Inelastic scattering.....

respectively. The mechanism of (n, 2n) reaction on Be consists in the neutron emission by the excited 2.43-Mev Be^{9*} nucleus forming after inelastic neutron scattering. The latter is due to the fact that the reaction does not progress in the range of 1.8 - 2.7 Mev, where it is possible from the energy conditions, but its cross section grows rapidly, starting from energy E_n = 2.70 Mev, above which the excitation of the 2.43-Mev level is possible.

[Abstracter's note: Complete translation]

Card 2/2

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S/641/61/000/000/025/033
B102/B138

AUTHORS: Zubov, Yu. G., Lebedeva, N. S., Morozov, V. M.

TITLE: Inelastic neutron scattering at 3.2-4.5 Mev in beryllium

SOURCE: Krupchitskiy, P. A., ed. Neytronnaya fizika; sbornik statey. Moscow, 1961, 298-305

TEXT: The cross sections of the reaction $Be^9(n,2n)Be^8$ were measured in dependence on the energy of the bombarding neutrons. The neutron source was a deuterium gas target irradiated by electrostatically accelerated deuterons. The proportional gas counters (BF_3) were arranged in three concentric rings of 9, 18 and 27 counters (Fig. 1). The pulses from the counters were recorded by radio with a coincidence time resolution of 200 μsec. For neutron spectra scattered elastically in carbon the efficiency of the detector was 5.5, 4.5 and 4.4 for neutrons of 3.7, 4.1 and 4.5 Mev, respectively. The total cross section σ_t was taken as the sum of the elastic scattering cross section σ_e, the cross section σ_{2n} of the (n,2n), and σ_α of the (n,α), reactions. σ_e and σ_{2n} were determined

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Inelastic neutron scattering at...

from the number of counts with the Be and with a standard specimen, and from coincidence counts. σ_{2n} was found to be 0.8 ± 0.1, 0.73 ± 0.09, 0.53 ± 0.07 and 0.45 ± 0.05 barn for E_n = 3.2, 3.7, 4.1 and 4.5 Mev, respectively. The results indicate that the (n,2n) reactions take place as cascade processes (n; n', n"). The first stage is an inelastic neutron scattering with formation of an excited state of Be^9 (excitation energy 2.43 Mev). Deexcitation leads to neutron emission and formation of Be^8. L. G. Kondrat'yev and L. A. Molodov are thanked for assistance. There are 3 figures and 12 references: 2 Soviet and 10 non-Soviet. The four most recent references to English-language publications read as follows: Hughes, Schwartz Neutron Cross Sections. N.Y., 1958; Stelson, P. H., Campbell, E. C. Phys. Rev. 106, 1252 (1957); Fischer, G. J. Phys. Rev. 108, 99, (1957); G. Weber et al. Phys. Rev. 104, 1307 (1956).

Fig. 1. Experimental arrangement. Legend: (1) neutron source, (2) paraffin collimator, (3) cadmium filter, (4) specimen, (5) moderating block of detector, (6) gas counters, (7) paraffin container, (8) layer of amorphous boron.

Card 2/2

AUTHOR: Zubov, Yu. G.; Kolt'pin, Ye. A.; Lobikov, Ye. A.; Mostyukha, A. I. S/0057/63/033/006/0686/0692 86 80

TITLE: Investigation of the energy spectra of the electrons and ions penetrating the face of a magnetic mirror apparatus

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 6, 1963, 686-692

TOPIC TAGS: plasma diagnostics, plasma compression

ABSTRACT: The energy spectra of the electrons and ions in a plasma bunch in a magnetic mirror apparatus were measured with a simple "lateral collector" consisting of three grids and a collecting plate in a 40 mm brass tube. The first two grids were held at ground potential, a saw-tooth cut-off voltage was applied to the third grid, and the collector current (less than 10 microamperes) was measured. [Abstractor's note: The experiments appear to have been undertaken at least partly to test the usefulness of this simple device.] The hydrogen plasma was formed in a source similar to that described by S. Marshal (Transactions of the Second International Conference on Peaceful Uses of Atomic Energy, Geneva, 1958.) and injected into a 15 cm diameter stainless steel tube 200 cm long. The tube was located in a constant magnetic field of 100 to 200 oe. A pulse field that rose in 250 microsec

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ACCESSION NR: AP3001327

to 6 koe at the center of the tube and 10 koe in the mirror regions provided adiabatic compression. Two measuring collectors were located, one at the center of the tube and the other at the end, 10 to 15 cm behind the magnetic mirror. Different collectors were used to measure the electron spectra and the ion spectra. Oscillograms and energy distribution curves are given for the electrons and the ions at both locations with and without magnetic compression. Plateaus in the apparent electron spectra without magnetic compression are ascribed to a potential [illegible] between the plasma bunch and the apparatus. The potential is negative at the [illegible] plasma bunch and increases "asymmetrically" along its length. A similar [illegible] the ion energy spectrum is ascribed to the large forward velocity of the plasma bunch [illegible] cm per sec. Spectra of the electrons penetrating the magnetic mirror show that the electron energy increases during compression for about [illegible] and subsequently increases. The mean energy of the electrons is [illegible] ev. [illegible] gratitude to [illegible] S.V. [illegible]nberg, G.B. Yan'kov and A.V. [illegible] interest in the work and for valuable discussions, and also to [illegible] Makharov, [illegible] Zaitsev and [illegible] Simakova for aid in conducting the experiments and fabricating the collectors. Orig. art. has: [illegible] figures.

ASSOCIATION: none

SUBMITTED: 12Feb62 | DATE ACQ: 01Jul63 |
SUB CODE: 00 | NO REF SOV: 002 | ENCL: 00
| | OTHER: 002

2/2

LEVSHINA, Ol'ga Nikolayevna; SHLASHOVA, Zoya Petrovna; LYAPUNOV, B.V., nauchnyy red.; KAUFMAN, I.M., red.; ZUBOV, Yu.S., red.; KHELEMSKAYA, L.M., tekhn.red.

[Artificial earth satellites and interplanetary flights; suggested readings] Iskusstvennye sputniki zemli. Mezhplanetnye polety; rekomendatel'nyi ukazatel' literatury. Nauchnaia red. B.V.Liapunova. Moskva, 1958. 45 p. (MIRA 11:6)

1. Moscow. Publichnaya biblioteka.
(Bibliography--Artificial satellites)
(Bibliography--Space flight)

AUTHOR: Druzhinin, V.V., Cand. of Phys.Math.Sci., Zubov, Yu.Ye., Engineer, Kozhurov, A.A., Engineer and Professor Yanus, R.I.

SOV/110-58-7-7/21

TITLE: An apparatus for measuring the specific losses and magnetic induction of whole sheets of electrical steel (Apparat dlya izmereniya udel'nykh poter' i magnitnoy induktsii elektrotekhnicheskoy stali na tselykh listakh)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 7, pp 24-28 (USSR)

ABSTRACT: At present the principal method of determining specific losses and magnetic induction in electrical sheet steel is by the Epstein apparatus, which suffers from a number of disadvantages. The losses of the steel may be increased by work-hardening when the strips are cut or reduced by stress relief. The method in rather unreal because the strips are much narrower than those used in practice and finally the tests waste a good deal of material. Therefore, in recent years attempts have been made in the USSR and abroad to develop accurate and quick methods of testing whole sheets of steel. It is a

Card 1/5

requirement of standard GOST-802-54 that one sheet shall be taken from each ton of steel but not less than 4 sheets per batch. It is, therefore, more convenient to test sheets four at a time rather than singly, and equipment has been designed accordingly. If there are more than four sheets to be tested the quality of the steel is evaluated with a coercivity meter. The coercive force is determined on all the test sheets since it is proportional to the hysteresis loss. For final evaluation of the quality of the steel, four sheets are taken, two of which have the minimum and two the maximum coercive force as specified in standard GOST-802-54 for the Epstein apparatus. The construction of the apparatus is then described. It is intended for sheets of 1200 x 750 mm. The length of 1200 is what remains from the

standard sheet after two pieces have been cut off for the standard mechanical tests. The sheets are mounted in two solenoids, arranged one above the other as shown in Fig 1. The solenoids are 40 mm shorter than the sheets. At the ends of the solenoids there are armatures which form a closed magnetic circuit with the sheets. To ensure good magnetic contact, each armature consists of twelve sections pressed on by springs. A general view of the apparatus is shown in Fig 2. As butt joints are used there is no need to press the sheets flat. Each solenoid has 600 measuring and magnetising turns uniformly distributed over the length. The specific losses are measured by an absolute watt-meter method using a special low-power-factor wattmeter. The formula used for calculating the losses is explained and the significance of the various connections is considered. The estimated errors of the method are discussed in some detail. The distribution of magnetic induction along a sheet is plotted in Fig 3 and the influence of insulation between

An apparatus for measuring the specific losses and magnetic induction of whole sheets of electrical steel

sheets on the specific losses in steel are given in Table 1. It is considered that the accuracy of the determination of losses in the apparatus is about the same as in the Epstein apparatus. Comparative tests were made between the Epstein apparatus and the new one, with the results given in Table 2. Values are sometimes somewhat lower with the Epstein apparatus, apparently because of the relief of stresses in the steel on cutting. The way in which the equipment is used at the steelworks is described. The extent of the differences between the losses determined in the old and new apparatus on 450 samples is given in Fig 3. On 95% of the samples agreement was within 3% at 10 kilogauss. The agreement rd 4/5 was not quite so good at 15 kilogauss. Certain

An apparatus for measuring the specific losses and magnetic induction of whole sheets of electrical steel SOV/110-58-7-7/21

difficulties may be met in testing hot-rolled steel because the anisotropy of the magnetic properties varies. This is not so important with cold-rolled steel because the magnetic properties are guaranteed only in the direction of rolling. The complete testing time is 5 - 7 minutes. On the basis of six months' experience the method is recommended for general use. There are 3 Card 5/5 tables and 3 figures.

