

Khion, Ya. V.

USSR/ Mathematics - Topology

Card 1/1 Pub. 22 - 7/47

Authors : Khion, Ya. V.

Title : Regulated associative rings

Periodical : Dok. AN SSSR 101/6, 1005 - 1007, Apr. 21, 1955

Abstract : Regulated associative rings were studied and results presented. The study was accomplished with the help of defined concepts of the following: the embossed ideal, embossed sub-ring, and embossed sub-group. (Definition: A subset A of a regulated set B is called embossed in the B , if $b \in A$ when $a_1, a_2 \in A, b \in B$ and $a_1 \leq b \leq a_2$). One USSR reference (1954).

Institution : M. V. Lomonosov State University, Moscow

Presented by: Academician P. S. Aleksandrov, December 21, 1954

Khion, Ya. V.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow,
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Suprunenko, D. A. (Minsk). Linear Nilpotent Groups. 35

Turkin, V. K. (Moscow). Quasi-monomial Representations
of Groups. 35

Urazbayev, B. M. (Alma-Ata). On Some Asymptotic Formulas
in Algebra. 35-36

Mention is made of Delone, B. N. and Fadeyev, D. K.

Khion, Ya. V. (Tartu). Rings Normed by Means of Semi-groups. 35-36

Chernikov, S. N. (Molotov). Nilpotent Groups. 37-40

Mention is made of Kurosh, A. G., Schmidt, O. Yu., Ado, I. D.,
Mal'tsev, A. I., Myagkov, N. N., Mukhamedzhan, Kh. Kh.,
Glushkov, V. M., Golovin, O. N., Sesekin, N. F., Smirnov, D. M.,
Plotkin, B. I., Charin, V. S.

Card 12/80

SUBJECT
AUTHOR
TITLE
PERIODICAL

Khion, Ya.V.
USSR/MATHEMATICS/Algebra
KHION Ya.V.
Ordered semigroups.
Izvestija Akad.Nauk 21, 209-222 (1957)
reviewed 7/1957

CARD 1/3

PG - 908

The set P is called an ordered semigroup if 1) P is closed with respect to the associative multiplication defined in it; 2) P is a (linear) ordered set; 3) for all $\alpha, \beta, \gamma \in P$ from $\alpha \geq \beta$ there follows: $\alpha\gamma \geq \beta\gamma$ and $\gamma\alpha \geq \gamma\beta$; 4) in P there exists an element 0 with the property $\alpha 0 = 0\alpha = 0$, $0 \leq \alpha$ for every $\alpha \in P$; 5) from $\alpha\gamma = \beta\gamma \neq 0$ it follows $\alpha = \beta$ and from $\gamma\alpha = \gamma\beta \neq 0$ it follows $\alpha = \beta$ for all $\alpha, \beta, \gamma \in P$.

A subset A of the semigroup P is called subsemigroup in P if A is closed with respect to the multiplication defined in P . A subset A of the semigroup P is called a right ideal in P if from $\alpha \in A$ and $\zeta \in P$ it follows $\alpha\zeta \in A$. A subset A of an ordered semigroup P is called convex in P if from $\alpha_1, \alpha_2 \in A$ and $\alpha_1 \leq \beta \leq \alpha_2$ it follows $\beta \in A$. If in an ordered semigroup P a convex two-sided ideal I is given, then with respect to it a new ordered semigroup can be formed which is denoted as a factor semigroup of P with respect to I : P/I . $\bar{\alpha} \in P/I$ corresponds to the element $\alpha \in P$. From $\alpha \in I$ it follows $\bar{\alpha} = \bar{0}$.

Izvestija Akad.Nauk 21, 209-222 (1957)

CARD 2/3

PG - 908

Let from $\alpha \geq \beta$ follow $\bar{\alpha} \geq \bar{\beta}$. Let $\bar{\alpha}\bar{\beta} = \overline{\alpha\beta}$. For an element α of an ordered semigroup we have either $\alpha^2 < \alpha$ or $\alpha^2 = \alpha$ or $\alpha^2 > \alpha$. The set of those α for which $\alpha^2 \leq \alpha$ is called K and these α are called integral.

Elements being different from zero, for which $\alpha^2 = \alpha$, are called unities. Let M be the set of integral elements which are no unities. If P contains no non-trivial convex two-sided ideals, then P is called simple.

Theorem 1: K and $P \setminus K$ are convex subsemigroups in P .

Theorem 2: Every convex subset in K which contains the element 0 is a two-sided ideal in K .

Theorem 3: Beside of the elements M , K contains at most one element $\bar{\varepsilon}$. If $M \neq K$, then M is a maximal convex two-sided ideal in K ; the ideal M is a prime ideal in K and the factor semigroup

K/M consists of the elements $\bar{0}$ and $\bar{\varepsilon}$, where $\bar{\varepsilon}^2 = \bar{\varepsilon}$.

Theorem 4: If I is a convex right (left) ideal in P and $I \neq P$, then $I \subset M$.

Theorem 5: The totality N of all nilpotent elements of an ordered semigroup P is a convex two-sided ideal in P . N is the union of all right nilpotent ideals of P . The factor semigroup P/N has no zero divisors. N is called the radical of P .

Theorem 6: If $P \neq M$, then in P it exists a non-trivial maximal convex

Izvestija Akad. Nauk 21, 209-222 (1957)

CARD 3/3

PG - 908

two-sided ideal \mathcal{A} . The factor semigroup P/\mathcal{A} contains no non-trivial convex two-sided ideals.

Theorem 7: A simple ordered semigroup contains no non-trivial convex one-sided ideals.

In an ordered semigroup archimedean classes are introduced as follows: let $\alpha \geq \beta$ and $\alpha, \beta \in K$, then α and β have to belong to a class if it exists an n such that $\alpha^n \leq \beta$. Let $\alpha \geq \beta$ and both α and β non-integral, then α and β have to belong to a class if it exists an n such that $\alpha \leq \beta^n$.

Theorem 8: The decomposition into archimedean classes is a decomposition into pairwise disjoint convex subsemigroups. Every decomposition of P into pairwise disjoint convex subsemigroups can be continued up to a decomposition into archimedean classes.

Some further theorems concern integral ordered groups, the notion of congruence being determined by the decomposition into archimedean classes and so-called archimedean semigroups.

AUTHOR
TITLE

KHION YA.V.

38-3-2/7

PERIODICAL

The Rings normalized with the help of half-groups.
(Kol'tsa, normirovannyye pri pomoshchi polugrupp, - Russian)
Izvestia Akad. Nauk SSSR, Ser. Mat. 1957, Vol 21, Nr 3,
pp 311-328 (USSR).

ABSTRACT

The theory of these rings is here developed upon the basis of the theory of ordered half-groups. The attempt can be made to transfer the conception of norm from the fields to the rings, so that the axiom $\| a b \| = \| a \| \| b \|$ is conserved. If, however, it is intended to normalize sufficiently voluminous classes of rings (e.g. rings with zero divisors), also normalization with the help of ordered half-groups (and not merely with half-groups) must be admitted. The present work discusses the generalizations in this direction.

The first chapter gives a definition of the conception "normalized ring" and discusses the connection between a ring and a normalizing half-group. One of the theorems

CARD 1/2

38-3-2/7

The Rings normalized with the help of half-groups.

mentioned here says: For any ordered half-group P there exists a ring R , which is normalized with the help of this half-group. The next chapter deals with the most simple properties of a normalized ring and the ideal. The maximum convex ideal and the simple normalized rings are then dealt with. Thus, a simple normalized ring contains no non-trivial unilateral convex ideals. The following chapter investigates whole normalized rings, i.e. such rings as have been normalized with the help of a whole ordered half-group. In this and in the preceding chapter a considerable number of theorems is mentioned. In conclusion the ordered rings are investigated.
(No Illustrations)

ASSOCIATION: not given.
PRESENTED BY: A.N. KOLMOGOROV, member of the Academy.
SUBMITTED: 23.12. 1955.
AVAILABLE: Library of Congress.

CARD 2/2

KHION, Ya.V.

Partially ordered semigroups in which the characteristic convex
subsemigroups do not intersect. Izv. AN SSSR. Ser. mat. 27 no.1:
67-74 Jan-F '63. (MIRA 16:2)

(Groups, Theory of)

KHIPKOVA, G. A.

Dissertation: "The Effect of Some Physicochemical Factors on the Fluidity of Cement-Producing Slime." Cand Tech Sci, Novocherkassk Polytechnic Inst, Novocherkassk, 1953

SO: Referativnyy Zhurnal, No. 5, Dec 1953, Moscow, AN USSR, (W-30928)

KHIRA LAL; PETRIY, O.A.; PODLOVCHENKO, B.I.

Electrolytic oxidation of organic matters on platinized
platinum at hydrogen adsorption potentials. Dokl. AN SSSR 158
no.6:1416-1419 0 '64. (MIRA 17:12)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.
Predstavleno akademikom A.N. Frumkinym.

KHIRA LAL; PETRIY, O.A.; PODLOVCHENKO, B.I.

Role of adsorption of intermediate reaction products in the
electrooxidation of methanol in an acid solution. *Elektrokhimiya*
1 no.3:316-320 Mr '65. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

GRINSHPUN, L.Ya.; PYLAYKIN, P.A.; KHIRDZHIYEV, S.G.; PERTSOVSKAYA, Ye.V.

Tanks on powerful borizontal hydraulic presses for the extrusioⁿ of
aluminum alloys. Kuz.-shtam.proizv. 6 no.1:21-24 Ja '64.

(MIRA 17:3)

L 1359-66 EWT(m)/EWP(t)/ EWP(k)/EWP(h)/EWA(h)/EWA(c) JD/HW
ACCESSION NR: AP5024359 UR/0286/65/000/015/0024/0024
621.984.2

36
B

AUTHOR: Yefimov, L. A.; Sysoyev, P. M.; Fylaykin, P. A.; Shtin, L. M.;
Khirdzhiyev, S. G. 44,55 44,55 44,55 44,55

TITLE: A multilayer container for the extrusion process. Class 7, No. 173195
44,55 18

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 24

TOPIC TAGS: metal extrusion, metallurgic process

ABSTRACT: This Author's Certificate introduces a multilayer container for the ex-
trusion process. The device is built up from several hoops fitted concentrically
one over the other. To economize on costly steels and lighten the container, spac-
ers are placed between two or several pairs of hoops. These spacers are made in
the form of hoops which are cut away in one or several places along the generatrix.

