

GINDIN, L.M.; BOBIKOV, P.I.; KOUBA, E.F.; BUGAYEVA, A.V.

Exchange interaction of soaps with mineral acid salts. Zhur.neorg.-
khim. 6 no.12:2797-2804 D '61. (MIRA 14:12)

1. Noril'skiy gornometallurgicheskiy kombinat imeni A.P.Zavenyagina.
(Metallic soaps) (Acids, Inorganic)

GINDIN, L.M., kand.khimicheskikh nauk; BOBIKOV, P.I., inzh.; SOKOLOV,
A.P., inzh.

Former indivisibles. Nauka i zhizn' 29 no.1:56-57 Ja '62.
(MIRA 15:3)

(Platinum group)

GINDIN, L.M.; BOBIKOV, P.I.; PATYUKOV, G.M.; DAR'YAL'SKIY, V.A.;
BRODNITSKIY, K.P.; KASAVIN, I.A.

Electrolytic extraction of high-purity cobalt. TSvet. met.
34 no.12;22-26 D '61. (MIRA 14:12)
(Cobalt--Electrometallurgy)

GINDIN, L.M.; BOEIKOV, P.I.; PATYUKOV, G.M.; ROZEN, A.M.; KOUBA, E.F.;
BUGAYEVA, A.V.

Separation of ~~mixtures~~ of metals by exchange extraction with
carboxylic acids. Ekstr.; teor., prim., app. no. 2:87-111 '62.
(MIRA 15:9)
(Metals) (Extraction (Chemistry)) (Acids, Organic)

BOBIKOV, P.I.; GINDIN, L.M.

Commercial separation of metals by the method of exchange extraction in columns. Izv. Sib. otd. AN SSSR no.6s46-53 '62
(MIRA 17s7)

1. Noril'skiy gorno-metallurgicheskiy kombinat, Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk.

GINDIN, L.M.

Acid-base interactions in ion-exchange extraction processes.
Izv. Sib. otd. AN SSSR no.12:128-130 '62. (MIRA 17:8)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

DOLGIKH, V.I.; BOBIKOV, P.I.; BORBAT, V.F.; FERBERG, M.B.; GINDIN, L.M.

Extractive method of recovering noble metals from slimes. TSvet. met.
36 no.11:85-86 N '63. (MIRA 17:1)

GINDIN, L.M.; IVANOVA, G.M

Extraction separation of platinum and palladium by hydrochloric
tri-n-octylamine. Izv. SO AN SSSR no.7 Ser. khim. nauk no.2:
28-34 '64 (MIRA 18:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

IVANOVA, S.N.; GINDIN, L.M.; MIRONOVA, L. Ya.

Extraction of platinum by aliphatic amines of various structure.
Izv. SO AN SSSR no.7 Ser. khim. nauk no.2:35-43 '64
(MIRA 18:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

KHOL'KIN, A.I.; GINDIN, L.M.

Extraction equilibria in the system water - n-decane - n-caprylic acid. Izv. SO AN SSSR no.7 Ser. khim. nauk no.2:33-41 '65.

(MIRA 18:12)

I. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk. Submitted February 26, 1964.

BRONSTEIN, A.G.; IVANOV, I.N.; GINDLI, L.S.

Extraction equilibria in the system water - benzene - sodium caprylate. Izv. SO AN SSSR no.7 Ser. Khim. nauk no. 272-
SO '65. (DIE-1841)

I. Institut neorganicheskoy khimii Sibirskogo nauchnogo tsentra
SSSR, Novosibirsk. Submitted December 26, 1964.

MARUROVA, G.A.; GINDIN, L.M.

Palladium extraction with tri-~~n~~-octylamine hydrochloride. Zhur,
neorg. khim. 10 no.2:489-496, '65. (MIRA 18:11)

1. Institut neorganicheskoj khimii Sibirskogo otdeleniya AN
SSSR. Submitted July 29, 1963.

GINDIN, L.M.; VASIL'YEVA, A.A.; IVANOV, I.M.

Extraction of bismuth, antimony, and silver with aliphatic
monocarboxylic acids. Zhur. neorg. khim. 10 no.2:497-501
1965. (MIRA 18:11)

1. Submitted July 29, 1963.

GINDIN, L.M.; IVANOVA, S.N.; MAZUROVA, A.A.; MIRONOVA, L.Ya.

