SYRNEV, G.S.

Upsetting fitting screws. Priborostroenie no.6:27 Je '64.
(MIRA 18:3)

SYRNEV, G.S., inzh.

New technological processes in the manufacture of fastening bolts and screws. Priborostroenie no.4:14-15 Ap '65. (MIRA 18:5)

SYRNEV, G.S.

Producing a self-locking adjusting screw for coiled tension springs. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.8:46-47 Ag '65.

(MIRA 18:12)

SYRNEV, G.S.

Sectional adjustable split die for cold headers. Kuz.-shtam. proizv. 7 no.8:47 Ag '65. (MIRA 18:9)

SYRNEV, G.S., inzh.

Introducing cold extrusion of parts and billets. Priborostroenie no.6:17-18 Je '65. (MIRA 18:7)

SYRNEV, I.P.

Reproduction of the structure of the Kubadag-Greater Balkhan trough in its relief. Neftegaz. geol. i geofiz. no.3:17-21 '63. (MIRA 16:8)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti Glavnogo upravleniya geologii i okhrany nedr pri Sovete Ministrov RSFSR.

SYRNEV, I.P.

Pre-Akchagyl (Middle Pliocene) erosion by water in the region of Kara-Bogaz-Gol. Neftegaz. geol. o geofiz. no.8:20-22 '63. (MIRA 17:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti Gosgeolkom SSSR.

SYRNEV, I.P.; USHKO, K.A.; EBERZIN, A.G.

Age of the Kyuryanykyure series in the Krasnovodsk Peninsula.
Biul. MOIP. Otd. geol. 39 no.6:87-92 N-D '64. (MIRA 18:3)

ARKHIPOV, A.Ya.; ALTAYEVA, N.V.; BAYBULATOVA, Z.K.; VISKOVSKIY, Yu.A.; GOLENKOVA, N.P.; KRAVCHENKO, M.F.; KUPRIN, P.N.; LEVIN, A.I.; POL'STER, L.A.; SEMOV, V.N.; SYRNEV, I.P.; USHKO, K.A.; SHOLOKHOV, V.V.; Prinimali uchastiye: RODIONOVA, M.K.; CHEL'TSOV, Yu.G.; KUZNETSOV, Yu.Ya., kand. geograf. nauk, nauchnyy red.

[Geology and oil and gas potentials of the south of the U.S.S.R.; Kara-Bogaz-Gol (Gulf) region (eastern part of the Middle Caspian oil- and gas-bearing basin).] Geologiia i neftegazonosnost' iuga SSSR; Prikarabozaz'e (vostochnaia chast' Srednekaspiiskogo neftegazonosnogo basseina). Leningrad, Nedra, 1964. 300 p. (Trudy Nauchno-issledovatel'skoy laboratorii geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti no.12).

YAKUSHOVA, A.F.; SYAGAYEV, M.A.; GUSTYAKOV, A.A.; KONDAKOVA, L.P.; FILATOV, O.M.; ULITSKIY, Yu.A.; SYRNEV, L.P.

Main characteristics of the geomorphology and recent tectonics in the Volga-Don territory. Trudy NIIneftegaza no.13:171-186 '65. (MIRA 18:9)

SYRNEV, L

Sofia, Doklady Bolgarskoi Akademii Nauk, Vol 14, no 3, 1961

1. "Distribution of Tangential Planes to Surfaces of the Congruence of Straight Lines in the Hyperbolic Space" A. MATHEEV; pp 235-237.
2. "Measuring the Activation Energy of Adhesion Layers in Lead Sulfide" Iv. BASV and L. SYRNEV; pp 239-242 (English Summary)
3. "A New Precise Differential Manometer for Laboratory Purposes" L. BOJADZHIEV and I. SCHOPOV; pp 243-246.
4. "Microquantitative Determination of Chlorine and Iodine Ions" N. GANCHEV and K. KOEV; pp 247-250.
5. "Comparative Amino Acid Content of the Meats of Some Fat Stones" S.I. YANKOV; pp 251-254.
6. "One Method of Recovering Sulfur from The Kremikovci Limonite Ore" N. YANKIEV; pp 255-257.
7. "Absorption of Nitrogen Oxides in the Vibrating Mass of Sodium Hydroxide Solutions. Part III" D. [illegible] Chr. PALAREW, L. BOJADZHIEV and D. LANGILEV; pp 259-262.
8. "On the Rate of Absorption of Pure Gases" D. ATANEV, D. PENKOV and C. PALAREW (IN ENGLISH) pp 263-268.
9. "Effect of Some Inorganic Additives on the Reduction of Copper Oxide by Carbon Dioxide at Low Temperatures" M.S. KURCHATOV; pp 267-270.
10. "Segerite from the Radka Mine, Panagyrur Basin" T.G. RADONOVA; pp 271-274 (English Summary).
11. "Aluminum Saponite from Svetluka, Ardin Basin" T. TODOROVA; pp 275-278 (English Summary).
12. "Regarding the Experimental Variability of Escherichia coli" S. GALABOV; pp 279-281.
13. "Studies on the Formation of Capsule by Certain Strains of Bacillus anthracis in vitro" G. Iv. HADJIEV; pp 283-[illegible]
14. "Antibiotics and the Reticulo-Endothelial System Fixation Activity in Mice Treated with Colloid Iron Saccharate" As. TOTSKOV, G. SCHELKOVA and D. STOYANOV; pp 287-290.
15. "Electron Microscopic Study of Lungs of Snakes" H. KRASTEV; pp 291-294.
16. "Human Leptospiroais Due To Leptospira Saxkoebing in Bulgaria" I. KUTUNGIEV; pp 295-298.

— 1/2 —

SYRNEV, L. [Surnev, L.]

Slow conditions of a PbS surface. Doklady BAN 16 no.3:233-236 '63.

1. Predstavleno akad. G. Nadzhakovym.

31833
S/194/61/000/010/053/082
D256/D301

9.4177
26.2420

AUTHOR: Syrnev, L.N.

TITLE: Production of photo-sensitive surface PbS monocrystals and investigation of the photo-effect mechanism

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 28, abstract 10 G195 (Dokl. Bolg. AN, 1960, 13, no. 3, 269-272 (English summary))

TEXT: In various photo-effect models of PbS, PbTe and PbSe it is assumed that the photo-conductivity is connected with the micro-crystalline structure of the photo-conductive layer. It was, therefore, interesting to investigate the behavior of monocrystals in the case where point-contacts do not exist. For this purpose, the PbS monocrystals were sensitized, the process being similar to that for poly-crystalline layers, and for this purpose PbS was heated to 400°C in the presence of S vapors for several

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Production of photo-sensitive...

hours with subsequent polishing and heating in air to 590°C for a short period. The detailed investigations of the photo-galvanic effect, the thermo-emf, rectifier effect and the life-time of the unstable carriers demonstrated a full similarity to the effects in monocrystals and layers, showing that both depend upon the same processes. 12 references. [Abstracter's note: Complete translation]

Card 2/2

SYRNEV, L. [Surnev, L.]

Slow conditions on the lead sulfide surface produced by water vapors. Doklady BAN 15 no.7:719-722 '62.

1. Predstavleno akad. G. Nadzhakovym [Nadzhakov, G.].

DIMCHEV, T.; SYRNEV, L. [Surnev, L.]

Changes in the work function of PbS monocrystals with the change of gas medium. Doklady BAN 16 no.6:577-580 '63.

1. Predstavleno akad. G. Nadzhakovym, chlenom Redaktsionnoy kollegii, "Doklady Bolgarskoy Akademii nauk".

SYRNEV, N.I.

Theory and practice of approximate computations involving transcendental functions. Uch. zap. MOPI 123:197-207 '63.
(MIRA 17:4)

SYRNEV, N. I.

Arithmetic - Problems, Exercises, Etc.

Direct and reciprocal proportionality of values. Mat. v shkole No. 3, 1952.

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

SYRNEV, N.I.

PONOMAREV, S.A (Moscow); SYRNEV, N.I. (Moscow)

Some methodological remarks on the new collection of arithmetical problems for the 5-6th classes of the secondary school. Mat. v shkole no.4:47-53 Jl-Ag '54. (MLRA 7:7)
(Arithmetic--Problems, exercises, etc.)

SYRNEV, NIKOLAY IVANOVICH,

PONOMAREV, Semen Alekseyevich; SYRNEV, Nikolay Ivanovich; PAZEL'SKIY, S.V., redaktor; MAKHOVA, N.N., tekhnicheskiy redaktor

[Collection of problems and exercises in arithmetic; for classes 5-6 of seven-year and secondary schools] Sbornik zadach i uprazhnenii po arifmetike; dlia 5-6 klassov semiletnei i srednei shkoly. Izd. 2-e. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 222 p. (MLRA 8:4)

(Arithmetic--Problems, exercises, etc.)

SYRNEV, N.I. (Moskva)

"Arithmetic" by I.K. Andronov and V.M. Bradis. Mat. v shkole no.5: 84-85 S-O '58. (MIRA 11:10)
(Arithmetic)

SYRNEV, N.I. (Moskva)

Work with the adding machine in the 5th grade. Mat. v shkole no.5:42-43 S-O '59. (MIRA 13:2)
(Calculating machines)

SYRNEV, N.I. (Moskva)

Studying the slide rule (logarithmic) in an eight-year school.
Mat.v shkole no.4:34-38 Jl-Ag '60. (MIRA 13:9)
(Slide rule)

SYRNEV, N.I. (Moskva)

Using an adding machine. Mat. v shkole no.3:51-52 My-Je '63.
(MIRA 16:7)

(Calculating machines)
(Mathematics—Study and teaching)

SYRNEV, DOCENT V. M.

