S/149/61/000/001/006/013
A006/A001

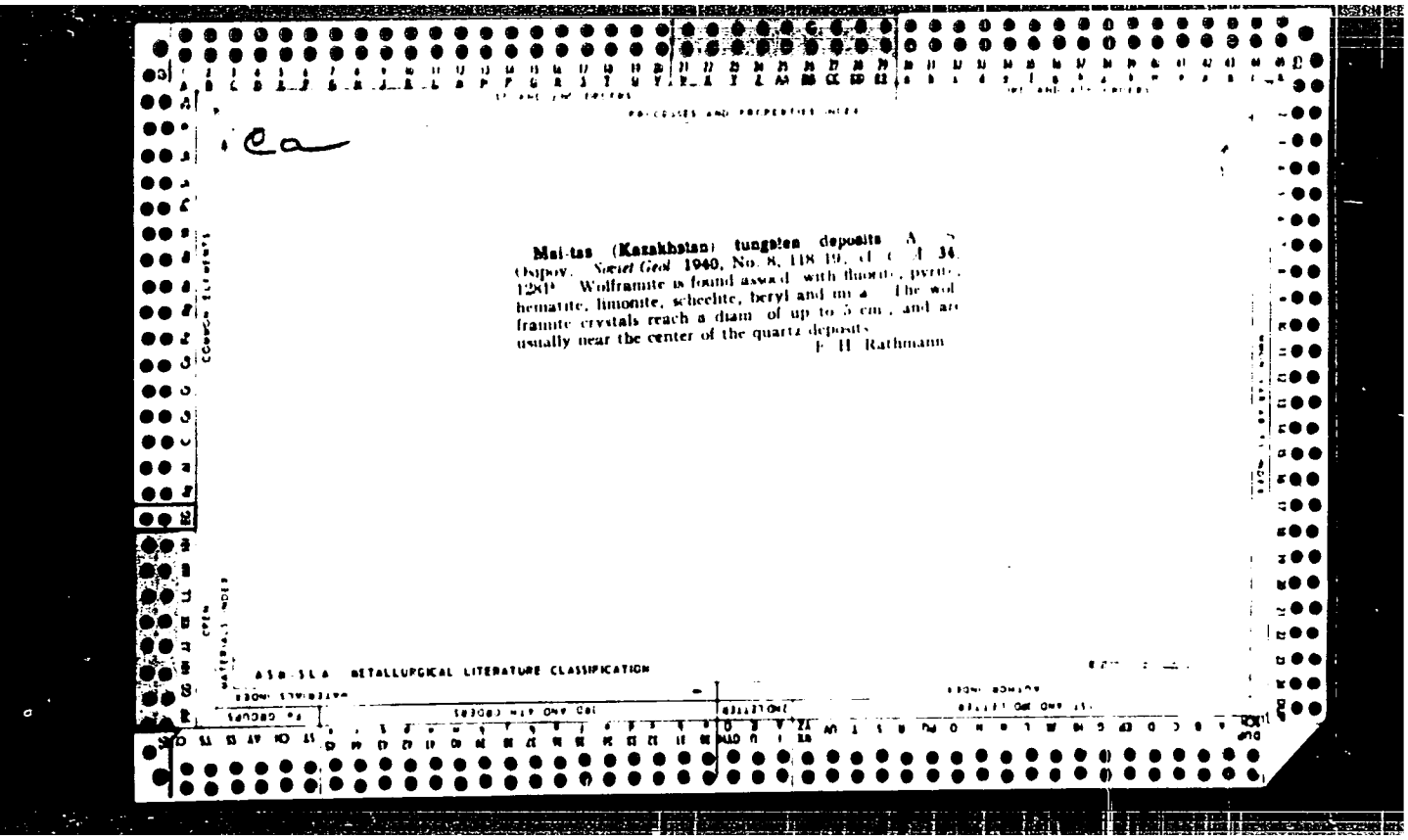
The Separation of Selenium and Tellurium From Platinum Metals in the Form of Trivalent Ferric Selenite and Tellurite

obtained show that optimum conditions for the precipitation of tellurites and selenite are pH values of 2.3 - 2.5 and a 90% excess of iron against the stoichiometric amount. Under these conditions tellurium extraction attained 97.5% and selenium extraction 95.4%. The ferric selenite and tellurite precipitates separated out of solutions, at a pH value of 2;28, contained 215 g/t platinum, 460 g/t palladium, and 59 g/t rhodium or 3.7; 4.6 and 5.1% respectively of their content in the initial solution. The precipitate contained very small amounts of ruthenium and iridium. There are 2 tables and 6 Soviet references.

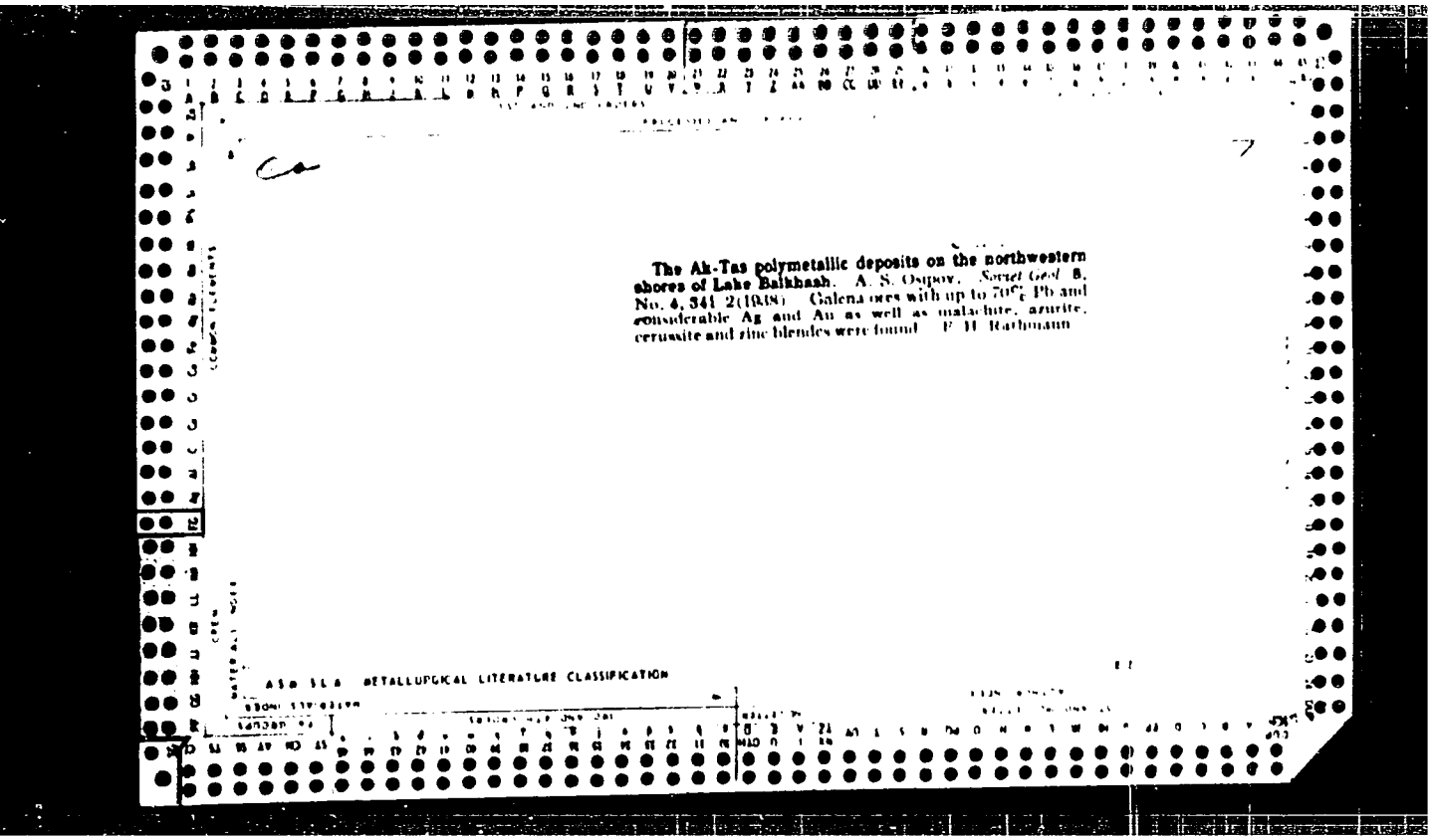
ASSOCIATIONS: Severckavkazskiy gornometallurgicheskiy institut (North Caucasian Institute of Mining and Metallurgy); Kafedra metallurgii tyazhelykh tsvetnykh metallov (Department of Metallurgy of Heavy Non-Ferrous Metals)

SUBMITTED: July 4, 1960

Card 4/4



Mai-tas (Kazakhstan) tungsten deposits A. S. Osipov. *Soviet Geol* **1940**, No. 8, 118-19; cf. C. A. 34, 1281[9]. Wolframite is found associated with fluorite, pyrite, hematite, limonite, scheelite, beryl and mica. The wolframite crystals reach a diam. of up to 5 cm., and are usually near the center of the quartz deposits.
F. H. Rathmann



The Ak-Tas polymetallic deposits on the northwestern shores of Lake Baikhash. A. S. Ospov. *Soviet Geol.* 8, No. 4, 341-2(1938). Galena ores with up to 70% Pb and considerable Ag and Au as well as malachite, azurite, cerussite and zinc blendes were found. P. H. Rathmann

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

OSIPOV, A.S.