SUBMITTED: January 18, 1958.

1. Steel--Testing equipment 2. Electrical equipment--Design
3. Solenoids--Applications

ZUBOVA, A. F.

ZUBOVA, A. F.: "Investigation of the problem of the oscillation and stability of solutions of a second-order equation." Leningrad Order of Lenin State U imeni A. A. Zhdanov. Leningrad, 1956. (Dissertation for the degree of Candidate in Sciences).

So; Knizhnay Letopis', No 36, 1956, Moscow.

ZUBOVA, A.F.

Variation in the solution of second-order equations [with summary in English, p.211]. Vest.Len.un. 12 no.1:168-174 '57.
(MLRA 10:5)

(Differential equations, Partial)

ZUBOV, Vladimir Ivanovich. Prinimala uchastiye ZUBOVA, A.F.; KANAREV, L.Ye., retsenzent; GRIGOR'YEV, Ye.P., nauchnyy red.; SACHUK, N.A., red.; KONTOROVICH, A.I., tekhn. red.

[Vibrations in nonlinear and controlled systems] Kolebaniia v nelineinykh i upravliaemykh sistemakh. Leningrad, Sudpromgiz, 1962. 630 p. (MIRA 15:6)
(Vibration) (Automatic control)
(Differential equations)

ZUBOVA, A.F.

Variable and stable solutions to a second-order equation. Sib. mat. zhur. 4 no.5:1060-1070 S-O '63. (MIRA 16:12)

ZUBOVA, A.F. (Leningrad)

Cold reservation with restoration. Avtom. i telem. 26 no.10:1800-1808 O '65. (MIRA 18:10)

L 6790-66 EWT(d)/EWT(l)/T/EWA(h) IJP(c) JG

ACC NR: AP5026963 SOURCE CODE: UR/0103/65/026/010/1800/1808

AUTHOR: Zubova, A. F. (Leningrad)

ORG: None

TITLE: A cold standby arrangement with recovery

SOURCE: Avtomatika i telemekhanika, v. 26, no. 10, 1965, 1800-1808

TOPIC TAGS: reliability theory, statistics, Volterra equation

ABSTRACT: The author proposes a new method for determining the probability of trouble-free operation in a system consisting of a single working element and m standby elements (cold standby arrangement). It is assumed that the elements in the system may be either equally reliable or not and that recovery takes place after failure. The distribution functions for duration of trouble-free operation of the elements are $q_1(t), \ldots, q_{m+1}(t)$ and the length of recovery is $R(t, \tau)$, where $q_1(t)$, $q_2(t)$, ..., $R(t, \tau)$ are arbitrary smooth functions between zero and one. The system works as follows. The working element is started with a probability of trouble-free operation $p_1(t)$, while m elements stand in reserve. The first standby element begins operation after failure of the working element at the instant t_1, and its probability of trouble-free operation at time t_2 will be $p_2(t_2 - t_1)$. The switches are assumed to be ideal. The element which failed is repaired and placed in reserve. It is assumed that there will be no new failures in a device out of operation. The author determines the probability of trouble-free operation for this system. It is found that in the case of duplication

Card 1/2 UDC: 621.3.019.35

ACC NR: AP5026963

(i.e., where m = 1), the probability increases with the ratio between the mean time of trouble-free operation for the system without standby arrangements and the mean recovery time. A volterra integral equation of the second kind is found for the case where m = 2 assuming that $R(t, \tau) = R(\tau)$ and that the elements are equally reliable. This integral equation is then extended to the case where m equals any number. The final equation may be solved by numerical integration or by using Laplace transforms. Orig. art. has: 6 figures, 1 table, and 21 formulas.

SUB CODE: 12, 09 / SUBM DATE: 16Nov64 / ORIG REF: 005 / OTH REF: 001

jw
Card 2/2

SOURCE CODE:

ACC NR: AT6023930

AUTHOR: Zubova, A. F.

ORG: none

TITLE: On some reliability characteristics of stand-by systems without reset

SOURCE: Tsifrovaya vychislitel'naya tekhnika i programmirovaniye, no. 1, Moscow, 1966, 28-38

TOPIC TAGS: reliability engineering, system reliability

ABSTRACT: This article computes such reliability characteristics as probability of correct operation and average time of trouble-free operation for systems reserved under the substitution system and those standing by all the time (general and element-by-element). It is assumed that the law of distribution of trouble-free operation of the units is nonexponential. The devices are assumed to vary in reliability, while the switches are ideal and switching is instantaneous. Specific matters treated are: (1) an unreserved system of n equireliable units, (2) reserving a system by the substitution method, (3) a system with two reserve units, (4) a system in which the number of basic elements is n and the number of stand-by circuits is m, (5) a system reserved by the substitution method with m = 1, 2, 3 (n = 1, the summation constant k of any value), (6) a system of element-by-element reservation (doubling of elements), (7) a system of element-by-element reservation with m stand-by units per element, (8)

UDC: 681.142.019.3

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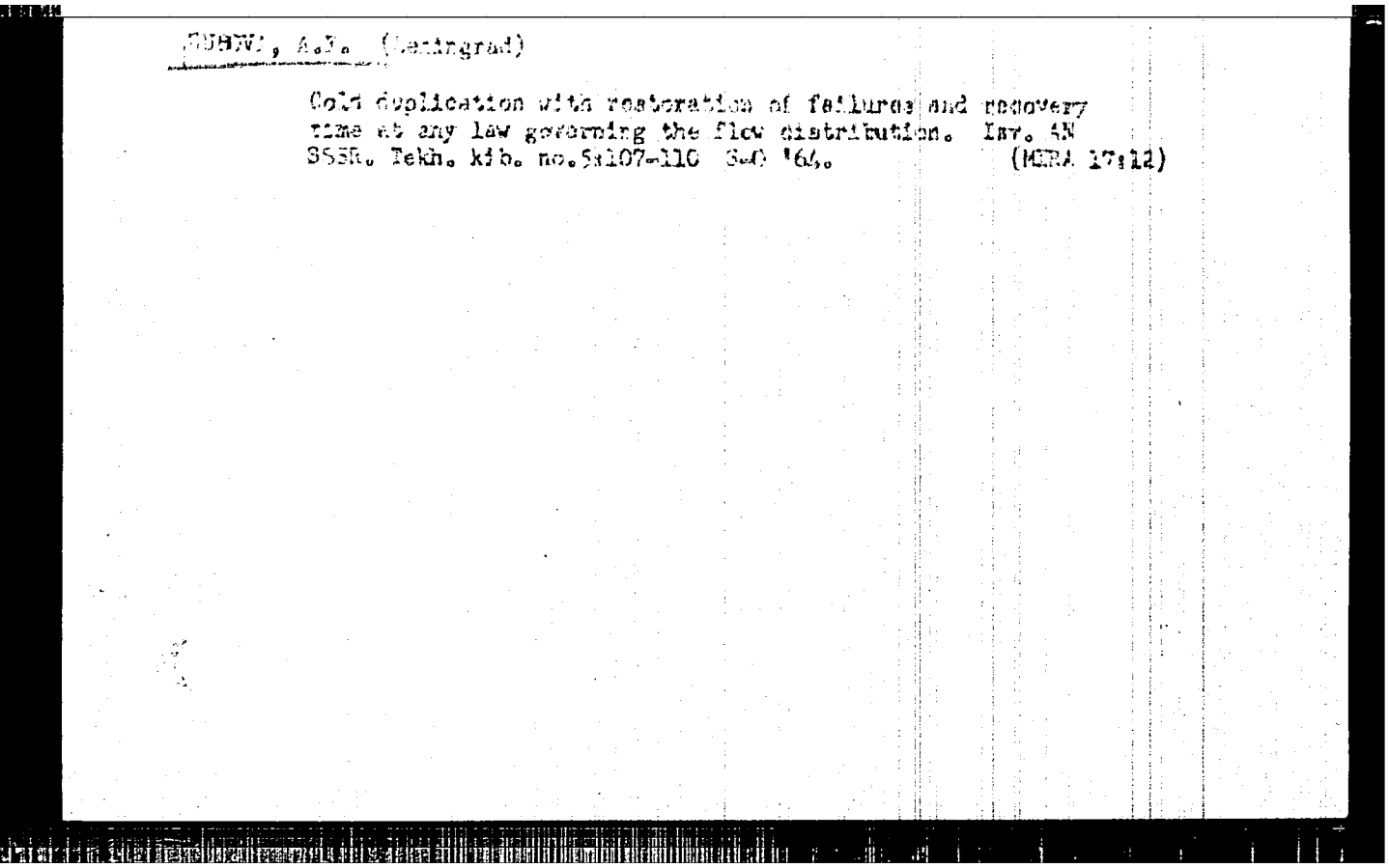
ZUBOVA, A.F. (Leningrad)

One method for calculating the reliability of redundant systems. (MIRA 18:6)
Avtom. i telem. 26 no.4 770b-771 Ap '65.



