

ZORINA, V. A. ED.

Bor'ba Sovetskogo Soyuza Za Razoruzheniye, 1946-1960 Gody. Moskva, Izd-vo Instituta Mezhdunarodnykh Otnosheniy, 1961.

566 p.

Includes Bibliographical Footnotes.

Appendices includes texts of Basic Proposals of the Soviet Union on questions of disarmament introduced after World War II.

ZORINA, V.A.

Method of forecasting the spring ice phenomena in the Kurishches
Haff and the Frisches Haff. Trudy GOIN no.86136-43 '65. (MIRA 18:9)

ZCRINA, V. M., Cand. Medic. Sci. (Miss) "Some Features of Course of Rheumatism Among Children in Active Period of the Illness and Between Attacks," Moscow, 1961, 14 pp. (1st Moscow Med. Inst.,) 250 copies (KL Supp 12-61, 285).

S/169/03/000/001/035/062
D218/D307

AUTHORS: Fogel'man, N.A., Zorina, V.S. and Solodov, A.A.

TITLE: Data for the development of a method of preparing prognostic charts for the gold-bearing region of East Transbaykal

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 6, abstract 1D33 (Tr. Tsent. i.-i. gornorazved. in-ta, 1961, no. 44, 20-23)

TEXT: In order to rationalize prospecting operations, it was necessary to prepare prognostic charts for the main gold bearing region of East Transbaykal, showing regularities in the distribution of major gold concentrations. The following principles and geological gold prognostic charts are suggested for the preparation of such charts: 1) direct reconstruction of empirical data on a specialized geo-structural basis, showing the relationship between gold deposits and various local geostructural elements, i.e. the reconstruction of ore-controlling factors for the given region; 2) utilization of

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Data for the development ...

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exploration data collected over many years for the existing gold deposits in the given region and any regularities concerning the localization of ores with respect to the local geological structure; 3) knowledge of leading most promising types of gold depositions of the early Kimmeridge and Laramie metallogenic periods (baleyan and darasunyan) [Abstracter's note: Names unknown] and the necessity of assessing new types of deposits which are present in other regions and are industrially important; 4) relation of the deposits to definite types of magnetic formations; 5) structural localization regularities of deposits: (a) ore-controlling significance of tectonic dislocations and jointing zones which reflect discontinuities in plutonic structural stages; (b) regional development of 'transverse' ore-controlling jointing zones which determine the structural position of industrial ore fields and promising regions; (c) effect of block tectonics on the distribution of various types of hydrothermal mineralization which may serve as a basis for detailed metallogenic regional classification; (d) relation of Laramian volcanism and mineralization with subsidence blocks - upper

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Mesozoic tectonic depressions and transverse fractures; (e) possible screening effect of structural elements on the localization of baleyen-type gold deposits in the Lower Chalk depressions. In setting up gold prognostic charts, it is necessary to carry out special field studies, including composite geophysical methods.
[Abstracter's note: Complete translation]

Card 3/3

ZORINA, Ya., inzh.; STARIKOV, A., kand.tekhn.nauk

Improving the discharge system on SP3U-type suction dredges.
Rech.transp. 21 no.11:31-34 N '62. (MIRA 15:11)
(Dredging machinery)

ZORINA, Ya. A.

KOZYR', Ivan Vasil'yevich; ZORINA, Ya. A., redaktor; SEMIOVA, R. Ye.,
tekhnicheskiy redaktor

[Biological laboratories in secondary schools] Kabinet biologii
srednei shkoly. Moskva, Izd-vo Akad. pedagog. nauk BSPSR,
1956. 270 p. (MLBA 10:4)
(BIOLOGICAL LABORATORIES)

LARICHEV, Pavel Afanas'yevich; ZORINA, Ya. A., redaktor; TYSHKEVICH, Z.V.,
tekhnicheskii redaktor

[Requirements for written work in secondary school mathematics]
Trebования k pis'mennym rabotam po matematike v srednei shkole.
Moskva, Izd-vo Akademii pedagog. nauk RSFSR, 1955. 19 p. (MLRA 9:12)

1. Chlen-korrespondent APN RSFSR (for Larichev)
(Mathematics--Study and teaching)

SYTINSKAYA, Nadezhda Nikolayevna, professor; DVUKHSHKHESTOV, G.I., redaktor;
ZORINA, Ya.A., redaktor; GARNEK, V.P., tekhnicheskii redaktor

[Modern science on the origin of the solar system] Sovremennaiia
nauka o proiskhozhении solnechnoi sistemy. Moskva, Izd-vo Akademii
pedagog. nauk RSFSR, 1956. 93 p. (MLBA 9:8)
(Solar system)

SEMUSHINA, A.D.; ZORINA, Ya.A., redakter; MUKHINA, tekhnicheskiy redakter.

[Practical application in the teaching of mathematics; work practice in classes 5-10, a collection of articles] Politekhnicheskoe obuchenie v prepodavanii matematiki; iz opyta raboty v V-X klassakh, sbernik statei. Ped red. A.D.Semushina. Moskva, 1956. 226 p.

(MIRA 9:5)

1.Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov obucheniya.

(Mathematics--Study and teaching)

ZORINA, Ye., inzh.

Increase the operational efficiency of dredging pumps. Rech.
transp. 20 no. 2:34-37 F '61. (MIRA 14:2)
(Dredging machinery--Equipment and supplies)

L 24304-66 EXT(1)/EXP(e)/EXT(a)/EXT(m)/T/INT(t) INT(s) INT/JD/NA
 AC# 48 A5007000 SOURCE CODE: INT/INTS L765/080/002/0193/0295

AUTHOR: Zorina, Ye. L.

ORG: none

TITLE: Infrared absorption of arsenic monoselenide

SOURCE: Optika i spektroskopiya, v. 20, no. 2, 1966, 293-296

TOPIC TAGS: arsenic compound, selenide, ir absorption, excited state, glass property, absorption edge, optic transition

ABSTRACT: This is a continuation of an earlier investigation (ZhT v. 7, 351, 1955) in which it was shown that the indirect transition and indirect transition is applicable to the absorption of light. The purpose of the present study was to determine the nature of the absorption bands in the infrared region of the spectrum of arsenic monoselenide. It is shown that the absorption bands in the infrared region of the spectrum of arsenic monoselenide are due to the indirect transition of the valence electrons from the valence band to the conduction band. The energy of the indirect transition is found to be 0.17 eV. The energy of the indirect transition is found to be 0.17 eV. The energy of the indirect transition is found to be 0.17 eV.