ASSOCIATION: none
SUBMITTED: 27Mar64
NO REF SOV: 000

ENCL: 01
OTHER: 000

SUB CODE: IE, MM

Card 1/2

L 1359-66

ACCESSION NR: AP5024359

ENCLOSURE: 01

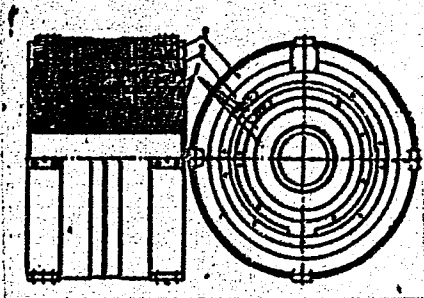


Fig. 1. 1--hoops; 2--spacer; 3--outside hoop

Me
Card 2/2

L 15329-66 INT(d)/INT(m)/INT(v)/T/INT(k)/INT(h)/INT(l) DJ

ACC NR: AP6001006

(N)

SOURCE CODE: UR/0286/65/000/022/0077/0077

AUTHORS: Pylaykin, P. A.; Khirdzhiyev, S. G.

ORG: none

32
B

TITLE: Hydraulic cylinder. Class 47, No. 176470 [announced by Scientific Research Construction Technological Institute of Heavy Machine Construction of Uralmashzavod (Nauchno-issledovatel'skiy konstruktorsko-tehnologicheskii institut tyazhelogo mashinostroyeniya Uralmashzavod)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 77

TOPIC TAGS: hydraulic device, hydraulic equipment

ABSTRACT: This Author Certificate presents a hydraulic cylinder including a case with a flange mounted on a fixed support by means of a ring. To decrease the stress at the support points of the flanges, to increase the reliability of the cylinder mounting, and to increase the wear resistance, an elastic element is placed between the outer surface of the case flange and the inner surface of the fixed support (see Fig. 1). To ensure the mechanical properties of the elastic element capable of withstanding the pressure of the working medium in the cylinder, the elastic element is reinforced.

Card 1/2

UDC: 621-222.1 621.888.6

L 15329-66
ACC NR: AP6001006

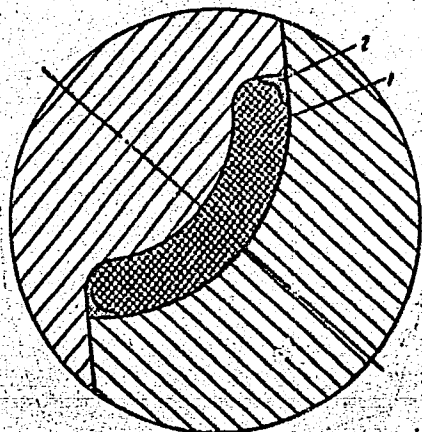


Fig. 1. 1 - Elastic element; 2 - reinforcing.

Orig. art. has: 1 diagram.

SUB CODE: 13/

SUBM DATE: 22Oct64

Card 2/2 *7mb*

ACCESSION NR: APL011134

S/0182/64/000/001/0021/0024

AUTHORS: Grinshpun, L. Ya.; Py*laykin, P. A.; Khirdzhiyev, Ye. V.;
Pertsovskaya, Ye. V.TITLE: Containers of high power horizontal hydraulic presses for pressing
aluminum alloys

SOURCE: Kuznecino-shtampovochnoye proizvodstvo, no. 1, 1964, 21-24

TOPIC TAGS: hydraulic press, press container, 5KhNV steel, 5KhNM steel, 5KhNM2
steel, 38Kh2N3M steel, 3Kh2N2MVF steel, 27Kh2N2MVF steelABSTRACT: The technological requirements of containers for pressing Al alloys
were limited by the temperatures up to 430C, specific stresses up to 50 kg/mm²,
and the maximum press force 12 000 T. A commonly used container consisted of a
frame and a conical bushing. Both the frame and the bushing were made of high-
alloy steels 5KhNV or 5KhNM. They had a number of shortcomings associated with
the shape of the bushing and the metal used. For this reason, several research
projects leading to the design of more suitable containers were undertaken at

Card 1/3

ACCESSION NR: AP401134

the Uralmashzavod (Ural Machine Plant). The new types had multilayer frames and cylindrical bushings (see Fig. 1 of the Enclosure). The problem of obtaining steels with high mechanical properties ($\sigma > 150 \text{ kg/mm}^2$) at 480C has not yet been solved. The steels studied so far were: 5KhNM2, 38Kh2N3M, 3Kh2N2MVV and 27Kh2N2MVV. A standard mathematical procedure for calculating the strength of a multilayered thick-wall cylinder subjected to internal pressure is presented. Orig. art. has: 1 table, 3 figures, and 2 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 14Feb64

ENCL: 01

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/3

L 35976-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6016042 (N) SOURCE CODE: UR/0185/66/011/005/0502/0506 69

AUTHOR: Khirich, I.Ya. 66
B

ORG: Odessa Technological Institute of the Food and Refrigeration Industry (Odes'kyi tekhnolohichnyy instytut kharchovoyi i kholodil'noyi promyslovosti)

TITLE: Thermoelectric and galvanomagnetic properties of bismuth - antimony single crystals 4 21

SOURCE: Ukrayins'kyi fizychnyy zhurnal, v.11, no.5, 1966, 502-506

TOPIC TAGS: antimony crystal, bismuth crystal, thermal emf, magnetic field, galvanomagnetic effect, thermoelectric property, electric resistance, temperature dependence

ABSTRACT: Samples of Bi_{97%}Sb_{3%}, obtained by the zone leveling method, have been investigated. The variation of the thermal emf in the magnetic field (H=0-15 koe) was measured as a function of temperature.

Card 1/2

L 35976-66

ACC NR: AP6016042

3
The superposition of a magnetic field of 2 koe intensity increases the electromotive force. At a temperature $T=200K$ and $H=15$ koe, the relative change in thermal emf was $\frac{\Delta\alpha}{\alpha} = 0.5\%$. The effect of the

magnetic field intensity on the electric resistance was investigated. At a temperature of $100K$ and $H=15$ koe, the electric resistance amounted to $\frac{\Delta R_H}{R_0} = 14.8\%$. The temperature dependence of the resistivity and Hall

emf were used in determining the carrier concentrations, while the electron and hole mobilities were determined from formulas for isotropic metals. The author thanks V.A.Nayer, I.D.Konozenko, and V.L.Vinets'kiy for their valuable advice and help in this work.

Orig. art. has: 4 figures and 7 formulas. [Based on author's abstract]

[NT]

SUB CODE: 11,20/ SUBM DATE: 06Apr65/ ORIG REF: 003/ OTH REF: 007

Card 2/2

CHIZHIKOV, D.M.; KHIRIK, A.S. [deceased]

Received

Determining thermophysical properties of oxygen and sulfur
compounds of zinc and copper. Trudy Inst. met. no.12:79-84
'63. (MIRA 16:6)

(Zinc compounds--Thermal properties)
(Copper compounds--Thermal properties)

CHIZHIKOV, D.M.; KHIRIK, A.S. [deceased]

Determining thermophysical properties of oxygen and sulfur
compounds of zinc and copper. Trudy Inst. met. no. 12:79-84
'63. (MIRA 16:6)

(Zinc compounds--Thermal properties)
(Copper compounds--Thermal properties)

Khirik, A. S.

USSR/ Engineering - Metal machining

Card 1/1 Pub. 128 - 8/25

Authors : Khirik, A. Sh., Engineer

Title : New principles of heading with swinging punches on rotating automats

Periodical : Vest. mash. 35/4, 35-38, Apr 1955

Abstract : The testing of a new rotary action automatic heading machine is described. The basic kinematic feature of this header is that all its working organs and links execute a uniform rotary motion in one direction. In addition some of its links, e.g., the punches are displaced forward thus creating a rocking (swinging) motion. It is shown that the utilization of rocking punches in the heading automat warrants the possibility of heading even during the rotation of the billets and the working discs. The characteristics of the new automatic heading machine are described. Drawings; illustrations.

Institution :

Submitted :

ANDRUSHKO, A.F., prepodavatel'; VORONKOV, E.N., prepodavatel',
KUBETSKIY, G.A., prepodavatel', MALYSHEV, G.A., prepodava-
tel'; SETYUKOV, L.I., prepodavatel'; SOKOLOV, A.A., prepodavatel';
KHIRIN, A.A., prepodavatel'; SHALIMOVA, K.V., prof.; ENYUTIN, V.V.,
rec., LARIONOV, G.Ye., fakhr. red.

[Specialized guide to semiconductors and semiconductor devices]
Spetsial'nyi praktikum po poluprovodnikam i poluprovodniko-
vym priboram. Moskva, Gos. energ. izd-vo, 1962. 303 p.
(MIRA 15:2)

(Semiconductors) (Transistors)

1982. ADJUSTMENT AND OPERATIONS OF THE ...

PESTRIY, N.V., inzhener; KHIRIN, N.D., inzhener.

Adjusting wetting-type ash removers of centrifugal scrubbers.
Elek.sta. 28 no.9:23-27 8 '57. (MIRA 10:11)
(Scrubber (Chemical technology))

KHIRIN, N.D., inzh.; PESTRIY, N.V., inzh.

Performance of wet ash collectors operating with ashes from milled peat. Teploenergetika 7 no.3:52-56 Mr '60.

(MIRA 13:5)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i rationalizatsii elektrostantsiy.
(Ash disposal)

VOLKOVA, Ye.I., inzh.; KHIRIN, N.D., inzh.; BARYSHNIKOV, A.P., inzh.;
KOZHEVNIKOV, G.A., inzh.; KHOKHRIN, K.G., inzh.; BABKOV, V.A.,
inzh.; VNUKOV, A.K., kand.tekhn.nauk

Starting clutch for draft and blowing machinery and pit mills.
Teploenergetika 8 no.6:31-32 Je '61. (MIRA 14:10)

1. Yuzhnoye otdeleniye Gosudarstvenhogo tresta po organizatsii i
ratsionalizatsii elektrostantsiy.

(Clutches (Machinery))

(Electric power plants--Equipment and supplies)

PESTRIY, N.V., inzh.; KHIRIN, N.D., inzh.; LOZINSKIY, R.P., inzh.,
VESELOV, V.T., inzh.