"Early Clinical Diagnosis of Rheumatic Heart Disease," Vop. Ped. i. Okhran. Mater. i. Det., 17, No. 2, 1949. Hd., Chair Children's Diseases, Astrakhan Med. Inst., -1949-.

SYRNEV, V. M.

Method of auscultation in diagnosis of tuberculosis in children. Probl. tuberk., Moskva No. 3, May-June 50. p. 31-5

1. Of the Department of Children's Diseases of Astrakhan' Medical Institute, Astrakhan'.

CLML 19, 5, Nov., 1950

SYRNEV, V. N.

Certain practical conclusions from Pavlov's theory and his school of thought. Vopr. pediat. 18:5, 1950. p. 34-6

1. Head of the Department of Children's Diseases, Astrakhan' Medical Institute, Astrakhan'.

CLML 20, 3, March 1951

SYRNEV, V.

Problem of early diagnosis of tuberculous meningitis. Vopr. pediat. 20 no.4:19-23 July-Aug 1952. (CLML 23:2)

1. Professor. 2. Moscow.

SYRNEV, V.M., prof. (Moskva)

Diagnosis of whooping cough in the catarrhal period. Vop.okh.mat. i det. 3 no.3:39-40 My-Je '58. (MIRA 11:5)
(WHOOPING COUGH)

SYRNEV, V.M., prof.

Some problems in the cardiology of childhood. Pediatriia 37 no.4:3-6 Ap '59. (MIRA 12:6)

1. Iz kafedry fakul'tetskoy pediatrii Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova (dir.N.N.Mizinov).

(CARDIOLOGY
pediatric problems (Rus))
(PEDIATRICS
cardiol. problems (Rus))

SYRNEV, V.M., prof.; GERGEL', L.N.; BUYLOVA, G.N.

Early functional symptoms in rheumatic fever. Pediatriia 37 no.6:84-85 Je '59. (MIRA 12:9)

1. Iz detskoy poliklinik Kuybyshevskogo rayona g.Gor'kogo (glavnyy vrach L.N.Gergel').
(RHEUMATISM, in inf. & child, early manifest. (Rus))

YAGUBOV, S.N.; REVICH, G.G.; SYRNEV, V.M. (Moskva)

Strengthen the polyclinical training of students in medical institutions. Zdrav. Ros. Feder. 4 no.5:33-36 My '60. (MIRA 13:11)

(MEDICINE—STUDY AND TEACHING)

SYRNEV, Vasiliy Mikhaylovich; CHUKILOVA, A.I., red.

[Early diagnosis by physical methods under conditions of the district physician's service] Ranniaia diagnostika fizicheskimi metodami v usloviiakh vrachebnoi uchastkovoi sluzhby. Izd.2. Moskva, Meditsina, 1965. 98 p. (MIRA 18:1)

SYRNEV, V., (Engr-Maj, Candidate of Technical Sciences)

Coauthor with Engr-Maj V. SYRNEV of article, "The Physics of the Action of Nuclear Forces," subtitled, "Radioactive Emissions," discussing the rays emitted by radioactive substances, their penetrating power, and their effect on the human body. The "dose concept" and the amount of dosage necessary to harm the body tissues are also mentioned. /Article translated in full in Joint Press Reading Service, No 148, 28 May 1954./ (Krasnaya Zvezda, Moscow, 26 May 54).

SO: SUM No. 208, 9 Sep 1954

SYRNEV, V., (Engr-Maj, Candidate of Technical Sciences)

Author of article, "The Physics of the Action of Nuclear Forces (Measuring Radiation)," discussing radiometric and dosimetric measuring devices. The author told how radiation-measuring devices are constructed and how they operate, and described a fountain-pen-size, pocket radiation-measuring device. /Full translation of article appeared in Joint Press Reading Service, No 166, 15 June 1954./ (Krasnaya Zvezda, Moscow, 10 Jun 54)

SO: SUM No 224, 28 Sep 1954

SYRNEV, V. P. and PETROV, N. P.

"Radioactive Radiation and its Measurement", War Publishing Office of the Ministry for Defense of the Soviet Union, Moscow 1956.

"This publication was written specifically for soldiers and sailors of the Red Army and Navy. It omntains informatiin of the dangers encountered during Atomic Warfare, Radiation Measurement, and identifies markers used in Radioactive Areas.

SO: D531003.

SYRNEV, Vladillen Pavlovich; PETROV, Nikolay Panteleymonovich; SMIRNOV, A.I., kandidat tekhnicheskikh nauk, inzhener-podpolkovnik, redaktor; KAMER, Ya.M., redaktor; SRIBNIS, N.V., tekhnicheskiy redaktor.

[Radioactive emissions and their measurement] Radioaktivnye izlucheniia i ikh izmereniia. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1956. 159 p. (MIRA 9:6)
(Radioactivity--Measurement)

IVANOV, Anatoliy Ivanovich; SYRNEV, V.P., inzhener-mayor, kandidat tekhnicheskikh nauk, redaktor; KADER, Ya.M., redaktor izdatel'stva; SRIBNIS, N.V., tekhnicheskiy redaktor

[Nuclear radiation of atomic explosions] IAdernye izlucheniia atomnogo vzryva. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1956. 211 p. (MLRA 9:9)
(Radioactivity--Safety measures)
(Atomic bomb)

Syrnev, V.P.

86-5-9/24

AUTHOR: Syrnev, V. P., Eng.Lt.Col., Candidate of Technical Sciences

TITLE: Ground Radiation Reconnaissance (Nazemnaya radiatsionnaya razvedka)

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 5, pp. 52-62 (USSR)

ABSTRACT: The article points out that the basic measures of anti-atomic defense are constant reconnaissance of radiation and a dosimetric checking of irradiation and contamination. The radiation of radioactive substances can be detected only with dosimetric instruments. The measurements can be either roentgenometric or radiometric. Roentgenometric measurements by means of roentgenometers or dosimeters show the ionizing effect produced by radiation, while radiometric measurements by radiometers show the activity of a radiation source (Figure 1) or the intensity of the contamination of the bodies or surfaces. The ДП-1 (Figure 2) field roentgenometer which is the main instrument

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Ground Radiation Reconnaissance (Cont.)

for ground radiation reconnaissance (a picture of this roentgenometer is given in the article) is intended to measure gamma radiation within the limits of 0.04 to 400 roentgen/hour. The weight of this instrument is about 6.7 kg. It is operated by one man. It consists of a receiver (ionization chamber) (Figure 3), an amplifier, a microammeter, and a power feeder. The wiring diagram of the roentgenometer is given in Figure 4. The individual field dosimeter is intended to measure the effect on personnel of gamma radiation in a contaminated terrain. The set contains small-weight ionization chambers and a charging-measuring panel (Figure 5). This instrument measures doses of 0 to 5 roentgens (first sub-range) and 0 to 50 roentgens (second sub-range). The weight of a separate ionization chamber is about 15 gr. A field radiometer (Figure 6) measures the intensity of the contamination of the soil and the surfaces of various objects by beta and gamma-active substances, as well as the contamination of food and water. The range of measurements of beta contamination is from 150 to 1,000,000 disintegrations/cm$^2$ min and for gamma radiation from 0.03 to

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Group Radiation Reconnaissance (Cont.)

20 milliroentgens/hour. The radiometer consists of two units: a control panel (Figure 7) and a prober. In addition, there is a headset (Figure 8). The weight of the whole set is 5.5 kilograms. There are 8 figures.

AVAILABLE: Library of Congress

Card 3/3

Tyrnov, V.

51(0); 3(0); 2(10) PHASE I BOOK EXPLOITATION SOV/2210

Atomnaya energiya v aviatsii i raketnoy tekhnike; sbornik statey (Atomic Energy in Aviation and Rocket Engineering; Collection of Articles) Moscow, Voyen. Izd-vo M-va obor. SSSR, 1959. 500 p. (Series: Nauchno-populyarnaya biblioteka) No. of copies printed not given.

Ed. - Compiler: P.T. Astashenkov, Engineer, Lt.-Col; Ed.: Ya.M. Kaderj Tech. Ed.: A.M. Gavrilova.

PURPOSE: This book is intended for officers of the Soviet Armed Forces, members of DOSAAF, and the general reader interested in the uses of atomic energy and in the development of aviation and rocket engineering.

COVERAGE: This collection of 16 articles, compiled by 28 Soviet scientists and based chiefly on non-Soviet materials, discusses various aspects of the use of atomic energy in rocketry and aviation. The book surveys the development of atomic and thermonuclear weapons and weapon carriers, lays down the principles of anti-atomic defense, and evaluates the application of nuclear energy in aviation and rocketry. Fuel and construction materials, as well as actual physical and technological processes involved, are treated briefly. Fundamentals of atomic warfare and combat tactics are discussed at some length. The book is divided into four parts, of which the last consists chiefly of anti-Western propaganda. Section I is devoted to nuclear weapons and their use in aviation. Section II is on anti-atomic defense, especially the defense and decontamination of airfields and aircraft, and defense against radiation. Section III is on the use of flight technology in modern aircraft and rocket technology and on the missiles, including some speculations on space travel and on the energy of the future. There are 126 figures and 35 non-Soviet references (some in Russian Translation).