ZUBOV, A.D. (Leningrad)

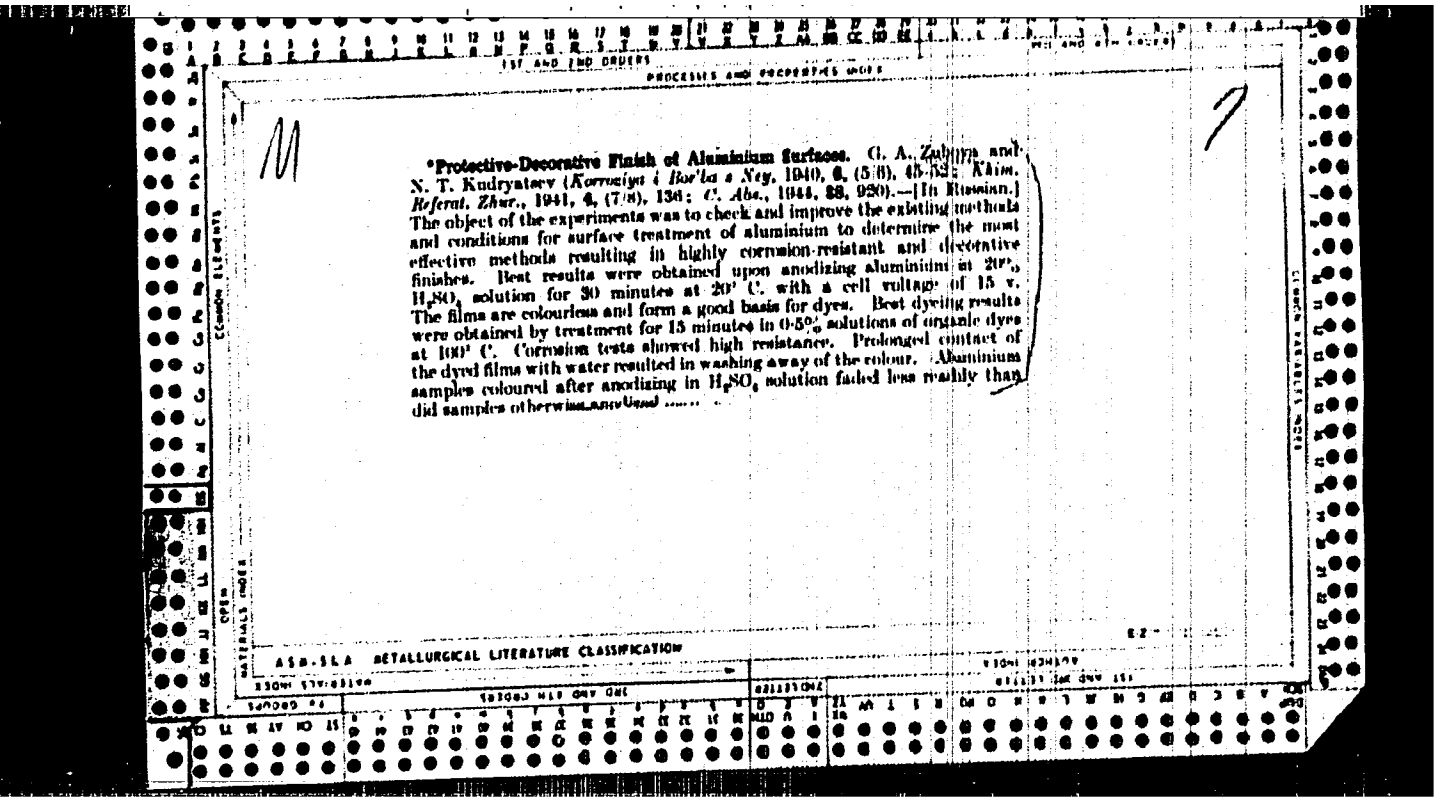
Cold duplication with restoration of failures and recovery time at any law governing the flow distribution. Izv. AN SSSR. Tekh. kib. no.5:107-110 S-O '64. (MIRA 17:12)

MEDNIS, [illegible]; ANDREYEVA, N., spets. red.; ZUBOVA, G., red.

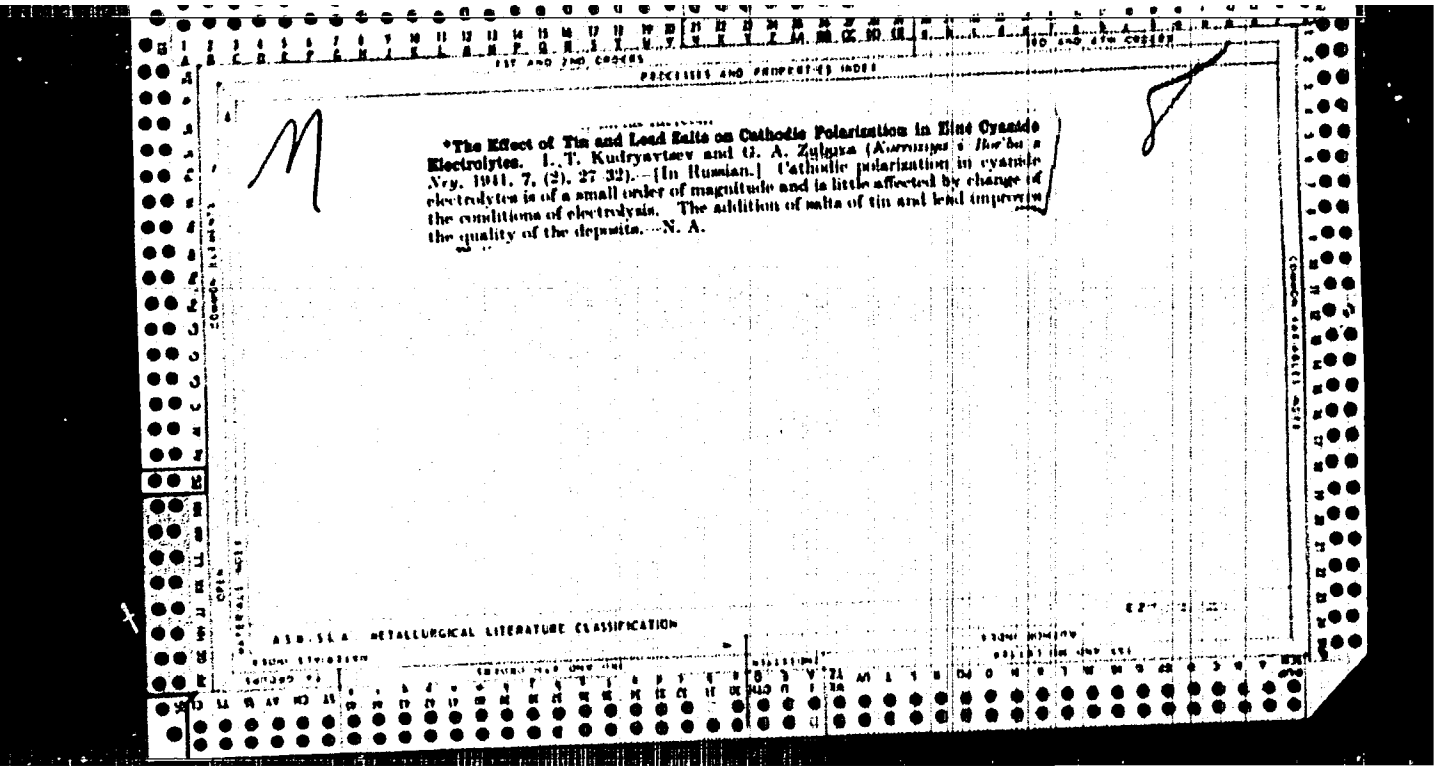
[Innovations in the mechanization of repair work] Novoe v mekhanizatsii remontno-stroitel'nykh rabot. Riga, Latviiskii respubl. in-t nauchno-tekhn. informatsii i propagandy, 1964. 63 p. (MIRA 18:1)

RUDZIT, R.; ZUBOVA, G., red.

[Resistance welding in instrument manufacture; a review] Kontaktnaia svarka v priborostroenii; obzor. Riga, Latviiskii respubl. in-t nauchno-tekhn. informatsii i propagandy, 1965. 36 p. (MIRA 19:1)



***Protective-Decorative Finish of Aluminium Surfaces.** G. A. Zubova and N. T. Kudryatsev (*Korroziya i Bor'ba s Ney.* 1940, **8**, (5/6), 45-52; *Khim. Referat. Zhur.*, 1941, **4**, (7/8), 136; *C. Abs.*, 1944, **38**, 920).—[In Russian.] The object of the experiments was to check and improve the existing methods and conditions for surface treatment of aluminium to determine the most effective methods resulting in highly corrosion-resistant and decorative finishes. Best results were obtained upon anodizing aluminium at 20°, H_2SO_4 solution for 30 minutes at 20° C. with a cell voltage of 15 v. The films are colourless and form a good basis for dyes. Best dyeing results were obtained by treatment for 15 minutes in 0·5% solutions of organic dyes at 100° C. Corrosion tests showed high resistance. Prolonged contact of the dyed films with water resulted in washing away of the colour. Aluminium samples coloured after anodizing in H_2SO_4 solution faded less readily than did samples otherwise coloured .....