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ACC NR: AP6007000

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tion coefficient, more accurate values were obtained for the energies of the direct and indirect transitions, namely 1.42 and 1.01 eV respectively. The results show that appreciable damping of single-particle excited states is possible in crystals which are insufficiently transparent. Since the samples were insufficiently transparent, the McMahon formulae (J. Opt. Soc. Amer. v. 40, 1950, 1951) were used to determine the transmission and reflection with the absorption coefficient calculated from these values. The absorption coefficient is approximately 1.2 cm⁻¹ for the samples and for part of other data work. Data are presented in figures and a table.

SUB TITLE: 20 SUBM DATE: 8/20/74 ORIG REF: 006 OTH REF: 002

Card 2/2 PV

SIMANOVSKAYA, R.E.; rukovoditel' raboty; SHPUNT, S.Ya.; VOIZINSKAYA, Z.V.;
KOKINA, Z.I.; MASTUKHOVA, M.G.; NAYDENOVA, V.A.; VAS'YANOV, V.P.;
VASIL'YEV, N.F., master; ORLOV, N.N., starshiy apparatchik;
NAUMOV, P.M., starshiy apparatchik; TRUPIN, M.P., starshiy apparatchik;
VOLKOVA, V.M., starshiy apparatchik; ZORINA, Ye.A.; KIROVA, V.A.;
LUTOVA, Z.I., ZENKINA, Z.P., laborant; SEMOKHINA, L.A., laborant;
NIKITINA, N.A.

Phosphogypsum and its use in the manufacture of sulfuric acid and
portland cement; small-scale operation at the pilot plant of the
Scientific Research Institute of Fertilizers and Insectifuges.
[Trudy] NIUIF no.160:59-76 '58. (MIRA 12:8)

1. Sotrudniki Nauchnogo instituta po udobreniyam i insektofungisidam
(for Simanovskaya, Shpunt, Vodzinskaya, Kokina, Mastukhova,
Naydenova). 2. Zamestitel' nachal'nika 3-go tsekha Opytnogo zavoda
Nauchnogo instituta po udobreniyam i insektofungisidam (for Vas'yanov).
3. 3-y tsekh Opytnogo zavoda Nauchnogo instituta po udobreniyam i
insektofungisidam (for Vasil'yev, Orlov, Naumov, Trupin, Volkova,
Zorina, Kirova, Lutova, Zenkina, Samokhina). 4. Tsentral'naya
analiticheskaya laboratoriya Opytnogo zavoda Nauchnogo instituta po
udobreniyam i insektofungisidam (for Nikitina).
(Gypsum) (Portland cement) (Sulfuric acid)

ZORINA, Ye.G.

TUR, Aleksandr Fedorovich, professor, saclushennyy deyatel' nauki;
ZORINA, Ye.G., redaktor; RUBLEVA, M.S., tekhnicheskiiy redaktor.

[Preliminary studies on children's diseases] Propedevtika
detskikh bolesnei. Izd. 3-e, ispr. i dop. [Leningrad] Gos. izd-vo
med. lit-ry, Leningradskoe otd-nie, 1954. 363 p. (MERA 7:12)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Tur).
(Children--Care and hygiene)

ZORINA, YE. I.

Zorina, Ye. I. -- "Organization and Contents of Methodological Work with Teachers of the General Education School in Rural Rayons. (According to Materials of the Moscow Oblast)." Min Education RSFSR, Moscow Oblast Pedagogical Inst, Moscow, 1955 (Dissertation for the Degree of Candidate of Pedagogical Sciences)

SO: Knizhnaya Letopis', No. 24, Moscow, Jun 55, pp 91-104

SEMENCHENKO, V. K., ZORINA, YE. L.

Phase Rule and Equilibrium

Phase transitions of the second degree and critical phenomena. Part 4. Viscosity of binary liquid systems in the critical region. Zhur. fiz. khim., 26, no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

ZORINA, Ye.L.; DEMBOVSKIY, S.A.; VELICHKOVA, V.B.; VINOGRADOVA, G.Z.

Infrared absorption of vitreous As_2Se_3 , As_2Se_5 , and $AsSe_4$.

Izv. AN SSSR. Neorg. mat. 1 no.11:1889-1891 N '65.

(MIRA 18:12)

1. Institut obshchey i neorganicheskoy khimii Imeni N.S. Kurnakova
AN SSSR. Submitted June 22, 1965.

ZORINA, Ye.L.; KOVALEVA, I.S.

Infrared absorption of vitreous As_2S_5 . Zhur.neorg.khim. 9 no.4:
1020-1022 Ap '64. (MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii imeni
N.S.Kurnakova AN SSSR.

8L817

S/181/60/002/008/052/052/XX
B006/B070

24.7600 (1043, 1158, 1160)

AUTHOR: Zorina, Ye. L.

TITLE: Remarks on the Law of Mooser and Pearson

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 8, p. 1936

TEXT: In their work on semiconductivity^{2/} Mooser and Pearson start from the covalence of binding in semiconductors. They use that condition from Pauli's theory of metallic and covalent binding, which gives no metallic conductivity. To obtain the law of filled octets in sp^3 orbits of atoms of elementary substances, or of anions and the totality of valence electrons, as well as the binding of anions with one another, the condition of absence of empty orbits was used instead of the condition of saturation of binding in semiconductors. This law leads to the relation $(n_e/n_a)+b=8$, where n_e is the total number of (unpaired) valence electrons, including also the nonseparated pairs on anions; n_a is the number of anions; and b is the number of bindings formed by the anions among themselves. Instead of this Mooser and Pearson take n_e as the total number of valence electrons, n_a

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Remarks on the Law of Mooser and Pearson

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B006/B070

as the number of elements from groups IV-VII of the periodic system, and b as the number of bindings formed by them. The latter formulation is incompatible with the concept of semiconductivity of the compounds formed by the elements of groups IV-VII with one another, and does not lead in this case to the octet rule, e.g., for compounds of the type $A_2^V B_3^{VI}$, $A^V B^VI C^VII$, $A^V C_3^{VII}$, etc. It is shown that according to the first-named definition the octet rule is valid also for the compounds mentioned here. There are 5 references: 1 Soviet and 4 US.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR Moskva (Institute of General and Inorganic Chemistry
imeni N. S. Kurnakov of the AS USSR, Moscow)

SUBMITTED: January 19, 1960

Card 2/2

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065430001-0

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065430001-0"

ZORINA, Ye.I.; YAREMBASH, Ye.I.