Studying the model of a wet ash collector with a gas overfeed
system. Teploenergetika 9 no.1:11-14 Ja '62. (MIRA 14:12)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii
i ratsionalizatsii elektrostantsiy.

(Gases--Purification)

(Electric power plants--Equipment and supplies)

VESELOV, V.T., inzh.; DAROVSKIY, Ye.T., inzh.; LOZINSKIY, R.P., inzh.;
KHIRIN, N.D., inzh.

Adjustment and testing of type MP-VTL ash collectors with a
4,500 mm diameter. Teploenergetika 9 no.11:41-45 N '62. (MIRA 15:10)

1. Yuzhnoye otdeleniye Gosudarstvennogo tresta po organizatsii i
ratsionalizatsii rayonnykh elektrostantsiy i setey.
(Fly ash)

L 12,32-65

ACCESSION NR: AP4047340

0

... under which it is obtained. Zn-CdS powders with fine crystalline structure, obtained by different means at different temperatures and with different reagents, were used in the investigations. All the spectra were obtained in unpolarized light at liquid-nitrogen temperature. The reflection spectra were obtained with the ISP-51 spectrophotograph with UF-84 camera, while the radiation and excitation spectra were obtained with the ISP-51 spectrophotograph with an attachment. The excitation spectra were obtained with a 100-watt mercury lamp. The powders have five reflection maxima at liquid-nitrogen temperature, and the luminescence excitation spectra display a similar pattern. Comparison of these spectra shows that the maximum intensity corresponds to a maximum in the reflection spectrum. The blue band in the reflection spectra of cadmium-sulfide powders from different sources and green reflection bands in the spectrum. The blue band has two maxima with positions which vary from sample to sample, while the green band has four maxima at 4445, 4723, 5295, and 6190 Å. The results indicate that the spectra are dependent on the preparation. The results indicate that the opti-

ACCESSION NR: AP4047340

... absorption in the cadmium sulfide is due to impurities and is connected with the violation of the stoichiometry of the crystals. ... has: 3 figures.

ASSOCIATION: Moskovskiy energeticheskiy inatitut (Moscow Power Institute)

SUBMITTED: 28Apr63

ENCL: 00

SUB CODE: OP, IC

NR REF SOV: 009

OTHER: 003

Card 3/3

ACC NR: AF6033438 SOURCE CODE: UR/0051/66/021/004/0456/0459

AUTHOR: Shalimova, K. V.; Khirin, V. N.; Korolev, O. I.

ORG: none

TITLE: Temperature dependence of the absorption, reflection, emission, and excitation spectra and of the quantum yield of luminescence in polycrystalline films of cadmium sulfide

SOURCE: Optika i spektroskopiya, v. 21, no. 4, 1966, 456-459

TOPIC TAGS: cadmium sulfide, absorption spectrum, emission spectrum, excitation spectrum, quantum yield, luminescence spectrum, semiconducting film, temperature dependence

ABSTRACT: This is a continuation of earlier work (DAN SSSR v. 139, 938, 1961) on the temperature dependence of the absorption and reflection of cadmium sulfide films, where a photographic procedure was used. In the present study, the tested polycrystalline films were of hexagonal modification, and were prepared by a thermal sublimation of the initial substance in vacuum, using a procedure described by the authors elsewhere (Kristallografiya v. 8, 774, 1963). The temperature dependence of the spectra and of the quantum yield were measured with an optical system based on a spectrometer (DFS-12), universal monochromator (UM-2), a double monochromator (DMR-4), and a photoelectronic continuous spectrum recorder (FEP-1). The absorption spectra in the temperature range 77 - 300K were plotted with a recording spectrophotometer SF-10. The

Card 1/2

UDC: 535.34 + 535.37.096

ACC NR: APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722020000

use of the spectrophotometer in the present investigation made it possible to determine the absorption coefficient more accurately with allowance for reflection. The results show that all the absorption bands shift toward longer wavelengths with increasing temperature. The shift is linear. In addition, the bands become deformed with increasing temperature and their half-width increases. The quantum yield was also investigated by the authors earlier (Opt. i spektr. v. 20, 1063, 1966). The luminescence spectrum, on the other hand, shifts toward shorter wavelengths, with all bands of the spectrum experiencing an equal shift. The relative quantum yield of the luminescence decreases with increasing temperature. The temperature dependence of the photoluminescence is the same for different excitation wavelengths, agreeing well with the Gurney and Mott relation. Orig. art. has: 3 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 07Apr65/ ORIG REF: 005/ OTH REF: 003

Card 2/2

L 13079-65 EWP(m)/EWP(t)/EWP(b) IJP(c)/AEDC(a)/AS(mp)-2/ESD(c)/ESD(gs)

ACCESSION NR: AP4047358

S/0139/64/000/005/0119/0124

AUTHORS: Shalimova, K. V.; Andrushko, A. F.; Khirin, V. N.; Moro-
zova, N. K.

TITLE: Optical properties of powders of the cubic modification of
cadmium sulfide and their changes in the $\beta \rightarrow \alpha$ phase transition

SOURCE: IVUZ. Fizika, no. 5, 1964, 119-124

TOPIC TAGS: cadmium sulfide, cubic crystal, powder, phase transi-
tion, light absorption, light emission

ABSTRACT: In order to obtain additional information on the mechanism
of absorption and emission of light in CdS, the authors investigated
the spectra of diffuse reflection, emission, and excitation of lu-
minescence of CdS powders of cubic modification, and also investigated
the spectra of β -CdS powders annealed at high temperatures in air and
in vacuum atmosphere. All the spectra were investigated in unpo-

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13079-65

ACCESSION NR: AP4047358

larized light at liquid-nitrogen temperature. The reflection spectra were obtained with an ISP-51 spectrograph with UF-84 camera. The absorption and emission spectra were investigated with the same spectrograph and a photoelectric attachment. The cadmium sulfide powder was precipitated from solutions and heat treated at temperatures from 100°C to 1200°C. One band is observed in PCdS in reflection and in emission at 77K. After heating the PCdS above 540°C, this band at 77K gradually attenuates and vanishes, and is replaced by reflection peaks characteristic of the hexagonal modification of CdS. The emission and reflection spectra show a similar behavior. Fig. art. has: 3 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

DEPOSITED: 28Apr63

ENCL: 00

SUB CODE: OP, 88

NR REF SOV: 010

OTHER: 003

2/2

EWI(1)/EWI(m)/EWP(t)/EWP(b) 11-4 IJP/3 10

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00000000/0084

Belisova, A. V.; Khirin, V. N.; Korolev, O. I.

luminescence of polycrystalline films of cadmium sulfide

1965, no. 1, 1965, 80-84

luminescence, cadmium sulfide, polycrystalline film, spectral
excitation, fine structure

study was made of the spectra of absorption, reflection, excitation, and
luminescence of polycrystalline CdS films

These investigations are of interest because a study
of the spectra of CdS films was never made before. The films were obtained
by thermal sputtering of powder in an atmosphere of argon or hydrogen sulfide in
vacuum with subsequent crystallization on heated and unheated substrates. Samples
of substrates heated below 350C, regardless of the atmosphere in which
they were absorption and emission spectra of the films
of substrates heated above 350C have a fine structure in the excitation.

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AP5006056

reflection, luminescence excitation, and emission spectra, due to transitions be-
tween levels of the excess cadmium atoms and holes. Four
lines at 4670, 4670, and 4740 Å were observed in the excitation spectra of
the films. The spectral distribution of the luminescence of the films was
independent of the resulting wavelength in the 4600-4700 Å region. A fine structure
was observed in the reflection, luminescence excitation, and emission spectra of
the films having hexagonal-symmetry lattice.

energeticheskiy institut (Moscow Power Engineering Insti-

Approved

ENCL: 00

SUB CODE: CP, SS

OTHER: 001

L 42898-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/GG

ACC NR: AP6018447

SOURCE CODE: UR/0051/66/020/006/1063/1065

AUTHOR: Shalimova, K. V.; Khirin, V. N.; Korolev, O. I.

ORG: none

TITLE: Spectral distribution of relative quantum yield for photoluminescence of polycrystalline cadmium sulfide films at 77°K 74
B

SOURCE: Optika i spektroskopiya, v. 20, no. 6, 1966, 1063-1065

TOPIC TAGS: cadmium sulfide, photoluminescence, light excitation, excitation spectrum, absorption spectrum, spectrophotometry, quantum yield, monochromator, semiconducting film, polycrystalline film

ABSTRACT: The absorption, reflectance, excitation and quantum yield of luminescence from polycrystalline cadmium sulfide films at liquid nitrogen temperature (77°K) were investigated. In the corresponding spectra in the 210-360 mμ region, four broad bands with maxima at 330, 290, 240 and 215 mμ were observed while a fine structure consisting of 4-5 bands was observed in the 460-490 mμ region. The spectral distribution of green luminescence of polycrystalline CdS films is independent of the wavelength of the excitation light. The radiation intensity of this luminescence is directly proportional to the intensity of the excitation light over three orders of magnitude. These conclusions are based on a series of measurements carried out by the authors on hexa-

Card 1/2

UDC: 535.37

L 42898-66

ACC NR: AP6018447

gonal CdS polycrystalline films at 77°K. The experimental equipment included a double grating monochromator, a grating spectrometer, universal monochromator, recording spectrophotometer, and a photomultiplier detector. The quantum yield was calculated for given excitation and radiation conditions for samples of CdS films from 0.15 to 1.1 μ thick. All samples exhibited identical spectral distributions of their quantum yield. Spectral distribution of green fluorescence of the CdS film is shown in figure 1.

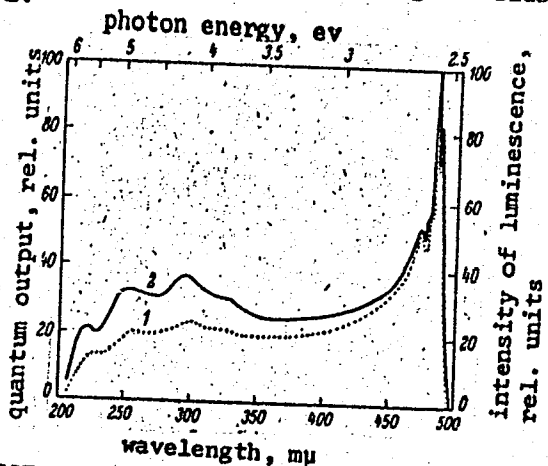


Fig. 1.