***The Effect of Tin and Lead Salts on Cathodic Polarization in Zinc Cyanide Electrolytes.** I. T. Kudryavtsev and G. A. Zyagina (*Korroziya i Bor'ba s Nei*, Moscow, 1941, 7, (2), 27–32).—[In Russian.] Cathodic polarization in cyanide electrolytes is of a small order of magnitude and is little affected by change of the conditions of electrolysis. The addition of salts of tin and lead improves the quality of the deposits.—N. A.

ZUBOVA, G. A.: Master Chem Sci (diss) -- "The thermodynamic properties of low-solubility selenates". Moscow, 1958. 9 pp (Min Higher Educ USSR, Moscow Order of Lenin Chemico-Technological Inst im D. I. Mendeleyev, Chair of Gen and Inorganic Chem), 150 copies (KL, No 4, 1959, 121)

AUTHORS: Selivanova, N. M., Zubova, G. A., Strel'tsov, I. S. SOV/156-58-1-2/46

TITLE: On the Problem of Barium-, Strontium-, and Lead Selenate Crystalline Structure (K voprosu o kristallicheskoy strukture selenatov bariya, strontsiya i svintsa)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 5 - 8 (USSR)

ABSTRACT: The crystalline structure of the selenates has hitherto much less been investigated than that of the sulfates. Above all the selenates of the bivalent metals which are soluble to only a small extent are insufficiently known. After a survey of publications (Refs 1-5) the authors say that at present the mentioned three selenates may be considered as isomorphous to the corresponding sulfates, i.e. they have an orthorhombic bipyramidal structure (barite type)(Refs 8-10). Since, however, experimental data on the structure of the barite type in the case of lead selenates are lacking in publications, the authors decided to investigate radiologically the three mentioned salts. The production and several constants of the mentioned three salts are described in an experimental part. Figure 1 gives

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the Debye (Debay)-Scherrer (Sherrer) X-ray diagrams. They show that the appearance of the radiograph of the strontium selenate differs from that of barium selenate, it is, however, similar to that of lead selenate. The interplanar spacings of $BaSeO_4$, $SrSeO_4$ and $PbSeO_4$ (Table 2) show similar conditions.

The values determined of the refraction indices of all salts in question (Table 1) increase with the rising cation weight. They are in all cases higher than the values of the same indices of the corresponding sulfates (Ref 6). They form a series: tellurides > selenides > sulfides > oxides (Ref 2). The indices of refraction of tellurates, selenates, and sulfates are bound to change in the same order. This would agree with the authors' results. The fact that the lead selenates belong to the crystalline structure type of barite may be considered as proved. The analogy of the Debye (Debay) diagrams of the strontium- and lead selenates is no chance one: it is exclusively due to the approximate ionic radii of Sr^{2+} and of Pb^{2+} (1,27 Å and 1,32 Å)(Refs 13,14). There are 1 figure, 2 tables, and 16 references, 6 of which are Soviet.

On the Problem of Barium-, Strontium-, and Lead Selenate Crystalline Structure

SOV/156-58-1-2/46

ASSOCIATION: Kafedra neorganicheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta im.D.I.Mendeleyeva (Chair of Inorganic Chemistry of the Moscow Institute of Chemical Technology imeni D.I. Mendeleyev)

SUBMITTED: September 21, 1957

Card 3/3

5(4), 5(2)

AUTHORS: Selivanova, N. M., Zubova, G. A. SOV/153-58-3-5/30

TITLE: Physical and Chemical Properties of Strontium Selenate (Fiziko-khimicheskiye svoystva selenata strontsiya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp 27 - 33 (USSR)

ABSTRACT: The industrial use of the selenates besides other selenium compounds is steadily increasing (Refs 1-6). The knowledge of the properties mentioned in the title, which are little known, is becoming urgent more and more (Refs 7-12). The strontium selenate belongs to the least known salts of the selenic acid, and there are only a few data available on its solubility (Ref 13). Its behavior on heating (Ref 14) is hardly known. The clarification of these questions is the purpose of the present paper. The determination results of the solubility of strontium selenate in the thermostat at 25± 0.1° by the polarographic and gravimetric method are seen in table 1. The solubility

product Lp (as average number of both methods) was $3.75.10^{-4}$. The solubility of the strontium selenate (determined by these two methods) between 0 and 100° in the thermostat is given in table 2 (polythermal lines of the solubility). By heating the strontium selenate (in contrast with $SrSO_4$) does not undergo a polymorphous enantiotropic transformation. On heating it is decomposed under selenite formation and oxygen separation. Thus, the chemism of the selenate decomposition differs from that of the strontium sulfate. Professor N.F.Kapustinskiy, Corresponding Member, Academy of Sciences, USSR, has critically reviewed this paper. There are 4 figures, 4 tables, and 31 references, 9 of which are Soviet.

Physical and Chemical Properties of Strontium Selenate SOV/153-58-3-5/30

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva (Moscow Institute of Chemical Technology imeni D.I. Mendeleyev) Kafedra obshchey i neorganicheskoy khimii (Chair of General and Inorganic Chemistry)

SUBMITTED: October 2, 1957

Card 3/3

78-3-6-4/30

AUTHORS: Selivanova, N. M., Shneyder, V. A., Zubova, G. A.

TITLE: On the Thermal Decomposition of the Selenates of Strontium, Barium and Lead (O termicheskom razlozhenii selenatov strontsiya, bariya i svintsa)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1295 - 1303 (USSR)

ABSTRACT: The thermograms and the cooling curves of the selenates of strontium, barium and lead were investigated in order to explain the effects occurring in these curves. The thermographic analyses of strontium and barium selenate were performed within temperature ranges of from 100-1300°C. On this occasion three effects take place: For strontium selenate: at 525°C (exothermic), at 835°C (endothermic), and at 1115°C (endothermic). For barium selenate: at 630°C (exothermic), at 900°C (endothermic), and at 1285°C (endothermic). The cooling curves of strontium and barium selenate do not agree with the heating curves of the two compounds, i. e. both processes are

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On the Thermal Decomposition of the Selenates of Strontium, Barium and Lead

not reversible. It can be seen from the thermograms that also selenium is oxidized by Se^{4+} in Se^{6+}. It was shown that the selenates of strontium, barium and lead when heated, pass into selenite under the release of oxygen. The chemical analyses of the final products in the thermal analyses were confirmed by x-ray analysis. The thermographic analysis of lead selenate showed that at 680°C and 930°C thermal effects take place and that beginning with 930°C this compound melts. At 1000°C the lead selenite formed at 700°C passes into lead oxide. It was found that strontium, barium and lead selenate are thermally more unstable than the corresponding sulfates. There are 7 figures, 6 tables and 33 references, 9 of which are Soviet.

SUBMITTED: May 6, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Strontium selenates--Thermal analysis 2. Lead selenates--Thermal analysis 3. Barium selenates--Thermal analysis

AUTHORS: Gel'man, A. D., Zaytsev, L. M. 78-3-6-5/30

TITLE: Carbonate and Carbonate Oxalate Complexes of Plutonium-(IV) I. Potassium Plutonium Carbonate (Karbonatnyye i karbonatno-oksalatnyye kompleksnyye soedineniya plutoniya (IV) I. Plutoniykarbonaty kaliya)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1304-1311 (USSR)

ABSTRACT: The synthesis for the production of solid carbonate complex compounds of plutonium-(IV) in greatest purity was elaborated. Solid plutonium-(IV)-oxalate was dissolved in potassium-, sodium-, and ammonia-carbonate as initial components. The solid complex compounds were isolated by ethyl alcohol. Also four carbonate complex compounds of plutonium-(IV) with potassium were investigated and the following formulae were determined for the compounds: $K_4[Pu(CO_3)_4].nH_2O$; $K_6[Pu(CO_3)_5]$ (3-4).H_2O; $K_8[Pu.(CO_3)_6].\ nH_2O$; $K_{12}[Pu(CO_3)_8].\ nH_2O$. The microscopic investigations of the potassium carbonate complex compounds of plutonium confirm the crystalline structure of these compounds.

Card 1/2

AUTHORS: Selivanova, N. M., Kapustinskiy, A. F., SOV/62-59-2-2/4
Zubova, G. A.