TABLE OF CONTENTS:



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SYRNEV, V.P

PHASE I BOOK EXPLOITATION SOV/4503

Petrov, Nikolay Panteleymonovich, and Vladillen Pavlovich Syrnev

Radioaktivnyye izlucheniya i ikh izmereniya (Radioactive Radiation and Measurement) 2nd ed., rev. and enl. Moscow, Voyenizdat, 1960. 190 p. (Series: Nauchno-populyarnaya biblioteka) Number of copies printed not given.

Ed.: A.I. Sedov, Candidate of Technical Sciences, Engineer, Lt. Colonel; Ed. of Publishing House: Ya.M. Kader; Tech. Ed.: V.Ye. Volkova.

PURPOSE: This book is intended for officers of the Soviet Army, DOSAAF instructors, and those interested in radioactive radiation and the measurement of radioactive radiation.

COVERAGE: The book deals with radioactive radiation and methods of detecting it and includes the fundamentals of ionizing-radiation dosimetry and methods of recording ionizing radiation. The design principles and construction of the basic types of dosimetric field instruments are described, and operating instructions are given for their utilization in a contaminated locality in the area of an atomic explosion. Considerable attention is given to the characteristics of radioactive radiation. No personalities are mentioned. There are no references.

Card ~~1/3~~

SYRNEV, V.V.

Clinical aspects of endarteritis lenta. Vrach. delo no.3:301 Mr '57.
(MLRA 10:5)
1. Gospital'naya terapevticheskaya klinika sanitarno-gigiyenicheskogo fakul'teta Pervogo moskovskogo meditsinskogo instituta.
(ARTERIES--DISEASES)

SYRNEV, V.V.

Rarely considered possibility for prolonged lowering of arterial blood pressure in hypertension. Sov.med. 21 no.10:108-112 O '57. (MIRA 11:1)

1. Iz kafedry obshchey i gospital'noy terapii (zav. - deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. Ye.M.Tareyev) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(HYPERTENSION, case reports
spontaneous regression)

SYRNEV, V. V., Cand Med Sci (diss) -- "Some aspects of the course of stages II and III of hypertension". Moscow, 1958. 19 pp (First Moscow Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, No 13, 1960, 122)

SYRNEV, V.V., dotsent

Method of instruction in clinical departments. Zdrav. Ros. Feder. 8 no.2:28-30 F'63 (MIRA 17:3)

1. Kafedra fakul'tetskoy terapii ( zav. - dotsent V.V.Syrnev) Kemerovskogo meditsinskogo instituta.

S/153/60/003/004/036/040/XX
B020/B054

AUTHORS: Tronov, B. V., Syrneva, N. V.

TITLE: Complexes of Aminobenzoic Acids and Their Salts With Meta-dinitro Benzene

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4, pp. 752 - 753

TEXT: The authors studied the complex formation of the following amino acids of the benzene series: ortho-, meta-, and p-aminobenzoic acid with meta-dinitro benzene; the latter is distinguished by a high electron-acceptor activity. The colorimetric investigation was conducted in alcoholic solution, since both dinitro benzene and aminobenzoic acids are soluble in alcohol, whereas simple, saturated amino acids are insoluble in alcohol. In all three systems, the color is considerably intensified, the maximum exactly or almost exactly lying at a molar ratio of 1:1, which indicates that only one nitro group participates in the complex formation. This is confirmed by the circumstance that sodium salts of amino

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acids, in which the formation of a hydrogen bond is impossible, also showed a color intensification in systems with dinitro benzene, the maximum lying at a ratio of 1:1. Crystalline complexes with dinitro benzene were obtained from ortho- and para-aminobenzoic acids. The optical density was measured at 19°C by an ФЭК-М (FEK-M) photoelectric colorimeter. Measurement results are given in Figs. 1 and 2. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Tomskiy politekhnicheskiy institut im. S. M. Kirova (Tomsk Polytechnic Institute imeni S. M. Kirov). Tomskiy meditsinskiy institut, kafedra organicheskoy khimii (Tomsk Medical Institute, Department of Organic Chemistry)

SUBMITTED: July 15, 1958

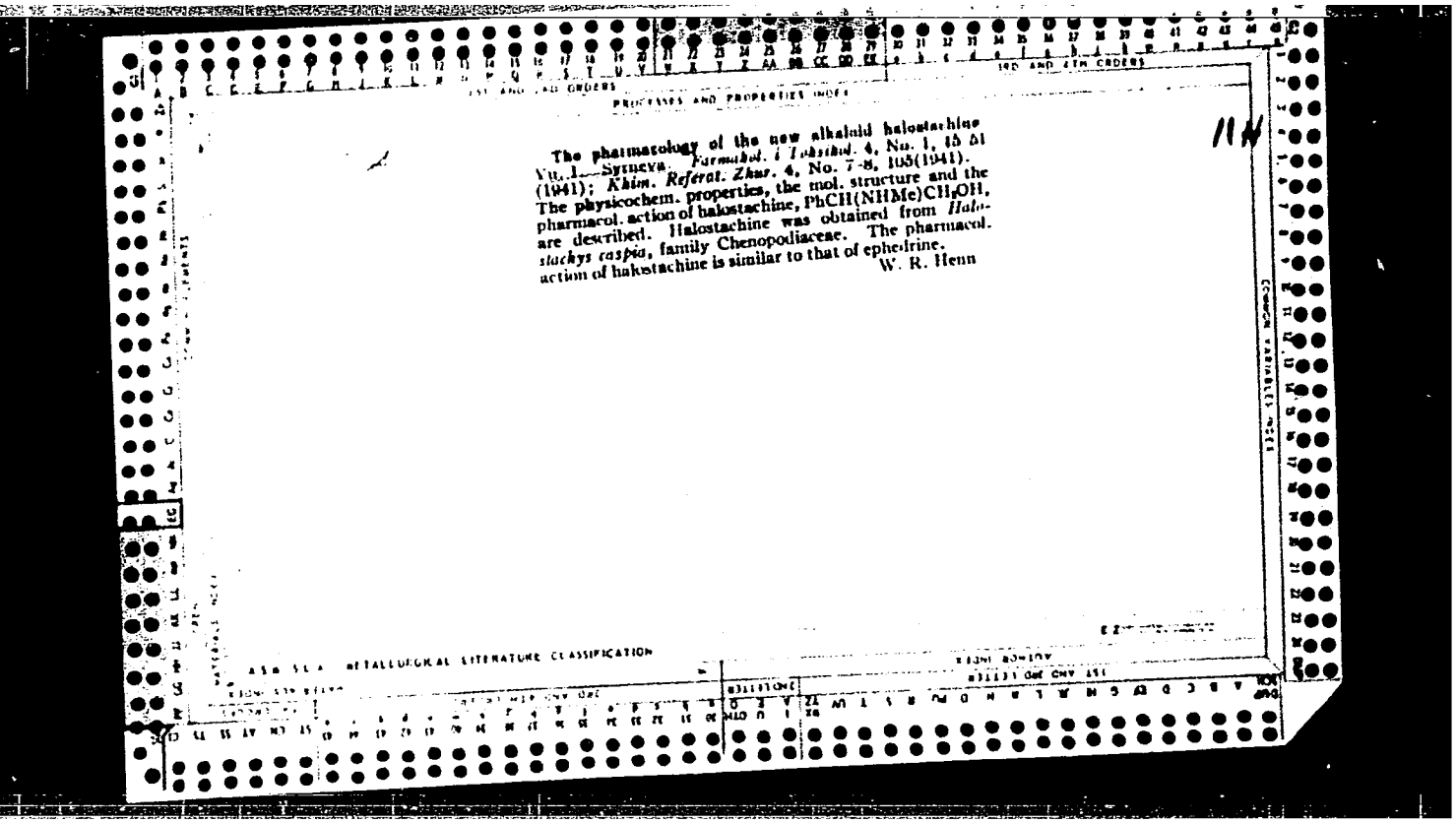
TRUNOV, B.V. ; SYRNEVA, L.V.

Complexes of aminobenzoic acids and their salts with dinitroben-
zenes. Izv.TPI 111:3-5 '61. (MIRA 16:9)
(Benzoic acid) (Nitrobenzene)

ZYRNEVA, N.V.; FOMINOVA, R.M.;

Determining the equilibrium constants in the process of complex formation of aminobenzoic and aminooxobenzoic acids and their sodium salts with dinitrobenzenes. Izv.vys. ucheb.zav.;fiz. no. 2:46-48 '64. (MIRA 17:6)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.