Infrared absorption of PrTe_2 . Izv. AN SSSR, Neorg. mat. 1
no.3:446 Mr '65. (MIRA 18:6)

L. Institut obshchey i neorganicheskoy khimii imeni Kurnakova
AN SSSR.

"APPROVED FOR RELEASE: 03/15/2001

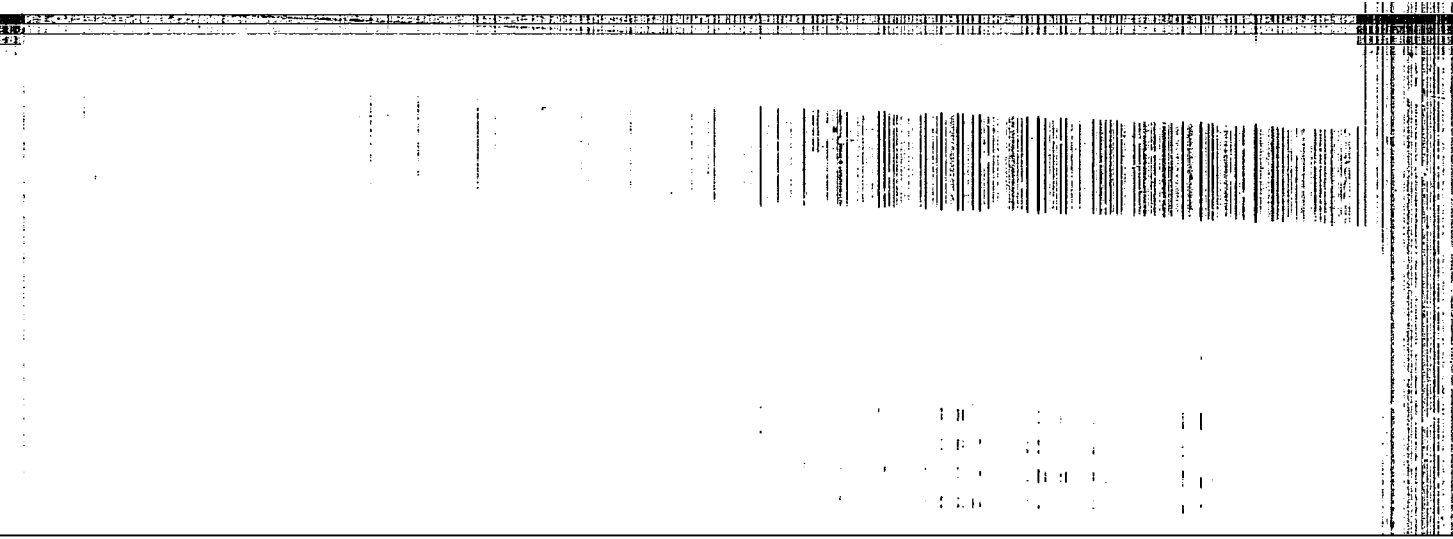
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5 (4)

AUTHORS:

Zorina, Ye. L., Semenchko, V. K. SOV/76-33-5-1/33

TITLE:

The Effect of Sodium Sulfate on the Critical Phenomena in the System Triethylamine - Water (Vliyan'ye sul'fata natriya na kriticheskiye yavleniya v sisteme trietilamin - voda)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol. 33, Nr 5, pp 961-969 (USSR)

ABSTRACT:

This work is the continuation of investigations of the effect of a third component on critical phenomena which can be determined by variations of the temperature dependence of viscosity. The methods of these investigations are described in references 1 and 2. The concentration of aqueous sodium sulfate solution (1.7 mol%) in the mixture of triethylamine - water varied between 0.007 mol% and 0.256 mol%. For mixtures containing 7.36-9.33 mol% triethylamine were investigated. The results are summarized in a table. If Na_2SO_4 is added to mixtures the triethylamine content of which is below the critical one, the maxima of viscosity and the temperature interval of the abnormal viscosity increase are reduced; nonyl alcohol shows the same effect in

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The Effect of Sodium Sulfate on the Critical Phenomena in the System Triethylamine - Water

SOV/76-33-5-1/33

contrast to isomyl alcohol. With triethyl amine concentrations above the critical value, Na_2SO_4 shows the opposite effect. The curve $\lg\eta(1/T)$ (η = viscosity in centipoise) given in figure 1 shows quantities marked with A, B, D, E, and G which quantitatively characterize the effect on the temperature dependence of viscosity and the effect of hysteresis; they are defined in reference 1. The variation of the values A and B depending on the concentration of sodium sulfate and triethylamine is shown in figures 2 and 3. Figure 4 shows the variation of hysteresis by Na_2SO_4 addition. Figures 5 and 6 indicate the same dependences for the values of D, E, and G. Figure 7 shows the variation of the solubility curve of triethylamine - water by sodium sulfate addition. Small Na_2SO_4 additions change the solubility curve by means of spirals, in contrast to isomyl alcohol additions. Other authors gained similar experiences with mixtures of organic liquids with water if salt is added. Figures 8, 9, 10 show the values for A, B, E, and G with varying concentration of the

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The Effect of Sodium Sulfate on the Critical
Phenomena in the System Triethylamine - Water

SOV/76-33-5-1/33

third component mentioned in order to compare the effect
of nonyl alcohol, isoamyl alcohol, and sodium sulfate.
There are 10 figures, 1 table, and 9 references, 6 of which
are Soviet and 1 Polish.

ASSOCIATION: Institut neorganicheskoy khimii Akademii nauk SSSR
(Institute of Inorganic Chemistry of the Academy of Sciences,
USSR)

SUBMITTED: July 16, 1957

Card 3/3

ZORINA, Ye.L.

Remark on the Mooser-Pearson rule. Fiz. tver. tela 2 no.8:1936 Ag
'60. (MIRA 13:8)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR, Moskva.

(Semiconductors)

5 (4)

AUTHORS:

Semenchenko, V. K., Zorina, Ya. L. SOV/76-33-6-2/44

TITLE:

The Effect of Nonyl Alcohol on the Critical Phenomena in the System Triethylamine - Water (Vliyaniye nonilovogo spirta na kriticheskiye yavleniya v sisteme trietilamin - voda)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1176-1183 (USSR)

ABSTRACT:

Subsequently to a preceding paper (Ref 1) in which the influence of isoamylalcohol (I) on the temperature function of the viscosity of the system triethylamine - water (II) was tested, in the present case the influence of nonyl alcohol was investigated. It was worked according to the already described investigation method (Ref 1) whereby three different mixtures of (II) with different added amounts of (III) were used - one with an amount of triethylamine higher, one near at, and one lower than the critical concentration. The test results show that in contrast to (I) the abnormal rise of the viscosity of the mixtures is increased by the addition of (III) at concentrations of triethylamine over the critical concentration whilst it is decreased at concentrations of (T)

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The Effect of Nonyl Alcohol on the Critical
Phenomena in the System Triethylamine - Water

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below the critical. The influence of (III) is most significant near the critical point. Both diagrams of the function of the values A, B, D, E and G (Ref 1) of the concentration of (III) in different (II) systems (Figs 1-7) and function diagrams of $\lg \eta$ of $1/T$ (Fig 8) are given. It was also discovered (as also in the system (Ref 1)), that the greatest alterations of the activation energy can be seen at mixtures with a concentration of (T) near the critical point. There are 10 figures, 1 table, and 3 Soviet references.