L 10350-63 EWO(s)-2/EWT(m)/BDS AFFTC/ASD Pw-4
PHASE I BOOK EXPLOITATION SOV/6125

57
56

Gerberg, Anatoliy Aronovich, and Aleksandr Sergeyevich Osipov

Stroitel'stvo aerodromov (Construction of Airports) Moscow, Avtotransizdat, 1962. 330 p. 3000 copies printed.

Ed.: B. S. Deberdeyev; Tech. Ed.: Ye. N. Galaktionova.

PURPOSE: This book is intended for engineers and technicians concerned with the design and construction of airports.

COVERAGE: The book generalizes Soviet and non-Soviet experiences accumulated by airport builders in respect to the efficiency of individual performance methods of leading work procedures involving the maximum use of mechanized means of progressive inventory devices and tools. Practical methods and procedures employed in individual airport construction operations are presented, and the procedures governing the operations of machinery and equipment manufactured in the Soviet Union and in current use by airport building organizations are elaborated. Data

Card 1/32

L 10350-63
Construction of Airports SOV/6425

are presented on the construction of runways, taxi strips, aprons, platforms, dirt strips, and drainage facilities. The construction of simple, improved, and asphalt-concrete surfacings is discussed briefly. The Preface and Chs. I, II, IX, X, and XI were written by Engineer A. A. Gerberg, and Chs. III through VIII, by Engineer A. S. Osipov. There are 20 references, all Soviet.

TABLE OF CONTENTS [Abridged]:

Card 2/12

OSIPOV, A S

PHASE I BOOK EXPLOITATION SOV/6425

Gerberg Anatoliy Aronovich, and Aleksandr Sergeyevich Osipov

Stroitel'stvo aerodromov (Construction of Airports) Moscow, Avtotransizdat, 1962. 330 p. 3000 copies printed.

Ed.: B. S. Deberdeyev; Tech. Ed.: Ye. N. Galaktionova.

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Card 1/3

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TABLE OF CONTENTS [Abridged]

OSIPOV, A.S., aspirant

Investigating shock absorbers based on granular materials. Izv.vys.ucheb. zav.; mashinostr. no.4/124-133 '64. MIRA 18:1

1. Bryanskiy institut transportnogo mashinostroyeniya.

OSIPOV, A.S., aspirant

Improving power characteristics of friction devices for automatic coupling. [illegible] zav., mashinostr., no.6:184-188 '65. MIRA 18:8

S/123/60/000/018/002/006
A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 18, p. 94, # 97905

AUTHOR: Osipov, A.T.

TITLE: Some Methods of Processing Piston Rings in Connection With Their Operation Quality in the Engine

PERIODICAL: Tr. Ufimsk. aviats. in-ta, 1957 (1958), No. 4, pp. 82-90

TEXT: Investigations, which were carried out by some works producing piston rings, showed that the fitness of the piston rings to the cylinder walls depends to a considerable extent on the method of obtaining the intermediate product assuring the uniform distribution of the cast iron structure over the ring. Intermediate products with local inclusions of chilled cast iron, porous and having blisters, with non-uniform cast iron structure, do not assure, even after the corresponding mechanical processing, the production of high-quality rings. It is recommended to cast the intermediate products for piston rings of non-circular shape; hereby the weight of the intermediate product decreases the

Card 1/2

OSIPOO) A.F.

10(0); 18(0); 25(0) PHASE I BOOK EXPLOITATION SOV/2035

Ufa. Aviatsionnyy institut

Trudy, vyp. 2. (Transactions of the Ordzhonikidze Aviation Institute, Ufa) Nr 2. Ufa, Bashkirskoye knizhnoye izd-vo, 1956. 219 p. Errata slip inserted. 1,000 copies printed.

Editorial Board: I.F. Yemelin (Resp. Ed.), A.N. Rakhmanovich, I.A. Bolotovskiy, S.I. Kulikov, I.A. Barsuk, V.A. Vinogradov, and P.D. Klimov; Resp. Ed. for this number: I.A. Bolotovskiy; Ed. of Publishing House: M.A. Gurvich; Tech. Ed.: F.O. Goyfulin.

PURPOSE: The book is intended for engineers of scientific and industrial institutions.

COVERAGE: This collection is composed of a number of unrelated articles in mechanical, aeronautical (fluid dynamics), metallurgical and other branches of engineering. For further coverage see Table of Contents.

10(0); 18(0); 25(0) PHASE I BOOK EXPLOITATION SOV/2035

Ufa. Aviatsionnyy institut

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PURPOSE: The book is intended for engineers of scientific and industrial institutions.

COVERAGE: This collection is composed of a number of unrelated articles in mechanical, aeronautical (fluid dynamics), metallurgical and other branches of engineering. For further coverage see Table of Contents.

Yelizarov, B.A. Increasing the Accuracy of Mechanical Integration and Solution of Common Differential Equations by Means of Impulse Link-rake Integrator 93

The article deals with research on mechanisms for accurate approximate integration and differentiation based on new principles of simulation (modelly). A detailed description is given with diagrams of the integrator. Personalities mentioned include: M.L. Bykhovskiy and N.O. Bruyevich. There are 8 Soviet references.

Ozirov, A.S. Influence of the Nonuniformity of the Structure and Elastic Properties of Pig Iron on the Quality of Piston Rings 111

The article discusses some important problems of piston ring technology and establishes the causes of qualitative irregularity of piston rings.

Interior, A.Ye. Investigation of the Viscosity of Liquid Pig Iron Depending on Chemical Composition and Temperature of Heating 125

The article describes a method of obtaining experimental data on the viscosity of pure double ferrocarbon alloys and triple alloys of iron. It also discusses determination of viscosity of various pig irons, such as, Bessemer, open hearth and cast irons. Personalities mentioned include: A.I. Bachinskiy, Professor A.M. Samarin, and L.A. Shvartsman. There are 11 references: 7 Soviet and 4 German.

Voronov, A.I. Investigation of the Process of Machining With Vibrating Tools 143

The article gives basic results of an investigation of the influence of second order vibration in metal turning on the quality and accuracy of the machined surface. There are 15 references: 14 Soviet, and 1 English.

Zinov'yev, V.I. Methodology for Elaborating Technological Processes of Aircraft Engine Assembly 155

According to the author this is the first attempt to elaborate the technological processes of assembling aircraft engines prior to mass production. Basic principles for development of technological processes of assembly, recommended sequence of operations, and some organizational requirements are given. There are 5 Soviet references.

Card 2/4

Ehrlman, I.A. Graphic Method for the Determination of Volatile and Heat-producing Properties of Brown Coal 183

The article gives a correlational analysis of the interdependence of the incandescent mass and the exit of volatile products of brown coal. A method for the construction of individual curves, their practical significance, and a method for the composition of tables are given. There are 8 Soviet references.

Ehrlman, I.A. Qualitative Paper-Chromatographic and Luminescent Method of Marking Bituminous Brown Coals 207

The article describes methods for investigations of a large number of coals. Results are given in the form of a table. There are 6 Soviet references.

10(0); 18(0); 25(0) PHASE I BOOK EXPLOITATION SOV/2035

Ufa. Aviatsionnyy institut

Trudy, vyp. 2. (Transactions of the Ordzhonikidze Aviation Institute, Ufa, Bashkirskoye knizhnoye izd-vo, 1956. 219 p. Errata slip inserted. 1,000 copies printed.

Editorial Board: I.F. Yemelin (Resp. Ed.), A.N. Rakhmanovich, I.A. Bolotovskiy, S.I. Kulikov, I.A. Berezin, V.A. Vinogradov, and P.D. Mirko; Resp. Ed. for this number: I.A. Bolotovskiy; Ed. of Publishing House: M.A. Gurvich; Tech. Ed.: F.G. Gayfullin.

