSENT IN THE KINETOPLASTS OF 2 STRAINS OF TRYPANOSOMES, S. ONCOPELTI (LEPTOMONAD FORM) AND T. CRUZI (LEPTOMONAD AND CRITHIDIAL FORMS); WHEREAS, II WAS EASILY DEMONSTRATED IN THE PARASITE KINETOPLASTS. II WAS CONSPICIOUS BY ITS ABSENCE IN THE MITOCHONDRIA OF CELLS OF DIFFERENT ORIGINS, INCLUDING TRYPANOSOMES STUDIED. THESE OBSERVATIONS ARE CONTRADICTORY TO THE PRESENT BELIEF THAT THE KINETOPLASTS ARE AN ORGANOID OF MITOCHONDRIAL NATURE. METHODS OF FIXATION OF CELLS FOR CYTOCHEM. LOCALIZATION OF NUCLEIC ACIDS ARE DISCUSSED, AND OSO SUB4 FOLLOWED BY CHROMIC ANHYDRIDE GAVE THE BEST RESULTS. FACILITY: LAB. FUNC. CELL MORPHOL., INST. MOL. BIOL., MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr:

AP0047366

Abstracting Service:

GEOPHYSICAL ABST.

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Ref. Code:

UR0065

KHACHATUROVA DA.

91899a Precise method for recalculating the boiling points of petroleum fractions. Manovyan, A. K.; Khachaturova, D. A. (USSR). *Khim. Tekhnol. Topl. Masel* 1970, 15(1), 23-7 (Russ). For improving the precision of the data obtained by GOST 10120-62 and 11011-64 to recalc. the vacuum b. detd. exptl. into that at normal pressure, a correction graph was applied. At 2-3 mm without applying the graph, a reading error of 0.5 mm gave a b. error of  $\geq 20^\circ$  and at 0.2 mm, the error could reach  $40^\circ$ . The correction graph, based on exptl. datz, reduced these errors to max.  $5^\circ$ . Thus, the b. at 760 mm, obtained according to GOST from the b. detd. exptl. by vacuum distn., was put on the abscissa of the graph, detg. the correction for the pressure at which the vacuum distn. was made.

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UDC 620.179.1

KARAKHANOV, L. M., and KHACHATUROVA, O. A., All-Union Scientific Research Institute of Metrology imeni D. I. Mendeleev, Tbilisi Branch

"Nondestructive Methods of Determining Elastic and Strength Characteristics of Fiber-Glass Reinforced Plastics"

Sverdlovsk, Defektoskopiya, No 2, 1971, pp 77-83

Abstract: A review is presented with an analysis of nondestructive methods of determining moduli of normal elasticity, moduli of rigidity, and strength properties of fiber-glass reinforced plastics. It is recommended that research work on strength determination of plastic materials by nondestructive methods be concentrated on the application of the discussed impulse method which makes it possible to rate the change of physico-mechanical properties of fiber-glass reinforced plastics even after their being affected by high temperatures, radiation, aggressive media, and other factors. From a formula developed by the authors, strength characteristics of specimens and constructions of fiber-glass reinforced plastics can be calculated with an experimental degree of accuracy.

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USSR

KHACHATUROVA, T. V.

"One Estimate of the Spectrum of Certain Stable Random Processes"

Zap. Nauch. Seminarov Leningr. Otd. Mat. In-ta AN SSSR [Writings of Scientific Seminars Leningrad Division Mathematics Institute, Academy of Sciences, USSR], 1972, Vol 29, pp 42-50 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V356 by A. Kholevo).

Translation: With certain weak limitations on the spectral window, a refinement is produced of the asymptotic formula for displacement and known asymptotic formula for dispersion of a spectral estimate (for example, see RZhMat, 1965, 2V212K).

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USSR

VASIL'YEV, A. Ye., and KHACHATUR'YAN, A. A., Central Institute of Hematology and Blood Transfusion

"Synthesis of O-aminoacyl Derivatives of Dextran"

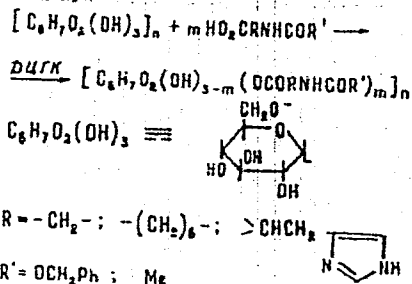
Riga, Fiziologicheski i Opticheski Aktivnyye Polimernyye Veshchestva, "Zinatne, 1971, pp 166-169