Curve 1 shows the spectral distribution of the excitation light for the green luminescence, curve 2 shows the relative quantum yield. Orig. art. has: 3 figures.

SUB CODE: 20/

Card 2/2

SUBM DATE: 07Apr65/

ORIG REF: 006/

OTH REF: 002

GOLIYAT, Yu. S. (Veterinary Doctor, Feremyshl' Inter-District Veterinary Bacteriological Laboratory), KHILIVSKIY, V. A. (Head Veterinary Doctor, Bobr. District, L'vov Oblast). (Abstracted by NOSKOV, A. I.)

"Treating herpes tonsurans with a 50% phenothiazine emulsion".....
Veterinariya, vol. 39, no. 3, March 1962 pp. 27

KHIRMUNSKIY, V. M.

"Sredneaziatskiye narodnye skaziteli (traditsiya i tvorcheskaya improvizatsiya)."
report submitted for 7th Intl Cong, Anthropological & Ethnological Sciences,
Moscow, 3-10 Aug 64.

KHIRNYKH, L.A., inzh.

Testing the remote control system in fields of the Abin Petroleum
Trust. Neftianik 5 no.6:11-12 Je '60. (MIRA 13:7)

1. Neftepromyslovoye upravleniye Abinneft' Krasnodarskogo sov-
narkhoza.
(Abin region (Krasnodar Territory)--Remote control)

GABRIYELOV, L.V.; SHEVTSOV, A.A.; LITVINOV, A.Ya.; KHIRNYKH, L.A.

Automation of group measuring installations. Neftianik 7 no.4:11-13
Ap '62. (MIRA 15:11)

1. Nachal'nik tsekha avtomatiki neftepromyslovogo upravleniya Abinneft' (for Gabriyelov).
2. Glavnyy inzh. neftepromyslovogo upravleniya Abinneft' (for Shevtsov).
3. Starshiy inzh. promyslovoy gruppy tsekha avtomatiki neftepromyslovogo upravleniya Abinneft' (for Litvinov).
4. Starshiy inzh. gruppy telemekhanizatsii tsekha avtomatiki neftepromyslovogo upravleniya Abinneft' (for Khirnykh).
(Kuban--Petroleum--Measurement)
(Automatic control)

ABRUKIN, Abram L'vovich; KHIRNYKH, Leonid Andreyevich; PEREVERZEV,
V.V., red.; GOR'KOVA, A.A., ved. red.; YAKOVLEVA, Z. I.,
tekhn. red.

[Remote control in petroleum production] Telemekhanizatsia
dobychi nefi. Moskva, Gostoptekhzdat, 1962. 302 p.

(MIRA 16:2)

(Remote control)

(Oil fields--Equipment and supplies)

KHIRNYY, N.I., inzhener-podpolkonik; NIKOLAYEV, S.A., inzhener-mayor

Mechanization to replace manual labor. Vest.Vozd.Fl. no.3:61-68
Mr '61.

(Airplanes--Equipment and supplies) (MIRA 14:6)

KHIRNYY, V. P.

Sugar - Manufacture and Refining

How we achieved rhythmic labor. Sakh. prom. 26. No. 6, 1952.

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

ALMAZOV, A.V.; KHIRNYY, Yu.M.

Sources of negative hydrogen ions. Prib. i tekhn. eksp. no. 5:54-58
8-0 '57. (MIRA 10:12)

(Ionization of gases) (Hydrogen)

SOV/120-58-2-13/37

AUTHOR: Khirnyy, Yu. M.

TITLE: A Source of Negative Hydrogen Ions (Istochnik otritsatel'nykh ionov vodoroda)

PERIODICAL: Pribury i Tekhnika Eksperimenta, 1958, Nr 2, pp 51-53 (USSR)

ABSTRACT: The device is based on the high frequency source of positive ions with a longitudinal magnetic field given in Ref.3 and is shown in Fig.1. The negative ions are produced by charge exchange between protons and hydrogen, or deuterons and deuterium, in the capillary of a high frequency ion source (Fig.1). The beam of ions thus produced is accelerated to 20 kev and analysed by a magnet. Analysis of the ion beams shows that the ions coming out from the source are practically monoenergetic. The working life of the source is more than 200 working hours and the amount of hydrogen supplied to obtain a current of 20 μamp (H_1^-) is 28 cc/hour. A similar amount of deuterium gave a current of about 10 μamp of D_1^- . Fig.2 shows the dependence of the current on the diameter of

Card 1/2

A Source of Negative Hydrogen Ions.

SOV/120-58-2-13/37

the capillary. A. V. Almazov is thanked for his supervision.
There are 3 figures and 4 references, of which 1 is Soviet
and the rest English.

SUBMITTED: August 5, 1957.

Card 2/2

1. Hydrogen ions--Sources 2. Ion beams--Analysis

KHIRNYY, Yu. M., CAND TECH SCI, "SOURCE⁹ OF NEGATIVE
HYDROGEN IONS." MOSCOW, 1961. (MOSCOW, ENGINEERING-
PHYSICS INST). (KL, 3-61, 221).

279

21392

S/120/61/000/002/002/042
E032/E114

26.23/2

AUTHORS: Khirnyy, Yu.M., and Kochemasova, L.N.

TITLE: An injector of negative hydrogen ions

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, ⁶/₁ No.2, pp. 14-19

TEXT: The electrostatic generator has retained its importance in nuclear reactor studies since it can be used to produce accelerated particle beams with a very small energy spread. In order to double the energy of particles obtained from electrostatic generators one can use the L.W. Alvarez scheme (Ref.1) whereby negative hydrogen ions are first accelerated by the field between the "earth" and the positive electrode and then, having given up two electrons in a stripping target, they are converted into positive ions which are accelerated again by the field but in the opposite direction. The energy thus obtained corresponds to twice the applied potential. The two ion injectors described in the present paper are designed for this type of application. The stripping target employed by these authors was in the form of a long thin tube with a gas circulated through its middle part. In order to obtain good vacuum and avoid charge exchange on
Card 1/5

21392

S/120/61/000/002/002/042
E032/E114

An injector of negative hydrogen ions

residual gas atoms, the diameter in the tube had to be as small as possible. It was found that the most suitable electron-optical focussing scheme for the negative ions was a combination of a three-electrode lens with an immersion lens. The first of these lenses focusses the beam leaving the source in the immersion lens. The latter is used to match the beam energy to the accelerating voltage of the tube and to stabilize the position of the narrowest part of the beam in its object plane (C.H. Johnson, et al. Rev. Scient. Instrum., 1957, 28, 942. Ref.4). The three-electrode lens consists of electrodes of equal diameter ($D=30$ mm). The length of the middle electrode is 30 mm and the gap between the electrodes is 3 mm. The minimum focal length is about 50 mm. Fig.3 shows a schematic drawing of the H_1^- injector. In this figure, 1 is the source of the negative ions, 2 is the focussing system, 3 is the corrector which is used to adjust the position of the beam, 4 is an electron separator which consists of two permanent magnets and a moveable Faraday cup 5. The latter is used to measure the beam current. The electrodes 6 and

Card 2/ 5

S/120/61/000/002/002/042
E032/E114

An injector of negative hydrogen ions .

9 are used to suppress secondary electron emission, 7 is a valve, 8 is a trap which removes CO_2 which flows in from the stripping target, 11 is a slit and 12 is a second Faraday cup. Fig.5 shows another negative ion injector in which the H_1^- and H_0^- particles are separated by a magnetic field. In Fig.5, 1 is the negative ion source, 2 is a single lens, 3 is the magnetic analyser, 4 is a 4 mm diaphragm, 5 is an immersion lens, 6 is a corrector, 7 is a Faraday cup, 8 is a valve and 9 is a trap. With this arrangement only two lenses are necessary as compared with four in the apparatus described by L.E. Collins and A.C. Riviere (Ref.9: Nucl. Instrum. and Meth., 1959, 4, 121). Moreover, the length of the focussing system of the injector up to the object plane of the tube is smaller by a factor of 20 as compared with the length reported in Ref.9. The beam diameter obtained in the object plane is smaller than in Ref.9 and is practically independent of the input energy. The negative hydrogen-ion injector described in this paper was designed for an electrostatic generator with a working energy of 2×1.5 Mev. ✓
Card 3/5

22392

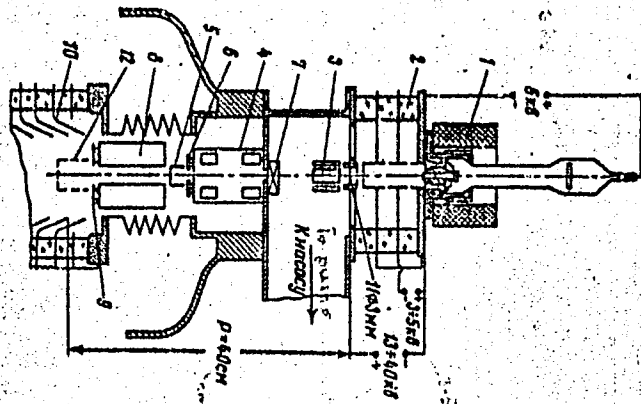
S/120/61/000/002/002/042

An injector of negative hydrogen... E032/E114

There are 5 figures, 3 tables and 9 references: 3 Soviet and 6 non-Soviet.

Acknowledgements are expressed to A.V. Almazov for his interest in this work.

SUBMITTED: May 6 1960



Card 4/5

Fig. 3

S/057/61/031/005/013/020
B104/B205

26. 2312

AUTHOR: Khirnyy, Yu. M.

TITLE: Formation of negative hydrogen ions by protons passing through gas targets

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 597-605

TEXT: The results of an investigation of the content of H_1^- , H_1^+ , and H_1^0 in equilibrium beams, obtained by the passage of protons through H_2 , He, Ne, Ar, CO_2 , and C_3H_8 targets, are presented. Furthermore, data on the scattering of hydrogen beams by such targets are given. In the introduction, data from previous articles are discussed, reference being made to a paper of Ya. M. Fogel' and R. V. Mitin (ZhETF, 30, 450, 1956). The experimental arrangement is shown in Fig. 1. The neutral H_1^0 component in the beam was determined by measuring the current of secondary electrons produced by neutral atoms impinging on the beam catcher. The curve $H_1^-/H_1^+ = f(t_M)$ was drawn for the purpose of determining the thickness of

X

Card 1/9

22782

Formation of negative...