ASSOCIATION: Akademiya nauk SSSR, Institut obshchey i neorganicheskoy khimii, Moskva (Academy of Sciences of the USSR, Institute of General and Inorganic Chemistry, Moscow)

SUBMITTED: July 16, 1958

Card 2/2

5(4)

AUTHORS:

Zorina, Ye. L., Semenchenko, V. K.

SOV/76-33-3-3/41

TITLE:

The Effect of Isoamyl Alcohol Upon Critical Phenomena in the System Triethylamine - Water (Vliyaniye izoamilovogo spirita na kriticheskiye yavleniya v sisteme trietilamin - voda)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 523 - 533 (USSR)

ABSTRACT:

The unusual sensitivity of critical phenomena with respect to minimum admixtures has already several times been mentioned (Refs 4-8). The effect of minimum admixtures of isoamyl alcohol (I), sodium sulfate and nonyl alcohol upon critical phenomena was investigated; thus it was possible to determine the variation of the temperature function of viscosity in the system triethylamine - water. The additions were selected under consideration of the investigations of reference 9. In the present case the experimental results of the admixtures of (I) are given. Different amounts of (I) were stepwise added to the mixture to be investigated. The experimental results show (Table 1) that admixtures of (I) reduce the temperature of the maximum viscosity and vary the abnormal increase in

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The Effect of Isoamyl Alcohol Upon Critical Phenomena in the System Triethylamine - Water SOV/76-33-3-3/41

viscosity and the temperature ranges in which they proceed. The strongest effect of (I) was observed in mixtures being close to the critical concentrations (8.53 and 857% by mole of triethylamine). In the case of mixtures with a composition below the critical concentrations an effect of the admixtures of (I) was observed, contrary to that observed in connection with concentrations above the critical concentration. On the basis of a diagram (Fig 1) of the function $\lg \eta - 1/T$ the effect of the admixtures of (I) upon different sections of the curve is given (Figs 2-6, 8). There are 9 figures, 1 table, and 11 references, 8 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut neorganicheskoy khimii Moskva (Academy of Sciences, USSR, Institute of Inorganic Chemistry, Moscow)

SUBMITTED: July 16, 1956

Card 2/2

SEMENCHENKO, V. K.; ZORINA, Ye. L.

Viscosity

Hysteresis of viscosity in the critical region. Dokl. AN SSSR 34 No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress
October 1952. UNCLASSIFIED.

ZORINA, Ye. L.

"Viscosity of Liquid Mixtures in the Critical Region of Solution" Card
Phys-Math Sci, Inst of General and Inorganic Chemistry Acad Sci USSR, Moscow, 1954.
(RZhMekh, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (12)
SQ: Sum. No. 556, 24 Jun 55

"APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001

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ZORINA, Ye.L.

Light absorption in vitreous As_2S_3 and As_2S_5 on the edge of the valence band. Fiz. tver. tela 7 no.1:331-332 Ja '65.

(MIRA 18:3)

1. Institut obshchey i neorganicheskoy khimii imeni Karakova
AN SSSR, Moskva.

ZORINA, Ye.L.; DEMBOVSKIY, S.A.

Infrared absorption of arsenic monoselenide. Opt. 1 spektr.
18 no.3:505-508 Mr '65. (MIRA 18:5)

ZORINA, Ye.L.; VELICHKOVA, V.B.; GULIYEV, T.N.

Infrared absorption of indium selenide single crystals. Izv. AN
SSSR. Neorg. mat. 1 no.5:690-691 My '65. (MIRA 18:10)

1. Institut obshchey i neorganicheskoy khimii imeni Karnakova
AN SSSR.

L 7941-66 Exp(a)/EPR(a)/NPR(a)/EPR(a)/EPR(a) (G) 000000
ACC NF: RPS028717 SOURCE CODE: UR/0363/65/001/011/1889/1891

AUTHOR: Zorina, Ye. L.; Dembovskiy, S. A.; Velichkova, V. E.; Vinogradova, G. S.

Institute of General and Inorganic Chemistry Im. N. S. Kurnakov, Academy of Sciences of the USSR, Moscow

Physical and Chemical Institute of the USSR Academy of Sciences, Leningrad

SOURCE: AN SSSR Izvestiya. Neorganicheskaya khimiya, v. 1, no. 1, 1963, 1889-1891

TOPIC TAGS: arsenic, selenide, glassy state, IR spectrum, absorption spectrum

ABSTRACT: A study has been made of the IR absorption of glassy As_2Se_3 , As_2S_3 , and $As_2S_3Se_3$. The IR spectra of these glasses were compared with those of the corresponding crystalline compounds. The absorption bands of the glasses were found to be broader and shifted towards shorter wavelengths compared with those of the crystalline compounds. In particular, the absorption bands of the glasses were found to be broader and shifted towards shorter wavelengths compared with those of the crystalline compounds. The IR spectra of the glasses were found to be broader and shifted towards shorter wavelengths compared with those of the crystalline compounds. The IR spectra of the glasses were found to be broader and shifted towards shorter wavelengths compared with those of the crystalline compounds.

SUB CODE: IC/ SUBM DATE: 22 Jun 65/ ORIG REF: 009/ OTH REF: 003/ ATD PRESS: 4/4/

UDC: 546.19123.543.422.4

Card 1/1

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L. 21782-66 EMT(m)/EMP(l)/I LJP(c) SVY/RM
 ACC NR: AP6002862 (A) SOURCE CODE: UTM/0286/65/000/024/0020/0020
 AUTHORS: Shvets, V. F.; Gus'kov, K. A.; Gribov, A. M.; Zelenskiy, A. P.; Korina, Ye. N.

ORG: none

TITLE: A method for obtaining acrylic acid nitrile. Class 12, No. 176890⁶

TOPIC TAGS: acetylene, acrylic acid, hydrocyanic acid, organic nitrile compound

ABSTRACT: This Author Certificate presents a preparative method for a nitrile of acrylic acid, based on a reaction between acetylene and hydrocyanic acid in presence of a Haxland catalyst. The product is purified, the catalyst is separated with a special apparatus. The reaction is carried out in a special apparatus. The reaction with acetylene is carried out in a special apparatus.

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WDC: 547.539.21391.1,07

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ACC NR: AP6002862

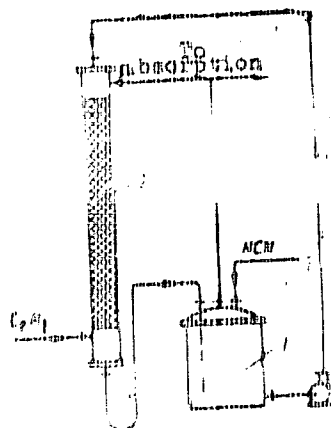


Fig. 1. Ideal mixing apparatus; 2 - packed absorption column.