Abstract: A new method is suggested for the synthesis of such blood substitutes which could perform simultaneously several functions, such as hemodynamic + parenteral feeding, or hemodynamic + hemopoietic functions, etc. For this purpose several aminoacyl derivatives of dextran were synthesized which were considered as simplified analogs of glycoproteins with a reversed ratio of amino acid and carbon groups. The method is based on O-acylation of monosaccharides by condensation of N-acylamino acids with sugars in the reaction with dicyclohexylcarbodiimide

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USSR

VASIL'YEV, A. Ye., and KHACHATUR'YAN, A. A., Fiziologicheski i Opticheski Aktivnyy Polimernyye Veshchestva, "Zinatne," 1971, pp 166-169



with the use of pyridine and dimethylsulfoxide mixture as solvent in which all reagents were soluble. The reaction was carried out at 40-60°C and the reaction products were separated on Sephadex G-50 and precipitated with alcohol from water. Absence of a significant destruction of the polysaccharide chains was verified by a comparative fractionation of the starting and modified polymer on Sephadex G-75. A modified polysaccharide with free amine groups was prepared by hydrogenation of O-acylaminoacyldextrans over Pd/C in the presence of two equivalents of oxalic acid.

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USSR

UDC: 669.112.342:539.374

SUYAZOV, A. V., USIKOV, M. P., KHACHATURYAN, A. G.

"Structural Peculiarities of Low-Temperature Plastic Deformation of Martensite in High-Carbon Nickel Steel"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 5, Nov 73, pp 1033-1042.

Abstract: Electron microscope study of the Martensite of Fe-Ni-C steel, deformed at liquid-nitrogen temperature, establishes the existence of deformation twins in plains  $\{112\}_M$ , which are not mirror symmetry plains with an accuracy to the tetragonality of the adjacent twinning and matrix lattices. Theoretical analysis of the elastic stress state arising in this case can explain the decrease in tetragonality upon deformation of the martensite. The change in the tetragonal (011)-(110) doublet of the martensite observed in earlier works results from the formation of irregular twins on the  $\{112\}_M$  plains upon low-temperature plastic deformation.

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Acc. Nr: AP0038041

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Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy  
Fiziki, 1970, Vol 58, Nr 1, pp 175-190

THEORY OF SPACE-PERIODIC PHASE DISTRIBUTIONS  
(MODULATED STRUCTURES) PRODUCED IN DECOMPOSITION  
OF SOLID SOLUTIONS

Khachatryan A. G.

A system is considered in which decomposition of a cubic solid solution into two cubic phases occurs, the phases differing from each other only with respect to component concentration and consequently to specific volumes. The distribution of liberated phases which ensures minimum of the free energy, in which elastic stress energy is taken into account, is considered. A solution of the corresponding variational problem indicates that three types of macroperiodic inclusion distributions may exist; these are one and two-dimensional distributions and two-dimensional structures with secondary modulation. Since inclusions of various phases differ only with respect to composition, the distributions may be conceived as macroperiodic composition modulations usually termed modulated structures. A common property of these structures is that the basis

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vector of the Bravais translations coincide with the directions of the cubic axes of the  $\langle 100 \rangle$  matrix and the corresponding «inverse lattices» have sites located only in directions of the  $\langle 100 \rangle$  type around the matrix inverse lattice sites. On X-ray and electron diffraction patterns the «inverse lattice» of the modulated structures are observed as satellites around the Laue reflections from the matrix lattice.

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19731084

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70  
TITLE--CORRELATION CALCULATION IN AN ORDERING BINARY SOLID SOLUTION -U-

AUTHOR--(02)--BADALYAN, D.A., KHACHATURYAN, A.G. *K*

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(2) 439-47

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--SOLID SOLUTION, COPPER GOLD ALLOY, COPPER PLATINUM ALLOY,  
CRYSTAL LATTICE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1986/0242