Extraction of platinum metals with salts of quaternary ammonium bases. Zhur. neorg. khim. 10 no.2:502-506 F '65.

(MIRA 18:11)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR. Submitted May 12, 1964.

MAZUROVA, A.A.; GINDIN, L.M.

Extraction of hydrochloric acid with tri-n-octylamine.
Zhur.neorg.khim. 10 no.11:2559-2563 N '65.

(MIRA 18:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya
AN SSSR. Submitted April 11, 1964.

NIKOLAYEV, A.V.; GINDIN, L.M.; ZAKHAROV, V.F.; KHOMAYKO, I.A.

Hydrometallurgical method of treating Khovu Akssy cobalt-nickel
arsenate concentrates. TSvet. met. 38 no. 12:11-16 D '65
(MIRA 19:1)

L 36078-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

SOURCE CODE: UR/0289/66/000/001/0083/0087

ACC NR: AP6016126

AUTHOR: Fedyashina, A. F.; Yudelevich, I. G.; Gindin, L. M.; Strokina, T. G.;³²

ORG: Institute of Inorganic Chemistry, Siberian Branch of the AN SSSR, Novosibirsk (Institut neorganicheskoy khimii, Sibirskogo otdeleniya AN SSSR)

TITLE: Chemical and spectral determination of micro impurities in salts of high purity rare alkali metals by extraction with aliphatic monocarboxylic acids²⁷

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1966, 83-87

TOPIC TAGS: alkali metals, spectrophotometric analysis, solvent extraction, carboxylic acid

ABSTRACT: The metals are arranged in the following series in decreasing order of their ability to go over into the organic phase in an exchange reaction: Sn(IV); Bi(III); Fe(III); Sb(III); Pb(II); Cu(II); Al(III); Ag(I); Cd(II); Zn(II); Ni(II); Co(II); Mn(II); Mg(II); Na(I). To investigate the possibility of concentrating micro impurities of the

UDC: 546.31 543.42

Card 1/2

GINDIN, M. L.; Putilova, I. N.

"Structure Formation in Suspensions under the Influence of an Electrical Field"
(Strukturoobrazovaniye v suspenziyakh pod vliyaniyem elektrocheskogo polya) from
the book Trudy of the Third All-Union Conference on Colloid Chemistry, pp.182-196,
Iz. AN SSSR, Moscow, 1956

(Report given at above Conferende, Minsk, 21-4 Dec 53)

GINDIN, R. S.

"Corrosion of Metals by Non-Aqueous Solutions: The Action of Ethyl Alcohol on Metals," Dokl. AN SSSR, 29, No.1, 1940.

All-Union Inst for Aircraft Materials

L 08098-67 EWT(1) GW

ACC NR: AP6029965 (N) SOURCE CODE: UR/0413/66/000/015/0151/0152

INVENTOR: Barshay, Ya. A.; Vysokorodov, N. S.; Gindin, V. I.; Golovin, N. A.; Zelenskiy, S. I.; Indin, I. M.; Levit, G. A.; Petrov, P. P.; Smirnov, A. M.

34
B

ORG: none

TITLE: Installations for underwater television inspection of the docking assembly and the bottom of ships. Class 65, No. 184645 /announced by Gunboat Repair Plant, Baltic Sea Steamship Line, Ministry of the Navy, SSSR (Kanonerskiy sudoremontnyy zavod Baltiyskogo morskogo parokhodstva Ministerstva morskogo flota SSSR)7

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 151-152

TOPIC TAGS: underwater camera, floating dry dock, TV camera, remote control

ABSTRACT: An Author Certificate has been issued for an installation for the underwater television inspection of the dock assembly and the bottom of a ship while docking includes a remote-controlled television camera with a transmitting cathode-ray tube in a hermetic casing and an electric cable for power supply and signaling. The television camera is mounted on a remote-controlled self-propelled carriage provided with an electric drive, rollers for moving on vertical and horizontal monorails along the wall and floor of the dock, and a switch remotely controlled by a block-and-tackle system. Orig. art. has: 1 figure. [GE]

SUB CODE: 14, 13, 09/ SUBM DATE: 21Aug64

Card 1/1 ml

UDC: 629.128.6: 621.397.13

CA

GINDIN, E. I.