Orig. art. no. 12172

SUB CODE: 07/ SUBM DATE: 04Mar65

Card 2/2

КЕРБИКОВ, О.В.; ЗОРИНА, Ye.S.; ИЛ'ИНСКИЙ, Yu.A.

~~XXXXXXXXXXXXXXXXXXXX~~
Prolonged sleep therapy by intravenous drop-injection of a alcohol
containing solution. Nevropat, psikhiat., Moskva 20 no.4:38-40
July-Aug 1951. (CINL 21:2)

KERBIKOV, O.V. ZORINA, YE. S. IL'INSKIY, YU. A.

Blood--Analysis and Chemistry

Concerning Prof. Ye.Yu. Karu's remarks "On the determination of alcohol in the blood by the Vidmark method." Zhur. nevr. i psikh. 52, No. 3, March, 1952

Monthly List of Russian Accession, Library of Congress, August, 1952 Unclassified

ZORINA, YE. S.

Insane--Hospitals

Problems of wards in planning and reconstruction of psychoneurological hospitals.
Zhur. nevr. i psikh 52, No. 5, 1952

Monthly List of Russian Accessions, Library of Congress, September 1952, Unclassified

USSR/Chemistry - Viscosity

21 Oct 51

The Viscosity of Binary Liquid Systems in the Critical Region, " V. K. Semenchko, Ye. I. Zorina, Inst of Gen and Inorg Chem Acad Sci SSSR, Acad Sci SSSR

"Dokl Ak Nauk SSSR" Vol LXXX, No 6, pp 903-905

Viscosity polydimers were constructed for the systems triethylamine - water, and nitro - benzene - benzene at varying temps and concns. Found that these systems exhibit a ~~max~~ in viscosity at a certain crit temp. Concluded that the initial process of formation of disperse systems consists

217710

of passing into a ~~disperse~~ state characterized by a max viscosity. The ~~disperse~~ heterogeneous state arises at the crit conditions of temp and concn, after which there is a sudden emergence of sol aggregates and systems of an ordinary disperse state characterized by a milky ~~viscosity~~.

ZORINA, Ye. L.

217710

ZORINA, YE. S., IL'INSKIY, YU. A.

Blood - Analysis and Chemistry

Concerning Prof. Ye. Yu. Karu's remarks "On the determination of alcohol in the blood by the Vidmark method." Zhur. nevr. i psikh. 52, no. 3, March 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. Unclassified.

ZORINA, YE. S.

USSR/Medicine - Therapeutic Sleep, Jul/Aug 51
Narcosis

"Treatment With Prolonged Sleep Brought About by
Introducing Intravenously an Alcohol-Containing
Solution By the Continuous Drip Method," O. V.
Kerbikov, Ye. S. Zorina, Yu. A. Il'inskiy

"Nevropatol i Psikhiat" Vol XX, No 4, pp 38-40

Describes clinical aspects of treating psy-
chopathic patients by intravenous introduction
of alc and technique of introducing a narcotic
mix which has the following compn: sodium
chloride 4.0, calcium chloride 1.0, glucose
25.0, distilled alc 60.0-120.0, distilled water
up to 500.0. 198198

FLESS, D.A.; ZORINA, Z.A.

Role of the hippocampus in the genesis of audiogenic spasms of
the myoclonic type. Biol. eksp. biol. i med. 60 no. 10:63-66
0 1965 (MIRA 1961)

1. Kafedra fiziologii vysshey nervnoy deyatel'nosti (zav. - prof.
L.G. Voronin) i laboratoriya patofiziologii nervnoy deyatel'nosti
(zav. - prof. I.V. Krushinskiy) biologo-pochvennogo fakul'teta
Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.
Submitted January 8, 1965.

ZORINA, Z.I.; MYAKISHEVA, O.N.; ROZENTSVEYG, O.M.; BOTOSHANSKIY, M.N.
[Botoshans'kyi, M.N.]

Growth of the pharmaceutical trade in Bukovina. Farmatsev. zhur.
15 no.6:63-66 '60. (MIRA 14:11)

1. Chernovitskoye nauchno-farmatsevticheskoye obshchestvo.
(BUKOVINA—PHARMACY)

L 47117-66 EWT(1) GW

ACC NR: AR6019879

SOURCE CODE: UR/0169/68/000/002/B039/B040

AUTHOR: Burman, E. A. ; Zorina, Z. I. ; Ulanova, L. V.

3
B

TITLE: Possibility of objectively estimating favorable conditions for breeze development

SOURCE: Ref. zh. Geofizika, Abs. 2B267

REF SOURCE: Meteorol. klimatol. i gidrol. Mezhd. nauchn. sb., vyp. 1, 1965, 8-11

TOPIC TAGS: breeze, land temperature, sea temperature, breeze development

ABSTRACT: The maximum contrast between land and sea temperatures ΔT_{max} is determined as the characteristic of breeze-development conditions at the moment t_{max} , from the equations of daily variation of land and sea surface-layer temperatures:

$$\Delta T_{max} = \frac{1}{\rho_1 c_1 k_1} \int_0^{\tau} (R_1 - P_1 - L E_1) dt,$$

where index 1 is referred to as

Card 1/2

UDC: 551.553.11

E 4/117-66

ACC NR: AR6019879

0

the land characteristics, τ is time, ρ is density, c is specific heat, z is the propagation depth of temperature fluctuation, R is the value of the radiative balance of the underlying surface, P is the turbulent influx of heat, and LE is the heat consumption in evaporation. The physical meaning of this equation permits an assumption that the value of temperature amplitude represents the characteristic of breeze-development conditions (the maximum difference between land and sea temperatures is equal to the maximum excess of soil temperature over its mean values, i. e., it is equal to the amplitude). The existing correlation graphs of these characteristics confirm this. Besides, ΔT_{max} is proportionate to total radiation S_* . To account for the wind effect due to other causes, the authors deem it advisable to introduce the dimensionless characteristic $K = \frac{S_*}{\rho c_p T U}$

which reflects the effect of both factors, where U is the total transfer. This characteristic calculated on the basis of averaged data over several years agrees well with the average frequency of breezes. L. Volokitina. [Translation of abstract] [DW]

SUB CODE: 04/

Card 2/2

ZORINA, Z.M., inzh.

Investigating small TSS engine reducers. Vest. mashinostr.
44 no. 2:7-15 + 16.
(MIRA 17:7)

ZORINA, Z.H., inzh.

New load hooks. Vest.wash. 40 no.2:28-33 H '60. (MIRA 13:5)
(Hooks)

ZORINA, Z. M.