PROCESSES AND PROPERTIES INDEX

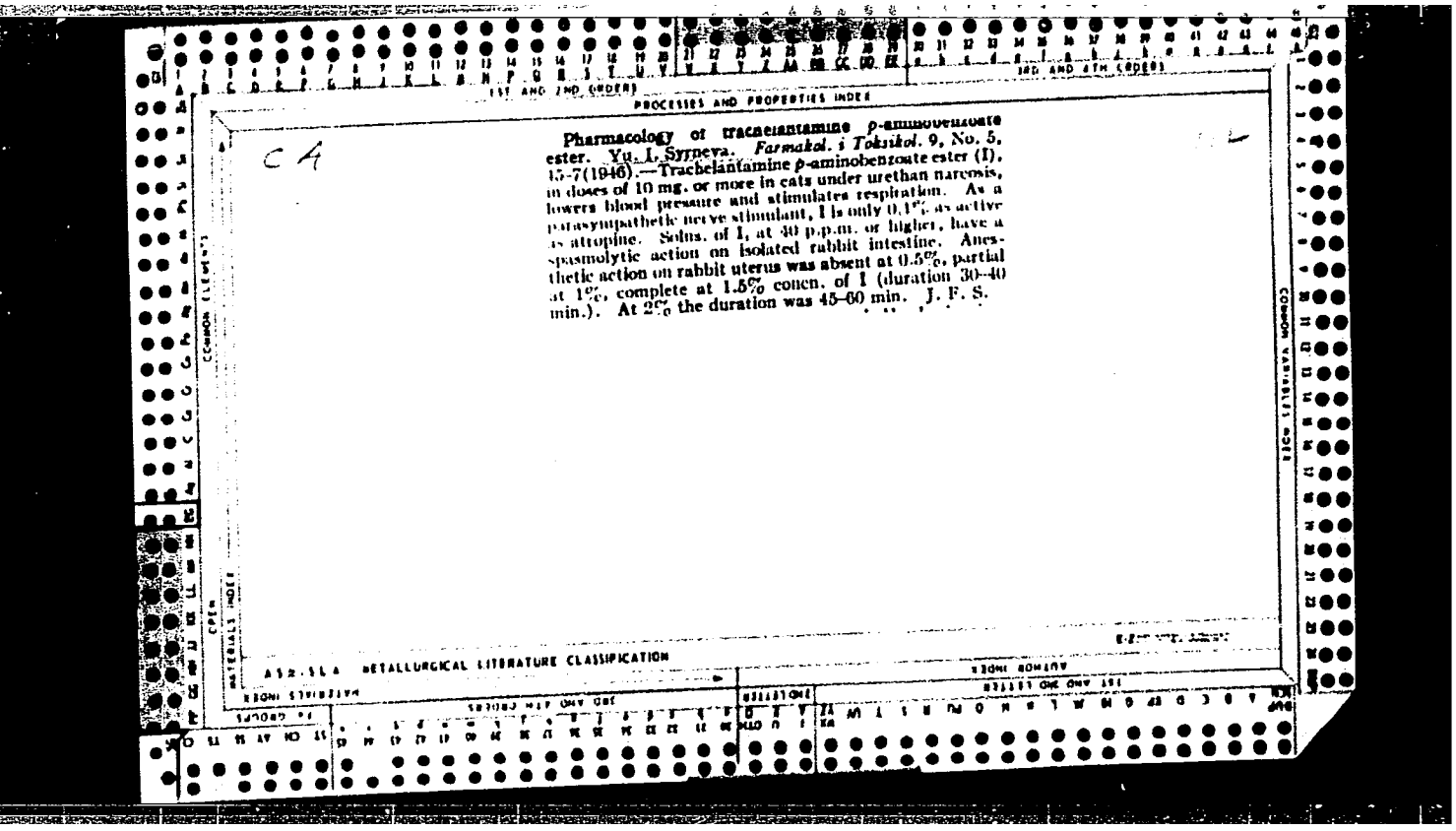
The pharmacology of the new alkaloid halostachine
Vul, I.—Syrnova. *Farmakol. i Toksikol.* 4, No. 1, 15 Δl
(1941); *Khim. Referat. Zhur.* 4, No. 7-8, 105(1941).
The physicochem. properties, the mol. structure and the
pharmacol. action of halostachine, $PhCH(NHMe)CH_2OH$,
are described. Halostachine was obtained from *Halo-*
*stachys caspia*, family Chenopodiaceae. The pharmacol.
action of halostachine is similar to that of ephedrine.
W. R. Henn

11 H

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

SYRKINA, M. I.

"On the Pharmacology of Migrin," 9, No. 6, 194 . Mar. Dept. Pharmacology, Inst. Pharmacology, Toxicology and Chemotherapy, Min. Medical Industry, SSSR, -1946-.

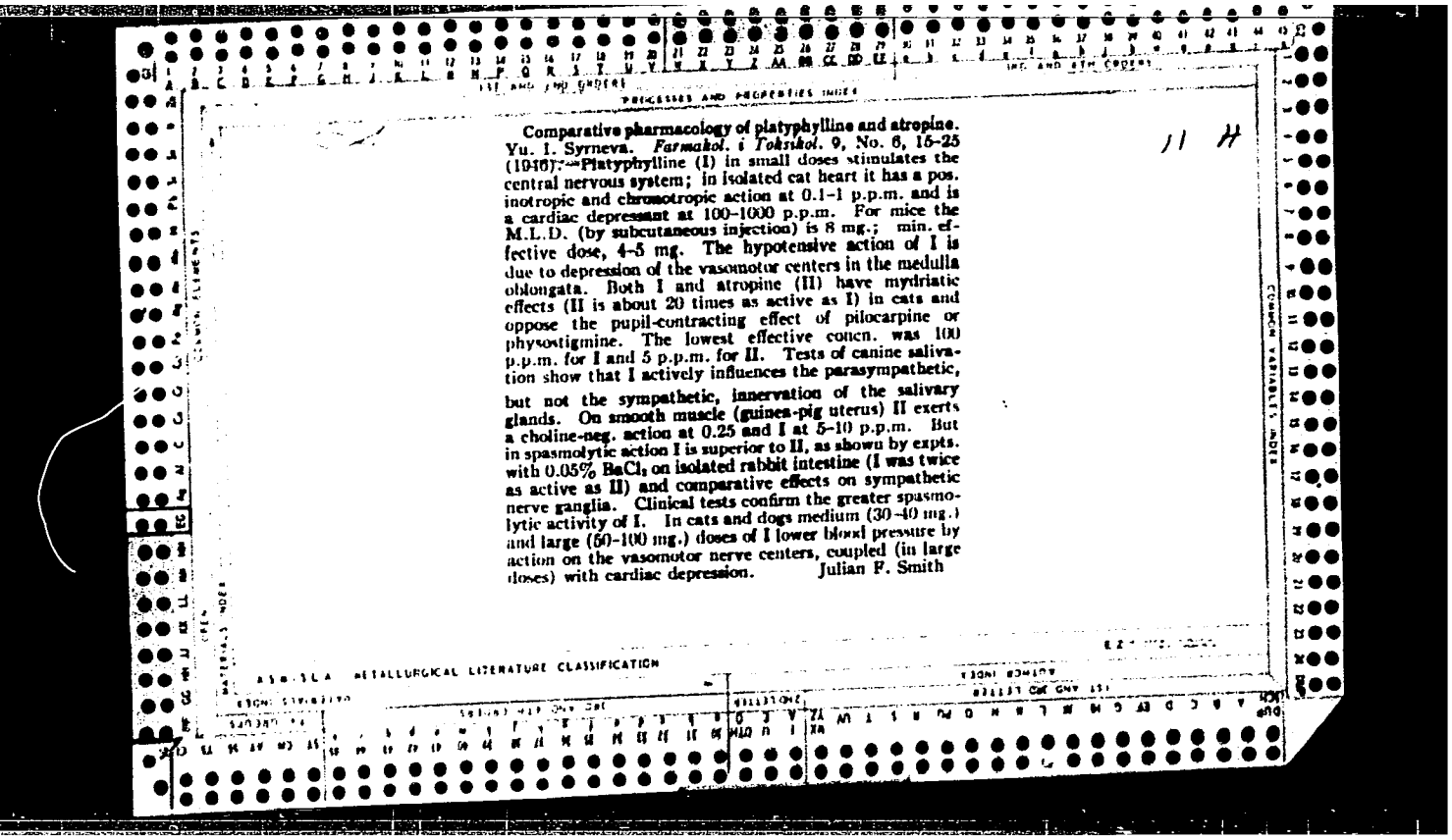


PROCESSES AND PROPERTIES INDEX

C 4

**Pharmacology of tracheiantamine** *p*-aminobenzoate ester. Yu. I. Syrneva. *Farmakol. i Toksikol.* 9, No. 5, 15-7(1946).—Trachelantamine *p*-aminobenzoate ester (I), in doses of 10 mg. or more in cats under urethan narcosis, lowers blood pressure and stimulates respiration. As a parasympathetic nerve stimulant, I is only 0.1% as active as atropine. Solns. of I, at 30 p.p.m. or higher, have a spasmolytic action on isolated rabbit intestine. Anesthetic action on rabbit uterus was absent at 0.5%, partial at 1%, complete at 1.5% concn. of I (duration 30–40 min.). At 2% the duration was 45–60 min. J. F. S.

A52-51A METALLURGICAL LITERATURE CLASSIFICATION



Comparative pharmacology of platyphylline and atropine. Yu. I. Syrneva. *Farmakol. i Toksikol.* 9, No. 6, 15-25 (1946).—Platyphylline (I) in small doses stimulates the central nervous system; in isolated cat heart it has a pos. inotropic and chronotropic action at 0.1–1 p.p.m. and is a cardiac depressant at 100–1000 p.p.m. For mice the M.L.D. (by subcutaneous injection) is 8 mg.; min. effective dose, 4–5 mg. The hypotensive action of I is due to depression of the vasomotor centers in the medulla oblongata. Both I and atropine (II) have mydriatic effects (II is about 20 times as active as I) in cats and oppose the pupil-contracting effect of pilocarpine or physostigmine. The lowest effective concn. was 100 p.p.m. for I and 5 p.p.m. for II. Tests of canine salivation show that I actively influences the parasympathetic, but not the sympathetic, innervation of the salivary glands. On smooth muscle (guinea-pig uterus) II exerts a choline-neg. action at 0.25 and I at 5–10 p.p.m. But in spasmolytic action I is superior to II, as shown by expts. with 0.05% $BaCl_2$ on isolated rabbit intestine (I was twice as active as II) and comparative effects on sympathetic nerve ganglia. Clinical tests confirm the greater spasmolytic activity of I. In cats and dogs medium (30–40 mg.) and large (50–100 mg.) doses of I lower blood pressure by action on the vasomotor nerve centers, coupled (in large doses) with cardiac depression. Julian F. Smith

Syrn. A., Yu. I.