STEP NO--UR/0181/70/012/002/0439/0447

CIRC ACCESSION NO--AP0102293

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0102293

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD IS PROPOSED TO ACCOUNT FOR THE CORRELATION IN THE EXPRESSION FOR THE FREE ENERGY OF A BINARY ORDERING SOLID SOLN. WITH AN ARBITRARY RADIUS OF INTERAT. INTERACTION. THE METHCD FOR CALCG. THE FREE ENERGY IS BASED, ON ONE HAND, ON THE APPLICATION OF THE THERMODYNAMIC THEORY OF PERTURBATIONS, AND ON THE OTHER, ON THE UTILIZATION OF THE REPRESENTATION OF THE 1 PART PRGBABIL IN THE FORM OF SUPERPOSITION OF STATIC PLANE WAVES, THE AMPLITUDE WHICH ARE PROPORTIONAL TO THE PARAMETERS OF THE LONG RANGE ORDER. APPROACH ALLOWS TO FORGO AN A PRIORI SUBDIVISION OF THE LATTICE POINTS OF THE DISORDERED ALLOY INTO "OWN" AND "FOREIGN" FOR GIVEN ATOMS, WHICH ASSUMES THAT THE STRUCTURE OF THE ORDERED ALLOY IS ALREADY KNOWN. AN EXPRESSION WAS OBTAINED FOR FREE ENERGY, ACCOUNTING FOR 4 CORRELATION CORRECTIONS, VALID FOR THE SYSTEMS WITH AN ARBITRARY DISTRIBUTION OF CRYSTAL LATTICE POINTS. AS A RESULT OF THE UTILIZATION OF THE OBTAINED RESULTS FOR THE ANAL. OF ORDERING IN CRYSTALLOGRAPHICALLY DIFFERENT SYSTEMS, AN EQUATION WAS OBTAINED FOR THE PARAMETER OF LONG RANGE ORDER OF THE ALLOY AB SUITABLE FOR THE DESCRIPTION OF ORDERING OF THE TYPES CSCL IN A BODY CENTERED LATTICE, CUPT AND CUAK IN FACE CENTERED LATTICES, AND AN EQUATION FOR 2 PARAMETERS OF LONG RANGE ORDER, WHICH CHARACTERIZE ORDERING ACCORDING TO THE TYPE FE SUB 3 AL. IN THE LIMITING CASES, WHEN POTENTIALS OF INTERAT. INTERACTION ARE DIFFERENT FROM ZERO IN THE 1ST COORDINATION SPHERE, THE RESULTS OBTAINED ARE REDUCED TO THOSE KNOWN PREVIOUSLY.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--REGENERATION OF A CATALYST FOR VINYL ACETATE SYNTHESIS -U-

AUTHOR--(05)-KHACHEYAN, KH.YE., TSIRLINA, R.N., FEDOROVA, N.M., BOGOLEPOVA,  
YE.I., LVOVA, L.N.  
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,353  
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(9)  
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYST REGENERATION, VINYL COMPOUND, ACETATE, CATALYTIC  
ORGANIC SYNTHESIS, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--3007/0828

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

CIRC ACCESSION NO--AA0136262

UNCLASSIFIED



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UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0136262

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CATALYST FOR VINYL ACETATE  
SYNTHESIS IS GENERATED BY TREATING IT WITH A CONCD. SOLN. OF KOH WHICH  
REMOVES CU SALTS.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--SPIRAL STRUCTURE AND DISTRIBUTION OF STELLAR ASSOCIATIONS IN NGC  
6946 -U-  
AUTHOR-(02)-KHACHIKIAN, E.E., SAHAKIAN, K.A.  
COUNTRY OF INFO--USSR, SWITZERLAND  
SOURCE--THE SPIRAL STRUCTURE OF OUR GALAXY; PROCEEDINGS OF THE SYMPOSIUM,  
UNIVERSITAT BASEL, BASEL, SWITZERLAND, AUGUST 29-SEPTEMBER 4, 1969,  
DATE PUBLISHED-----70  
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS  
TOPIC TAGS--COLOR, INDEX, SPIRAL GALAXY, STELLAR MAGNITUDE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY FICHE NO----FD70/605030/F03 STEP NO--SZ/0000/70/000/038/0087/0090  
CIRC ACCESSION NO--AT0141876

UNCLASSIFIED

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PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0141876

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEMONSTRATION THAT THE ASSOCIATIONS OF NGC 6946 OUTLINE ITS SPIRAL ARMS. THERE IS NO RELATION BETWEEN THE COLOR OR MAGNITUDE OF THE ASSOCIATIONS AND THEIR DISTANCE FROM THE CENTER. THEIR MEAN ABSOLUTE MAGNITUDE IS 11.1 MAG AND THEIR MEAN COLOR INDEX IS NEAR ZERO. FACILITY: BIURAKANSKAIA ASTROFIZICHESKAIA OBSERVATORIIA, YEREVAN, ARMENIAN SSR.

UNCLASSIFIED

USSR

GOROYAN, T. A., KHACHIYAN, E. Ye.

"Earthquake Resistance of Multistory Frame Buildings with Rigidity Decreasing with Each Successive Story"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Tekhnicheskikh Nauk, Vol 25, No 3, 1972, pp 35-43.