SPITSYNA, I.O., kandidat tekhnicheskikh nauk; ZORINA, Z.M., inzhener;
MANAKIN, N.V., redaktor; UVAROVA, A.F., tekhnicheskii redaktor

[Method of computing the gearing of hoisting and conveying
machinery] Metodika rascheta subchatykh satsaplenii pod'emno-
transportnykh mashin. Moskva, Gos.nauchno-tekhn.izd-vo mashino-
stroit.lit-ry, 1957. 36 p. (MLRA 10:7)

1. Moscow, Vsesoyuznyy nauchno-issledovatel'skiy institut
pod'yemno-transportnogo mashinostroyeniya
(Gearing) (Hoisting machinery) (Conveying machinery)

ZORINA, E.M., inzh.

Investigating thermal characteristics of the TB-5 disk brake.
Sbor. VNIITMASH no.25:67-74 '59. (MIRA 13:11)
(Brakes)

ZORINA, Z.P.

Formol blood serum test in children with rheumatism.

Vrach. delo no.5:138-140 My '62. (MIRA 15:6)

1. Klinika detskikh bolezney (zav. - prof. S.I. Ignatov)
L'vovskogo meditsinskogo instituta.

(RHEUMATIC FEVER) (FORMALDEHYDE)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065430001-0

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065430001-0"

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065430001-0

APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065430001-0"

ZORINA, Z.P.; VORONIN, A.G.

Precocious puberty as an adrenal cortex syndrome in adrenal gland tumors. *Pediatrics* no.7:75 '61. (MIRA 14:9)

1. Iz kliniki detskikh bolezney (zav. kafedroy S.I. Ignatov) i kliniki ortopedii, travmatologii i detskoy khirurgii (zav. kafedroy - prof. I.L. Zaychenko) L'vovskogo meditsinskogo instituta (dir. - prof. L.N. Kuzmenko).

(ADRENAL GLAND-TUMORS)

(PUBERTY)

ZORINA, Z.S.; SHKABARA, Ye.A.

Resolving devices equipped with ferrite cores and controlled
by means of crystal triodes. Sbor.trud.Vych.tsentra AN URSR
no.3:84-93 '58. (MIRA 12:2)
(Electronic circuits) (Ferrates) (Transistors)

VORONIN, A.G.; YUS'KO, S.M.; ZORINA, Z.P.

Problem of splenectomy in Werlhof's disease. *Pediatrics* 39 no. 2:
16019 F '61. (MIRA 1462)

1. Iz kafedry travmatologii, ortopedii i detskoy khirurgii (zav. -
doktor med.nauk I.D. Zaychenko) i kafedry pediatrii (zav. - doktor
med. nauk S.I. Ignatov) L'vovskogo meditsinskogo instituta (dir. -
doktor med. nauk L.N. Kuzmenko).
(PURPURA (PATHOLOGY)) (SPLEEN---SURGERY)

VORONIN, A.G., assistant (L'vov, ul.Lysenko, d.23, kv.1); YUS'KO, S.M.,
assistant; ZORINA, Z.F., assistant

Two cases of splenectomy in Werlhof's disease in children. Nov. Khir.
arkh. no.4:98-99 J1-Ag '60. (MIRA 15:2)

1. Kafedra travmatologii, ortopedii i detskoy khirurgii (zav. -
prof. I.L.Zaychenko i kafedra pediatrii (zav. - prof. S.I.Ignatov)
L'vovskogo meditsinskogo instituta.
(SPLEEN SURGERY) (PURPURA (PATHOLOGY))

DASHEVSKIY, Lev Naumovich, kand. tekhn. nauk; POGREBINSKIY,
Solomon Benjaminovich, inzh.; SHKABARA, Yekaterina
Alekseyevna, kand. tekhn. nauk. **Prinimali uchastiye:**
LOSEV, V.D.; ABATYSHNIKOVA, L.M.; ZORINA, Z.S.;
ORLOVA, I.A.; ZUBATENKO, A.Ya.; PAVLENKO, Yu.S., inzh.,
retsensent; GLUSHKOV, V.M., akademik, red.

[The "Kiev" computer; its design and operation] Vychislitel'nai mashina "Kiev"; proektirovanie i ekspluatatsiya. Kiev, Tekhnika, 1964. 322 p. (MIRA 17:11)

ZOHINA-TSIKINA, K.F.; KUL'VANOVSKIY, M.P.

Interceptive reflexes from the bladder following transection
of the spinal cord and different autonomic formations. Trudy
Inst.fiziol. AN BSSR 3:178-189 '59. (MIRA 13:?)

1. Laboratoriya kortiko-viztseral'noy fiziologii, Instituta
fiziologii AN BSSR.
(BLADDER--INNERVATION) (NERVOUS SYSTEM) (REFLEXES)

BULYGIN, I.A.; ZORINA-TSIKINA, K.F.; KUL'VANOVSKIY, M.P.

Analysis of collateral afferent pathways of interoceptive reflexes
from pelvic organs [with summary on English]. *Fiziol.shur.* no.1:
7-15 Ja '59. (MIRA 12:2)

1. From the Institute of Physiology, BSSR Academy of Sciences, Minsk.
(PELVIS, physiol.
collateral afferent pathways of interoceptive reflexes
from pelvic organs (Rus))
(REFLEX,
same))

USSR/Human and Animal Morphology. Nervous System. Peri- S-3
pheral Nervous System

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88419

Author : Bulygin, I. A.; Zerina-Tsikina, K.F.; Kul'vanovskiy,
H. P.

Inst : AS Belorussian SSR

Title : Experimental Analysis of the Indirect Afferent
Pathways of the Pelvic Organs.

Orig Pub: Dokl. AN SSSR 1957, 1, No. 3, 126-129

Abstract: In acute experiments on dogs, besides the well-known
direct afferent pathways of the pelvic organs, 3
indirect afferent pathways were demonstrated, passing
extrapyramidally into the anterior segments of the
C.N.S. It was demonstrated that from the urinary
bladder and rectum only direct afferent pathways
reach the C.N.S. through the pelvic nerves, but also

Card 1/2

45

USSR/Human and Animal Morphology. Nervous System. Peri- S-3
pheral Nervous System

APPROVED FOR RELEASE: 03/15/2001 . CIA-RDP86-00513R002065430001-0"

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88419

Abstract: indirect and roundabout pathways through the inferior
splanchnic nerves exist. The afferent fibers of these
reach the spinal cord in the thoracic and cervical
segment. The roundabout afferent pathways of the
pelvic organs contain not only cerebro-spinal fibers,
but also sympathetic afferent fibres-originating from
Dogiel's cells - type 2.

Card 2/2

ZORINA-TSIKINA, K.F.; KUL'VANOVSKIY, M.P.

Interceptive reflex influences from the bladder in young dogs. Trudy
Inst. fiziol. AN BSSR 2:203-208 '58. (MIRA 12:1)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii
AN BSSR.