PURPOSE: The book is intended for engineers of scientific and industrial institutions.

COVERAGE: This collection is composed of a number of unrelated articles in mechanical, aeronautical (fluid dynamics), metallurgical and other branches of engineering. For further coverage see

Table of Contents.

Table of Contents

Zhirgan, I.A. Graphic Method for the Determination of Volatile and Heat-producing Properties of Brown Coal 183

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Zhirgan, I.A. Qualitative Paper-Chromatographic and Luminescent Method of Marking Bituminous Brown coals 207

The article describes methods for investigations of a large number of coals. Results are given in the form of a table. There are 6 Soviet references.

Berezin, I.A. Small Dimension Engine With Emulsion Fuel Injection 211

This article investigated the possibility of using emulsion injection of fuel in small-dimension engines. Design of a mixing pump and of a slide-valve pump is described. There are 6 Soviet references.

AVAILABLE: Library of Congress

13/6
8-1-59

OSIPOV, A. [illegible] ([illegible])

OSIPOV, [illegible] ([illegible]) -- "[illegible] ... Structure ... Pro... ... Piston Ring." [illegible], ... Avia... ... (Dissertation ... [illegible])

[illegible]: [illegible], [illegible]

OSIPOV, A.T.

10(0), 18(0), 25(0) PHASE I BOOK EXPLOITATION SOV/2035

Ufa. Aviatsionnyy institut

Trudy, vyp. 2. (Transactions of the Ordzhonikidze Aviation Institute, Ufa) No 2. Ufa, Bashkirskoye knizhnoye izd-vo, 1956. 213 p. Errata slip inserted. 1,000 copies printed.

Editorial Board: I.P. Yemelin (Resp. Ed.), A.M. Rakhmanovich, I.A. Dmitriyevskiy, S.I. Kulikov, I.A. Berezin, V.A. Vinogradov, and P.D. Kirko; Resp. Ed. for this number: I.A. Belotserkovskiy, Ed. of Publishing House: N.A. Gurvich; Tech. Ed.: P.G. Gaydullin.

PURPOSE: The book is intended for engineers of scientific and industrial institutions.

COVERAGE: This collection is composed of a number of unrelated articles in mechanical, aeronautical (fluid dynamics), metallurgical and other branches of engineering. For further coverage see Table of Contents.

YERGALIYEV, A.Ye.; YURKOV, V.N.; OSIPOV, A.V.

Boring and blasting operations in drift mining. Trudy Alt. GMNII AN Kazakh. SSR no.7:102-113 '58. (MIRA 12:7)
(Boring) (Blasting)

YERGALIYEV, A.Ye.; YURKOV, V.N.; OSIPOV, A.V.

Establishing work norms and wages in lode mining. Trudy Alt. GMNII AN Kazakh. SSR no.7:114-119 '58. (MIRA 12:7)
(Mining engineering) (Wages) (Work measurement)

YERGALIYEV, A.Ye.; KUZNETSOV, I.Ye.; YURKOV, V.N.; POPENKO, M.Kh.; OSIPOV, A.V.

Development of systems of mining at the Belousovka Mine. Trudy Alt. GMNII AN Kazakh. SSR 10:3-11 '61. (MIRA 14:9)
(Altai Mountains--Mining engineering)

YERGALIYEV, A.Ye.; BABINOVICH, V.L.; OSIPOV, A.V.; YURKOV, V.N.; KHUDYAKOV, M.T.

System of mining the Berezovskiy Mine. Trudy Alt. GMNII AN Kazakh. SSR 10:12-34 '61. (MIRA 14:9)
(Altai Mountains--Mining engineering)

YERGALIYEV, A.Ye.; YURKOV, V.N.; OSIPOV, A.V.

Mining flat pitching vein deposits. Trudy Alt. GMNII AN Kazakh. SSR 10:35-63 '61. (MIRA 14:9)
(Mining engineering)

OSIPOV, A.V.

Study of labor consuming operations by the ore [illegible]. Trudy A.I. GMNII AN Kazakh. SSR 15:13-23 '63.

Determining the height of the outlet opening depending on the parameters of withdrawal stops and the physicomechanical properties of the ore. Ibid.:24-37 (MIRA 17:3)

OSIPOV, A.V.

Our road toward communist labor. Bum.prom. 37 no.8:22-25 Ag '62. (MIRA 17:2)

1. Direktor Grigishkskogo opytnogo bumazhnogo kombinata.

OSIPOV A V.

P 2

23(4) 23 (5) SOV/77-4-2-15/18

AUTHOR: Lyalikov, K.S.

TITLE: Successes of Soviet Electrophotography (Uspekhi sovetskoy elektrofotografii) A Scientific and Technical Conference on Questions of Electrography (Nauchno-tekhnicheskaya konferentsiya po voprosam elektrografii)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1959, Vol 4, Nr 2, pp 149-152 (USSR)

ABSTRACT: This is an account of a scientific and technical conference on electrography, the first to be held in the Soviet Union and evidently in the world. It was organized in Vil'nyus on December 16-19, 1958 by the Sovet narodnogo khozyaystva Litovskoy SSR (Council for National Economy of the Lithuanian SSR), the Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta ministrov Litovskoy SSR (State Scientific and Technical Committee of the Council of Ministers of the Lithuanian SSR) and the Nauchno-issledovatel'skiy institut elektrografii (Scientific Research Institute of Electrography). The conference, attended by over 300 scientific workers, was opened by the Deputy Chairman of the Council for National Economy of the Lithuanian SSR P.A. Kul'vets, after which the director of the Institute for Electrography, I.I.Zhilevich, reviewed the state and prospects for development of electrography in the USSR. He stated that research in this field should be carried out along the following lines: a) a search for new photo-active materials with high dark resitance. b) physical research into the internal photoeffect, c) development of photosemiconductor layers; d) development of the theory of the electrophotographic process. K.S. Lyalikov (speaking also for O.S. Popova) gave a report in which he suggested determining the light sensitivity of electrophotographic layers in GOST units. N.Z. Plavina (speaking also for I.I.Zhilevich, L.I.Kryun'ko, S.S.Markevich, P.I. Kalinauskene and O.M. Suveyzdis) reported on some research on the sensitization of a semiconductor in electrophotographic layers. V.M. Fridkin gave a report on highly sensitive electrophotographic layers and an electrophotocopying device, and reviewed the formation process of the latent electrophotographic image on the basis of the zonal theory. He also described the design of an electrosensitometer for determining sensitivity by the relaxation period of a charge on the surface of the layer, and the circuit of an electrophotographic copying device. Anfilov finished describing the latter and then spoke on the mechanics and kinetics of the development of the latent electrophotographic image in liquid developers.

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SOV/77-4-2-15/18

Successes of Soviet Electrophotography. A Scientific and Technical Conference on Questions of Electrography

E.N. Vinogradov described some of the features of the cascade and liquid methods of electrophotographic development. Yu.Ye. Karpenko devoted his report to the criterion of light sensitivity of the electrophotographic process. After the reports, a discussion took place on methods of determining the light sensitivity of electrophotographic layers. [illegible] spoke on the prospects of developing polygraphic [illegible] also electric and magnetic forces. [illegible] reported on the [illegible] for I.I. Zhilevich, A.A. Suchy, [illegible] Pauzha and Yu. I. Kovalyuta) reported on the development of electrophotographic reproducing equipment. [illegible] Pauzha (speaking also for I.I. Zhilevich, A.S. Borisovich, M.M. Galvidis and [illegible]) reported on the use of electrographic methods in recording oscillographs and other recording instruments.