Abstract: The frequency equations of multistory frame buildings with absolutely rigid beams and a linear decrease in rigidity of each successive story are analyzed. A formula is suggested for determination of the periods of the first three lowest harmonics of free oscillations of buildings of this type up to twenty stories high. The forms of oscillations of the buildings are studied. The stress states of specific ten story reinforced concrete frame buildings are studied using accelerograms of four California earthquakes of 7 to 8 units intensity in order to estimate the earthquake resistance of buildings with rigidity decreasing with height. It is noted that a decrease in rigidity with height causes significant modification of the stress state of the upper stories during earthquakes.

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USSR

UDC 69.032+669.841+624.159.1

GOROYAN, T. A., ~~KHACHIYAN, E. YE.~~, Armenian Scientific Research Institute of Building Materials and Structures

"Analysis of the Response of Multistory Frame Buildings to Seismic Disturbances on the Basis of Accelerograms of Strong Earthquakes"

Yerevan, Izvestiya Akademii nauk Armyanskoy SSR, Seriya tekhnicheskikh nauk, No. 4, 1971, pp 3-12

Abstract: A method is given for calculating the response of multistory buildings to seismic disturbances by using accelerograms of earthquakes and applying a computer. The relative effect of different shapes of buildings and the scattering of energy on the magnitude of the seismic loads is analyzed using specific examples of 10-story frame buildings. The spectral method of calculating buildings for seismic disturbances gave satisfactory results only for systems with one degree of freedom but in the case of a system with many degrees of freedom there arise many difficulties in attempting to calculate the pile-up of higher forms of oscillations. An exact calculation of the

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GOROYAN, T. A., KHACHIYAN, E. YE., Izvestiya Akademii nauk Armyanskoy SSR, Seriya tekhnicheskikh nauk, No. 4, 1971, pp 3-12

effect of higher forms of oscillations on the magnitude of the seismic load is complicated chiefly due to the impossibility of a mathematical description of the law of soil vibrations in earthquakes. A computer is applied to overcome these difficulties by making it possible to integrate numerically the expression for the seismic load and to determine the maximum values of this load considering phase deviations of all its components, by using a given accelogram of the earthquake as a basis of the calculation. Four California earthquakes of intensity 7-8 points were used to analyze the relative effect of energy scattering and different shapes of oscillations on the formation of seismic loads in specific types of 10-story reinforced concrete frame buildings.

Acc. Nr: AP0044023

**D. G. KHACHIROV**

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 2, pp 52-56

EXPERIMENTAL STUDY OF SHORT-LIVING DAUGHTER  
PRODUCTS OF RADON IN THE RESPIRATORY TRACT

V. N. Kirichenko, Dzh. G. Khachirov, S. A. Dubroviz,  
Klyuch, V. Ye.; Bykhovskiy, A. V.

One should know the nature of the isotopes distribution in order to asses the dosage load on basal cells of the bronchial epithelium in different lengths of the respiratory tract following inhalation of radon and of its daughter products. Experimental investigations carried out with the aid of a specially elaborated method of direct alpha-spectrometry of the preparations helped to clear up the nature of the radon daughter products distribution in the mucosa of bronchial epithelium of dogs and rabbits. These data enable dosage loads on the basal cells of the bronchial epithelium to be measured more exactly when the air containing RaA, RaB, RaC and RaC<sup>1</sup> isotopes is inhaled by experimental animals.

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~~KHACHIYAN, E. YE.~~

"Seismic Spectra According to Individual Components of Accelerograms and Taking the Two Horizontal Components Jointly Into Account"

Yerevan, Doklady Akademii Nauk Armyanskoy SSR, Vol 51, No 4, 70, pp 207-213

Abstract: An attempt is made in this article to obtain certain qualitative and quantitative evaluations of the complex problem involved in the effect on a building of horizontal and vertical ground vibration components.

Two figures and one table are given to illustrate the findings in this article.

Some indication is given concerning the spectral identity of the source of the horizontal and vertical ground tremors. It is also found that the influence of attenuation on the spectral ordinates and the spectral characteristics is the same as in the case of horizontal vibrations.

The data in the table show that the maximal values for the total accelerations and shifts for individual buildings are up to two times that for the individual components, and that in the majority of cases they are 20-30% greater than the largest of the two maximal values from the individual

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USSR

KHACHIYAN, E. YE., Doklady Akademii Nauk Armyanskoy SSR, Vol 51, No 4, 70, pp 207-213

components. Thus, both components of the horizontal ground accelerations must be taken into account in order to find the real spectra.

Mention is made of the fact that the equipment used in preparing these data record shifts in the system with one degree of freedom in allowing for the two horizontal ground components; thus, in making comparisons with data obtained from other sources, some correction must be taken into account.

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USSR

GOROYAN, T. A. and KHACHIYAN, E. YE.