3

Demountable ionic x-ray tube for structural analysis.
V. G. Prokhorov and E. I. Gindin. *Zavodskaya Lab.*
15, 1071-4 (1949).—The cathode-anode distance can be
varied from 70 to 90 mm., and the anode-window distance is
0 mm. The tip of the anode is a tetragonal pyramid, each
face consisting of a different metal. Focusing is accom-
plished with a deep-cup cathode and can be controlled from
the outside. Most necessary adjustments can be made
without breaking the vacuum. Cyrus Feldman

PA 169T90

GINDIN YE. I.

USSR/Physics - X-Ray Analysis

Aug 50.

"Vacuum High-Temperature Camera for X-Ray Structure Analysis," V. G. Prokhvatilov,
Ye. I. Gindin

"Zavod Lab" Vol XVI, No 8, pp 965

Describes camera for precision determination of lattice parameters at
elevated temperatures. Specimens may be heated to 500°. Camera satisfactorily
maintains vacuum to 10^{-4} mm Hg, and is simple and convenient in operation.

PA 169T90.

PA 187197

GINDIN, YE. I.

USSR/Physics - X-ray Tube

Mar/Apr 51

"Small-Size Ionic Sectional (Dismountable) X-ray Tube for Structural Analysis," V. G. Prokhvatilov, Ye. I. Gindin

"Iz Ak Nauk SSSR, Ser Fiz" Vol XV, No 2, pp 277, 278

Subject tube operates up to 10 ma at 30 kv. At loads higher than 12 ma the cementing material begins to soften and indications of deterioration of the vacuum are observed. Gives schematic diagram of the tube. Lecture read at 3d All-Union Conference on Use of X-rays in Study of Materials held 19 - 24 Jun 50 in Leningrad.

187197

LC

32-1-42/55

AUTHORS: Gindin, Ye.I., Frokhvatilov, V.G.

TITLE: A Device for Taking X-Ray Pictures at High Temperatures
(Prisposoble.iye dlya vysokotemperaturnykh rentgenovskikh s"yemok).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 106-107 (USSR)

ABSTRACT: In the present paper an additional device for the camera intended for taking pictures of pulverized polycrystalline substances at high temperatures (up to 1500°) is suggested. The powder of the substance to be investigated is applied on to a platinum wire of about 0.2 mm diameter. The suitable temperature is maintained by allowing the current to pass through this wire. The device consists of two suitably shaped brass plates, which are connected by a shaft. Between these plates a platinum wire is drawn in such a manner that one of its ends is made fast and the other is connected to a movable rod with a spring. This rod rests in two bearings of insulation material. The current is fed by 2 elastic lines in such a manner that one of them is connected to the connecting shaft of the device and the other to the free end of the movable rod; for reasons of safety this line is caught by an insulator which is

Card 1/2

A Device for Taking X-Ray Pictures at High Temperatures

32-1-42/55

fastened to one of the brass plates. The device is placed upon a steel rod in such a manner that the axis of this rod and that of the platinum wire is the same. The rod serves as a holder for the device with the sample and is fastened in the X-ray camera accordingly. Because of the automatic control of the necessary current a current stabilizer, an autotransformer, and a step-down transformer are provided (220/10). A small motor is connected here in order that the sample moves at not full revolutions (backwards and forwards). Temperature is measured according to the linear modulus of extension of the platinum wire (as per table). There is 1 figure.

AVAILABLE: Library of Congress
Card 2/2 1. X-ray cameras-Adaptors

5(2)

SOV/78-4-3-8/34

AUTHORS:

Verebeychik, N. M., Gindin, Ye. I., Odelevskiy, V. I.,
Prokhvatilov, V. G.

TITLE:

New Modification of the Crystalline Magnesium Metasilicate
(Novaya modifikatsiya kristallicheskogo metasilikata magniya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 3,
pp 535-542 (USSR)

ABSTRACT:

The existence of the δ -modification of magnesium metasilicate has been discovered by the thermal decomposition of talc. Investigations of the X-ray structure have shown that the δ -phase distinguishes distinctly from protoenstatite. The existence of δ - $MgSiO_3$ has been confirmed by comparative investigations of the refraction indices, the density and the mechanical stability of the various modifications. The thermodynamical stability of the δ -phase was investigated at 900°C. In the absence of mineralizers the δ -phase is stable up to 1400°C. The δ -modification of $MgSiO_3$ can be used for the production of non-aging steatite. There are 3 figures, 3 tables, and 16 references, 7 of which are Soviet.