V.F. Lupchenko (speaking also for L.F. Malin) spoke on the possibility of electrophotographically recording images from electron-beam tubes. [illegible] Karol' (speaking also for M.M. Kaymova, [illegible] and Kalinauskene, Z.K. [illegible]) gave a detailed description of laboratory and machine methods of producing photosemiconductor papers (zinc oxide was used). A.A. Suchy (speaking also for I.I. Zhilevich, O.V. Ivanov, [illegible] Gordeyev, K.V. Feigelov and T.N. Gel') described a laboratory and industrial machine for producing photosemiconductor papers. T.A. Shishkina (speaking also for [illegible]) reported on a method of examining electrophotographic materials using an a/c bridge. G.I. Khotyanovich (speaking also for A.I. Zikeyev and [illegible]) spoke on developing materials for electrophotography and [illegible] photography, including developers giving a reversed image. B.I. [illegible] reviewed methods of measuring the electrostatic potentials of electrophotographic layers, stressing that the oscillating electrode should not be placed above a layer with varying potential as this causes self-discharge. [illegible] (speaking also for A.A. Gorevoy, [illegible]) spoke on the practice of producing various papers in an electrostatic field, and showed samples produced by the Arkhangel'sk paper factory. Ye.I. Kozlovskiy then gave a brief review of the development of electrographic methods in which he paid tribute to the work of the Scientific Research Institute of Electrography in Kiyev and the Ukrainian Polygraphic Machine-Building Institute (Moscow [illegible] states were then held

Card 6/13

on methods of measuring the potential of charged electrophotographic layers, the vibration pick-up most-used was shown in B.I. Tikhonov's report to be not always accurate. S.G.Grenishin stated that the bad influence of the oscillating electrode can be eliminated if the electrode probe above its surface is fixed and the pick-up is connected to it by a shielded cable. In the debate on Ye.L. Nemirovskiy's report it was stated that the research of Academicians A.N. Terenin and Ye.K. Putseyko should be considered as the basis of all work on electrophotographic papers with ZnO, as they were the first to show the possibility of optical sensitization of the internal photoeffect in ZnO. M.M.Gol'vidis then gave a report on the depositing of charges by a corona discharge. A.I. Kantaskas and A.F. Yanulis reviewed some of the results of the use of electrographic methods in radiography. L.I. Kyun'ko (speaking also for I.I. Zhilevich, I.D. Flavin, Yu.K. Vishchakas and Yu.A.Zibuts) reported on relaxation processes in semiconductor layers, using a vibration electrometer. Yu.K.Vishakas gave a report on research on some physical properties of the polycrystalline layers of selenious cadmium. M.P. Mikalkyavichyus spoke on some of the photoelectric properties of Sb_2S_3 and Sb_2Se_3: the absorption maximum of the latter is about 900 mμ. S.M. Neyman reported on methods of obtaining selenium light-sensitive layers, including sublimation and thermal treatment; it was also found that the sensitivity of the layers increased after storage for 1.5 to 2 months at room temperature. F.M. Podvigalkin (speaking also for S.G.Grenishin) spoke on research into the electrical properties of electrophotographic layers of amorphous selenium and powdered zinc oxide. N.E. Shiktorov (speaking also for A.S. Tauraytis) discussed the production of selenium layers and some of their properties. Finally the following reports on ferromagnetography were delivered, 1) S.Ya. Karnacheyev, V.M.Zhogina, "Electrodeposition of Magneto-Hard Alloys with Given Magnetic Characteristics" 2) [illegible] Fatrunov, "Visualization of Magnetic Oscillograms by the Ferrographic Method" 3) V.T.Fatrunov, "Ferrographic Recording of Facsimile Images" 4) I.I.Zhilevich, I.I. [illegible], B. Ye. Buchek, I.I. Naynise, A.K.[illegible], "Mock Experiments in Non-Pressure Ferromagnetic Printing". There was also an exhibition showing the work of the Electrographic Institute. The most important conclusion of the conference was that a solid approach had been made to the possibility of wide technical use of the methods of electrography. It was considered that although work in this field actually started only in 1955-56 it has covered as much ground as the USA in 10 years. While admitting that it was easier to reproduce results already achieved than to be the first to arrive at them, the conference observed that the Americans took good care that no important information appeared in the literature available.

Card 10/10

MENZHERITSKIY, A.I.; OSIPOV, A.V.; YEFREMOV, M.D.; KRUKOVSKIY, Ye.V.; SHLUGER, N.A.; REPSHIL', A.P.; MITSKEVICH, V.M.; MIKIRTUCHEVA, Z.V.; POLONSKIY, V.V.; OBOTOVA, M.N.; SEMENOVSKIY, A.A.; GARASEVICH, G.I.; VAYNBERG, Ye.I.; DOMNICH, A.M.; LEVCHENKO, V.L.; RAFAL'SON, V.D.; ROMANENKO, Ye.I.; SHPINER, Ye.I.; TEKLIN, V.G.

Innovations. Bum. i der. prom. no.2:58 Ap-Je '65. (MIRA 18:6)

AUTHORS: Volkov, K.D., Chief Engineer, Yergaliyev, A.Ye., Candidate of Technical Sciences, Yurkov, V.N., and Osipov, A.V., Mining Engineers

TITLE: Experience of Exploitation of Block Nr. 34 in the Belousovo Mine (Opyt otrabotki bloka Nr. 34 na Belousovskom rudnike)

PERIODICAL: Gornyy Zhurnal, 1958, Nr. 4, pp. 19-21 (USSR)

ABSTRACT: The authors describe how well the mining work of the block Nr. 34 of the Belousovo Mine was organized. The work was executed by a party of 14 men. This party executed all the mining work, the boring of blast holes and the maintenance of all mechanical appliances. There are 3 figures and 2 tables.

ASSOCIATION: Belousovskoye rudoupravleniye (Belousovo Mining Administration)

Card 1/1 1. Mines - Operation

YERGALIYEV, Aodesh Yergaliyevich; YURKOV, Viktor Nazarovich; OSIPOV, Aleksandr Vasil'yevich; ZYRYANOV, Timofey Pavlovich; KUZNETSOV, Yu.N., red.; ROKOKINA, Z.P., tekhn. red.

[Systems of working ore deposits of minor and average thickness] Sistemy razrabotki rudnykh mestorozhdenii maloi i srednei moshchnosti. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1961. 205 p. (MIRA 14:7)

(Mining engineering)

OSIPOV, A. Ya.

"Tests on the Vegetative [illegible] of Cereals", Agrob. (, [illegible].-

1. OSIPOV, A.Ye.

2. USSR (600)

7. "Experiments in Selection of Oats for Immunity to Loose Smut", Selektsiya i Semenovodstvo, No 3, 1951, pp 75-77.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

OSIPOV, A. Ye.

"Vegetative Hybridization as a Selection Method for Grass Crops." [illegible] Biol Sci, All-Union Inst of Plant Growing, VASKhNIL, Leningrad, 1953. (ZhBiol., No 7, Dec '4)

Survey of Scientific and Technical Dissertations Defended at [illegible] Higher Educational Institutions (1)
SO: Sum. No. 550, 24 Jun 55

OSIPOV, A.Ye., kandidat biologicheskikh nauk.

Vegetative hybridization in the breeding of plants of the grass family. Agrobiologiia no.3:78-88 My-Je '56. (MLRA 9:9)

1.Ryazanskaya selektsionno-opytnaya stantsiya.
(Hybridization, Vegetable) (Grain)

OSIPOV, B.

Maturing in the process; a sketch. Sov.profsoiuzy 16 no.6:
6-10 Mr '60. (MIRA 13:3)
(Moscow--Clockmaking and watchmaking)

OSIPOV, B., inzhener-kapitan III ranga.

Studying fire extinction methods. Mor. flot 7 no.2:41 '47.
(MLRA 9:6)
(United States--Ships--Fires and fire prevention)

ACC NR: AN7004844 SOURCE CODE: UR/9003/67/000/038/0004/0004

AUTHOR: Belikov, V.; Osipov, B.

ORG: none

TITLE: Electronic computer serves aeroflot

SOURCE: Izvestiya, no. 38, 14 Feb 67, p. 4, col. 7

TOPIC TAGS: electronic computer, civil aviation, computer application, cybernetics

ABSTRACT:
Last year Aeroflot transported 53 million passengers. The newly established firm "Avtomatika" will do the cybernetics work by which with the help of a computer it will be possible to find out exactly the number of passenger seats available. The Ministry of Civil Aviation of the USSR thinks that the automated system of ordering and selling tickets will work 2 1/2 times faster than the most experienced cashiers.

SUB CODE: 09,01/SUBM DATE: none/ ATD PRESS: 5114

Card 1/1

OSIPOV, B. A.

36706. OSIPOV, [illegible], L. F. K voprosu [illegible] Sbornik trudov Tbilis. In-Ta [illegible] 19h8 s. 587 - 97 Bibliogr: 5 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

Осипов В А

124-1957-10-11454

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 40 (USSR)

AUTHOR: Osipov, B. A.