Evaluation of the biologic assay of extracts of Adonis vernalis and Convallaria majalis on cats. Yu. I. Syrneva and P. N. Abramova (All-Union Sci. Research [illegible]idze Chem.-Pharm. Inst., Ministry of Health, U.S.S.R.). *Aptechnoe Delo* 2, No. 6, 38–41(1953).—The cat and frog methods are equiv. in assaying prepns. of *C. majalis*. In the case of *A. vernalis* frogs are to be preferred because they are less subject to seasonal and individual variations. Cats ought to be used only when frogs are unavailable. A. S. M.

SYRNEVA, YU. I.

✓ Pharmacological properties of procaine amide, a new agentic for cardiac arrhythmia. Yu. I. Syrneva. *Farmakol. i. Toksikol.* 18, No. 4, 27-9(1955).—Procaine amide, a Soviet-made pronestyl, at 25–50 mg./kg. in narcotized cats desensitizes cardiac muscle and slows auricle-to-ventricle impulse transmission. It impedes development of arrhythmia under elec. stimulation, and relieves arrhythmia induced by aconitine. The Soviet and imported prepns. are identical in m.p., pharmacol. properties, and toxicity.
Julian F. Smith

1

SYRNEVA, Yu. I.

V

COUNTRY : USSR
CATEGORY : Pharmacology and Toxicology. Ganglionic Blocking Agents
ABS. JOUR. : RZhBiol., No. 5 1959, No. 23096

AUTHOR : Syrneva, Yu. I.
INST. :
TITLE : Nanofin, a New Ganglionic Blocking Drug

ORIG. PUB. : Med. prom-st' SSSR, 1957, No 6, 42-43

ABSTRACT : Nanofin (N) (hydrochloride of the isomer of 2,6-dimethylpiperidine) is a synthetic optic racemate of one of the alkaloids contained in Nanophyton erinaceum. N is little toxic. Its ganglionic blocking action exceeds the action of tetraethylammonium by 5-7 times. The decrease of arterial pressure in animals (within the limits of 40 mm of mercury), following intravenous introduction

A-U Sci Res Chem Pharm Inst im Ordzhonikidze

Card: 1/3 25

V

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 5 1959, No. 23096

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

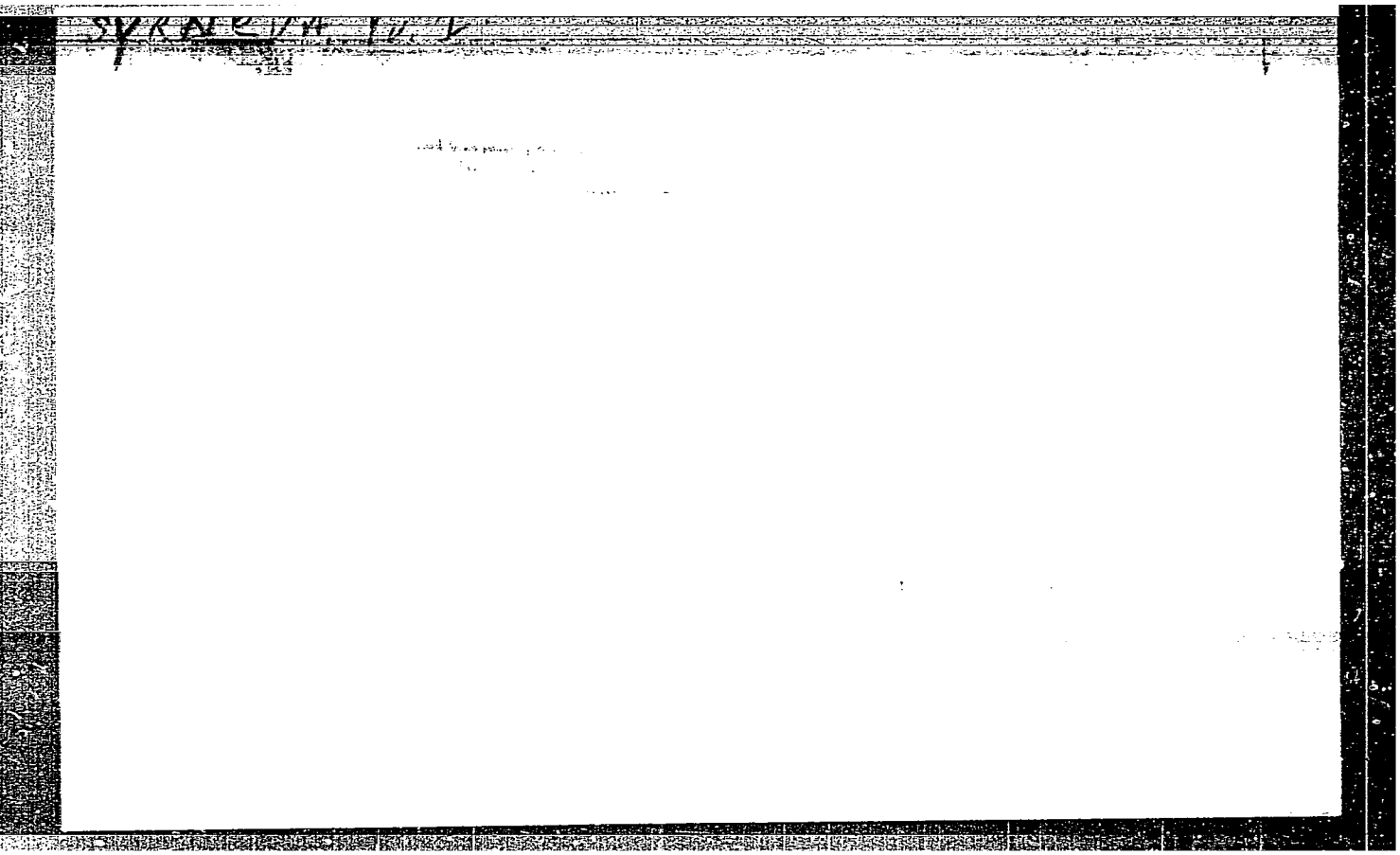
ABSTRACT : function. It is prescribed, per os, in doses of
cont'd 0.1-0.2 g, 2-3 times a day; subcutaneously and intravenously, in doses of 1 ml of 2% or 5% solution, 2-3 times a day. Average duration of the treatment is 3-4 weeks.-- E. I. Kandel'

Card: 3/4 f3

SYRNEVA, Yu.I.

Relation between the structure and the effect of certain aryl amino alcohols [with summary in English]. Farm. i toks. 20 no.4:7-14 Jl-Ag '57. (MIRA 10:11)

1. Otdel farmakologii (zav. - prof. M.D.Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S.Ordzhonikidze.
(ALCOHOLS,
aryl amino alcohols, relation of structure to eff. (Rus))



SYRNEVA, Yu.I.

Relation of structure to the effect on the adrenoreactive system of certain aryltetrahydrooxazoles. Farm. i toks. 20 no.6:15-20 N-D '58 (MIRA 11:6)

1. Otdel farmakologii (zav. - prof. M.D. Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze.
(SYMPATHOMIMETICS,
aryltetrahydrooxazoles, review (Rus))

SYRLEVA, Yu.I.

The antispasmodic drug, hexamidine. Med.prom. 13 no.1:56-57 Ja '59. (MIRA 12:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(PYRIMIDINE) (ANTICONVULSANTS)

5 (3)

AUTHORS: Danilova, A. V., Utkin, L. M., Kozyreva, G. V., Syrneva, Yu. I.

SOV/79-29-7-72/83

TITLE: A New Alkaloid Which Is an Isomer of Platyphyllin (Novyy alkaloid, izomernyy platifillinu)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2432-2436 (USSR)

ABSTRACT: Platyphyllin bitartrate is prepared from the broadleaved Senecio platyphyllus. As to its chemical structure the platyphyllin is a diester of platynecin and the senecinic acid (Ref 1). In the processing of the industrially manufactured alcoholic mother liquids a new base which had been called neoplatyphyllin was obtained on separation and recrystallization of platyphyllin bitartrate. As to composition and functional groups, this new base is identical with platyphyllin. Their basicity and infrared absorption spectra (Fig) show little difference, but as far as the physical properties are concerned, the neoplatyphyllin and its salts differ from platyphyllin and its salts. The bitartrate of neoplatyphyllin shows well pronounced cholinolytic and spasmolytic properties. As to activity and mode of action it is closely related with platyphyllin, but it is twice as toxic. Alkaline and acid hydrolysis of both compounds yield the same

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products. The authors assume that the difference between both bases is due to the steric configuration of the acid component of their molecules because, as is known, the "necinic" acids with double bonds show in addition to the optical isomerism also the geometrical one (Ref 2). The structure of the senecinic acid corresponds with the formula (I) (Ref 3). In order to investigate further the properties of both compounds the alkaloids were reduced with $LiAlH_4$. The resultant trivalent alcohols had to possess structure (II), according to the structure of the senecinic acid. The chemical and spectroscopic results obtained confirm the assumption of the authors that the different spatial configuration of the esterifying acids is the cause of the difference between neoplatyphyllin and platyphyllin. The formation of a trivalent alcohol from the senecinic acid, by treating it with alkali liquor, which is qualitatively different from the alcohols obtained by direct reduction of the alkaloids, confirms the observation that the "necinic" acids separated by alkaline hydrolysis of the alkaloids of the species Senecio possess a configuration which differs from that in which they enter into the composition of the alkaloid molecules. There are 1 figure

A New Alkaloid Which Is an Isomer of Platyphyllin SOV/79-29-7-72/83

and 3 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemicopharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: May 25, 1958

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21

SYRNEVA, Yu.I.