(BLADDER--INNERVATION) (BLOOD PRESSURE)
(SPINAL CORD)

ZORINA-TSIKINA, K.F., kand. med. nauk.

Scientific news. Trudy Inst. fiziol. AN BSSR 2:292-300 '58. (MIRA 12:1)
(BIBLIOGRAPHY--PHYSIOLOGY)

ZORINA-TSIKINA, K.F.

BULYGIN, I.A.; ZORINA-TSIKINA, K.F.

Interceptive reflexes from the bladder following transection of
the spinal cord. Trudy Inst. fiziol. AN BSSR 1:129-143 '56
(MLRA 10:5)

1. Laboratoriya kortiko-vistseral'noy fiziologii.
(SPINAL CORD--SURGERY) (REFLEXES) (BLADDER--INNERVATION)

ZORINA-TSIKINA, K.F.

Role of separate neural formations in the transmission of
interceptive impulses from the bladder. *Trudy Inst.fiziol.*
AN BSSR 3:190-198 '59. (MIRA 13:7)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta
fiziologii AN BSSR.

(BLADDER--INNERVATION)

BULYGIN, I.A.; ZORINA-TSIKINA, K.F.

Complication of afferent innervation of the distal intestinal segment in the phylogeny of vertebrates. Zhur. evol. biokhim. i fiziol. 1 no.5:425-434. S-O '65. (MIRA 18:10)

1. Laboratoriya obshchey fiziologii Instituta fiziologii AN BSSR, Minsk.

BULYGIN, I.A.; ZCRINA-TSIKINA, K.F.

Complication of afferent innervation of the terminal portion of the
intestines in vertebrate phylogeny. Dokl. AN BSSR 9 no.7:488-491 J1
'65. (MIRA 18:9)

1. Institut fiziologii AN Belorusskoy SSR.

TOMASEGOVIC, Z.; JANKOVIC, Z.; PETKOVIC, V.; STANIC, M.; EETLHEIM, S.; BLAZEVIC,
D.; PERSIC, N.; ZORINC, S.; TEODROVIC, B.; VRANCIC, J.; VODCPLJA, I.;
ANTONIAZZO, Z.; CULIC, R.; GALINOVIC, WEIEGLASS, M.; ~~REBACOV, I.~~
MRAVUNAC, B.; KOEHLER-KUBELKA, N.; CEZNER, M.; KOHN, V.; TEKAVIC, B.;
EMILI, H.; SMERDEL, S.; SOOS, E.; VUKSANOVIC, V.; JANJATOVIC, M.;
~~DERVISEVIC, I.~~ GRUENWALD, P.; SKRABALO, Z.; CREPINKO, I.; HAUPTMANN,
E.; VIDACEK, S.; HORVAT, A.; MIOCKA, O.; IVANCEVIC, D.; PERGER, A.;
KRSNJAVI, B.; PRAZIC, M.; SALAJ, B.; SUBOTIC, R.; RADOSEVIC, Z.; KELER-
BACOKA, M.; HAHN, A.; MATKOVIC, B.; RADONIC, M.

Reveiw of periodicals; medicine. Bul sc Youg 9 no.4/5:145-147
Ag-0 '64.

ZORINC, Stjepan, dr.

Tick-borne meningoencephalitis in the Bjelovar region. Lijecn.
vjesn. 86 no.1:45-48 Ja'64

1. Iz Sluzbe za zarazne bolesti Medicinskog centra u Bjelovaru.

S

ZORING, Stjepan, dr.; NIKULIN, Aleksandar, dr.

On paratyphus C Kunzendorff. Med. arh., Sarajevo B no.2:81-92
Mar-Apr 54.

1. Iz Infektivne klinike Medicinskog fakulteta u Sarajevu, nef prof.
dr. Blagoje Djordjevic i Instituta za patolosku anatomiju, nef.
prof. dr. Zivojin Ignjacev.
(PARATYPHOID FEVERS
C type)

ZORINI, A. Omodei; SPINA, G.; LUCCHESI, M.

Advances in chemoprophylaxis of tuberculosis with isoniazid.
Cas.lek.cesk 100 no.32/33:1010-1014 18 Ag '61.

1. Klinika tuberkulozy University v Rime. Vedecke ustredi "C. Forlanini"
Narodniho ustavu socialniho zabezpeceni. Reditel prof. A. Omodei
Zorini.

(ISONIAZID ther)

ZORINI, Attilio Omodei, prof.

Antituberculous chemoprophylaxis with izoniazid [with summary in French]. Probl.tub. 35 no.8:8-14 '57. (MIRA 11:4)

1. Iz Instituta imeni K.Forlanini i Ftiziatricheskoy kliniki Rimskogo universiteta (dir. - prof. A.Omodei Zorini)
(Tuberculosis, prev. & control
izoniazid, comparison with vacc. (Rus))

ZORINS, K.; DUNDURS, J.; ZVIREULIS, H., red.; UDRE, V., tehni. red.

[Increasing labor productivity is the path to abundance] Darba
raziguma paaugstināšana - cels uz pārpilnību. Rīga, Latvijas
Valsts izdevniecība, 1961. 71 p. (MIRA 15:3)
(Latvia--Agriculture--Labor productivity)

ZCRIC, N.; CALMANOVICI, B.

Use of Rumanian coal as ionexchange materials.

P. 760 (REVISTA DE CHIMIE) (Bucuresti, Rumania) Vol. 8, no. 12, Dec. 1957

SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5. 1958

~~ZORIO, KALMANOVICH~~

RUMANIA / Chemical Technology. Processing of Naturally H Deposited Solid Fuels.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 75204.

Author : ~~Zorio~~, Kalmanovich.

Inst : Not given.

Title : Utilization of Rumanian Coals as Ion Exchange Materials.

Orig Pub: Rev. chim., 1957, 8, No 12, 760-762.

Abstract: A report is given on the experiments that were made on raw and sulfonated coal, from Kapen', Ilien' and Vygich. PNP, which were used as ion exchange materials for water purification. In addition to that, a sulfonated coal was used for the purification of juices in the sugar industry.

Card 1/1

LORIO, N

The separation of 6-picolinic from 2,6-pyridinedione by ion-exchange resins. N. Lario and E. Cabelker. *Ann. rep. popolare Romba, Studi e Ricerche chim.* 6, 118-23 (1968).
 Aq. solns. of 4-picolinic and 2,6-pyridine have been continuously sepd. in a series of ion-exchange columns (Acidcelite 1B-20). Owing to its stronger alkyl, 2,6-pyridine was retained in the resin while 6-picolinic passed through.

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3

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RUMANIA/Chemical Technology: Chemical Products
and Their Applications. Industrial Or-
ganic Synthesis.

H-15

Abs Jour : Ref Zhur-Khimiya, No 7, 1959, 24350

Author : Zorio, N., Ghelber, B.