TITLE: On the Combustion of Pulverized Coal in the Fireboxes of Locomotives (K voprosu szhiganiya ugol'noy pyli v paravoznykh topkakh)

PERIODICAL: Sb. tr. Tbilissk. in-ta inzh. zh.-d. transp., 1956, Nr 30, pp 166-182

ABSTRACT: An analysis of existing ideas on the combustion process of pulverized solid fuel leads the Author to the conclusion that an accelerated combustion of the pulverized coal can be realized during the motion of the powdery suspension through a curvilinear flue; the acceleration of the process results from the high relative radial velocity. The high temperature of the process (around 1500° C) is an important factor in the increase of the rate of heat liberation. Experiments conducted by the Author support his assertions.

G. A. Varshavskiy

Card 1/1

OSIPOV, B.A.; NESTERENKO, A.D., kand. ekon. nauk, otv. red.

[Reproduction and ways of efficient utilization of timber resources in the Maritime Territory] Vosproizvodstvo i puti ratsional'nogo ispol'zovaniia lesosyr'evykh resursov Primorskogo kraia. Vladivostok, AN SSSR, 1961. 33 p. (MIRA 16:9)
(Maritime Territory--Forests and forestry--Economic aspects)

[redacted]

[redacted], B.A.

[redacted]

[redacted]

[redacted]

[redacted] USSR.

L 29538-65 EWT(1)/EWG(v)/FCC/EWA(h) Pe-5/Pi-4/Pc-4/Pq-4/Pt-10/Pae-2/Peb GW

ACCESSION NR: AT5005816 S/3116/64/271/000/0005/0018

AUTHOR: Borisenkov, Ye. P.; Osipov, B. A.

TITLE: Evaluation of the seasonal characteristics of the upper atmosphere energy balance in the Northern Hemisphere

SOURCE: Leningrad. Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, v. 271, 1964. Chislennyye metody issledovaniya gidrometeorologicheskikh usloviy v Arktike s ispol'zovaniyem elektronnykh tsifrovykh vychislitel'nykh mashin; sbornik statey (Numerical methods of investigating hydrometeorological conditions in the Arctic using electronic digital computers; collection of articles), no. 1, 5-18

TOPIC TAGS: upper atmosphere, atmospheric kinetic energy, upper atmosphere energy balance, radiation balance, upper atmosphere dynamics, radiation absorption

ABSTRACT: Research has been carried out to determine the relationships between the seasonal variations in the radiational balance and in the dynamic characteristics of the upper atmosphere. A series of meteorological factors were considered along eight parallels at 10-degree intervals between 10 and 80° N for summer and winter: monochromatic radiation transfer, total radiation intensity in a half-sphere within

Card 1/2

L 29538-65

ACCESSION NR: AT5005816

2

a given range of frequencies, longwave radiation in 2-km layers (11, 13, 15 ... 79 km), vapor tension at different latitudes and seasons, the downward transmission of longwave radiation, pressure and density within specific layers, the filtration function of ozone and carbon dioxide, shortwave radiation absorption by ozone in the 2000—3200-Å Hartley band, shortwave radiation absorption by water vapor in six regions in the Hartley band, and several upper atmosphere kinetic-energy factors. The results of these computations, made on an "Ural-2" electronic digital computer, are presented in a series of tables and graphs. The data are analyzed, discussed, and compared with those obtained in earlier studies made by Ohring, Murgetroyd, Goody, and Plass. The findings obtained in the present work, which stresses the role of water vapor, ozone, and carbon dioxide in the absorption of shortwave and longwave radiation, are essentially in agreement with those of Ohring and others. Orig. art. has: 5 tables, 8 figures, and 23 formulas. [SP]

ASSOCIATION: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (Arctic and Antarctic Scientific Research Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 012 OTHER: 008 ATD PRESS: 3197

Card 2/2

219. **On the accuracy of microwave frequency standards.**—B. D. Osipov. Letter in *Zh. eksper. teor. Fiz.*, **25**, *No.* 4(10) 509–10 (1953) In Russian.

An oscillator can be calibrated by the use of an absorber with a sharp resonance frequency ω_0 in conjunction with a discriminator whose signal is proportional to the deviation from ω_0. The error in a frequency determination is governed by the presence of noise in the discriminator, and a simple formula for it is easily derived. The accuracy of an oscillator calibrated in this way depends, however, also on its stability, and an analysis shows that it is usually considerably less than the former formula would suggest.

W. J. SWIATECKI

OSIPOV, B. D.

USSR/Physics - Microwave dispersion FD-746

Card 1/1 : Pub 146-16/22

Author : Osipov, B. D.

Title : Microwave dispersion in ammonia at a pressure of 10^{-2} mm of Hg

Periodical : Zhur. eksp. i teor. fiz., 27, 115, Jul 1954

Abstract : Letter to the editor. Experiments were performed according to methods of G. Birnbaum (J. Appl. Phys. 22 [1951]); Phys. Rev. 77 (1950) and of W. D. Hershberger (J. Appl. Phys. 17 [1946]). Dispersion curves are presented in graphs. 4 foreign references.

Institution : Physics Institute imeni Lebedev, Acad. Sci. USSR

Submitted : February 12, 1954

Osipov. B D

USSR/Electronics - Frequency Stabilizers FD-2224

Card 1/1 Pub 90-4/12

Author : Barchukov, A. I., Vasil'ev, G. A., Zhabotinskiy, M. E., Osipov. B. D.

Title : Electromechanic klystron frequency stabilizer

Periodical : Radiotekhnika, 10, 29-32, Mar 1955

Abstract : The article describes results of testing an electromechanic klystron frequency stabilizer developed by the authors at the Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR in 1951. The aim of this research was to develop a stabilizer simple in construction and operation, which could also provide an easy means for the klystron frequency changes. To attain these prerequisites in a single block, the functions of cavity resonator and the discriminator were unified, and the modulation of resonant frequency of the cavity-resonator wavemeter was executed by means of a movable membrane.

Institution: Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR

Submitted : 16 Apr 1954

OSIPOV, B.D.

USSR/Physics - A frequency standard

Card 1/ Pub. 22 - 21/54

Authors : Osipov, B. D., and Prokhorov, A. M.

Title : The ammonia line of absorption (3.3) as a standard for frequency measurements in the 5-20 Mgc range up to the 10^{-6} precision

Periodical : Dok. AN SSSR 102/5, 933 - 934, June 11, 1955

Abstract : A description is presented of an instrument which can be used as a frequency measuring standard in the frequency range between 5-20 Mgc. Its design and construction are based on the fact that gas spectral lines are not affected by the outer conditions. Ammonia gas of 3.3Å spectral line is used in the instrument. Frequencies measured with this instrument can be judged up to 10^{-6} (of a measuring unit). Five references: 1 USSR and 4 USA (1951-1954). Diagrams; illustrations.

Institution : The Acad. of Sc., USSR, P. N. Lebedev Physical Institute

Presented by : Academician M. A. Leontovich, February 26, 1955

Osipov, B.D.

Category : USSR/Radiophysics - Application of radiophysical methods I-12

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 2044

Author : Basov, N.G., Osipov, B.D., Prokhorov, A.M.
Title : On a Molecular Generator without a Molecular Beam

Orig Pub : Uspekhi fiz. nauk, 1956, 59, No 2, 375

Abstract : Report that it is impossible to sort gas molecules using the method (See Ref. Zhur. Fiz, 1956, 20674) of static, electric, or magnetic fields.

Card : 1/1

51-1-18/18

AUTHOR: Osipov, B. D.

TITLE: The Hyperfine Structure of the Rotational Transition I = 3→4 of the Molecule CH_3T^{127}. (Sverkhtonkaya struktura vrashchatel'nogo perekhoda I = 3→4 molekuly CH_3T^{127}).

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.III, Nr.1, pp.94-95. (USSR).

ABSTRACT: Complete translation.

Rotational transitions with I = 0→1, 1→2, 2→3 and 4→5 in the microwave spectra of the molecule CH_3T^{127} were reported in a number of papers (Refs.1-3).

This paper reports fourteen lines of the hyperfine structure of the transition I = 3→4 found in the frequency range of 60000 Mc/s. The observations were made using a radiowave spectroscope with electrical molecular modulation at the temperature of dry (carbon dioxide) ice. The line frequencies were measured by the usual method of comparison with harmonics of a quartz generator, whose frequency was controlled by standard frequency transmissions of a radiostation PB-71.

Card 1/3

Card 3/3

SOV/51-4-6-14/24

AUTHORS: Basov, N.G. and Osipov, B.D.