S/057/61/031/005/013/020
B104/B205

the target corresponding to a beam of equilibrium composition. The thickness at which this curve begins to form a plateau was assumed to suffice for generating an equilibrium beam. The H_1^- and H_1^+ currents were measured simultaneously in order to exclude the effect of fluctuations in the beam intensity upon the results of measurement which are diagrammatically represented. Hydrogen target: The composition attained equilibrium at a target thickness of $8.6 \cdot 10^{15}$ atoms/cm² and maintained it up to $2.5 \cdot 10^{16}$. All types of particles in this target were equally scattered. The good agreement between the charge-exchange coefficients and the content of H_1^- ions in the equilibrium beam indicates that protons are slightly scattered while passing through the target. The charge exchange between protons and gas is negligible when charge exchange takes place also between protons and target. The charge-exchange coefficient of H_2^+ ions is much lower than that of protons. Equilibrium composition of a hydrogen beam incident upon a helium target was attained at a thickness of $1 \cdot 10^{16}$ atoms/cm². With a neon target, this state was reached at

Card 2/9

22782

S/057/61/031/005/013/020
B104/B205

Formation of negative...

$0.9 \cdot 10^{16}$ atoms/cm² and remained constant up to a thickness of
 $2.5 \cdot 10^{16}$ atoms/cm²; with an argon target, it was reached at
 $0.6 \cdot 10^{16}$ atoms/cm²; with a carbon dioxide target, at $3 \cdot 10^{15}$ atoms/cm²; and
with a propane gas target, at $5.6 \cdot 10^{15}$ atoms/cm². A. V. Almazov is
thanked for his interest in the work. There are 12 figures, 1 table,
and 13 references: 8 Soviet-bloc and 5 non-Soviet-bloc. The two
references to English-language publications read as follows: Stier et al.,
Phys.Rev., 96, 973, 1954; Collins et al. Nucl.Instr. and Methods, 4, 121,
1959.

SUBMITTED: June 18, 1960

Legend to Fig.1: 1) Ion source; 2) focusing lenses; 3) accelerator tube;
4) electrostatic hyperbolic lens; 5) diaphragm; 6) channel of 6 mm
diameter and 26 mm length; 7) target chamber; 8) beam catcher; 9) palla-
dium capillary; 10) diaphragm; 11) analyzer; 12) beam catcher; 13) to
diffusion pump.

Card 3/9

L 10305-63 EWT(1)/EWT(m)/BDS/ES(s)-2/ES(w)-2--
AFFTC/ASD/ESD-3/SSD-Pt-4/Pab-4--IJP(C)
ACCESSION NR: AP3002714

8/0120/63/000/003/0025/0029

AUTHOR: Khirnyy, Yu. M.; Kochemasova, L. M.

76
69

TITLE: Study of a model of a charge-transfer electrostatic generator

SOURCE: Pribery i tekhnika eksperimenta, no. 3, 1963, 25-29

TOPIC TAGS: charge transfer, electrostatic generator, ion accelerator

ABSTRACT: Construction and performance of a 3-Mev charge-transfer electrostatic generator are described. The design, shown in Fig. 1 of Enclosure, included accelerating porcelain-ring tubes, each 1.5-m long and separated by a section containing a stripping tube 340 mm long by 8 mm in diameter into which carbon dioxide was injected as the stripping agent. Hydrogen was used as the active source and was injected into the accelerating tube in neutral atomic and positive and negative ion form. The beam charging source was 500 w, alternating at 500 cps. The vacuum system consisted of two diffusion pumps with nitrogen traps. The method used for reducing the loading effect of secondary particles on the accelerating tubes was to add grids and to stop the beam down to a 3-mm diameter with a diaphragm, rather than to actually separate out the unwanted particles. Tests on the carbon dioxide injection rate showed that optimum positive ion

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L 10305-63
ACCESSION NR: AP3002714

7

formation occurred at an injection rate of 35 cm sup 3 per hr, or a chamber pressure of 6.5×10^{-5} mm Hg. However, it appeared that the accelerator operation is not very sensitive to this pressure and that one pump capable of 500 l/sec would be adequate. Results show that approximately 70% of the injected ion beam emerges in ion form and 10% as neutral hydrogen atoms. It is concluded that a construction of this type would also meet the demands of a 12-Mev accelerator but that the question of separating out high-speed neutral atoms from the beam needs further investigation. "The authors thank A. V. Almazov, F. F. Myntsov, B. F. Ometov, V. A. Tabachkovskiy, I. G. Sugrovov, and L. H. Budnikov for their help." Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 08May62 DATE ACQ: 12Jul63

ENCL: 01

SUB CODE: 00 NO REF SOV: 003

OTHER: 000

Card 2/3

KHIRNYY, Yu.M.; KOHEMASOVA, L.N.

Analysis of a model for an ion recharge electrostatic generator.
Prib. i tekhn. eksp. 8 no.3:25-29 My-Is '63. (MIRA 16:9)
(Electric generators)

ACC NR: AP7001934

SOURCE CODE: UR/0120/66/000/006/0032/0036

AUTHOR: Khirnyy, Yu. M.; Kochemasova, L. N.

ORG: none

TITLE: Universal injector of negatively charged ions of hydrogen isotopes for a charge exchange generator

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 32-36

TOPIC TAGS: ion source, ion beam, electrostatic generator, charge exchange

ABSTRACT:

A description of an injector is given in which the negatively charged ions are obtained through the charge exchange of the positively charged ions in a supersonic flow of mercury vapor. The injector, shown in Fig. 1, consists of: 1 - a high-frequency source of positively charged ions with a water-cooled gas discharge bulb; 2 - a single lens located 25 mm from the channel of the source probe; 3 - an immersion lens; 4 - a charge-exchange chamber; 5 - a nozzle which creates a supersonic jet from the mercury vapor used as the charge-exchange target; 6 - a trap with liquid nitrogen; 7 - a second single lens; 8 - a vacuum valve which separates the chamber of the deflecting magnet from the charge-exchange chamber; 9 - a deflecting magnet; 10 - plates for the electrostatic corrector; 11 - Faraday cylinder for controlling the beam;

Card 1/3

UDC: 537.534.2

ACC NR: AP7001934

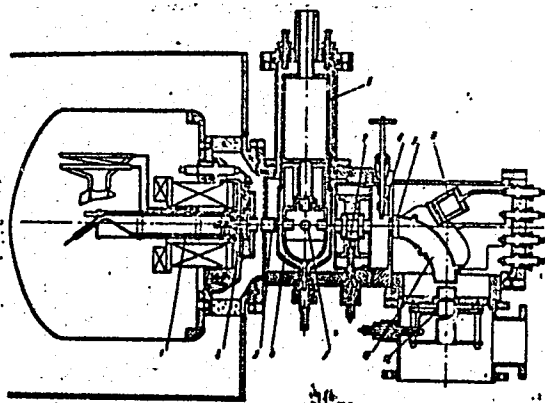


Fig. 1. Schematic of the Injector

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ACC NR: AP7001934

and 12 - a third single lens for focusing the beam at the exit from the injector. The injector was tested for 60 hr on a stand while operating on a D + He mixture. The D_1^- ion current was 14-17 μ a, and the consumption of mixture was 40-65 cm^3/hr . All of the units of the injector were in a normal state after the test and no mercury traces could be found in the chamber of the deflecting magnet or at the exit from the injector. The injector makes it possible to obtain bunches of H_1^- ions of 20-27 μ a, D_1^- ions of approximately 16 μ a, and T_1^- ions of 12-15 μ a. It is also simple to operate. Orig. art.

has: 6 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 19Nov65/ ORIG REF: 004/ OTH REF: 002/
ATD PRESS: 5112

Card 3/3

ACC NR: AP7001935

APPROVED FOR RELEASE: 09/17/2001
AUTHOR: Almazov, A. V.; Khirnyy, Yu. M.; Kochemasova, L. N.

SOURCE CODE: CIA-RDP86-00513R000722020007-1
20/05/005/000/0036/0039

QRG: none

TITLE: Compact duoplasmatron source of negatively charged ions for a charge exchange generator

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 36-39

TOPIC TAGS: ion source, ion beam, electrostatic generator, charge exchange

ABSTRACT:

The description is given of a duoplasmatron (see Fig. 1) with a constant magnet. At a 0.95-mm diameter of the anode aperture and a voltage of approximately 80 kv, the source current reached about 140 μ amp. The injector and source passed the stand test before being installed in the generator. At an aperture of 0.5 mm the source current was 40 μ amp. After 120 hr of constant operation the parameters of the source had not changed. Generally speaking, the source does not require the attention of an operation. Orig. art. has: 6 figures.

Card: 1/2

UDC: 537.534.2

ACC NR: AP7001935

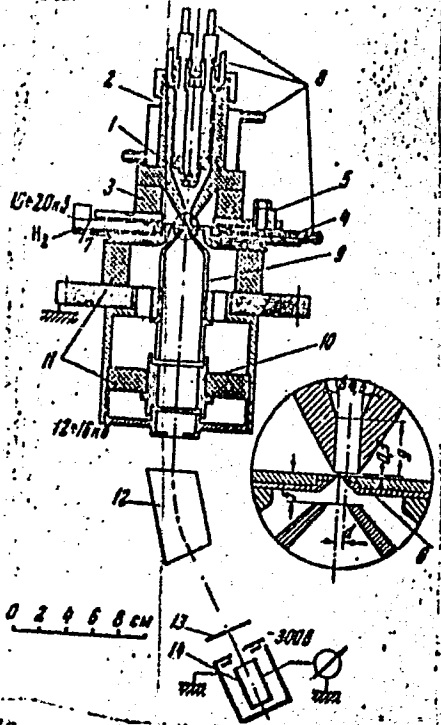


Fig. 1. Schematic diagram of duoplasmatron

- 1 - Cathode; 2 - intermediate electrode (steel); 3 - magnet;
- 4 - anode (steel); 5 - cam;
- 6 - copper insertion; 7 - gap, measured with clearance gage;
- 8 - water cooling pipes;
- 9 - extraction electrode;
- 10 - single lens; 11 - insulators;
- 12 - deflecting magnet;
- 13 - slit; 14 - Faraday cylinder.