Pharmacology of nanofin. Khim. i med. no.15:70-76 '60.
(MIRA 15:1)

1. Iz otdela farmakologii (zav. - prof. M.D.Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze.
(PIPERIDINE--PHYSIOLOGICAL EFFECT)

SYRNEVA, Yu.I.; ABRAMOVA, P.N.

Data on comparative studies of the activity of crystalline cymarin and a standard liquid Adonis preparation on R. tempraria. Farm.i toks. 23 no.6:521-525 N-D '60. (MIRA 14:3)

1. Otdel farmakologii (zav. - prof. M.D.Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze.
(ADONIS) (CARDIAC GLYCOSIDES)

SYRNEVA, Yu.I.

Relationship between the structure and effect of certain 2,6-dimethylpiperidine derivatives on the choline reactive systems. Farm. toks. 24 no.3:304-309 My-Je '61. (MIRA 15:1)

1. Otdel farmakologii (zav. - prof. M.D.Mashkovskiy) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S.Ordzhonikidze.
(PIPERDINE) (CHOLINE) (NERVOUS SYSTEM)

SYRNEVA, Yu.I.; SUKHININA, G.P.

Data on a comparative test of crystalline convallatoxin and liquid standard Convallaria on frogs. Farmakol.toksik. 26 no.3: 323-327 My-Je'63 (MIRA 17:2)

1. Laboratoriya biologicheskogo kontrolya (rukovoditel' - kand. med. nauk Yu.I.Syrneva) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S. Ordzhonikidze.

SYRNEVA, Yu.I.; SUKHININA, G.P.

Pharmacological properties of β-chloroethyldifurfurylamine. Farm. i toks. 28 no.1:33-36 Ja-F '65. (MIRA 18:12)

1. Laboratoriya biologicheskogo kontrolya (zav. - kand.med.nauk Yu.I.Syrneva) Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta imeni S.Ordzhonikidze, Moskva.
Submitted October 30, 1963.

[illegible], A.I., [illegible]

Surgical treatment of perforating ulcers of the stomach and duodenum. Khir. klinich. zab. Sar. gos. med. inst. 44:286-290 '64. (MIRA 18:7

1. Iz kliniki fakul'tetskoy khirurgii (nav. - prof. I.M. Kapetyan (deceased)) Saratovskogo meditsinskogo instituta (rektor - dotsent N.S. Ivanov).

L 15732-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JW

ACC NR: AP6000893 SOURCE CODE: UR/0181/65/007/012/3689/3690

AUTHORS: Petrov, M. P.; Smolenskiy, G. A.; Syrnikov, P. P.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Nuclear magnetic resonance in $RbMnF_3$

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3689-3690

TOPIC TAGS: nuclear magnetic resonance, rubidium, fluorine, line shape, line broadening

ABSTRACT: Measurements of the nuclear magnetic resonance were made on the Rb and F nuclei at room temperature, using a weak-oscillation generator. The $RbMnF_3$ were synthesized from the cold RbF and $MnCl_2$ by heating to a temperature ~700C. It was found that the magnetic field acting on the F and Rb nuclei in the polycrystal is not equal to the external applied field. In the case of $^{19}F$, the NMR line had

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L 15732-66

ACC NR: AP6000893

an asymmetrical shape, while that of $^{87}Rb$ had a Lorentz shape. The ratio $\alpha = \Delta H/H_0$ where $\Delta H$ is the supplementary magnetic field on the nucleus, was $0.022 \pm 0.003$ and $-(1.9 \pm 0.2) \times 10^{-3}$ for F and Rb, respectively. In the case of measurements on polycrystalline $RbNiF_3$ with hexagonal structure, no resonance was observed on $^{87}Rb$, probably because of quadrupole broadening and the NMR line of $^{19}F$ had a complicated form with $\alpha = 0.0058$. Authors thank A. G. Tutov for an x-ray analysis of the crystal and S. A. Kizhayev for magnetic measurements.

SUB CODE: 07/ SUBM DATE: 14Jul65/ ORIG REF: 002/ OTH REF: 003

Card 2/2

L 26063-66 EWT(1)/EWT(m)/T/EWP(w)/EWP(t) IJP(c) JD/HW/JG

ACC NR: AP6015808 SOURCE CODE: UR/0386/66/003/010/0416/0419

58
57
B

AUTHOR: Smolenskiy, G. A.; Yudin, V. M.; Syrnikov, P. P.; Sherman, A. B.

ORG: Institute of Semiconductors, Academy of Sciences SSSR (Institut poluprovodnikov Akademii nauk SSSR)

TITLE: The transparent hexagonal ferrimagnet $RbNiF_3$

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 10, 1966, 416-419

TOPIC TAGS: antiferromagnetism, magnetic moment, saturation magnetization, magnetic anisotropy, rubidium compound, Curie point

ABSTRACT: Since investigations of the magnetic properties of $RbNiF_3$ have hitherto been confined to the paramagnetic regions and to polycrystals, the authors have investigated the magnetic properties of single-crystal $RbNiF_3$, using a magnetic balance and the Faraday method, in fields from 2 to 14 koe, both above and below the magnetic-transition temperature. The single crystals have been obtained by an exchange decomposition reaction at 960C. They are transparent in visible light, and have the interesting feature that in the temperature interval from 77 to 900K they change their color continuously from bright green to pink. The resistivity at room temperature exceeds $10^{11}$ ohm-cm, and the dielectric constant is of the order 5--6. Large and perfect crystals (15 x 5 x 5 mm) without cleavage planes can be obtained with relative ease. The dependence of the paramagnetic susceptibility on the temperature has a

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form characteristic of ferrimagnets. The magnetic ordering sets in at 145K. Plots were obtained of the magnetic moment at 77K against the field intensity and against the temperature in the direction along the hexagonal axis and perpendicular to it. From these plots it is possible to estimate the field of negative uniaxial anisotropy at 77K (~25 koe) and the sum of the magnetic anisotropy constants ($K_1 + K_2 \simeq -0.4 \times 10^6$ erg/cm$^3$). The results are interpreted from the point of view of the collinear model of ferrimagnetism. The value obtained on this basis for the specific magnetization is 18 G-cm$^3$/deg. Although the obtained value of the saturation magnetization per formula unit at 0°K is found to be somewhat lower than the theoretical value (~2/3 Bohr magnetons), the difference is attributed to the high temperature of the experiment (more than half the Curie temperature). The results show that on approaching the Curie point the anisotropy constants decrease rapidly, and this gives rise to a spontaneous magnetic moment. It is concluded on the basis of all the data that $RbNiF_3$ is a transparent ferrimagnet of the ferroxplan type. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 25Mar66/ ORIG REF: 001/ OTH REF: 003

L 23028-66 EWT(l)/EWT(m)/T IJP(c) JD/HW

ACC NR: AP6009660 SOURCE CODE: UR/0181/66/008/003/0783/0787

AUTHORS: Pisarev, R. V.; Belyayeva, A. I.; Syrnikov, P. P.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Structure of energy levels and exchange interaction of $Co^{2+}$ ions in $NaCoF_3$

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 783-787

TOPIC TAGS: energy band structure, cobalt compound, single crystal, light absorption, optic transition, line shift

ABSTRACT: The authors investigated the spectrum of optical absorption of $NaCoF_3$ in the interval from 5,000 to 30,000 $cm^{-1}$ (2 -- 0.33 μ). The single crystals were obtained by chemical reaction of NaCl with $CoF_2$. The experiments were made in tightly sealed platinum crucibles. The absorption spectra were investigated in the ultraviolet and

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L 23028-66
ACC NR: AP6009660

visible regions using diffraction spectrographs (DFS-8 and DFS-12) and a double prism monochromator (DMR-4). The measurements were made at 4.2, 20.4 -- 60, 77, and 295K. The observed absorption bands are identified with transitions inside the 3d electron shell of the $Co^{2+}$ ion in a cubic crystalline field. It is shown that near 35K one of the absorption lines is strongly shifted, owing to the transition of the $NaCoF_2$ into a magnetically-ordered state. It is observed that at low temperatures the state $^2E(^2H)$ splits into two lines ($\Delta\nu = 36$ cm$^{-1}$), one of which disappears when the temperature is raised to 60K. The possibility that this splitting is due to exchange interaction between the paramagnetic ions is discussed, although the data obtained so far do not prove this completely. The authors thank G. A. Smolenskiy for interest in the work and a discussion of the results, V. V. Yeremenko for a discussion of the results, and E. V. Matyushkin for help with the measurements. Orig. art. has: 4 figures, 2 formulas and 1 table.