"Determination of Periods and Forms of Free Oscillations of Multi-Story Frame Buildings"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Tekhn. Nauk, Vol 23, No 5, 1970, pp 43-51

Abstract: In an earlier work, the authors suggested a formula for determination of the first three tones of the free oscillations of buildings up to 20 stories high. Subsequently, they showed that for buildings of over five stories, the influence of differences of masses of individual stories within limits of 20-30% can be ignored, and the periods and forms of oscillations determined as for systems with equal masses in all stories. Continuing these studies, this article presents an analysis of the free oscillations of buildings in which the rigidity of the first story differs from the rigidities of the other stories, which are equal to each other.

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UDC 621.382.2

IMENKOV, A. N., SIUKAYEV, N. V., ~~KHADIKOV, M. F.~~ Leningrad  
Physico Technical Institute imeni A. F. Ioffe, Leningrad, Academy  
of Sciences USSR; North Osetian State University imeni K. L.  
Khetagurov, Ordzhonikidze, Ministry of Education RSFSR

"Temperature Relations of the Electrical Properties of Tunnel  
p-n-Junctions in InP"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 4, No 5, 1970,  
pp 886-891

Abstract: Electrical properties of tunnel p-n-junctions in InP  
between 77-340°K were investigated to determine current mechan-  
isms at various voltages and parameters of the semiconductor in  
the n- and p-region. In the presence of inverse voltages the  
current predominates as a result of the direct tunnel effect  
of the conduction band -- light hole band. The effective mass  
of the electrons in the light hole band was determined. With  
forward voltages in the negative resistance section the current  
is basically caused by the tunnel effect of the conduction band --  
impurity acceptor band. In the second ascending section of the  
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IMENKOV, A. N., et al., Fizika i Tekhnika Poluprovodnikov, Vol 4,  
No 5, 1970, pp 886-891

voltampere characteristic, the current obviously arises from tunneling from the deep impurity level. Monocrystalline plates of p-InP alloyed with Zn with a current carrier concentration basically of  $p = 7.8 \cdot 10^{18} \text{ cm}^{-3}$  and a mobility of  $\mu_p = 30 \text{ cm}^2/\text{v} \cdot \text{sec}$  at  $295^\circ\text{K}$  were used in the experiment.  $I_{\text{max}}/I_{\text{min}}$  depends much less on temperature than in the tunnel p-n-junctions made of GaAs and Ge. The characteristic voltages  $V_{\text{max}}$ ,  $V_{\text{min}}$  and  $V_r$  decrease with an increase in temperature;  $dV_{\text{max}}/dT$  is very large and larger than expected as a result of variation in depth of the Fermi levels.

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USSR

UDC: 620.191.32

TRIBUNSKIY, V. V., KALINICHENKO, I. I., and KHADYYEV, M. S.

"Study of Composition and Structure of Scale from Nickel (NP2 and NK0.2), Alumel and Chromel Wire Rod"

Izv. VUZ, Tsvetnaya Metallurgiya, No 3, 1970, pp 131-134

Abstract: Electronographic and chemical studies indicated that the scale from NP2 and NK0.2 alloy wire rod consists of NiO,  $\text{NiFe}_2\text{O}_4$ , and traces of nickel. The scale on alumel wire consists of NiO,  $\text{NiAl}_2\text{O}_4$ ,  $\text{NiMn}_2\text{O}_4$ ,  $\text{Fe}_3\text{O}_4$ , and traces of nickel, the scale from chromel wire - of NiO,  $\text{NiCr}_2\text{O}_4$ ,  $\text{Cr}_2\text{O}_3$ , and  $(\text{Fe, Cr})_2\text{O}_3$ . It is established that the upper layer of the scale on the wire rod of the alloys studied consists of NiO. The  $\text{NiCr}_2\text{O}_4$ ,  $\text{Cr}_2\text{O}_3$ ,  $(\text{Fe, Cr})_2\text{O}_3$  phases, as well as  $\text{NiAl}_2\text{O}_4$  and  $\text{NiMn}_2\text{O}_4$  are present as individual crystals, dispersed in the NiO. The  $\text{NiFe}_2\text{O}_4$  and  $\text{Fe}_3\text{O}_4$  spinels are present in the scale in the form of individual interlayers.