TITLE: Thermochemical Properties of Difficultly Soluble Selenates and Entropy of the Selenate Ion in Aqueous Solution (Termokhimicheskiye svoystva trudnorastvorimykh selenatov i entropiya selenat-iona v vodnom rastvore)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 2, pp 187-194 (USSR)

ABSTRACT: In the present paper the authors determined the reaction heat in the precipitation of lead and barium selenates from aqueous solutions by means of selenic acid with < C.3% H_2SeO_4-content. From the data obtained the formation heat of $PbSeO_4$ and $BaSeO_4$ from elements, their absolute entropies and the entropy of the aqueous selenate ion under standard conditions were calculated. For $PbSeO_4$ the heat of solution was computed according to the solubility data of this salt in water at different temperatures. For this purpose the solubility of $PbSeO_4$ in water was investigated in the temperature range of

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Thermochemical Properties of Difficultly Soluble Selenates and Entropy of the Selenate Ion in Aqueous Solution SOV/62-59-2-2/40

from 0 to 100°. From the measurements carried out for the reaction $Ba_{solid} + Se_{solid} + 2O_2 = BaSeO_4$

$\Delta H_{298} = -279.2$ large calorie/mole and $\Delta F_{298} = -249.1$ large calorie/mole,

for the reaction $Pb_{solid} + Se_{solid} + 2O_2 = PbSeO_4$

$\Delta H_{298} = -148.7$ large calorie/mole and $\Delta F_{298} = -120.5$ large calorie/mole

were obtained. According to thermodynamic data for H_2SeO_4, $SrSeO_4$, $BaSeO_4$, $PbSeO_4$ and Tl_2SeO_4 the mean value of entropy of the aqueous SeO_4^{2-} ion is

$$S = 5.5 \pm 0.3 \text{ entropy units.}$$

The authors express their gratitude to the student Ye. I. Finkel'shteyn for his taking part in the experimental part of the work. There are 1 figure, 6 tables, and 16 references, 8 of which are Soviet.

Card 2/3

Thermochemical Properties of Difficultly Soluble Selenates and Entropy of the Selenate Ion in Aqueous Solution

SOV/62-59-2-2/40

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Institute for Chemical Technology imeni D. I. Mendeleyev)

SUBMITTED: July 5, 1957

Card 3/3

5(4), 24(8)

AUTHORS: Selivanova, N. M., Zubova, G. A.

SOV/76-33-1-23/45

TITLE: Thermodynamic Properties of Strontium Selenate (Termodinamicheskiye svoystva selenata strontsiya)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 141 - 146 (USSR)

ABSTRACT: The thermodynamic properties of strontium selenate have so far not been investigated. In analogy to $SrSO_4$, $SrSeO_4$ should be little soluble in water and thus the thermodynamic constants can be determined from the solubility and the precipitation heat. The solubility of $SrSeO_4$ in water at 25° was determined and calorimetric determinations of the precipitation heat from an aqueous solution under standard conditions were carried out. The experimental data obtained were elaborated thermodynamically. $SrSeO_4$ was produced from re-crystallized $Sr(NO_3)_2$ and selenic acid (Ref 2). A. I. Mayyer determined the refraction index. The value of the solubility product of $SrSeO_4$ in water at 25°C obtained

by polarographic and gravimetric determinations is $3.75.10^{-4}$. The change of free energy on precipitation is $Sr^{2+}+SeO_4^{2-} = SrSeO_4 - 6090$ cal. The precipitation heat of $SrSeO_4$ is -140 cal. Under standard conditions the free formation energy from the elements is -244.7 kcal/mol and the formation heat -275.37 kcal/mol. The precipitation heat was determined from an aqueous potassium selenate solution and crystalline $SrCl_2.6H_2O$ in connection with a heat radiation correction carried out according to the Renault-Pfaundler-Usov (Ren'o) equation. A precipitate was obtained in the form of long transparent needles and was verified as $SrSeO_4$. The absolute entropy of $SrSeO_4$ is $S_{298} = 18.12$ entropy units. The entropy of the selenate ion in water is SeO^2_{4aq} : $S_{298} = 5.48$ entropy units. In conclusion the authors thank A. F. Kapustinskiy. There are 1 figure, 4 tables, and 14 references, 7 of which are Soviet.

Thermodynamic Properties of Strontium Selenate SOV/76-33-1-23/45

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva, Moskva (Chemical-Technological Institute imeni D. I. Mendeleyev, Moscow)

SUBMITTED: July 1, 1957

Card 3/3

05841

5(4) SOV/76-33-10-39/45

AUTHORS: Selivanova, N. M., Zubova, G. A., Finkel'shteyn, Ye. I.

TITLE: Thermodynamic Properties of Silver Selenate

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 10, pp 2365 - 2369 (USSR)

ABSTRACT: Thermodynamic investigations of silver selenate, including those by Metzner (Ref 1), Meyer and Hinke (Ref 5) as well as Gelbach and King (Ref 6) have not yet yielded compatible results. These investigations were therefore checked in this article with the application of two different methods, namely determination of the solubility of Ag_2SeO_4 in water at 25° and calorimetric determination of the heat of precipitation of Ag_2SeO_4 from aqueous solutions under standard conditions with subsequent thermodynamic interpretation of the resultant experimental data. The solubility of Ag_2SeO_4 (Table 1) which was turbidimetrically determined, is closer to the data of reference 6 than to those of reference 5. It amounts to $1.26.10^{-3}$ mol/l. The heat of formation of Ag_2SeO_4 cryst

Card 1/2

05841

Thermodynamic Properties of Silver Selenate SOV/76-33-10-39/45

was determined by means of an isothermal calorimeter (described in reference 4) produced from silver nitrate solution and selenic acid solution (Table 2: heat of dilution of a 7.07m H_2SeO_4 solution). Radiation losses were corrected according to the Regnault-Pfaundler-Usov formula. The values obtained for the heats of precipitation (heats of formation in aqueous solutions) of Ag_2SeO_4 are listed in table 4, data of the radiographs of the resultant precipitates are given in table 3. The values $\Delta H^{\circ}_{298.16} = -105.05$ kcal/mol and $\Delta F^{\circ}_{298.16} = -8078$ kcal/mol are given for the reaction $2\,Ag_{cryst} + Se_{cryst} + 2O_{2\ gas} = Ag_2SeO_{4\ cryst}$ as well as the calculated entropy of the ion $SeO_{4\ aq.}$: $S^{\circ}_{298.16} = 5.50$ units of entropy. In conclusion, the authors thank A. F. Kapustinskiy, Corresponding Member of the AS USSR for his critique. There are 4 tables and 9 references, 5 of which are Soviet.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva, Moskva (Institute of Chemical Technology imeni D. I. Mendeleyev, Moscow)

SUBMITTED: May 4, 1958

Card 2/2

ZUBOVA, G.A.; PRYMOVA, L.A.; SELIVANOVA, N.M.

Thermal degradation of manganese selenate. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.3:367-372 '65. (MIRA 18:10)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova, kafedra obshchey khimii.

SELIVANOVA, N.M.; ZUBOVA, G.A.; ABRAMOV, I.I.; KALINKINA, A.V.; SAZYKINA, T.A.

Physicochemical properties of selenates. Report no.14: Properties of potassium selenate. Trudy MKHTI no.38:21-25 '62. (MIRA 16:7)

(Potassium selenate)

SELIVANOVA, N.M.; ZUBOVA, G.A.; KALINKINA, A.A.; SAZYKINA, T.A.

Physicochemical properties of selenates. Part 15: Behavior of rubidium selenate during heating. Izv.vys.uch.zav.; khim.i khim.tekh. 5 no.4:524-528 '62. (MIRA 15:12)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva, kafedra obshchey i neorganicheskoy khimii.
(Rubidium selenate)

YARYSHEV, N.A.; ZUBOVA, G.A.

Evaluating the irregularity and calculating mean temperatures under regular conditions of second type. Izv.vys.ucheb.zav.; prib. 5 no.6:110-117 '62. (MIRA 15:12)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy teplovykh i kontrol'no-izmeritel'nykh priborov.
(Heat—Transmission)

S/153/62/005/006/001/015
E071/E392

AUTHORS: Selivanova, N.M., Sazykina, T.A. and Zubova, G.A.

TITLE: Physicochemical properties of selenates. XVL. Investigation of the behavior of cesium selenate on heating

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Khimiya i khimicheskaya tekhnologiya, v. 5, no. 6, 1962, 859 - 863

TEXT: Since there are no literature data on the behavior of cesium selenate on heating, investigations were carried out on this subject by differential thermal analysis, determination of changes in weight and composition as well as X-ray photography of Cs_2SeO_4 at various temperatures. Cesium selenate used in the tests was obtained by oxidizing cesium selenite with 30% H_2O_2. The selenite was prepared by neutralization of cesium carbonate with selenious acid. It was found that cesium selenate decomposed slightly when heated from 200 to 600 °C, forming cesium selenite. Further heating up to 1 000 °C did not produce any changes in composition and structure. There was a reversible endothermic

Card 1/2

Physicochemical properties ....

effect on the heating curve at 608 °C which could be explained as being due to the polymorphic transformation of the rhombic cesium selenate crystals into hexagonal. The second endothermic effect on the curve at 985 °C corresponded to melting without decomposition. Cesium selenate was noticeably evaporating at 900 °C and over, without changing its composition.
There are 1 figure and 3 tables.

ASSOCIATION: Kafedra obshchey i neorganicheskoy khimii, Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (Department of General and Irorganic Chemistry, Moscow Institute of Chemical Technology im. D.I. Mendeleyev)

SUBMITTED: September 22, 1961

Card 2/2

S/146/62/005/006/006/006
D201/D308

24.2100

AUTHORS: Yaryshev, N.A. and Zubova, G.A.