SUB CODE: 20/ SUBM DATE: 24Jul65/ ORIG REF: 002/ OTH REF: 005

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L 24379-66 EWT(m) JD/HW

ACC NR: AP6009702 SOURCE CODE: UR/0181/66/008/003/0975/0977

AUTHOR: Pisarev, R. V.; Prokhorova, S. D.; Syrnikov, P. P.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Changes in the intensity of the electronic transitions of the $Mn^{2+}$ and $Ni^{2+}$ ions in the antiferromagnet $NaNi_{0.96}Mn_{0.04}F_3$

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 975-977

TOPIC TAGS: antiferromagnetic material, manganese, nickel, light absorption, electron transition, absorption spectrum, line intensity, spectral line

ABSTRACT: The authors report on an investigation of the intensity of the electronic transitions of both $Mn^{2+}$ and $Ni^{2+}$ in the antiferromagnets $NaNiF_3$ and $NaNi_{0.96}Mn_{0.04}F_3$, by measuring the optical absorption in a broad spectral interval, making it possible to draw certain definite conclusions concerning the growth of the transition intensity. The absorption spectra were investigated photmetrically with a double prism monochromator (DMR-4). The results (Fig. 1) show the effect of a mutual influence of the $Mn^{2+}$ and $Ni^{2+}$ ions, resulting in an increase in the intensity of certain absorption lines of these ions. The greatest interaction was observed in those regions of the spectrum where both ions have closely lying levels, provided that the symmetry principles impose no limitations on the possible interaction. It is concluded that the greatest role in the observed intensification of the spectral-line intensity is probably played by exchange interaction between 3d-ions. The transitions responsible for

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ACC NR: AP6009702

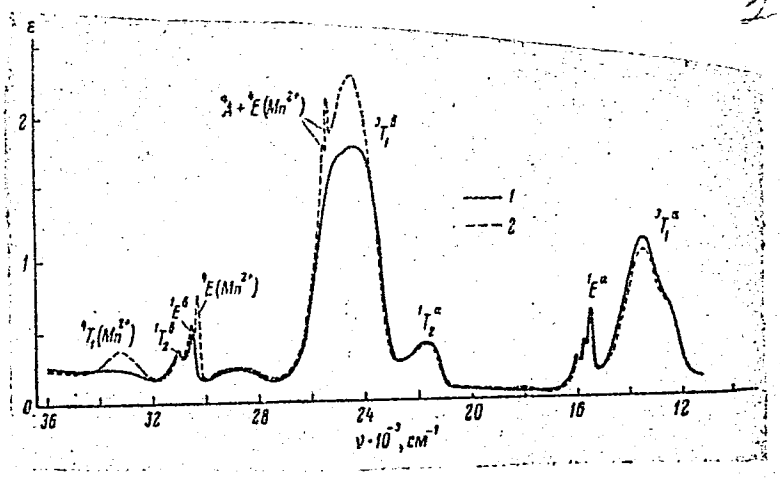


Fig. 1. Absorption spectrum of single crystals of $NaNiF_3$ (1) and $NaNi_{0.96}Mn_{0.04}F_3$ (2) at 77K. ε -- coefficient of molecular extinction

the different spectral lines are briefly analyzed and the absorption spectra evaluated and compared with other data. The authors thank G. A. Smolenskiy for interest in the work and valuable remarks, and P. V. Usachev for a chemical analysis of the crystals. Orig. art. has: 1 figure and 1 table.

SUB CODE: 07 / SUBM DATE: 21Oct65/ OTH REF: 002

Card 2/2

ACC NR: AP6033557 SOURCE CODE: UR/0181/66/008/010/2965/2969

AUTHOR: Smolenskiy, G. A.; Yudin, V. M.; Syrnikov, P. P.; Sherman, A. B.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: The transparent hexagonal ferrimagnet $RbNiF_3$

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2965-2969

TOPIC TAGS: rubidium compound, magnetic property, magnetic susceptibility, magnetic anisotropy, Curie point, magnetic structure

ABSTRACT: The purpose of the investigation was to study the magnetic properties of single-crystal $RbNiF_3$, both above and below the magnetic-transition temperature, in view of the fact that they were hitherto investigated only in the paramagnetic region in single-crystal form. Transparent $RbNiF_3$ crystals with low dielectric losses can be of interest for modulation of light beams in microwave devices at low temperatures. The single crystals were obtained by exchange decomposition at high temperatures. The magnetic properties were investigated with a magnetic balance by the Faraday method in fields from 2 - 14 kOe. The apparatus was described earlier (FTT v. 6, 3668, 1964) and was modified to accommodate anisotropic crystals. The reciprocal magnetic susceptibility was measured as a function of the temperature and the magnetic-moment components were determined as functions of the field intensity at different temperatures. The results confirm that $RbNiF_3$ is a ferrimagnet of the ferroxplan type with a Curie

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ACC NR: AP6033557

temperature of 145K. The magnetic structure and the magnetic anisotropy of $RbNiF_3$ exhibit a complicated variation which can be interpreted from the point of view of the assumption that as the temperature is increased the magnetic structure changes from one with an easy-magnetization plan to one having a cone of easy-magentization directions. Orig. art. has: 6 figures and 5 formulas.

SUB CODE: 20/ SUBM DATE: 03Mar66/ ORIG REF: 002/ OTH REF: 005

Card 2/2

ACC NR: AP7005318 SOURCE CODE: UR/0181/67/009/001/0021/0026

AUTHOR: Nesterova, N. N.; Siniy, I. G.; Pisarev, R. V.; Syrnikov, P. P.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Infrared absorption spectrum of the antiferromagnets $NaCoF_3$, $KCoF_3$, and $RbCoF_3$

SOURCE: Fizika tverdogo tela, v. 9, no. 1, 1967, 21-26

TOPIC TAGS: antiferromagnetic material, ir spectrum, absorption spectrum, absorption edge, spin orbit coupling

ABSTRACT: The authors investigated the optical absorption of these antiferromagnets (with perovskite structure) in the region 750 - 2000 $cm^{-1}$ at 77 and 295K. One of the purposes of the investigation was to determine the influence of the exchange interaction and to obtain a clear cut spectrum. The single crystals were grown from the melt and the absorption spectra were measured with an IKS-21 spectrometer. All the compounds exhibited an absorption band near 1200 $cm^{-1}$ and weak bands at the absorption edge of the lattice. The 1200 $cm^{-1}$ band is identified with the $\Gamma_8 \rightarrow \Gamma_7$ transition between the split levels of the orbital triplet. When the temperature is decreased from 295 to 77K, an increase of 40 $cm^{-1}$ in the half-width of this absorption band is observed in $KCoF_3$, and decreases of 55 and 20 $cm^{-1}$ are observed in the half-widths of the absorption bands in $RbCoF_3$ and $NaCoF_3$. The results show that the spin-

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ACC NR: AP7005318

orbit interaction constant does not depend on the crystalline field. The authors thank G. A. Smolenskiy for continuous interest in the work and a discussion of the results and S. D. Prokhorova for many measurements. Orig. art. has: 4 figures, 2 formulas, and 2 tables.

SUB CODE: 20/ SUBM DATE: 16Apr66/ ORIG REF: 004/ OTH REF: 010

Card 2/2

SYRNIKOV, V.P., sanitarnyy vrach

Occupational poisoning caused by preparing dry Ascomycetes. Zdrav. Belor. 5 no.1:53 Ja '59. (MIRA 12:7)

1. Gomel'skiy oblastnoy soyuz potrebitel'skikh kooperativov.
(MUSHROOMS--PHYSIOLOGICAL EFFECT)

Syrnikov, Ye. P.

USSR/Physical Chemistry - Solutions. Theory of Acids and Bases, B-11

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 494

Author: Syrnikov, Ye. P.

Institution: Leningrad Academy of Forest Technology

Title: On the Structure of Ionic Solutions

Original Periodical: Tekhn. inform. po rezul'tatam nauch.-issled. rabot. Leningr. lesotekhn. akad., 1956, No 38, 64-70

Abstract: Solvation is due to 2 effects: the formation of a stable envelope around the ion and changes in the structure of the "free" portion of the solvent under the action of the electrostatic fields of the ions. If, according to the views of Hall (Hall, Phys. Rev., 1948, 73, No 7), we consider water to be composed of 2 types of structures which are in dynamic equilibrium, we can write the equation $\Delta F = \Delta F_0 - \alpha\sqrt[3]{n^2}$, where $\Delta F$ and $\Delta F_0$ are the differences in the free energy of the indicated structures in the presence and in the absence of an external field, n is the mole fraction of the dissolved salt, and $\alpha$ is a

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MIKHAYLOV, I.G.; SYRNIKOV, Yu.P.

Sound velocity and structure of liquids. Vest. LGU 8 no.2:81-98 F '53. (MIRA 12:7)
(Ultrasonic waves--Speed) (Liquids)

SYRNIKOV, Yu. P., Cand Phys-Math Sci -- (diss)"Condensability of electrolyte solutions and certain problems of the theory of these solutions." Len, 1958. 11 pp (Len Order of Lenin State Univ im A. A. Zhdanov), 150 copies (KL, 35-58, 105)

SyRNIKOV, Ya. P.