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1/2 023 UNCLASSIFIED PROCESSING DATE--11DEC70  
TITLE--EFFECT OF NARINGENIN ON CAPILLARY PERMEABILITY AND FRAGILITY -U-

AUTHOR--(02)-KHALZHAY, YA.I., NIKOLAYEVA, A.V. *K*

COUNTRY OF INFO--USSR

SOURCE--FARMAKOL. TOKSIKOL. (MOSCOW) 1970, 33(3), 313-16

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RAT, MOUSE, GUINEA PIG, CAPILLARY, DRUG EFFECT, TOXICOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605004/C12 STEP NO--UR/0390/70/033/003/0313/0316

CIRC ACCESSION NO--AP0139630

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2/2 023

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ABSTRACT/EXTRACT--(U) GP-D- ABSTRACT. NARINGENIN (25, 50, OR 100 MG-KG), GIVEN TO RATS, MICE, OR GUINEA PIGS, WAS MORE EFFECTIVE THAN SIMILAR DOSES OF NARINGIN IN IMPROVING CAPILLARY PERMEABILITY AND STRENGTHENING CAPILLARY WALLS. THE LD SUB50 OF NARINGENIN FOR MICE WAS 355 MG-KG, AND OF NARINGIN WAS 562 MG-KG. FACILITY: LAB. OBSHCH. FARMAKOL., KHARKOV. NAUCH.-ISSLED. KHIM.-FARM. INST., KHARKOV, USSR.

UNCLASSIFIED

USSR

UDC 632.025

KHADZHAYEV, A. Senior Scientific Worker, Brodskiy (Central Asian Institute for the Protection of Plants)

"On the Duration of Action of Organophosphorus Preparations"

Moscow, Sashchita Rasteny, No 6, Jun 73, p 28

Translation: The aim of our investigations was to verify the toxicity of insecticide-treated surface for granary weevil (*Callosity granaria L.*), confused flour beetle (*Tribolium confusum Duv.*), and for larvae of the brown

It was found that after 10 days the effectiveness of chlorophos, trolene (Dantrolene), against granary weevil and confused flour beetle had decreased by 5.2 and 6.1, 10.3 and 10.9, 7.4 and 12.4%, respectively, that of methylnitrophos - by 11.3 and 13%, and that of metathion - by 15.3 and 14.1%.

Twenty days after treatment the action of chlorophos, methylnitrophos, metathion, trolene, and trichlorometaphos-3, on the granary weevil had decreased by 26.5, 34.5, 41.9, 32.3, and 27.7%, respectively, and on the confused flour beetle, by 20.4, 44.4, 37.7, 30.9 and 28%

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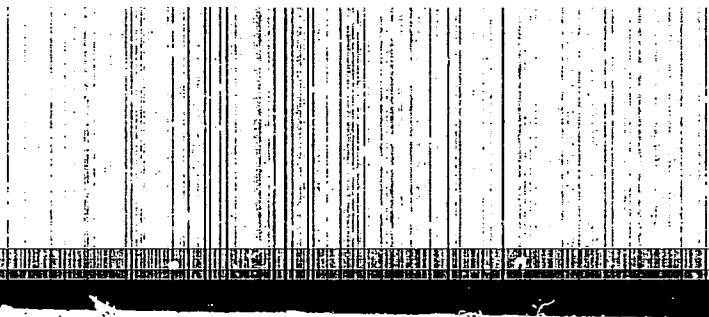
- 11 -

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**CIA-RDP86-00513R002201230012-8"**

USSR

GOROYAN, T. A., KHACHIYAN, E. Ye.

"Earthquake Resistance of Multistory Frame Buildings with Rigidity Decreasing with Each Successive Story"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Tekhnicheskikh Nauk, Vol 25, No 3, 1972, pp 35-43.

Abstract: The frequency equations of multistory frame buildings with absolutely rigid beams and a linear decrease in rigidity of each successive story are analyzed. A formula is suggested for determination of the periods of the first three lowest harmonics of free oscillations of buildings of this type up to twenty stories high. The forms of oscillations of the buildings are studied. The stress states of specific ten story reinforced concrete frame buildings are studied using accelerograms of four California earthquakes of 7 to 8 units intensity in order to estimate the earthquake resistance of buildings with rigidity decreasing with height. It is noted that a decrease in rigidity with height causes significant modification of the stress state of the upper stories during earthquakes.