Inst : -

Title : Separation of γ -Picolin and 2,6-Lutidine
by Ion Exchange.

Orig Pub : Studii si ceratari chim., 1958, 6, No 1,
119-126

Abstract : A possibility of separating of mixtures of
 γ -picolin (I) and 2,6-lutidine was inve-
stigated with the use of ion exchange resins
(albertite I R 120 H, vofatite, and sulfo-char-
coal) while employing a I : II mixture of 1 : 1
as a 10 percent water solution. Linear velocity

Card : 1/3

RUMANIA/Chemical Technology. Chemical Products
and Their Applications. Industrial Or-
ganic Synthesis.

H-17

Abs Jour : Ref Zhur-Khimiya, No 7, 1959, 24350

different ionites are presented together
with data pertaining to washing with 20
percent H₂SO₄, changes in the composition
of solutions leaving the column battery as
a function of time and its profile with re-
spect to the column's position. -- T. Slad-
kova

Card : 3/3

ZORIO N.

RUMANIA/Chemical Technology - Chemical Products and their
Application - Carbohydrates and Refinement.

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, 9484

Author : Kalman A., Ropceanu F., Creanga Laura, Zorio N.,
Budici Georgetta

Inst : -

Title : Treatment of Rumanian Diatomites and Possibilities of
Their Utilization.

Orig Pub : Rev. chim., 1957, 8, No 3, 158-161

Abstract : The chemical composition of diatomites is given and
their various uses are stated, especially as filtering
materials in the sugar- and chemical industries.

Card 1/1

17

ZORIY, L.M.; LEONOV, M.Ya.

Survey of the development of the theory of the stability of elastic
rod equilibrium. Nauch.zap. IMA AN URSR. Ser. mashinoved. 7 no.7:
119-126 '61. (MIRA 15:1)

(Elastic rods and wires)

ZORIY, L.M.; LEONOV, M.Ya.

Effect of friction on the stability of nonconservative systems.
Nauch.zap.IMA AN URSR. Ser.mashinoved. 7 no.7:127-136 '61.
(MIRA 15:1)

(Friction)

ZORIY, L.M.

Stability of the equilibrium of nonconservative systems. Vop. mekh.
real. tver. tela no.3:113-119 '64.

(MIRA 17:11)

LEONOV, Mikhail Yakovlevich. Prinsipialni uchastiye: ZORIY, L.M.;
CHERNUKHA, Yu.A.; SHVAYKO, N.Yu.; IVASHCHENKO, A.N.;
LIBATSKIY, L.L.; BURAK, Ya.I.; RUSINKO, K.N.; FOMENKO,
V.L., red.izd-va; ANOKHINA, M.G., tekhn. red.

[Fundamentals of the mechanics of an elastic solid] Osnovy
mekhaniki uprugogo tela. Frunze, Izd-vo AN Kirgizskoi SSR.
No.1. 1963. 328 p. (MIRA 16:12)

(Elastic solids)

10.6300

19583
S/O20/62/145/002/007/018
B178/B104

AUTHORS: Leonov, M. Ya., Academician AS KirSSR, and Zoriy, L. M.

TITLE: The effect of friction on the kinetic load of a compression strut

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 2, 1962, 295-297

TEXT: An elastic strut of length l fixed at one end only and resisting two separate loads at its free end is examined. The system has two degrees of freedom, and the mass of the strut is ignored. Small vibrations of the system are described by the equation

$$m \frac{d^2 v}{dt^2} = F - b_1 \frac{dv}{dt}, \quad I \frac{d^2 \varphi}{dt^2} = M - b_2 \frac{d\varphi}{dt} \quad (1),$$

where F = force, M = moment acting on the strut, b_1 and b_2 = small positive parameters, and $I = m\varrho^2$ = central moment of inertia of the two loads. The distance between the loads is 2ϱ . F and M are given by

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The effect of friction on the...

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B178/B104

$$F = -c_{11}U - c_{12}\Phi, \quad M = -c_{21}U - c_{22}\Phi, \quad (2),$$

$$c_{11} = \frac{G+H}{\Delta} k \sin kl, \quad c_{12} = \frac{G+H}{\Delta} (\cos kl - 1 + \eta\Delta), \quad (3),$$

$$c_{21} = \frac{G+H}{\Delta} (\cos kl - 1), \quad c_{22} = \frac{G+H}{\Delta} (\sin kl - kl \cos kl);$$

$$\Delta = 2 - 2 \cos kl - kl \sin kl; \quad (4),$$

$$\eta = \frac{H}{G+H}, \quad k = \sqrt{\frac{G+H}{D}}, \quad (5),$$

where D = rigidity. Eq. (1) then takes the form

$$m \frac{d^2 v}{dt^2} + b_1 \frac{dv}{dt} + c_{11}U + c_{12}\Phi = 0, \quad (6)$$

$$I \frac{d^2 \Phi}{dt^2} + b_2 \frac{d\Phi}{dt} + c_{21}U + c_{22}\Phi = 0.$$

Card 2/4

The effect of friction on the...

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which is solved by substituting $v = Ae^{\omega t}$ and $\varphi = Be^{\omega t}$, where A and B = const, and A is a parameter. This leads to the characteristic equation

$$\rho_0 \omega^4 + \rho_1 \omega^3 + \rho_2 \omega^2 + \rho_3 \omega + \rho_4 = 0, \quad (8),$$

$$\rho_0 = Im, \quad \rho_1 = b_2 m (\mu \rho^2 + 1), \quad \rho_2 = m (\rho^2 c_{11} + c_{22}), \quad (9),$$

$$\rho_3 = b_2 (\mu c_{22} + c_{11}), \quad \rho_4 = c_{11} c_{22} - c_{12} c_{21}, \quad (10).$$

$$\mu = b_1 / b_2,$$

The zero solution of (6) is stably asymptotic if all the roots of (8) lie in the left-hand half of the plane of complex numbers. It is necessary and sufficient for this that the coefficients of (9) all be positive and satisfy the condition $\Delta_3 > 0$, where $\Delta_3 = \rho_3(\rho_1 \rho_2 - \rho_0 \rho_3) - \rho_1^2 \rho_4$. In the interval (0,2) Δ has no zeros. The functions $c_{ij}(kl)$, $p_2(kl)$, $p_3(kl)$, $p_4(kl)$, and $\Delta_3(kl)$ are continuous if $0 < kl < 2\pi$. With a small compressive force $G + H$ all roots have negative real parts. p_2 , p_3 , p_4 , and Δ_3 change

Card 3/4

The effect of friction on the...

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with increasing $G + H$. Instability occurs either if a root ω becomes positive or if two complex-conjugate roots with negative real parts become changed into purely imaginary parts. At the boundary of the region of stability, p_4 vanishes in the first case and Δ_3 in the second. There are 2 figures. J

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Card 4/4

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