SUB CODE: 20/ SUBM DATE: 19Nov65/
ORIG REF: 002/ OTH REF: 007/
ATD PRESS: 5112

Card 2/2

KHIROV, A. A., Cand Agric Sci (diss) -- "The development of a method of investigating first-class pine cultures". Leningrad, 1959. 18 pp (Min Higher and Inter Spec Educ RSFSR, Leningrad Order of Lenin Forestry Engineering Acad im S. M. Kirov), 200 copies (KL, No 10, 1960, 135)

KHIROV, A.A., nauchnyy sotrudnik; DAVIDENKO, L.K., nauchnyy sotrudnik

Pests of pine grafts and their control. Zashch. rast. ot vred.
i bol. 7 no.9:50 S '62. (MIRA 16:8)

1. Borovaya lesnaya opytnaya stantsiya Vsesoyuznogo nauchno-
issledovatel'skogo instituta lesovodstva i mekhanizatsii
lesnogo khozyaystva,

(Buzuluk region--Pine--Diseases and pests)

(Buzuluk region--Insects, Injurious and beneficial--Control)

OGIYEVSKIY, Vasilii Vasil'yevich, doktor sel'khoz. nauk; KHIROV,
Aleksandr Aleksandrovich, kand. sel'khoz. nauk

[Inspection and study of forest plantations; methodological
manual for foresters] Obsledovanie i issledovanie lesnykh
kul'tur; metodicheskoe posobie dlia lesovodov. Moskva, Les-
naia promyshlennost', 1964. 47 p. (MIRA 17:9)

ACC NR: AP6022074

SOURCE CODE: UR/0141/66/009/003/0489/0496

AUTHOR: Giorgadze, N. P.; Khirseli, Ye. M.; Tsintsadze, N. L.

ORG: Institute of Physics , AN GruzSSR (Institut fiziki AN GruzSSR)

TITLE: Disintegrating interaction of waves in magnetoactive plasma

SOURCE: IVUZ. Radiofizika, v. 9, no. 3, 1966, 489-496

TOPIC TAGS: magnetoactive plasma, electromagnetic wave

ABSTRACT: A theoretical study is presented of the disintegrating interaction of waves in a magnetoactive plasma in the simplest case when all wave processes take place along the magnetic field (single-variate problem). The ordinary and extraordinary transverse waves and a longitudinal wave are considered; frequencies of linear transverse waves are assumed to lie far from cyclotron frequencies. The mean power ... of disintegrating generation, the disintegrating dispersion of transverse waves by longitudinal waves, and the disintegrating transformation of transverse waves into longitudinal waves are considered. Finally, the generation of Langmuir oscillations due to a disintegrating interaction of a helicon with a h-f wave is analyzed. Orig. art. has: 60 formulas.

SUB CODE: 20 / SUBM DATE: 22May65 / ORIG REF: 008

Card 1/1

UDC:621.371.182

KHIRVONEN, Kh. P.

Subject : USSR/Electricity AID P - 447
Card 1/1 Pub. 27 - 10/34
Authors : Akodis, M. M., Dr. of Tech. Sci., Brill', M. V. Eng.,
Rudnyy, V. M., Eng., and Khirvonen, Kh. P., Eng.
Title : Study of Reliable Ionic Valve Action of Gas-Filled Tubes
in an Experimental Circuit
Periodical : Elektrichestvo, 7, 52-56, J1 1954
Abstract : Experiments were made with cathode-ray oscillographer in
order to determine the moment of back-fire, the value of
inverse voltage, and the moment of rupture. The depend-
ence of valve action of the I-50/5000 ignitron from the
rate of growth of inverse voltage is presented. 8 dia-
grams, 3 tables and 6 Russian references (1940-53).
Institution : Ural Polytechnical Institute im. Kirov
Submitted : Mr 6, 1954

(VNIPOR).

Submitted : No date

KHIVONTEH, Kh. P., Cand. Tech. Sci.—(disc) "Study of ^a synthetic ~~system~~ ^{system}
for the testing of ion~~ic~~ valves." Sverdlovsk, 1958. 17 pp with drawings
(Min of Higher Education USSR. Ural Polytech Inst in S.M. Nizov. Chair of
High Voltage ^{Engineering} ~~Physics~~), 150 copies. Bibliography at end of text (12 titles)
(ML, 31-58, 104)

-71-

SOV/112-59-4-7854

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4,
pp 204-205 (USSR)

AUTHOR: Khirvonen, Kh. P.

TITLE: Accuracy of Reproducing Real Conditions of Operation of Ionic Rectifying
Devices When the Synthetic Testing Method is Used

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Elektromekhanika, 1958, Nr 2,
pp 114-121

ABSTRACT: An artificial circuit for testing ionic rectifying devices permits
obtaining current and voltage wave-shapes identical with real wave-shapes in
the forward and reverse half-cycles; the circuit ensures absence of the interval
between the moment of terminating the forward current and the moment of
applying the reverse voltage; the circuit secures similarity of switching-angle
conditions. The inductance of the oscillatory circuit is estimated, and the
current error of a low-voltage circuit is presented. It is assumed that if the

Card 1/2

SOV/112-59-4-7854

Accuracy of Reproducing Real Conditions of Operation of Ionic Rectifying . . .

current error does not exceed 10-15% at the beginning of commutation, it is sufficient for a practical equivalence, all the more because the end of commutation is reproduced exactly. In testing under inverter conditions, a complete reproduction of the anode-cathode voltage curve, the required extinction angle, and the rate of voltage change near zero is possible. With some complications, the artificial testing scheme can be made universal; it would be suitable for complete testing of ionic rectifying devices with various parameters in both rectifier and inverter operations. Bibliography: 6 items. (Ural Polytechnic Institute, Sverdlovsk.)

I.L.R.

Card 2/2

KHIRVONEN, Kh.P.

Consumption of electric power in the synthetic method of testing
ionic rectifiers. Trudy Ural. politekh. inst. no.79:93-104 '59.
(Electric current rectifiers--Testing)

S/194/61/000/008/045/092
D201/D304

9.4120

AUTHOR: Khirvonen, Kh.P.

TITLE: The exactness of reproducing real operating conditions of gas-filled rectifiers in an artificial method of analysis

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 28-29, abstract 8 G225 (Tr. Ural'skogo politekhn. in-ta, 1960, v. 77, 71-86)

TEXT: The theoretical analysis is given of an installation for testing gas-filled rectifiers, as developed by the Ural Polytechnic Institute. Equations are derived which permit choosing the inductances and capacitances of the oscillating circuit taking into account current evaluation errors in the circuit operation. It is shown that the most exactly reproduced parameters are the shapes of voltages and currents at small angles of flow. See also RZhE, 1959, 7854. [Abstracter's note: Complete translation] ✓

Card 1/1

9.4120
13.2940

30499
S/194/61/000/008/048/092
D201/D304

AUTHORS: Khirvonen, Kh.P. and Rudnyy, V.M.

TITLE: Experimental study of an artificial arrangement for testing gas-filled rectifiers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 29, abstract 8 G232 (Tr. Ural'skogo politekhn. in-ta, 1960, v. 77, 87-98)

TEXT: The experimental installation developed by the Ural Polytechnic Institute for testing gas-filled rectifiers utilizes thyratrons and consists of 2 circuits - of a current circuit of 50 kVA and of an oscillating circuit fed by a 10 kVA transformer. The experiments were carried out with rectifiers working in a 3-phase bridge circuit, max. rectified current 120 A, max. reverse voltage 7-8 kV. The rectifier under test was a type ТГ-120/15000 (TG-120/15000) thyatron. The experimental tests of the installation provided some material on the rectifier reliability. The power consumed

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Experimental study of an artificial...

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D201/D304

was also measured. It was found to be 1.5% of the rectified current power with the rectifier working in a 3-phase bridge connection.

[Abstracter's note: Complete translation]

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diagram of the experimental arrangement is given, together with rectifier current and voltage shapes. The main difference between the experimental set-up and practical circuit is the absence of the

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Artificial method...

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D201/D304

period with reversed voltage. In the experimental circuit the voltage across the rectifier is zero after extinction for the whole of the de-ionization time, after which the direct voltage sharply increases. Methods are considered of more accurate reproduction of the voltage waveform at the rectifier during the non-conducting part of the period; methods are also considered of reproducing the direct current shape by means of additional circuits. The experiments were carried out with a thyatron model. 3 references.

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[Abstracter's note: Complete translation]

Card 2/2

AKODIS, M.M., prof., doktor tekhn. nauk, red.; KHIRVONEN, Kh.P.,
dots., kand. tekhn. nauk, red.; KONSTANTINOV, A.G., inzh.,
red.

[Transactions of the Interuniversity Scientific and Technical
Conference on Overvoltages] Trudy Mezhvuzovskogo nauchno-
tekhnicheskogo soveshchaniia po perenapriazheniam. Sverdlovsk,
Izd.UPI, 1963. 2 v. (MIRA 1714)

1. Mezhvuzovskoye nauchno-tekhnicheskoye soveshchaniye po pere-
napryazheniyam, Sverdlovsk, 1961. .

KRICHENOVA, I.A., kand. tekhn. nauk, dotsent; ~~KHIRVONEN, Kh.P., kand. tekhn.~~
nauk, dotsent

Review of A.I. Rutskii's book "Electric power plants and substations."
Izv. vya. ucheb. zav.; energ. 6 no.11:107-110 N'63.

(MIRA 17:2)

1. Ural'skiy politekhnicheskii institut imeni S.M. Kirova.

KHIRTINA, G.V.

Postoperative hemorrhages following extrapleural pneumolysis
[with summary in French]. Probl. tub. 36 no.4:63-68 '58
(MIRA 11:7)

1. Iz Barnaul'skogo gorodskogo protivotuberkuleznogo dispansera
(glavnyy vrach T.I. Turosova); nauchnyye rukovoditeli raboty -
prof. I.V. Toroptsev, i prof. S.P. Khodkevich (iz Tomskogo meditsinskogo
instituta.)

(COLLAPSE THERAPY, compl.

postop.hemorrh. after extrapleural pneumolysis (Rus))

1. KHIRYA, YE. A.
2. USSR (600)
4. Swine--Feeding and Feeding Stuffs
7. How we fatten swine, Sots. zhiv., 15, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

KHISAMOV, A.V.