TITLE: Evaluation of nonuniformity and calculation of average temperatures in the regular state of the third kind

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, v. 5, no. 6, 1962; 110-117

/B

TEXT: The regular state of the third kind is a quasistationary state of heat exchange of a body when the ambient temperature varies harmonically with time. The authors introduce the criterion Ψ_3, which characterizes the nonregularity of temperature in the above state and relates this criterion to the corresponding criterion Ψ of the regular states of the first and second kind, which depends on the properties, shape and dimensions of the body and on the degree of intensity with which the surrounding medium affects it. Approximate expressions for the relative amplitude and phase are derived and the practical limits of their application for the evaluation of the average volume and surface temperatures are anal-

Card 1/2

Evaluation of nonuniformity ...

yzed. The analysis shows that in the regular state of the third kind, the irregularity of the temperature distribution in homogeneous isotopic bodies may be approximated, within certain limits, by the criterion ψ_2 of the regular state of the second kind. There are 3 figures and 2 tables.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: June 4, 1962

Card 2/2

FLIS, I.Ye.; TUMANOVA, T.A.; ZUBOVA, G.M.; NIKITINA, N F.

Methodology of the analysis of the mineral composition of natural water. Trudy LTITSBP no.13:57-61 '64.

Water absorption and ion adsorption from the aqueous electrolyte solutions by some polye ter resins and glass reinforced plastics made on their base. Ibid.:62-67 (MIRA 18:2)

FLIS, I.Ye.; TUMANOVA, T.A.; ZUBOVA, G.M.

Potentiometric analysis of chlorine dioxide and chlorite in aqueous solutions. Trudy LTITSBP no.13:68-71 '64.

Potentiometric determining of sulfur dioxide in aqueous solutions. (MIRA 18:2)
Ibid.:72-74

VASHKOV, V.I., doktor med. nauk prof.; SUKHOVA, M.N., doktor biol. nauk; KERBABAYEV, E.B., kand. med. nauk; SHNAYDER, Ye.V., kand. med. nauk; DREMOVA, V.P., kand. biol. nauk, retsenzent; VOLKOVA, A.P., kand. biol. nauk, retsenzent; BRIKMAN, L.I., kand. biol. nauk, retsenzent; VOLKOV, Yu.P., kand. khim. nauk, retsenzent; BESSONOVA, I.V., biolog, retsenzent; ZUBOVA, G.M., biolog, retsenzent; KARON, I.I., red.

[Insecticides and their use in medical practice] Insektitsidy i ikh primenenie v meditsinskoi praktike. Moskva, Meditsina, 1965. 523 p. (MIRA 18:12)

FLIS, I.Ye.[deceased]; TUMANOVA, T.A.; GRAD, N.M.; AL'SHITS, I.M.; DMITRIYEVA, A.N. Prinimali uchastiye: GLADKAYA, L.A.; MUDROV, O.A.; ZUBOVA, G.N.

Effect of water on polyester resins and glass plastics based on same. Plast.massy no.10:33-36 '64. (MIRA 17:10)

ZUBOVA, I. E.

"Effect of Extraneous Cations on the Current Efficiency and the Excess Voltage of Hydrogen in Electrolytic Production of Sodium Hydroxide and Chlorine by the Mercury Method." Sub 9 May 51, Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleyev

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

KUZNETSOV, D.A.; KARETNIKOV, G.S.; ZUBOVA, I.Ye.; SEMENOV, G.M.

Studying the interaction of K_2CO_3 with iron oxides. Trudy MKHTI no.47:119-124 '64. (MIRA 18:9)

YEGEUBAYEV, S.Kh.; BOGOSHINA, S.A.; KUZNETSOV, D.A.; ZUBOTA, I.Ye.

Distribution of promoters in iron catalysts for ammonia synthesis. Kin. i kat. 6 no.4:754-757 Jl-Ag '65. (MIRA 18:9)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva.

SEMENOV, G.M.; KUZNETSOV, D.A.; ZUBOVA, I.Ye.

Thermodynamic study of solid phase reactions in the system calcium oxide - iron oxides. Trudy MKHTI no.47:115-118 '64.
(MIRA 18:9)

YEGEUBAYEV, S.Kh.; KUZNETSOV, D.A.; ZUBOVA, I.Ye.

Reduction of potassium ferrite. Trudy MKHTI no.47:125-128 '64.

Reduction of potassium ferrite. Ibid.:129-133 (MIRA 18:9)

L 09962-67 EWT(m)/EWP(t)/ETI/ESP(k) JD

ACC NR: AP6035717 (N) SOURCE CODE: UR/0413/66/000/019/0073/0073

INVENTOR: Glazunov, S. G.; Zhikharev, I. A.; Khrustsevich, L. A.; Khromov, A. M.; Yershov, Yu. V.; Yasinskiy, K. K.; Zubova, K. A.

ORG: none

TITLE: Melting-pouring unit. Class 31, No. 186647

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 73

TOPIC TAGS: active metal, metal casting, metal vacuum melting, centrifugal casting, casting unit, vacuum casting unit

ABSTRACT: This Author Certificate introduces a melting-casting unit for centrifugal casting of reactive metals. The unit consists of a vacuum chamber which contains a centrifuge with a vertical axis of rotation. The melting crucible is mounted in the center of the centrifuge; the molds are on the periphery. To ensure continuous pouring of metal without extinguishing the arc and tilting the crucible, the latter is provided with side openings connected with an annular collector installed between the molds and the crucible.

SUB CODE: 13/ SUBM DATE: 28Dec64/ ATD PRESS: 5105

Card 1/1 UDC: 621.745.552.042.002.51

ZUBOVA, L., khudozhnik (g.Kursk)

Carpet makers of the Kursk province are making ready for the survey. Prom.koop. 13 no.5:23 My '59. (MIRA 12:9)
(Kursk Province—Rug and carpet industry)

USSR / Pharmacology and Toxicology--Medicinal Plants V-5

Abs Jour: Ref Zhur-Biol, No 23, 1958, 107348

Author : Mal'gin, M., Zubova, L.

Inst : Gorno-Altayskiy State Pedagogical Institute

Title : The Effect of the Juice of the Black Mountain Ash and Sea Buckthorn upon the Rate of Healing of Burns

Orig Pub: Uch. zap. Gorno-Altayskiy Gos. ped.in-t, 1957, byp. 2, 281-282

Abstract: Experimental burns in six rabbits were treated by wetting with the juice of the black mountain ash (BMA) and of the sea buckthorn (SBT). Besides, the juices were introduced per os (2 ml per 24 hours). It was demonstrated that the healing of burns in control rabbits occurs after 37 days (rate

Card 1/2

BETEKHTIN, G.A.; ZUBOVA, L.K.; POMANSKIY, B.A.; LYUBINSKAYA, A., redaktor; MATAPOV, M., tekhnicheskiy redaktor

[Technology of Russian rug making] Tekhnologiia kovrodeliia RSFSR. Moskva, Vses. kooperativnoe izd-vo, 1955. 229 p. (MLRA 8:7)
(Rugs)

GENKEL', P.A.; MART'YANOVA, K.L.; ZUBOVA, L.S.

Experiments on the presowing drought hardening of plants conducted under firm conditions. Fiziol. rast. 11 no. 3: 538-543 '64. (MIRA 17:7)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR, Moskva i Michurinskiy gosudarstvennyy pedagogicheskiy institut.

ZUBOVA, M., inzh.

Contactless signaling apparatus. Pozh.delo 9 no.1:23-24 Ja '63.
(MIRA 16:1)
(Fire alarms)

ZUBOVA, M.; MERKULOVA, N.; SHELEST, M.

The miracle of our century. Standartizatsiia 29 no.8: 52-53 '65. (MIRA 18:10)

MOVSHOVICH, E.B.; ZAKHAROVA, L.Ya.; ZUBOVA, M.A.; KOCHAR'YANTS, S.B.; MELIK-PASHAYEVA, N.V.; SHALUKHINA, A.D.

Basic problems of the correlation of Mesozoic and Paleogene sediments in the Volga-Don territory. Trudy NIIneftegaza no.13:5-38 '65. (MIRA 18:9)

MOVSHOVICH, E.B.; BEZBORODOV, R.S.; VIKTOROV, D.N.; ZUBOVA, M.A.; KOGAR'YANTS, S.B.; MELIK-PASHAYEVA, N.V.; SHALUKHINA, A.D.

Characteristics of the Mesozoic and Cenozoic stage of geological development in the Volga-Don territory. Trudy NIIneftegaza no.13: 135-170 '65. (MIRA 18:9)

SOLNTSEVA, N.O.; ZUBOVA, M.M.

Calculating the elements of wind waves for the northern part of the Atlantic Ocean. Trudy Okean kom. 9:151-160 '60.
(MIRA 14:1)

(Atlantic Ocean—Waves)

ZUBOVA, M.M.

Relation of wind velocity to the atmospheric pressure gradient for the Baltic Sea. Trudy GOIN no.70:28-33 '62. (MIRA 15:6)
(Baltic Sea--Winds) (Atmospheric pressure)

ZUBOVA, N.D., inzh.