Card 1/2

S/032/60/026/04/36/046
B010/B006

AUTHORS: Prokhvatilov, V.G., Gindin, Ye.I.

TITLE: Specimen Holder for the Apparatus of the Type URS-50I

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 4, p. 499

TEXT: Since the holders of the URS-50I apparatus turned out to be unsatisfactory, several new types of specimen holders were designed and tested. The most suitable holder is described in the present paper (Fig.). The specimen is fixed at one end of a horizontal bar and pressed against a support by a spring. The other end of the bar is connected to an electric motor, so that the specimen can be rotated slowly while photographing. A small chamber is used for investigating powdered specimens. The specimen is adjusted to the goniometer axis by means of a screw and a step bearing. In a footnote the editors point out the fact that the holder described has the disadvantage of providing no protection against scattered X-rays. There is 1 figure.

Card 1/1

BALYGIN, I.Ye.; GINDIN, Ye.I.

Changes in the structure of quartz glass during thermal diffusion
of gold, platinum, and palladium. Zhur.prikl.khim. 35 no.11:2558-2563
N '62. (MIRA 15:12)

(Glass research)

(Metals)

43258

S/080/62/035/011/009/011
D423/D307

15.2110

AUTHORS: Balygin, I.Ye., and Gindin, Ye.I.

TITLE: Changes in the structure of quartz glass as a result of thermo-diffusion of gold, platinum and palladium

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 11, 1962, 1558 - 2563

TEXT: Quartz glass discs 30 mm in dia. and 2 mm thick were coated with a metallic layer of Au, Pt and Pd and were heated at 600 - 800°C in a muffle furnace. After removal of metal from the surface of the quartz, the samples were examined by x ray photographic techniques. In the case of gold-coated discs no structural change occurred after 5 min at 300°C or after 280 hrs. at 700°C, but after 280 hrs. at 800°C the formation of α -cristobalite was confirmed by comparison with standard x-ray photographs of pure α -cristobalite. Samples coated with Pt and heated at 900°C for 5 min. showed the start of formation of a new structure. Well-defined polycrystalline structures of α -quartz were found after heating at 600, 700 and 800°C for 280 hrs., and of α -cristobalite also at 600°C. Transformation
Card 1/2

Changes in the structure of ...

S/080/62/035/011/009/011
D423/D307

of the amorphous structure of the quartz glass by the action of Pt occurred more intensively than with Au, which can be associated with the size of atomic radii ($r = 1.39 \text{ \AA}$ for Pt, $r = 1.44 \text{ \AA}$ for Au). Heating of samples coated with Pd paste was carried out at 1100 and 950°C for 5 min.; a change of structure was again observed. Exhaustive testing at 700°C confirmed that the amorphous structure was transformed into α -cristobalite, and the start of formation of α -quartz was also observed. A further structure was observed which was neither α -quartz nor α -cristobalite. A theory is advanced for the mechanism of structural change due to interaction of atoms and ions of the infiltrating metal with the structural lattice of SiO_2 , in which a layer of valency electrons is released, capable of penetration as ions into the quartz lattice. As a result of interaction with the oxygen of quartz, destruction of Si-O-Si bridges and regrouping of valency bonds occur, thus changing the structure of the amorphous quartz. There are 7 figures.

SUBMITTED: August 29, 1961

Card 2/2

L 42402-65 ENG(j)/ENA(k)/ENT(l)/EPT(m)/EPP(c)/EPR/EEC(t)/T/EWP(t)/EEC(b)-2/
EWP(b)/ENA(c) Pr-4/Pad/Ps-4/Pi-4 IJP(c) JD/HM/LHB/GG S/0070/65/010/002/0248/0250
ACCESSION NR: AP5008472

50
B

AUTHOR: Prokhvatilov, V. G.; Gindin, Ye. I.