Violent atmospheric phenomena in 1954. Izv. Uzb. fill. Geog. ob-va
2:155-162 '56. (MIRA 11:4)

(Meteorology)

KHISAMOV, A.V.

Marked weather anomalies in 1955. Izv.Uzb.fil.geog.ob-va
no.3:143-150 '57. (MIRA 11:4)
(Meteorology)

KHISAMOV, A. V.

Improvement of the microclimate of southern cities. Uch.zap.
Tashk.gos.ped.inst. no.18:51-57 '59. (MIRA 13:9)
(Russia, Southern--Microclimatology)

AKRAMOV, Z.M., kand. geogr. nauk; RAKITNIKOV, A.N., kand.
geograf. nauk; ZAMKOV, O.K., kand. geograf. nauk;
SHERMUKHAMEDOV, A.M. [deceased]; SAUSHKIN, Yu.G., doktor
geograf. nauk, prof, otv. red.; DEGTYAR', V.I., red.;
KHISAMOV, A.V., kand. geograf. nauk, red.;
ASTAKHOV, A., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Agricultural geography of Samarkand and Bukhara Provinces]
Geografiia sel'skogo khoziaistva Samarkandskoi i Bukharskoi
oblasti. [By]Z.M.Akramov i dr. Tashkent, Izd-vo Akad. nauk
UzSSR. Pt.2. 1961. 323 p. (Materialy Zeravshanskoi ekspedi-
tsii SOPS AN UzSSR, no.1) (MIRA 16:4)

1. Akademiya nauk Uzbekskoy SSR. Tashkent. Otdel geografii.
2. Nachal'nik Otdela sel'skogo khozyaystva Gosplana Uzbek-
skoy SSR (for Degtyar').
(Bukhara Province--Agricultural geography)
(Samarkand Province--Agricultural geography)

RYABCHIKOV, F.D., inzh.; KUSTOBAYEV, G.G., inzh.; SOKOLOV, V.A., inzh.;
KHISAMOV, F.N., inzh.

Accelerating the cooling of sheet steel in bell furnaces.
Stal' 22 no.8:748-749 Ag '62. (MIRA 15:7)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Furnaces, Heat-treating)

ASIAF'YEVA, M.S.; KLIMUSHIN, I.M.; KHISAMOV, R.B.

Using the specific resistance of rocks in the testing of methods
for determining the permeability of terrigenous layers. Geol.
nefti i gaza 5 no. 5:42-44 My '61. (MIRA 14:4)

1. Tatarskiy nauchno-issledovatel'skiy neftyanoy institut.
(Rocks—Permeability)

S/169/63/000/002/120/127
D263/D307

AUTHORS: Sultanov, S. A., Astaf'yeva, M. S., Kilimushin, I. M.
and Khisamov, R. B.

TITLE: Use of industrial geophysical methods of determining
rock properties of terrigenous ores at Romashkinskoye
deposit

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 35-36,
abstract 2D211 (Tr. Tatarsk. neft. n.-i. in-t, 1961,
no. 3, 49-59)

TEXT: At Romashkinskoye deposit different methods of determining
the porosity of ores (K_p) from natural potential (NP) diagrams,
the permeability (K_{pr}) from the data of the resistance method, and
N. V. Vilkov's methods were checked. A comparative analysis of me-
thods of determining K_p from NP was made for strata having K_p lar-
ger than 16% in boreholes of the central part of the deposit, cha-
racterized by three and more cores. The research group method of

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Use of industrial ...

'Tatneftegeofizika' trust, and methods of A. I. Krinari and L. P. Dolina were checked. The minimum mean relative error in determining K_{pr} was obtained using the research group method, and the maximum error using Dolina's method. Maximum relative error in all methods is observed for strata less than 3 m thick. Methods of determining K_{pr} from the resistivity ρ_p of L. P. Dolina, S. A. Sul-tanov, V. M. Dobrynin and 'Tatneftegeofizika' trust were checked. G. S. Morozov's method was not checked as it gives high errors. Best results were obtained by L. P. Dolina's method, worst by the trust's method. All methods give small errors for strata with ρ_p 100 ohm.m, all methods give a low value of K_{pr} . The error in determining K_{pr} by all methods increases in strata less than 2 m thick. N. V. Vilkov's method of determining K_{pr} from NP is unsatisfactory, as it takes no account of the lack of connection between the NP amplitude, A_{NP} , and the permeability for K_{pr} 100 millidarcies, and of the very weak connection between A_{NP} and K_{pr} for

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Use of industrial ...

K_{pr} 100 millidarcies; no corrections are made in the values of A_{NP} for the effect of thickness and resistivity of the stratum.

The general character of the connection between A_{NP} and K_{pr} indicated by Vilkov differs from the actual one. (Abstracter's note: Complete translation.)

Card 2/3

KHISAMOVA, Z.L.
KAMAY, G.I.; KHISAMOVA, Z.L.

Trichloromethylparatolylphosphinic acid and its derivatives.
Izv.Kazan.fil.AN SSSR Ser.khim.nauk no.1:59-61 '50.

(MIRA 10:5)

(Phosphinic acids)

CA

10

Action of carbon tetrachloride on esters of *p*-toluene-phosphonic acid. Z. L. Khisamova and G.M. Kamal (A. B. Arbuzov Chem. Inst., Kazan). *Zhur. Obshch. Khim.* (J. Gen. Chem.) 20, 1102-70(1950); cf. C.A. 41, 5005g; 42, 7724d. Esters of the type $RP(OR')$ (R = *p*-tolyl; $R' = H$, *i*-Bu, *n*-Bu, *sec*-Bu, *tert*-Bu, *cis*-1,2-cyclohexane diyl, *trans*-1,2-cyclohexane diyl) were converted to $R(Cl_2C)P(O)OR'$ by the action of CCl_4 . $RP(OH)$, b. 120°, d₄ 1.2984, n_D²⁰ 1.5200, n_F 1.5280, of CCl_4 . $RP(OH)$, b. 120°, d₄ 1.2984, n_D²⁰ 1.5200, n_F 1.5280, (40 g.) added slowly to 13.5 g. MeOH and 50.2 g. Me₂NPh in 100 ml. Et₂O, refluxed 30 min., let stand overnight, and filtered, gave 32% $RP(OH)$, b. 107-9°, d₄ 1.0700, d₂₀ 1.0427, n_D²⁰ 1.5225, which reacts with CuX, soln. of 5 g. MeI to 9 g. ester gave 90% $RMp(O)OMe$, b. 151-3°, d₄ 1.1315, d₂₀ 1.1201, n_D²⁰ 1.5280; this boiled with conc. HCl 3 hrs. and evapd. gave $RMp(O)OH$, m. 119-20° [cf. Michaelis, *Ber.* 31, 1040(1898)]. Addn. of 12 g. phosphonite to 0.5 g. CCl_4 caused a vigorous reaction yielding 100% MeCl and $R(Cl_2C)P(O)OMe$, b. 128-30°, d₄ 1.2128, d₂₀ 1.2140, n_D²⁰ 1.5313. Similarly, KOH gave 50% $RP(OH)$, b. 123-5°, d₄ 1.0380, d₂₀ 1.0210, n_D²⁰ 1.5139, which boiled 2 hrs. with EtI yielded $RMp(O)OEt$, b. 161°, d₄ 1.0830, d₂₀ 1.0607, n_D²⁰ 1.5185, while addn. of 8 g. CCl_4 to 11 g. phosphonite, followed by refluxing 2 hrs., gave $R(Cl_2C)P(O)OEt$, b. 157°, d₄ 1.2290, d₂₀ 1.2103, n_D²⁰ 1.5128;

this (4 g.) and 12 ml. conc. HCl refluxed 2 hrs., then repeatedly evapd. with H₂O, yielded $R(Cl_2C)P(O)OH$, m. 181.5-5.0° (from Et₂O), sol. in EtOH and Et₂O. A reaction sequence as above with EtOH gave 81.0% $RP(OH)$, b. 129-30°, d₄ 1.0691, d₂₀ 1.0607, n_D²⁰ 1.5010, which boiled 3 hrs. with MeI gave 92% $RMp(O)OMe$, b. 167°, d₄ 1.0890, d₂₀ 1.0650, n_D²⁰ 1.5185 (its hydrolysis gave $RMp(O)OH$, as described above), while 10 g. CCl_4 with 15 g. phosphonite gave 12 g. $R(Cl_2C)P(O)OPh$, b. 160-70°, d₄ 1.3004, d₂₀ 1.2914, n_D²⁰ 1.5370 (hydrolysis with conc. HCl gave the free acid, m. 181°, as above). BuOH, as above, yielded 80.3% $RP(OH)$, b. 170-1°, d₄ 0.9880, d₂₀ 0.9770, n_D²⁰ 1.5021, which heated with MeI gave 90% $RMp(O)OEt$, b. 178°, d₄ 1.0722, d₂₀ 1.0583, n_D²⁰ 1.5002, while CCl_4 gave $R(Cl_2C)P(O)OH$, b. 180-1°, d₄ 1.2283, d₂₀ 1.2143, n_D²⁰ 1.5267. Similarly, *iso*-BuOH yielded 77% $RP(OH-iso)$, b. 155-6°, d₄ 0.9807, d₂₀ 0.9697, n_D²⁰ 1.4987; this (10 g.) and 9.2 g. CCl_4 reacted with heat evolution, yielding almost 100% *iso*-BuCl and 58% $R(Cl_2C)P(O)OEt$, b. 178-80°, d₄ 1.2601, d₂₀ 1.2250, n_D²⁰ 1.5204. Continued hydrolysis of $R(Cl_2C)P(O)OH$ eventually leads to the formation of $RP(O)OH$. [It may be noted that the consts. of the initial $RP(O)OH$ differ from the properties indicated by Michaelis and Panek, *Ann.* 212, 213(1892), although the M. and P. procedure was used for the prepn.] G. M. Kosolapoff

KHISAMOVA, Z. I.

The action of carbon tetrachloride on the esters of p-tolylphosphonous acid.
Z.L. Khisamova and G.I. Kamal (Kazan Branch Acad. Sci. U.S.S.R.). J. Gen. Chem.
U.S.S.R. 20, 1207-14 (1950) (Engl. translation).

See C.A. 45, 1531d.

R.M.S.

immediate source clipping

KHISAMOVA, Z. L.