TITLE: Emission Line of the Transition F = 5/2→3/2, J = 1, K = 1 in the Rotational Spectrum of the CH_3I^{127} molecule. (Liniya izlucheniya perekhoda F = 5/2→3/2, J = 1, K = 1 vrashchatel'nogo spektra molekuly CH_3J^{127})

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 6, pp 795-797 (USSR)

ABSTRACT: Basov and Prokhorov (Ref 1) showed that it is possible to obtain active molecules in a system with three energy levels. This possibility was experimentally realized in the work reported in Ref 2 on levels of paramagnetic electron resonance in a crystal of gadolinium ethyl sulphate. A similar system of levels may be selected from the rotational spectrum of a molecule which possesses a sufficiently clear hyperfine structure (Fig 1). It is then possible to use a gaseous substance at low pressures and to obtain high resolving power. In this way an emission line (shown as ν_{12} in Fig 1) may be obtained. Experimental observations may be made in a spectroscope with a cavity resonator, as well as in a spectroscope with a waveguide absorption cell. The second method is more convenient when the form of the spectral line is studied, but it

Emission Line of the Transition F = 5/2→3/2, J = 1, K = 1 in the Rotational Spectrum of the CH_3I^{127} molecule.

requires high powers of auxiliary radiation (ν_{13} in Fig 1). Observation of the ν_{12} transition in the presence of auxiliary radiation makes it possible to increase the intensity of the ν_{12} line by a factor of $(1/2)(\nu_{13}/\nu_{12})$. Periodic variation of intensity of frequency of the auxiliary radiation produces modulation of the level 1 (Fig 1) population which makes observation of the ν_{12} transition many times. The present paper reports observations on the emission line of the transition F = 5/2→3/2, J = 1, K = 1, between hyperfine structure levels in the rotational spectrum of CH_3I^{127}. The apparatus used is shown schematically in Fig 2. A superheterodyne spectrometer with a coaxial cavity resonator 1 was used. The external wall of the resonator was made of a wire grid which was transparent to high-frequency radiation. This made it possible to tune independently at high and low frequencies. Auxiliary radiation was produced by a klystron 3, whose frequency was varied in a saw-toothed fashion near 30216 Mc/s. When the frequency of the klystron passed through the resonance frequency of the absorption line ν_{13} = 30216 Mc/s, the emission line was observed by change of power reflected from the coaxial resonator,

Emission Line of the Transition F = 5/2→3/2, J = 1, K = 1 in the Rotational Spectrum of the CH_3I^{127} molecule

tuned to the frequency of ν_{12} = 292.45 Mc/s. The coaxial resonator was insulated from the external resonator and served as the electrode for Stark modulation. In this way the absorption line ν_{13} was observed on a control oscilloscope (10 in Fig 2). The intensity of the emission line reached a maximum of the order of $10^{-8} cm^{-1}$ at (3-5) x 10^{-3}mm Hg. Power of the auxiliary radiation was of the order of several mW. The results obtained show that the spectroscope used makes it possible to make about 100 times more sensitive measurements than the usual method of observation of absorption lines (Ref 4). To increase the resolving power it would be necessary to use a non-monochromatic auxiliary radiation or spatial separation of the field. The authors thank A.V. Dudenkova, Yu. P. Zakharov and G. Mishukov for help in this work. There are 2 figures and 4 references, 3 of which are American and 1 Soviet.

Card 3/3

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva, AN SSSR (Physics Institute imeni P.N. Lebedev, Academy of Sciences of the U.S.S.R.)

SUBMITTED: November 19, 1957

S/051/60/008/04/031/032
E201/E691

AUTHOR: Osipov, B.D.

TITLE: The I-J Interaction in the CH_3I Molecule

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 4, pp 581-582 (USSR)

ABSTRACT: Interaction of the nuclear spin I with the magnetic field of a molecule in the $^1\Sigma$-state is known as the I-J interaction. The energy of a nucleus of a symmetrical-top molecule interacting in this way is given by:

$$W_m = \frac{F(F+1) - J(J+1) - I(I+1)}{2}\left[a + (b-a)\frac{K^2}{J(J+1)}\right], \qquad (1)$$

where F is the quantum number of the total angular momentum, J is the rotational quantum number, K is the projection of J on the molecule axis and "a", "b" are constants. The present paper deals with the I-J interaction in the CH_3I molecule. To observe transitions between h.f.s. levels of the rotational spectra of this molecule, a double-resonance method (Ref 3) was used. The frequencies of the intense transitions from J = K are listed in a table on p 581. Because of a strong quadrupole coupling of iodine in CH_3I, the quadrupole h.f.s. was calculated to the third order of the perturbation theory. For

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S/051/60/008/04/031/032
E201/E691

The I-J Interaction in the CH_3I Molecule

each pair of transitions with the quantum number J = 2 or 3 the table on p 581 lists both positive and negative changes of W_m, from which the quadrupole coupling constant $(eQq)_1$ and the I-J interaction energy can be found independently. The results obtained permit calculation of only the upper limit of the constant "a" (this limit is 1.04 kc/s); the value of "b" was found to be 19.9 $\pm$ 0.5 kc/s. There are 1 table, 1 figure and 4 references, 2 of which are Soviet and 2 English.

SUBMITTED: November 13, 1959

Card 2/2

Osipov B.D.

AID Nr. 971-27 20 May

EXCITATION OF RECOMBINATION EMISSION BY MEANS OF A LASER (USSR)

Basov, N. G., L. M. Lisitsyn, and B. D. Osipov. IN: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 21 Mar 1963, 561-562. S/020/63/149/003/009/028

An experimental study of recombination emission in germanium, silicon, and gallium arsenide at various temperatures employs a ruby laser (6934 Å) to obtain high excitation levels. Samples of n-type germanium with a resistivity of 40 ohm·cm and a diffusion length of 1.5 mm in the shape of a "Weierstrass sphere" 8 mm in diameter were excited by light pulses with a duration of 200 μ sec and a density of 10^6 w/cm^2. A spectrometer with a lead sulfide indicator (100 μ sec time constant) was used to analyze the recombination emission pulses. The signal was amplified by a broadband amplifier and registered by a dual-beam oscillograph. Laser output was monitored by a photomultiplier.

Card 1/2

AID Nr. 971-27 20 May

EXCITATION OF RECOMBINATION [Cont'd] S/020/63/149/003/009/028

The results show that the intensity of recombination emission at the temperature of liquid nitrogen is "two orders" greater than at room temperature, and at the temperature of liquid helium 2 to 3 times greater than at the temperature of liquid nitrogen. Analogous results were obtained for silicon and gallium arsenide. It is proposed that laser pulses of 10^{-7} sec be used for further investigations of recombination processes. [BB]

Card 2/2

BASOV, N.G.; LISITSYN, L.M.; OSIPOV, B.D.

Use of an optical quantum generator for the excitation of recombination luminescence in semiconductors. Dokl.AN SSSR 149 no.3:561-562 Mr '63. (MIRA 16:4)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR. 2. Chlen-korrespondent AN SSSR (for Basov).

(Masers) (Semiconductors) (Luminescnece)

OSIPOV, B.D.; KHVOSHCHEV, A.N.

Optical study of the magnetic constriction of an electron-hole plasma in InSb. Zhur. eksp. i teor. fiz. 43 no.4:1179-1183 O '62. (MIRA 15:11)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Plasma (Ionized gases))
(Indium antimonide) (Magnetic fields)

OSIPOV, B.D.

Interference rejection of a certain method for duplex phase telegraphy reception. Elektrosviaz' 16 no.10 21-24 O '62. (MIRA 15:9)

(Telegraph)

6.4310,
6.4800
6,7100

S/106/62/000/010/002/002
A055/A101

AUTHOR: Osipov, B.D.