24(1) PHASE I BOOK EXPLOITATION SOV/3150

Vsesoyuznyekaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov

Primeneniye ul'traakustiki k issledovaniyu veshchestva; trudy konferentsii, Vyp. 7 (Application of Ultrasonics for Analysis of Substances; Transactions of the All-Russian Conference of Professors and Teachers of Pedagogical Institutes, Nr 7) Moscow, Izd. MOPI, 1958. 283 p. 1,500 copies printed.

Tech. Ed.: S. F. Zhitov; Eds.: V. F. Nozdrev, Professor, and S. B. Kudryavtsev.

PURPOSE: This book is intended for physicists, technicians, aeronautical engineers and other persons concerned with ultrasonics.

COVERAGE: The book contains twenty eight articles which treat ultrasonic phenomena in five general categories: 1) historical data on the development of ultrasonics in the Soviet Union over the past forty years; 2) the speed of sound in suspensions of varying concentration and number and type of components and the relationship between sound velocity and the compressibility of electrolytes; 3) ultrasonic investigations of physical and chemical properties of materials and the determination of physical and chemical constants, e.g. density of aqueous solutions, adiabatic compressibility of solutions (with given temperatures), viscosity, surface tension, carbon content and petrographic state of coal 4) saturation pressure and also ultrasonic investigation of the carbonations of ultrasonics, e. g. emulsification industrial applications of textile fibers and enhancing the susceptibility of some synthetic fibers to dyeing, etc.; and 5) apparatus which produce ultrasonic waves. No personalities are mentioned. References accompany each article.

SOV-46-4-3-1/18

AUTHORS: Mikhaylov, I.G., Solov'yev, V. A., Syrnikov, Yu. P.

TITLE: The Main Problems of Contemporary Molecular Acoustics (Osnovnyye problemy sovremennoy molekulyarnoy akustiki)

PERIODICAL: Akusticheskiy Zhurnal, 1958, Vol 4, Nr 3, pp 211-222 (USSR)

ABSTRACT: This is a review of the present state of molecular acoustics. Both Western and Russian work is considered. In view of the relative simplicity of ultrasonic methods the velocity of sound has been measured in a very large number of liquids. The velocity has been correlated with various macroscopic and microscopic properties of liquids and various empirical rules have been suggested. Among these rules is the one due to Rao. The authors point out that in their opinion Rao's rule does not summarise any special molecular mechanism. This is shown above all by the approximate nature of this result and its limited range of applicability. The correct way of developing theoretical molecular acoustics would be to calculate the compressibility and hence the velocity of sound, rather than to try and find a theoretical foundation for Rao's law. However, as is well known, this is very difficult and has not as yet been done. Some attempts have been made to calculate the velocity of sound directly from

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molecular considerations (Refs.6 and 7) but in these attempts the velocity was obtained not through a solution of the kinetic equation but by using very approximate models. These calculations give the right order of magnitude for the velocity of sound but they are quite useless in providing information on the actual structure of the particular liquid. Relaxation theory points to a connection between volume viscosity and irreversible processes leading to equilibrium. Some work on this has been done by Mandel'shtam and others (Refs.16 and 17). In the authors' opinion, Frenkel's theory gives the most correct physical picture of the structure of liquids. Unfortunately, at the present time the mathematical apparatus of this theory is not sufficiently developed. The authors consider that a development of Frenkel's theory in general, and its application to the calculation of compressibilities in particular, would be of major value in the present context. Among the problems discussed in the present review is the problem as to whether relaxation processes are

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the only reason for the existence of volume viscosity. The authors consider that it is. On the experimental side it is pointed out that in many experiments on the absorption of sound in liquids the intensity of the ultrasonic waves was not taken into account. On the other hand, it has been established (Refs.52-54) that the coefficient of absorption does depend on the intensity even for relatively low amplitudes. Another experimental point is that measurements of absorption of ultrasonic waves should be carried out in a wider frequency range. There are no figures or table, 57 references, of which 26 are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy Universitet (Leningrad State University)

SUBMITTED: September 14, 1957.

1. Acoustics 2. Sound--Velocity 3. Liquids--Acoustic properties

54-10-2-1/16

AUTHORS: Mikhaylov, I.G., Syrnikov, Yu.P.

TITLE: The Compressibility of Electrolyte Solutions and the Influence Exerted by Ions on the Structure of Water (Szhimayemost' rastvorov elektrolitov i vliyaniye ionov na strukturu vody)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fiziki i khimii, 1958, Vol.10., Nr 2 , pp. 5-14 (USSR)

ABSTRACT: Abundant experimental material concerning the velocity of sound and the compressibility of electrolyte solutions is at present available. Much is, however, still unclear and there is a considerable difference in opinions concerning the interpretation of these data. It is known that all anomalies of water are connected with its structure. A mere study of quality cannot, however, help to clear up existing contradictory data, and therefore a thorough qualitative analysis is necessary. In the present paper the authors succeeded to find comparatively simple correlations which, basing on one point of view, provide a sufficient explanation for experiments with solutions as well as experiments relating to changes caused in water under pressure. When studying the compressibility of electrolyte solutions 2 effects must be

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taken into account: a) The influence exercised by ions on the structure of water, and b) the presence of an ion lattice in the solution. When investigating the influence exercised by ions upon the structure of water it is advisable to distinguish between 2 effects: a) Hydration, and b) the influence exercised by ions on the so-called "free water". The influence exercised by the ion lattice upon the temperature of the maximum of sound velocity in the solution was phenomenologically taken into account by B.B.Kudryavtsev (Ref 9). When setting up the formula for the temperature of the minimum of the compressibility of the solution the presence of the ion lattice was taken into account according to a similar method. From the correlations obtained it follows that the influence exercised by ions on the structure of the "free water" tends to shift this minimum into the range of higher temperatures, i.e. the ions act upon water in the same manner as pressure. This shifting of the minimum into the domain of higher temperatures is, above all, due to the structural part of compressibility. The presence of an ion lattice tends to shift the minimum into the domain of lower temperatures. As the analysis of the total formula for the temperature of the compressibility

minimum of the solutions shows, a decisive part is played in the case of low concentrations by the first-, and in the case of medium and high concentrations by the second effect. Herefrom it may be seen that the aforementioned contradictions can be explained by the ideas developed in this paper. There are 5 figures, and 11 references, 7 of which are Soviet.

SUBMITTED: December 25, 1957

AVAILABLE: Library of Congress

1. Electrolytes--Properties--Theory 2. Electrolytes--Effects of ions

MIKHAYLOV, I.G.; SYRNIKOV, Yu.P.

Compressibility of electrolyte solutions and the influence of ions on the structure of water [with summary in English]. Vest. LGU 13 no.10:5-14 '58. (MIRA 11:6)

(Liquids, Kinetic theory of)
(Electrolytes)
(Water)

20-118-4-37/61

AUTHOR: Syrnikov, Yu. P.

TITLE: On the Character of the Interaction Between Anions and Water Molecules in a Solution
(O kharaktere vzaimodeystviya anionov s molekulami vody v rastvore)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4, pp. 760-762 (USSR)

ABSTRACT: At the physical faculty of the State University Leningrad the acoustic properties of solutions of electrolytes are at present investigated. This work gives additional data which are necessary for the explanation of some of these properties. The author her implies the interaction of an ion with the nearest adjacent watermolecule by the term hydratation. When a cation is hydrated, the watermolecule with its electronegative part posses to the cation and the interaction of the cation with the watermolecules differs in its character essentially from the binding of the water-molecules among each other. According to this also the structure of the hydrate shell of the cation must differ

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from the structure of pure water. Quite another case is the hydration of an anion: The anion represents an electronegative atom or an electronegative atom group and the watermolecule associates with its electropositive part - with the proton. On this occasion immediately several watermolecules associate with the anion and protons combine with it. The surplus electrons of the anion are distributed on several protons and the interaction of the anion with the watermolecules of its hydrate shell has donor-acceptor-character. An electron partly falls to the share of each acceptor-proton. Such a binding resembles or equals a hydrogen binding. The quantitative compution of such an interaction has great difficulties and therefore the experimental control of this conception is of interest. The authors here performed measurings of the infrared absorption of ion solutions in the range 1,35-1,60 $\mu$ (first harmonic of the group O-H). These measurements were made at the Forestry Engineering Academy (Lesotekhnicheskaya akademiya) by a non-registering spectrophotometer with a glass optical system. The solutions of 8 salts with 4

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different anions were investigated and the results of the computations are illustrated in diagrams. In the ion solutions (even at saturation concentration) the absorption bands in first approximation are in the same range as also in the case of pure water, i.e. the molecules which are combined with the anion thus come into interaction with it in the same way as the molecules of water among each other. The energy of this interaction for several anions differs from the energy of the binding of the molecules among each other. In a solution of $KNO_3$ the absorption band has 2 maxima. After the here discussed deliberations the here shown ideas on the character of the interaction of the anion with the watermolecules agree with the spectroscopic data. Furthermore the structure of the hydrate shell of the anion seems to resemble the structure of water itself. From this point of view also the results by A. Pasynskiy (reference 7) are easy to understand. There are 4 figures, and 7 references, 5 of which are Soviet.

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On the Character of the Interaction Between Anions and Water Molecules in a Solution

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im A. A. Zhdanova (State University imeni A. A. Zhdanov, Leningrad ) Leningradskaya lesotekhnicheskaya Akademiya (Leningrad Forestry Engineering Academy)

PRESENTED: June 17, 1957, by I. I. Chernyayev, Member, Academy of Sciences USSR)

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