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UDC 69.032+669.841+624.159.1

USSR

GOROYAN, T. A., ~~KHACHTYAN, E. YE.~~, Armenian Scientific Research Institute of Building Materials and Structures

"Analysis of the Response of Multistory Frame Buildings to Seismic Disturbances on the Basis of Accelograms of Strong Earthquakes"

Yerevan, Izvestiya Akademii nauk Armyanskoy SSR, Seriya tekhnicheskikh nauk, No. 4, 1971, pp 3-12

Abstract: A method is given for calculating the response of multistory buildings to seismic disturbances by using accelograms of earthquakes and applying a computer. The relative effect of different shapes of buildings and the scattering of energy on the magnitude of the seismic loads is analyzed using specific examples of 10-story frame buildings. The spectral method of calculating buildings for seismic disturbances gave satisfactory results only for systems with one degree of freedom but in the case of a system with many degrees of freedom there arise many difficulties in attempting to calculate the pile-up of higher forms of oscillations. An exact calculation of the

GOROYAN, T. A., KHACHIYAN, E. YE., Izvestiya Akademii nauk Armyanskoy SSR, Seriya tekhnicheskikh nauk, No. 4, 1971, pp 3-12

effect of higher forms of oscillations on the magnitude of the seismic load is complicated chiefly due to the impossibility of a mathematical description of the law of soil vibrations in earthquakes. A computer is applied to overcome these difficulties by making it possible to integrate numerically the expression for the seismic load and to determine the maximum values of this load considering phase deviations of all its components, by using a given accelogram of the earthquake as a basis of the calculation. Four California earthquakes of intensity 7-8 points were used to analyze the relative effect of energy scattering and different shapes of oscillations on the formation of seismic loads in specific types of 10-story reinforced concrete frame buildings.

Acc. Nr: AP0044023

**D. G. KHACHIROV**

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 2, pp 52-56

EXPERIMENTAL STUDY OF SHORT-LIVING DAUGHTER PRODUCTS OF RADON IN THE RESPIRATORY TRACT

V. N. Kirichenko, Lzh. G. Khachirov, S. A. Dubrovin, Klyuch, V. Ye.; Bykhovskiy, A. V.

One should know the nature of the isotopes distribution in order to asses the dosage load on basal cells of the bronchial epithelium in different lengths of the respiratory tract following inhalation of radon and of its daughter products. Experimental investigations carried out with the aid of a specially elaborated method of direct alpha-spectrometry of the preparations helped to clear up the nature of the radon daughter products distribution in the mucosa of bronchial epithelium of dogs and rabbits. These data enable dosage loads on the basal cells of the bronchial epithelium to be measured more exactly when the air containing RaA, RaB, RaC and RaC' isotopes is inhaled by experimental animals.

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REEL/FRAME  
**19770460**

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UDC 624.042.7

~~KHACHIYAN, E. YE.~~

"Seismic Spectra According to Individual Components of Accelerograms and Taking the Two Horizontal Components Jointly Into Account"

Yerevan, Doklady Akademii Nauk Armyanskoy SSR, Vol 51, No 4, 70, pp 207-213

Abstract: An attempt is made in this article to obtain certain qualitative and quantitative evaluations of the complex problem involved in the effect on a building of horizontal and vertical ground vibration components.

Two figures and one table are given to illustrate the findings in this article.

Some indication is given concerning the spectral identity of the source of the horizontal and vertical ground tremors. It is also found that the influence of attenuation on the spectral ordinates and the spectral characteristics is the same as in the case of horizontal vibrations.

The data in the table show that the maximal values for the total accelerations and shifts for individual buildings are up to two times that for the individual components, and that in the majority of cases they are 20-30% greater than the largest of the two maximal values from the individual

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USSR

KHACHIYAN, E. YE., Doklady Akademii Nauk Armyanskoy SSR, Vol 51, No 4, 70, pp 207-213

components. Thus, both components of the horizontal ground accelerations must be taken into account in order to find the real spectra.

Mention is made of the fact that the equipment used in preparing these data record shifts in the system with one degree of freedom in allowing for the two horizontal ground components; thus, in making comparisons with data obtained from other sources, some correction must be taken into account.

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USSR

GOROYAN, T. A. and KHACHIYAN, E. YE.

"Determination of Periods and Forms of Free Oscillations of Multi-Story Frame Buildings"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR, Seriya Tekhn. Nauk, Vol 23, No 5, 1970, pp 43-51

Abstract: In an earlier work, the authors suggested a formula for determination of the first three tones of the free oscillations of buildings up to 20 stories high. Subsequently, they showed that for buildings of over five stories, the influence of differences of masses of individual stories within limits of 20-30% can be ignored, and the periods and forms of oscillations determined as for systems with equal masses in all stories. Continuing these studies, this article presents an analysis of the free oscillations of buildings in which the rigidity of the first story differs from the rigidities of the other stories, which are equal to each other.