TITLE: On the interference immunity of a method of double reception of phase telegraphy

PERIODICAL: Elektrosvyaz', no. 10, 1962, 21 - 24

TEXT: The double reception method with space diversity antennas shown in Fig. 1, where AA is the system analyzing the voltage amplitude levels and controlling the switch, is applied to phase telegraphy ["simplex" (odnokratnoye) telegraphy]. The receivers (no. 1 and no. 2) receive simultaneously the signals ($\bar{U}_{sign\ 1}$ and $U_{sign\ 2}$, respectively) and the interferences ($\bar{U}_{int\ 1}$ and $U_{int\ 2}$, respectively). The following assumptions are made: 1) The fadings of $U_{sign\ 1}$, $U_{sign\ 2}$, $U_{int\ 1}$ and $U_{int\ 2}$ are independent. 2) The resulting amplitude probability density distribution function for signals and interferences looks as follows:

Card 1/8

On the interference immunity of ....

$$W(U) = \frac{U}{U^2_{rms}} e^{-\frac{U^2}{2U^2_{rms}}}, \quad (1)$$

where U is the amplitude of the resulting voltage of the signal (or interference) in a receiver channel; U_{rms} is the rms value of the signal (or interference) amplitude. 3) The distribution function of the probability density of the angle α (between vectors $\overline{U}_{sign}$ and $\overline{U}_{int}$) is:

$$W(\alpha) = \frac{1}{2\pi} . \quad (2)$$

The author examines the effect of a periodical interference whose frequency coincides with the frequency of the signal. He assumes that the synchronous voltage U_{synch} in the detector is not subjected to interferences. The analysis is essentially based on the vector diagram of Fig. 2, corresponding to one channel and to a certain moment. The angle φ (deviation of the signal vector from its rated position) is supposed constant. For the estimation of the interference im-

Card 2/5 4

On the interference immunity of ....

munity, the following formula, determining the probability P of malfunction is deduced:

$$P_{mf} = \frac{n^2}{(1+n^2)(1+2n^2)} + \frac{4n^2}{\pi\sqrt{\Delta_3}}\left[\pi/2 + \operatorname{arc\,tg}\frac{\epsilon_3}{\sqrt{\Delta_3}}\right] -$$

$$- \frac{4n^4}{\pi(1+n^2)\sqrt{\Delta_2}}\left[\pi/2 + \operatorname{arc\,tg}\frac{\epsilon_2}{\sqrt{\Delta_2}}\right] - \frac{4n^2}{\pi(1+n)^2\sqrt{\Delta_1}}\left[\pi/2 + \operatorname{arc\,tg}\frac{\epsilon_1}{\sqrt{\Delta_1}}\right], \quad (7)$$

where $\Delta = 4a^2(a^2+b^2+1)$; $\epsilon = 2(a^2+b^2-1)$; $a_1^2 = 2n^2+1$; $a_2^2 = a_3^2 = n^2$; $b^2 = tg^2\varphi$; $n = \frac{U_{sign\ rms}}{U_{int\ rms}}$. Formula (7) is correct both in the reception of a positive sending and in the case of a deviation of $\bar{U}_{sign}$ into the left-hand half-plane. The conditions under which this formula is valid also in the case of interferences whose frequency differs from that of the signal are briefly mentioned. There are 3 figures.

Card 3/5

S/106/62/000/010/002/002
A055/A101

On the interference immunity of ....

SUBMITTED: January 15, 1962

Figure 1: (1) no. 1; (2) no. 2; (3) AGC; (4) AA; (5) 1-f circuits; (6) channel switch; (7) output

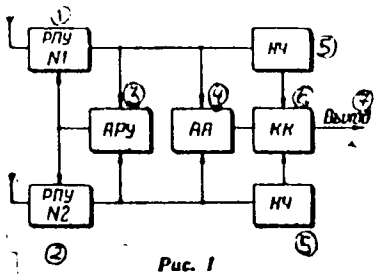

Рис. 1

Card 4/8

BASOV, Nikolay Gennadiyevich; OSIPOV, B. D.; KHVOSHCHEV, A. N.

"State with Negative Temperature in Electron Hole Plasma Compressed by Its Own Magnetic Field"

Paper presented at Optical Society of America Meeting, Washington, D. C. 14-17 March 62

BASOV, N.G.; KROKHIN, O.N.; LISITSYN, L.N.; MARKIN, Ye.P.; OSIPOV, B.D.

Negative conductivity in induced junctions. Zhur.eksp.i teor. fiz. 41 no.3:988-989 S '61. (MIRA 14:10)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.
(Semiconductors--Electric properties)

OSIPOV, B. D., BASOV, N. G., KROKHIN, O. N., LISITZYIN, L. N., MARKIN, E. P.

"On Negative Photoconductivity and the Induced Electron Transitions"

Paper presented at the IUPAP International Conference on Photoconductivity, Ithaca, New York, 21-24 Aug. 1961.

25210

S/056/61/040/006/[illegible]
B125/B202

6.3300

AUTHORS: Basov, N. G., Oskpov, B. D., Khvoshchev, A. N.

TITLE: Recombination luminescence of indium antimonide in an avalanche breakdown

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. [illegible], no. 6, 1961, 1882

TEXT: When studying the behavior of the crystals of indium antimonide in strong electric fields it was found that at a field strength of ~200 v/cm the carrier concentration strongly increases as a result of impact ionization of the electrons of the valence band (avalanche breakdown). (M. Glicksman, M. C. Steele, Phys.Rev., 11, 1234, 1958; M. C. Steele, M. Glicksman, J. Phys.Chem. Solids, 8, 1, 1959; A. Carrier J.Electr. and Control., 4, 165, 1958) The authors deal with an infrared luminescence of the crystals of n-type indium antimonide with low impurity concentrations on applying current pulses of up to [illegible] amperes mm^{-2} duration. At such amperages the resistance of the specimen was reduced by more than one order of magnitude with respect to the resistance at low amperages. This

Card 1/3

Recombination luminescence of indium

may be due to an avalanche breakdown. To avoid overheating of the specimen current pulses of 3 microseconds at the maximum with a repetition frequency of 50 cps are used. Luminescence was observed at a temperature of 78°K. It disappeared on heating the specimen to 120 - 180°K. The increase and decrease of the light pulse took less than one microsecond so that the luminescence observed cannot be connected with the heating of the crystal lattice. The radiation spectrum with the maximum at $\lambda = 5.3\mu$ and the half-width 0.25μ suggests that in this case recombination luminescence is concerned. (T.S. Moss. Optical Properties of Semiconductors, 1959). The actual temperature at the maximum of the spectrum was determined by comparing it with the radiation of a black body. It was found to be 500°K. The authors thank D. N. Nasledov and his collaborators for their interest. [Abstracter's note. Complete translation.] There are 4 non-Soviet-bloc references. The two most recent references to English-language publications read as follows. M.C. Steele, M. Glicksman. J. Phys. Chem. Solids, 8, 242, 1959; T.S. Moss. Optical Properties of Semiconductors, 1959.

Card 2/3

25210

Recombination luminescence of indium .

ASSOCIATION. Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED. April 27, 1961

Card 3/3

BASOV, N.G.; OSIPOV, B.D.; KHVOSHCHEV, A.N.

Recombination luminescence of indium antimonide in avalanche discharges. Zhur. eksp. i teor. fiz. 40 no.6, Je '61.
(MIRA 14:8)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Indium antimonide)
(Electric discharges through gases)
(Luminescence)

OSIPOV, B.D.

28767
S/056/61/041/003/020/020
B113/B102

9.4177 (113)

AUTHORS: Basov, N. G., Krokhin, O. N., Lisitsyn, L. M., Markin, Ye.P., Osipov, B. D.

TITLE: Negative conductivity in induced transitions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 3(9), 1961, 988-989

TEXT: In indirect transitions the carrier concentration at which a negative temperature occurs relative to the band-to-band transition, is comparatively small. It is by some orders of magnitude lower than the concentration at which a negative absorption coefficient exists for photons with an energy that is comparable with the width of the forbidden band. For the existence of a negative absorption coefficient it is necessary that the probability of induced photon emission in the band-to-band transition considerably exceeds the photon absorption probability in the inverse process in order to compensate also absorption in inner transitions. The processes, however, that are connected with internal absorption practically do not influence conductivity since they do not change the

Card 1/3

Negative conductivity in induced...

total number of free carriers. The band-to-band transitions which are in a state with negative temperature and which were induced by photon irradiation, reduce the number of free carriers and lead to a decrease in conductivity. Hence, the semiconductor which is in a state with negative temperature relative to the band-to-band transition is bound to have negative photoconductivity when irradiated with photons, whose energy is almost equal to the width of the forbidden band. The measurement of the spectral dependence of the semiconductor photoconductivity permits the determination of the states with negative temperatures also with lacking negative absorption coefficient. The authors made experiments for the production and observation of states with negative temperature in silicon. The specimen was irradiated at 4°K with light of a wavelength smaller than 0.7 μ which considerably increased its conductivity. Upon additional irradiation with weak monochromatic light a conductivity reduction (negative photoconductivity) was observed for a series of specimens in a narrow band of wavelengths near 1.1 μ. It can be assumed that the conductivity decrease observed is due to the existence of a state with negative temperature. However, also other explanations, such as impurity photoconductivity, are possible. [Abstracter's note: Essentially

Negative conductivity in induced...

complete translation.] There are 3 Soviet references.

ASSOCIATION: Fiziches'kiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: July 13, 1961

Card 3/3

OSIPOV, B.D.