Mechanization of the production of ice cream. Khol.tekh. 40 no.6:8-14 N-D '63. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti.

ZUBOVA, N. D.

AID P - 2991

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 6/28

Authors : Rabinov, B. S., Eng., and N. D. Zubova, Eng.

Title : Reduction of losses caused by incomplete burning in a unit system coal mill furnace

Periodical : Energetik, 6, 13-14, Je 1955

Abstract : The authors gives data about the Pechora coal coming from Vorkuta and also data about the three-drum boiler at one of the electric power stations. The incomplete burning was improved by the authors who describe details of structural changes. One drawing.

Institution : None

Submitted : No date

ZUBOVA, N. N.

"Pathomorphological Changes in the Nervous System of Large Agricultural Animals as Evidence of Hydrophobia." Cand Vet Sci, Inst of Experimental Medicine, Acad Med Sci USSR, Leningrad, 1953. (RZhBiol, No 5, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

ZUBOVA, N.N

VEREVKINA, T.S.; ZUBOVA, N.N.

Data for the statistics on tumors in dogs and cats. Trudy AMN SSSR 21 no.4:193-197 '52. (MLRA 10:8)

1. Kafedra patologicheskoy anatomii Leningradskogo veterinarnogo instituta (zav. prof. V.Z.Chernyak)

(NEOPLASMS, statistics, in cats & dogs)
(CATS, diseases, neoplasms, statist.)
(DOGS, diseases, neoplasms, statist.)

ZUBOVA, N. N. (Aspirant), DOBIN, M. A. (Lecturer), and EPSHTEYN, Yu. F.

"Concerning the pathological-anatomic picture of rabies", (Department of Pathological Anatomy and the Diagnostic Laboratory of the Agriculture Department, Executive Committee of Leningrad City Council, attached to the Utilization Plant). Collected Works No. 14, of Leningrad Veterinary Institute USSR Ministry of Agriculture, P 52 Sel'khozgiz, 1954.

L 38121-66 EWT(1)

ACC NR: AP6024868 SOURCE CODE: UR/0056/66/051/001/0101/0107

55
B

AUTHOR: Zubova, N. V.; Kuz'mina, N. P.; Zubov, V. A.; Sushchinskiy, M. M.; Shuvalov, I. K.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Intensity distribution in stimulated Raman scattering spectra

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 1, 1966, 101-107

TOPIC TAGS: raman scattering, ~~nonlinear~~ laser optics, laser, light

ABSTRACT: The line intensity of stimulated Raman scattering spectra (SRS) was experimentally investigated as a function of the exciting light intensity. The measurements were conducted in a region of intensities above and below the experimental threshold for a single flash. The intensity distribution in SRS spectra was investigated for several Stokes and anti-Stokes components. The existence of a considerable wing accompanying each component was detected. A structure of the first Stokes component of SRS was found and was investigated in the threshold region and below the threshold. Orig. art. has: 7 formulas and 4 figures. [CS]

SUB CODE: 20/ SUBM DATE: 21Feb66/ ORIG REF: 008/ OTH REF: 002/ ATD PRESS: 5043

Card 1/1

ACC NR: AP6020694 SOURCE CODE: UR/0016/66/000/006/0146/0146

AUTHOR: Korobkova, Ye. I.; Pavlova, L. P.; Zubova, M. V.; Dyushikyan, G. Kh.

ORG: All-Union Antiplague Scientific Research Institute "Microbe" (Vsesoyuznyy nauchno-issledovatel'skiy protivochumnyy

TITLE: Effect of certain culture conditions on the virulence of the plague microbe

SOURCE: Zh mikrobiol, epidemiol i immunobiol, no. 6, 1966, 146

TOPIC TAGS: microbiology, plague microbe, epidemiology, ~~environmental conditions~~, bacterial disease, disease control, bacteria

ABSTRACT:
Culture conditions affect the virulence of the plague microbe. Highly virulent cultures were passaged on agar under differing conditions. The virulence of strain 708 for mice decreased 20 times after five to ten passages through agar. On synthetic media the number of pigmented colonies decreased. This suggested that after many passages on nutrient agar or synthetic media, the succeeding generations of microbes become increasingly more adapted to the media than they are to the host organism.
[W.A. 50; CBE No. 10]

SUB CODE: 06/ SUBM DATE: 22Jan65/

Card 1/1 UDC: 576.851.45.093.3:576.851.45.097.21

L 1418-66 EWA(k)/FBD/EWT(1)/EPF(c)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) IJP(c) WG/WW/GG

ACCESSION NR: AP5021727 UR/0386/65/002/002/0063/0067

AUTHOR: Zubova, N. V.; Sushchinskiy, M. M.; Zubov, V. A.

TITLE: The complex line structure in stimulated Raman scattering of light

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 2, 1965, 63-67, and insert attached to p. 65

TOPIC TAGS: Raman scattering, Stokes line, stimulated emission, laser, Raman laser

ABSTRACT: In investigating stimulated Raman scattering in styrene, isoprene, 1,3-pentadiene, benzene, and nitrobenzene the authors observed line splitting in the region of the first Stokes line. This effect was very pronounced at pump powers just above the threshold, when the line was split from 1—2 components into 5—6 components and the separation of the outer components changed from 1—2 to 10—12 cm^{-1}. As the pump power was increased, the number of components and their separation decreased until only one line was observed when the pump power was 2—4 times greater than the threshold power. The splitting of the lines was found to be independent of the nature of the apparatus used and the operating regime of the laser. The effect was attributed to the fact that Raman scattering occurs on molecules moving at a high speed. At a relatively low pump power the formation of a "spark" in the

Card 1/2

L 1418-66
ACCESSION NR: AP5021727

liquid is accompanied by a flow of molecules in several directions. As the pump power is increased, these directions are shifted closer to the plane perpendicular to the incident beam until only one line is observed. It is calculated that in order to cause splitting the velocities of the molecules must be very high (about 10^7—10^8 cm/sec). Orig. art. has: 4 formulas and 2 figures. [CS]

ASSOCIATION: Fizicheskiy institut imeni P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 25May65 ENCL: 00 SUB CODE: OP, EC

NO REF SOV: 004 OTHER: 002 ATD PRESS: 4099

Card 2/2

5 (2), 5 (4)

AUTHORS: Popov, M. M.: (Deceased), Kostylev, P. A., SOV/78-4-8-2/43
Zubova, N. V.

TITLE: Vapor Pressure of Uranium Tetrafluoride (Davleniye para tetraftorida urana)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1708 - 1709 (USSR)

ABSTRACT: The vapor pressure of UF_4 was measured in the temperature interval of from 875 - 1000°C. Argon purified from oxygen and steam served as carrier gas. Figure 1 shows the apparatus, figure 2 a microphotograph (1:24) of the UF_4 crystals taken from the condensation tube. The vapor pressures (in mm Hg) measured for the temperatures 875, 900, 950, 975 and 1000° are given. The first three values, corresponding to the vapor pressure in equilibrium with the solid salt follow the equation $\log p = 12.945 - 16140.\frac{1}{T}$, the latter two follow equation $\log p = 8.003 - 10000.\frac{1}{T}$. (vapor pressure in equilibrium with the liquid UF_4). The poi..t of intersection of those two straight

Card 1/2

lines shows the value 969° for the melting point of UF_4 which is in good agreement with the data from publications (Ref 2) ($960 \pm 5°$). There are 2 figures and 2 references, 1 of which is Soviet.

SUBMITTED: May 16, 1958

S/0276/64/000/002/B084/B085

ACCESSION NR: AR4027701

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 2B465

AUTHOR: Labutin, A. L.; Zubova, O. A.

TITLE: Some new things in the field of non-metallic coatings for chemical apparatus

CITED SOURCE: Sb. materialov Konferentsii po bor'be s korroziyey. Gor'kiy, 1962, 75-90

TOPIC TAGS: anti-corrosion coating, chemical apparatus, nairit, low-molecular polychloroprene, solvent, carbon black, magnesium oxide, vulcanizing agent, shipbuilding, thiokol, aging, oil, kerosene, fluoro-plastic, gas-flame dusting, zinc oxide

TRANSLATION: The paper describes a number of new polymer materials used as anti-corrosion coatings in the chemical and other branches of industry, as well as various kinds of equipment for applying them to the surfaces of tubes and apparatus and for welding vinylplastic sheets. A rubberizing compound of liquid nairit, consisting of low-molecular polychloroprene, solvent, carbon black,

1/3

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ACCESSION NR: AR4027701

magnesium and zinc oxide as vulcanizing agents and vulcanization accelerators, is applied in several layers to the cleaned and defatted metallic surface on a chlorine-nairit base by brushing, spraying, dipping or pouring. To protect chemical apparatus, the thickness of the coat is 1.5--2 mm; for abrasive wear, 2.5--3mm. After a 3-day exposure to air in order to volatilize the solvent, the coat is vulcanized in a closed drying chamber for 20--24 hours at 100C. Coats of liquid nairit 0.5 mm thick have no pores and are impermeable to water. have satisfactory resistance to oil, alcohol, gasoline, sea water, transformer oil, 10% hydrochloric acid, 65% sulfuric acid and other chemicals. Under protracted action of water and corrosion-active media nairit coatings can be exposed to temperatures up to 70C. It is planned to manufacture various sealing fittings protected by nairit instead of bronze. In shipbuilding, liquid nairit can be used to protect propellers, condensers and other parts operating in sea water. Protective coatings with a liquid thiokol base are applied in one layer of the required thickness to a metal surface primed with chlorine-nairit or covered with VIUR, K-50 or 88-N sizing, by means of a spatula or trowel. Thiokol coatings are distinguished by high resistance to the atmosphere and are durable in aqueous solutions of salts, sea water and other organic solvents. They age gradually in storage and can be exposed for a long time to the air and

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aqueous solutions at temperatures up to 70C (briefly up to 100C) and to oil and kerosene to 25-30 degrees higher. Thiokol coatings require no heat treatment. The paper also discusses studies on obtaining fluoro-plastic coatings from steel by the method of gas-flame dusting, etc. Nine illustrations. L. Kamionskiy.