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UDC 621.382.2

K

USSR

IMENKOV, A. N., SIUKAYEV, N. V., KHADIKOV, M. K., Leningrad  
Physico Technical Institute imeni A. F. Ioffe, Leningrad, Academy  
of Sciences USSR; North Osetian State University imeni K. L.  
Khetagurov, Ordzhonikidze, Ministry of Education RSFSR

"Temperature Relations of the Electrical Properties of Tunnel  
p-n-Junctions in InP"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 4, No 5, 1970,  
pp 886-891

Abstract: Electrical properties of tunnel p-n-junctions in InP  
between 77-340°K were investigated to determine current mecha-  
nisms at various voltages and parameters of the semiconductor in  
the n- and p-region. In the presence of inverse voltages the  
current predominates as a result of the direct tunnel effect  
of the conduction band -- light hole band. The effective mass  
of the electrons in the light hole band was determined. With  
forward voltages in the negative resistance section the current  
is basically caused by the tunnel effect of the conduction band --  
minority acceptor band. In the second ascending section of the

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IMENKOV, A. N., et al., Fizika i Tekhnika Poluprovodnikov, Vol 4,  
No 5, 1970, pp 886-891

voltampere characteristic, the current obviously arises from tunneling from the deep impurity level. Monocrystalline plates of p-InP alloyed with Zn with a current carrier concentration basically of  $p = 7.8 \cdot 10^{18} \text{ cm}^{-3}$  and a mobility of  $\mu_p = 30 \text{ cm}^2/\text{v} \cdot \text{sec}$  at 295°K were used in the experiment.  $I_{\text{max}}/I_{\text{min}}$  depends much less on temperature than in the tunnel p-n-junctions made of GaAs and Ge. The characteristic voltages  $V_{\text{max}}$ ,  $V_{\text{min}}$  and  $V_r$  decrease with an increase in temperature;  $dV_{\text{max}}/dT$  is very large and larger than expected as a result of variation in depth of the Fermi levels.

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USSR

UDC: 620.191.32

TRIEUNSKIY, V. V., KALINICHENKO, I. I., and KHADYYEV, M. S.

"Study of Composition and Structure of Scale from Nickel (NP2 and NK0.2), Alumel and Chromel Wire Rod"

Izv. VUZ, Tsvetnaya Metallurgiya, No 3, 1970, pp 131-134

Abstract: Electronographic and chemical studies indicated that the scale from NP2 and NK0.2 alloy wire rod consists of NiO,  $\text{NiFe}_2\text{O}_4$ , and traces of nickel. The scale on alumel wire consists of NiO,  $\text{NiAl}_2\text{O}_4$ ,  $\text{NiMn}_2\text{O}_4$ ,  $\text{Fe}_3\text{O}_4$ , and traces of nickel, the scale from chromel wire - of NiO,  $\text{NiCr}_2\text{O}_4$ ,  $\text{Cr}_2\text{O}_3$ , and  $(\text{Fe, Cr})_2\text{O}_3$ .

It is established that the upper layer of the scale on the wire rod of the alloys studied consists of NiO. The  $\text{NiCr}_2\text{O}_4$ ,  $\text{Cr}_2\text{O}_3$ ,  $(\text{Fe, Cr})_2\text{O}_3$  phases, as well as  $\text{NiAl}_2\text{O}_4$  and  $\text{NiMn}_2\text{O}_4$  are present as individual crystals, dispersed in the NiO. The  $\text{NiFe}_2\text{O}_4$  and  $\text{Fe}_3\text{O}_4$  spinels are present in the scale in the form of individual interlayers.

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1/2 023  
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ABSTRACT/EXTRACT--(U) GP-0-

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FACILITY: LAB. ODSHCH. FARMAKUL.,

KHAR'KOV. NAUCH.-ISSLED. KHIM.-FARM. INST., KHARKOV, USSR.

USSR

UDC 632.025

KHADZHAYEV, A., Senior Scientific Worker, SredazIZR (Central Asian Institute for the Protection of Plants)

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Moscow, Zashchita Rasteniy, No 6, Jun 73, p 28

Translation: The aim of our investigations was to verify the toxicity of insecticide-treated surface for granary weevil (*Calandra granaria* L.), confused flour beetle (*Tribolium confusum* Duv.), and for larvae of the brown dermestid, at various periods after spraying.

It was found that after 10 days the effectiveness of chlorophos, trolene (Ronnel), and trichlorometaphos-3, against granary weevil and confused flour beetle had decreased by 5.2 and 6.1, 10.3 and 10.9, 7.4 and 12.4%, respectively, that of methylnitrophos - by 11.3 and 13%, and that of metathion - by 15.3 and 14.1%.

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... of investigations for the purpose of ... gradually increasing. After 10 days it amounted to ... after 20 days to ... and after 30 days to ... After 3 months the preparations ceased ...

REEL # 12  
KALABIN, G.A.  
to  
KHADZHAYEV, A.