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USSR/Chemistry - Organic Arsenic Compounds 1 Feb 51

"Synthesis and Properties of Some Cyclic Esters of Ethyleneglycolarsenous Acid," G. I. M. Kamy, Z. L. Khisamova, Chem Inst Imeni A. Ye. Arbuzov, Kazan' Affiliates, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXVI, No 4, pp 535-538

By reacting ethylene glycol with arsenic trichloride in presence of pyridine, synthesized chloride of ethyleneglycolarsenous acid (bp 71-72° at 11 mm, mp 44-45°). Prep'd number of triesters of arsenous acid from this cyclic diester monochloride. The

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USSR/Chemistry - Organic Arsenic Com. 1 Feb 51
pounds (Contd)

bp of alkyl esters of ethyleneglycolarsenous acid lie very close to those of the analogous P compd. In the case of Me and Et esters of either ethyleneglycolarsenous acid or ethyleneglycolphosphorous acid, they are in the neighborhood of 50-60° at 11-23 mm. Prep'd triester As₂(-OCH₂CH₂O)₃ by oxidizing latter with bromine, obtained penta-ester of arsenic acid As₂(-OCH₂CH₂O)₅.

178117

PHENYL ARSENIC ACID

esters of ethyleneglycol arsenic acid. (U.S. Patent 2,411,000, 1949; Zhur. Obshch. Khim., 23, 1323-30 (1953).) Addn. of 100 g. $AsCl_3$ with cooling to 37.5 g. $(CH_2OH)_2$ in 87.2 g. pyridine and 400 ml. dry Et_2O , followed by standing overnight at room temp. and 1 hr. at reflux gave on distn. of the filtrate

some 81 g. $O.CH_2CH_2O.AsCl_2$ (I), b_p 71-2°, n_D 1.44-5°, along with higher-boiling products, which included 10 g. $(CH_2O)_2AsOCH_2CH_2OAs(OCH_2)_2$ (II), b_p 160-7°, d₄ 1.5051, n_D 1.6433. I is instantly hydrolyzed by H_2O yielding As_2O_3 . Addn. of I to $(CH_2OH)_2$ in pyridine and Et_2O , as above, gave an unstated yield of II. Heating 60 g. As_2O_3 with 96.4 g. $(CH_2OH)_2$ 30 min. at 140-60°, followed by continued heating under water-pump vacuum for removal of H_2O , gave 92.4% II, b_p 160-1°. Addn. of 6 g. $AsCl_3$ to 16 g. II, followed by 0.5 hr. heating to unstated temp., gave largely I, b_p 60-7°. Refluxing 2.5 g. II with 50 ml. H_2O gave As_2O_3 . To 51 g. II in CCl_4 was added with cooling 23 g. Br; the resulting ppt. of $(CH_2O)_2As(OH)(OCH_2)_2$, m. 127° (Englund, C.A. 23, 595), was sepd. and the filtrate distd., yielding 22.2 g. greenish lacrimatory liquid, identified as $(CH_2O)_2AsBr$, b_p 89°, d₄ 2.0979, d₂₀ 2.5088, n_D 1.6528. Thus, the previously proposed structure of the substance, m. 127° (C.A. 43, 10166f) is in error; probably the initially formed $[(CH_2O)_2AsOCH_2CH_2OAs(OCH_2)_2]_n$ is hydrolyzed in handling to the acidic product given above. Addn. of 20 g. I to 3.3 g. MeOH in 9.2 g. pyridine and 250 ml. Et_2O with cooling, followed by 1 hr. reflux, gave 3.6 g.

$O.CH_2CH_2O.AsOMe$, b_p 50-1°, d₄ 1.6163, d₂₀ 1.6310, n_D 1.5035. Similarly were obtained the following esters (R shown followed by d₄, d₂₀ and n_D): Et, b_p 01-2°, 1.5031, 1.4784, 1.4788; Pr, b_p 74-5°, 1.4188, 1.3923, 1.4762; Bu, b_p 93°, 1.4024, 1.3764, 1.4785; n-C₁₀H₂₁, b_p 120-1°, 1.3043, 1.2813, 1.4742; n-C₁₂H₂₅, b_p 130-1°, 1.2971, 1.2465, 1.4730; n-C₁₄H₂₉, b_p 110°, 1.2440, 1.2250, 1.4737; n-C₁₆H₃₃, b_p 117-18°, 1.2240, 1.2041, 1.4748; cyclohexyl, b_p 118°, 1.4270, 1.4044, 1.5070 (from cyclohexanol); Ph, b_p 143-4°, 1.5087, 1.5440, 1.5716. All these are readily hydrolyzed by H_2O yielding As_2O_3 . Heat.

(over)

Kanai, G. (2)

ing $O, CH_2, CH_2, O, As, OMe$ with MeI 8 hrs. at reflux resulted in no reaction. Similarly II failed to react with MeI, S,

(3) 2/2

or Cu_2Br_2 . Addn. of 4.4 g. Br to 5 g. $O, CH_2, CH_2, O, As, OMe$ in CCl_4 gave an unatated yield of $C_{17}H_{19}AsBr_2$, b_p 72-3°, d₄ 2.2163, d₂₀ 1.1707, n_D 1.5880. When 19.3 g. I in Et_2O was slowly added to cooled 15 g. $(BuO)_3P$ in Et_2O a vigorous reaction took place with deposition of red E. The filtrate gave some $BuOH$ and a fraction, b_p 140°, d₄ 1.1155, n_D 1.4333, which contained P and As but decompd. rapidly to a black solid; no analyses were made, presumably the substance was crude $(C_4H_9O)_3P(O)(OAs)$. To a soln. of $(EtO)_3PONa$ (from 24.5 g. $(RO)_3POH$) in Et_2O was added 30 g. I with cooling; the mixt. acquired a red color and deposited NaCl (9.9 g.); on distn. the filtrate decompd. and no individual substances were isolated. G. M. Kosolapoff

KHISANOVA, Z. I.

Preparation of alkyl and glycolic esters of arsenious and
 arylazanoous acids. G. M. Kamf, Z. I. Khisamova, and
 N. A. Chudacva. Doklady Akad. Nauk S.S.S.R. 89,
 1015-10(1953); cf. C.A. 47, 10471c.—Cyclic esters of

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general type $ArAs. O.R'.O$ (R' = alkylene radical) were
 obtained by 2 procedures: reaction of $ArAsCl_2$ with the
 glycol in the presence of 2 moles pyridine or by heating
 $ArAsO$ with the glycol without any water-abstracting agents
 (method not described further). The products obtained are
 listed below; the 2nd method generally gives somewhat
 better yields (R, R' , properties of the products and yields
 are listed in the same order as the procedures cited above;
 all d_4 and n values are for d_{20} and n_D^{20}). $Ph, -(CH_2)_5-$:
 50.6%, b, 121-2°, d. 1.5365, n 1.6100; 64.6%, b, 123-2.5°,
 d. 1.6270, n 1.5961. $p-MeC_6H_4, -(CH_2)_5-$: 45.6%, b₁₂
 138-9°, m. 134-5°; 66.4%, b, 137-8°, m. 134-5°. $Ph,$
 $-CHMeCH_2-$: 65.3%, b₁₁ 150-8°, d. 1.3584, n 1.5540;
 74.3%, b₁₁ 158-9°, d. 1.3677, n 1.5512. $Ph, -(CH_2)_4-$:
 62.1%, b₁₁ 135-0°, d. 1.4618, n 1.5680; 69%, b₁₁ 133°, d.
 1.4042, n 1.4642. $Ph, -(CH_2)_3O(CH_2)_3-$: 61.3%, b₁₁
 171-2°, d. 1.4501, n 1.5841; 59.8%, b, 155°, d. 1.4504, n
 1.5805. $Ph, o-C_6H_4-$: 20.1%, b, 153°, m. 85-8°; 80%,
 b, 178-0°, m. 85-0°. Heating 60 g. As_2O_3 and 80.4 g.
 $HOCH_2CH_2OH$ in a distg. app. at 150° 15-20 min., re-
 moval of the H_2O in vacuo, and distn. of the mixt. gave
 92.4% $[O.CH_2.CH_2.O.As(OCH_2)_2]$, b, 100-1°. G. M. K.

Evaluation of paper in B-76836, 19 Jul 54

KHISOMAVA, Z. L.

USSR/Chemistry

Card 1/1

Authors : Kamay, Gil'm; and Khisomava, Z. L.

Title : Acid chlorides and mixed esters of tetramethylethyleneglycolarsenous and pyrocatechinarsenous acids

Periodical : Zhur. Ob. Khim. 24, Ed. 5, 816 - 820, May 1954

Abstract : First obtained and investigated were acid chlorides of tetramethylethyleneglycolarsenous and pyrocatechinarsenous acids. The acid chlorides obtained are crystalline substances soluble in water and some organic solvents. The reaction of these acid chlorides with various alcohols in a benzene medium in the presence of anhydrous pyridine results in the formation of mixed esters of tetramethylethyleneglycolarsenous and pyrocatechinarsenous acids the properties of which are described. Two USSR references. Table.

Institution : Acad. of Scs. USSR, Kazan Branch, The A. E. Arbuzov Chemical Institute

Submitted : December 26, 1953

KHISAMOVA, Z. L.
USSR/Chemistry

Card 1/1

Authors : Kamay, Gil'm; and Khisamova, Z. L.

Title : Reaction of cyclic arsenic chlorides with dialkylamines

Periodical : Zhur. Ob. Khim. 24, Ed. 5, 321 - 324, May 1954

Abstract : The reaction of cyclic arsenic chlorides with dialkylamines was investigated. The first products were dialkyl substituted amides of cyclic esters of arsenous acid (cyclic arsenates). The bond $>As-N<$ in these compounds is very unstable and breaks under the effect of alkyl halide, atmospheric oxygen and water. The products of oxidation of dialkylamido esters of arsenous acid are cyclic esters of pyroarsenous acid. One USSR reference. Tables.

Institution : Acad. Scs. USSR, Kazan Branch, The A. E. Arbuzov Chemical Institute

Submitted : December 26, 1953

KAMAY, Gil'm.; KHISAKOVA, Z.L.

Synthesis of new arsenic-nitrogen organic compounds with the As-N bond. Dokl.AN SSSR 105 no.3:489-491 N '55. (MLRA 9:3)

1. Khimicheskiy institut imeni A.Ye. Arbuzova Kaluzhskogo filiala Akademii nauk SSSR.

(Arsenic organic compounds)