DATE ACQ: 24Mar64 SUB CODE: CH, MA ENCL: 00

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YATSUNSKAYA, O.I.; CHERNIKEVICH, L.I.; SMIRNOV, N.A.; GUTNOV, R.B.; ZUBREV, O.N.

Production of crumbling open-hearth furnace slag. Metallurg 10 no.5:20-21 My '65. (MIRA 18:6)

1. Metallurgicheskiy zavod "Serp i molot".

VIKTOROV, I.A.; ZUBOVA, O.M.

Directionality diagrams of radiators of Lamb and Rayleigh waves. Akust. zhur. 9 no.2:171-175 '63. (MIRA 16:4)

1. Akusticheskiy institut AN SSSR, Moskva.
(Ultrasonic waves)

S/046/63/009/001/003/026
B104/B186

AUTHORS: Viktorov, I. A., Zubova, O. M.

TITLE: Normal waves in a solid cylindrical layer

PERIODICAL: Akusticheskiy zhurnal, v. 9, no. 1, 1963, 19-22

TEXT: The propagation of harmonic plane waves through a thin layer of hollow-cylinder shape perpendicular to the cylinder generatrix is studied under the assumption that the elastic field does not depend on the z coordinate. The solution of the equation of elasticity has to satisfy the following conditions: (1) Absence of tensions in the inner and in the outer cylinder surfaces; (2) The solution depends on θ according to $\exp(\pm ip\theta)$, where p is the wave number; (3) If the radius of curvature tends to infinity, h and ω become characteristics of normal waves in a plane layer. Under these assumptions the front of the propagating normal waves is a plane which propagates along the cylinder axis. The solutions

$$\begin{aligned} \varphi &= [AJ_p(k_l r) + CN_p(k_l r)]\, e^{ip\theta}, \\ \psi &= [BJ_p(k_t r) + DN_p(k_t r)]\, e^{ip\theta}, \end{aligned} \qquad (3)$$

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of the equations

$$\begin{cases} \frac{1}{r}\frac{\partial}{\partial r}\left(r\frac{\partial\varphi}{\partial r}\right)+\frac{1}{r^2}\frac{\partial^2\varphi}{\partial\theta^2}+k_1^2\varphi=0, \\ \frac{1}{r}\frac{\partial}{\partial r}\left(r\frac{\partial\psi}{\partial r}\right)+\frac{1}{r^2}\frac{\partial^2\psi}{\partial\theta^2}+k_t^2\psi=0. \end{cases} \quad (1)$$

are developed by means of the characteristic equation which defines the relationship between the wave number $k = p/R$ and the wave number $k_{l,t}$. At a definite k, three of the four constants A, B, C and D may be expressed by the fourth and the expressions for the potentials (3) can be completely determined. In first approximation the velocity and other characteristics of normal wave propagation in a hollow cylinder with a great radius of curvature are not affected by the curvature. In second-order approximation the group velocity correction caused by the curvature is proportional to $(1/p_0)^2$ and depends on the wave number and on the layer thickness. There are 2 figures.

ASSOCIATION: Akusticheskiy institut AN SSSR, Moskva (Institute of Acoustics AS USSR, Moscow)

SUBMITTED: February 7, 1962

VIKTOROV, I.A.; ZUBOVA, O.M.; KAYEKINA, T.M.

Use of the "wedge" method in studying the generation of Lamb waves. Akust.zhur. 10 no.4:412-418 '64.

(MIRA 18:2)

1. Akusticheskiy institut AN SSSR, Moskva.

SEMENOV, M.N.; ZUBOVA, O.V.; SILAYEV, A.B.

Antibiotic associated with fumagillin. Antibiotiki 10 no.3: 219-222 Mr '65. (MIRA 18:10)

1. Laboratoriya antibiotikov, Moskovskogo universiteta.

ZUBOVA, O.V.

Antitumoral and toxic action of individual aurantins (actinomycins). Dokl. AN SSSR 162 no.4:934-936 Je '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Submitted April 2, 1964.

SHAPOSHNIKOV, V. N., akademik; NEFEDOVA, M. V.; ORLOVA, T. I.; MIRONOVA, I. B.; KUZNETSOVA, V. S.; ZUBOVA, O. V.; SILAYEV, A. B.

Formation of new fractions of auranthin and the study of their chemical and biological properties. Dokl. AN SSSR 147 no.6: 1476-1479 D '62. (MIRA 16:1)

(Auranthin)

ZUBOVA, O.V.; FEDOSEYEV, V.M.; SILAYEV, A.B.

Study of the antitumor activity of some derivatives of 2,3-di (isothiuronium)-propanol and 2-imino-5-(isothiuronium)-methyl-thiazolidine. Vop. onk. 10 no.1:26-28 '64.

(MIRA 17:11)

1. Iz laboratorii antibiotikov biologo-pochvennogo fakul'teta (zav. - dotsent A.B. Silayev) i kafedry radiokhimii khimicheskogo fakul'teta (zav. - prof. A.N. Nesmeyanov) Moskovskogo gosudarstvennogo universiteta. Adres avtorov: Moskva, Moskovskiy universitet, Leninskiye gory, laboratoriya antibiotikov biologo-pochvennogo fakul'teta.

SHAPOSHNIKOV, V. N.; SILAYEV, A. B.; NEFELOVA, M. V.; ORLOVA, T. I.; KUZNETSOVA, V. S.; MIRONOVA, I. B.; ZUBOVA, O. V.

"Directed biosynthesis of aurantin and investigation of biological and chemical properties of new aurantin fractions."

report submitted for Antibiotics Cong, Prague, 15-19 Jun 64.

Lab of Antibiotics, Faculty of Soil Biology, Moscow State Univ.

ZUBOVA, O.V.; SILAYEV, A.B.; SOLOV'YEVA, V.G.

Comparative study of the tumor-inhibiting and toxic action of aurantin, its individual fractions and actinomycin C. Antibiotiki 6 no.6:485-488 Je '61. (MIRA 15:1)

1. Laboratoriya antibiotikov biologo-pochvennogo fakul'teta Moskovskogo universiteta.
(ANTIBIOTICS) (TUMORS)

ZUBOVA, O.V. (Moskva)

Antitumor action of certain chlorethylamino and ethyleneimino derivatives of pyridine. Pat.fiziol. i eksp.terap. 3 no.2: 34-38 Mr-Ap '59. (MIRA 12:6)

1. Iz laboratorii eksperimental'noy khimioterapii (zav. - chlen-korrespondent AN SSSR prof.L.F.Larionov) Instituta eksperimental'noy patologii i terapii raka AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof.N.N.Blokhin).

(NEOPLASMS, eff. of drugs on
pyridine substituted nitrogen mustards & pyridino-ethyleneimines, anti-tumor action (Rus))
(NITROGEN MUSTARDS, eff.
pyridine substituted nitrogen mustards, anti-tumor action (Rus))
(CYTOTOXIC DRUGS
pyridino-ethyleneimines, anti-tumor action (Rus))

KEVDIN, N.A., professor, zasluzhennyy deyatel' nauki; ZUBOVA, R.F.; ZAKHARCHUK, V.N.

Drug-induced sleep therapy of hypertension. Klin.med. 32 no.9:62-70 S '54. (MLRA 7:12)

1. Iz kafedry fakul'tetskoy terapii (zav. prof. N.A.Kevdin) L'vovskogo meditsinskogo instituta.

(HYPERTENSION, therapy, sleep)
(SLEEP, therapeutic use, hypertension)

ZUBOVA, R.F.

Basal metabolism in hypertension. Nauch.trudy L'vov.obl.terap. ob-va no.1:197-200 '61. (MIRA 16:5)

1. Klinika fakul'tetskoy terapii lechebnogo fakul'teta L'vovskogo meditsinskogo instituta (zav. klinikoy - prof. S.F. Cleynik).
(HYPERTENSION) (BASAL METABOLISM)

ZUBOVA, R.F.

Treatment in hypertension with conditioned reflex sleep. Nauch. trudy Lvov.obl.terap.ob-va no.1:275-279 '61. (MIRA 16:5)

1. Kafedra fakul'tetskoy terapii lechebnogo fakul'teta L'vovskogo meditsinskogo instituta (zav. kafedroy - prof. S.F. Oleynik).
(HYPERTENSION) (SLEEP THERAPY)