Feasibility of measuring the gravitational frequency shift in the gravitational field of the sun. Zhur.eksp.i teor.fiz. 38 no.2:657-658 F '60. (MIRA 14:5)

1. Fizicheskiy institut im. P.N.Lebedeva Akademii nauk SSSR.
(Relativity (Physics))

OSIPOV, B.K.; MANEVICH, V.L.

Importance of special methods of examining the mediastinum in the assay of the operability of malignant neoplasms of the lungs and the anterior mediastinum. Trudy TSIU 62:119-128 [illegible].
(MIRA [illegible])

1. II kafedra klinicheskoy khirurgii (zav. prof. B.K.Osipov) TSentral'nogo instituta usovershenstvovaniya vrachey.

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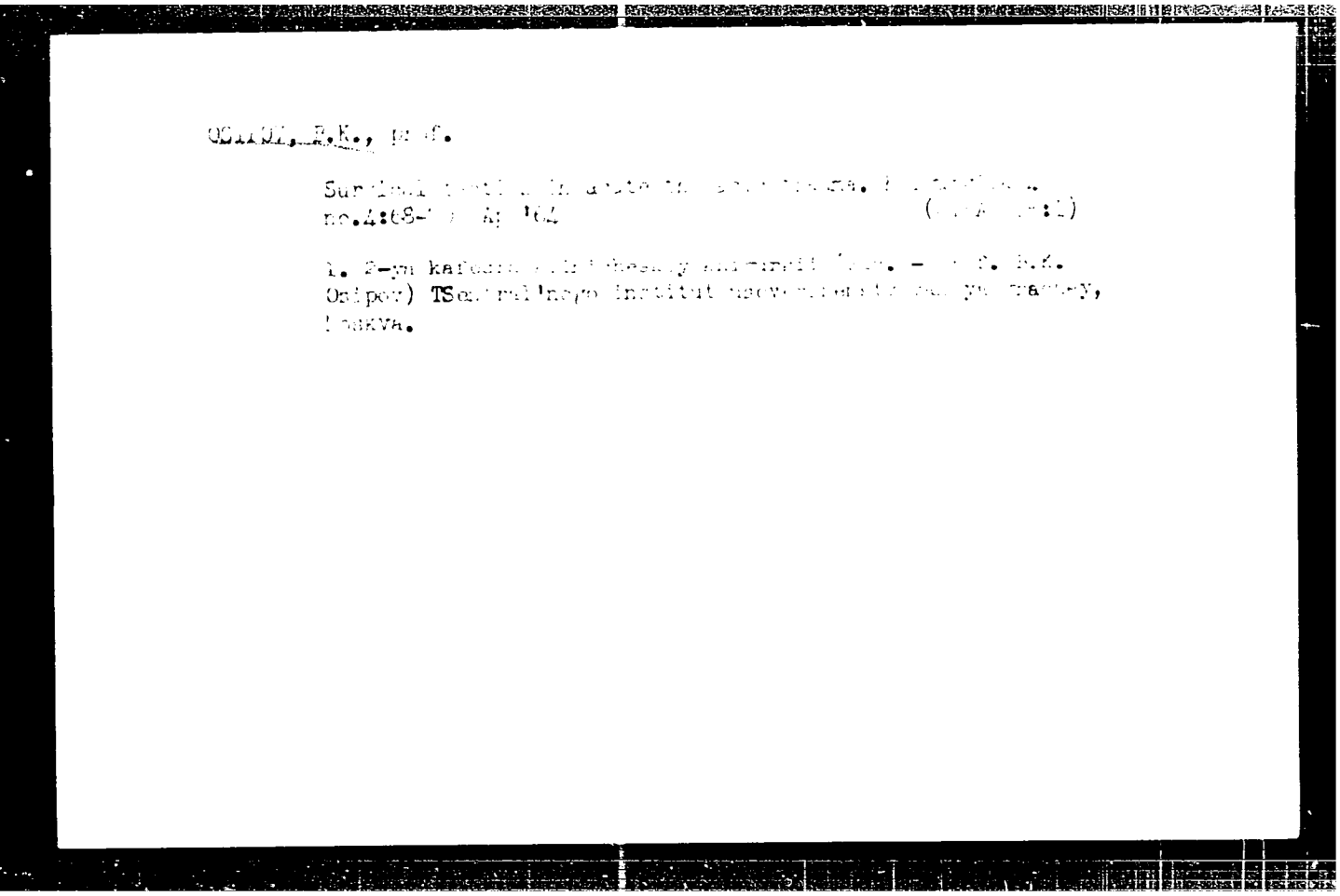

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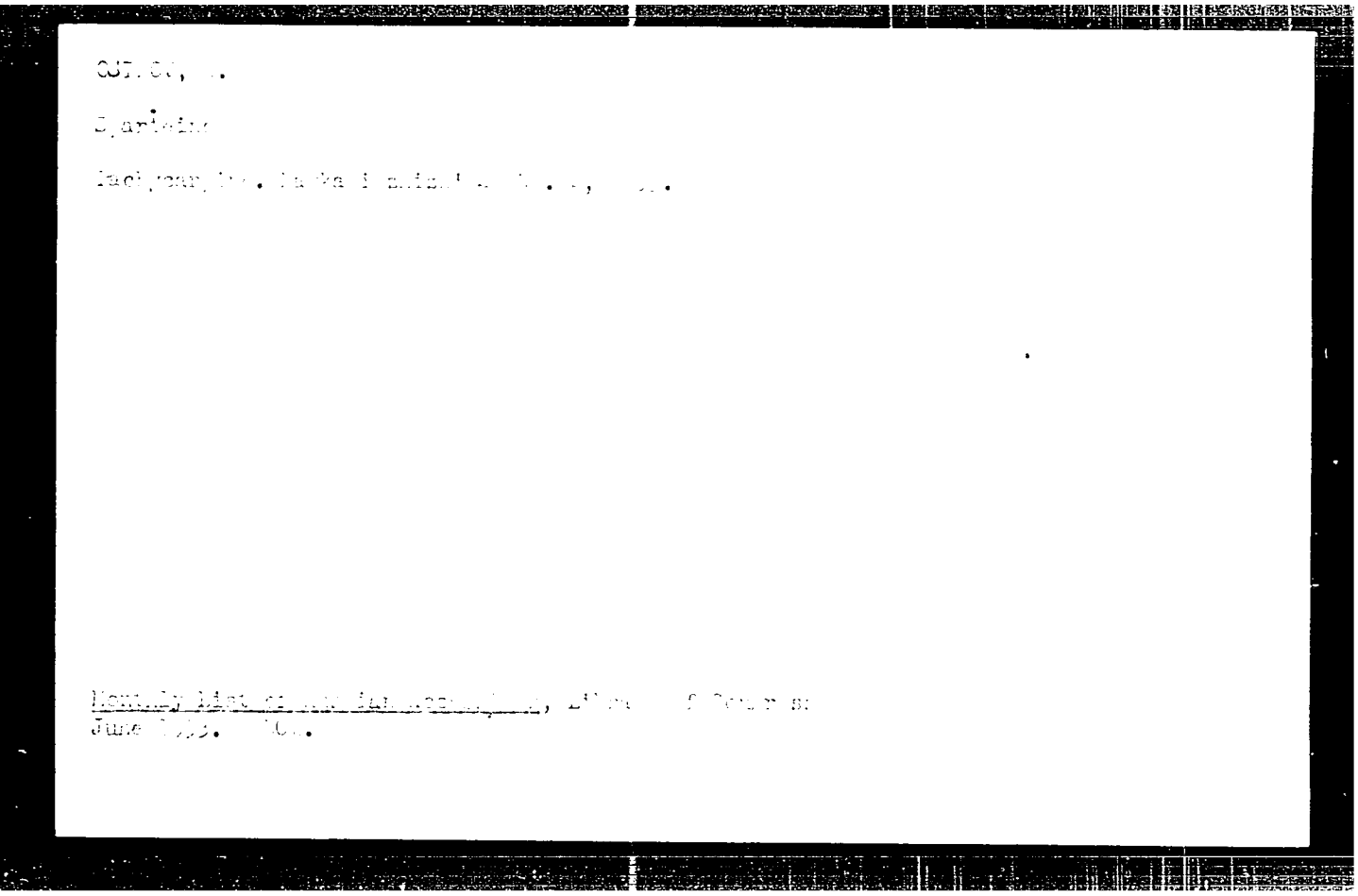

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B. K. OSIPOV

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Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71563

Author : Osipov, B.K.
Inst :
Title : Hamartoma of the Lung.

Orig Pub : Khirurgia, 1956, No 8, 21-24

Abstract : No abstract.

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