TITLE: Tetragonal spinels in the $CoO-MnO-O_2$ system

SOURCE: Kristallografiya, v. 10, no. 2, 1965, 248-250

TOPIC TAGS: cobalt compound, manganese compound, spinel, x-ray crystallography, tetragonal spinel, crystal lattice distortion

ABSTRACT: The specimens for this study were prepared by Ye. V. Kurlina by joint alkaline precipitation of manganic and cobaltic hydroxides from manganous and cobaltous nitrates with subsequent drying at 80° and roasting at 1000-1200°C. Various holding times during roasting and various cooling conditions were used. A URS-50IM diffractometer was used for x-ray metallography of the specimens with a scintillation counter. Iron K_{α} -emission with an Mn filter was the radiation source. The counter was moved at the rate of 1 deg/min. X-ray phase analysis shows that when the Co:Mn ratio is 2:1, a cubic $MnCo_2O_4$ spinel is formed. For a Co:Mn ratio of 0.5:1, $CoMn_2O_4$ is formed which shows an x-ray pattern very similar to Mn_3O_4 . This indicates that the compound is a tetragonal spinel. Chemical compositions

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ACCESSION NR: AP5008472

intermediate between $MnCo_2O_4$ and $CoMn_2O_4$ give x-ray patterns which differ considerably from Mn_3O_4 and from a cubic spinel. These intermediate compounds are found to be tetragonal spinels with various degrees of tetragonal distortion of the cubic lattice. The tetragonal distortion increases with the content of Mn, reaching a value of $c/a = 1.16$ in Mn_3O_4 . The tetragonal distortion depends both on the Mn content in the spinel and on the quantity of Mn^{3+} in the B positions (general formula AB_2O_4), i.e. in the octahedral spaces. The parameters of the spinels investigated are given in tabular form. Orig. art. has: 1 figure, 1 table.

ASSOCIATION: none

SUBMITTED: 28Jun64

ENCL: 00

SUB CODE: SS

NO REF SOV: 002

OTHER: 005

ll
Card 2/2

L 10582-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5025385

SOURCE CODE: UR/0181/65/007/010/3048/3053

AUTHOR: Rotenberg, B. A.; Danilyuk, Yu. L.; Gindin, Ye. I.; Prokhvatilov, V. G. 69

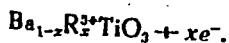
ORG: none

TITLE: Electrophysical and microwave spectral study of barium titanate with admix-
tures of oxides of trivalent elements 27

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 3048-3053

TOPIC TAGS: barium titanate, solid solution, electron paramagnetic resonance, micro-
wave spectroscopy, oxide, semiconductor research, crystal lattice defect, electric
conductivity, polycrystal

ABSTRACT: The authors study some of the electrical properties and the structure as
well as paramagnetic resonance absorption of polycrystalline barium titanate with
small admixtures of oxides of trivalent elements. Preparation of the specimens is
briefly described together with an explanation of the experimental methods and equip-
ment used. Paramagnetic resonance absorption was measured at 9320 Mc and 78°K. It
is experimentally established that there are four possible types of solid solutions
in BaTiO₃-R₂O₃ systems. 1. A solid solution of substitution in the barium ion sub-
lattice with the formation of weakly bound electrons (donor levels)

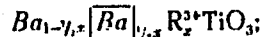


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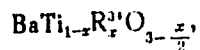
L 10582-66

ACC NR: AP5025385

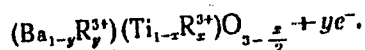
Solid solutions of this type have high electrical conductivity. 2. A solid solution of substitution with subtraction in the barium ion sublattice



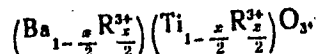
in this case, the lattice is neutral due to barium vacancies, and the specimens are dielectrics. 3. A solid solution of substitution in the titanium sublattice



where it is most natural to assume that electric neutrality of the lattice in the case of oxide semiconductors is due to oxygen vacancies formed during annealing, and electrical conductivity does not increase. 4. A more complex solid solution of substitution in both sublattices with the formation of oxygen vacancies and donor levels



An increase in electrical conductivity is possible in this case. When $x=y$, electric neutrality may be maintained without the formation of oxygen vacancies and donor levels according to the formula



Other cases are also possible if the alloying additive has variable valence. It is

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I. 10582-66

ACC NR: AP5025385

shown that electrical conductivity is related to impurity concentration through changes in the type of solid solution formed during annealing of barium titanate with impurities in concentrations of 0.1-0.3 mol %. The experimental data indicate that the same types of defects are formed by reduction of the ceramic and by alloying. It is possible that these are not single-electron defects or defects of odd order in general. This hypothesis agrees with the conclusions made by other researchers. Orig. art. has: 4 figures.

SUB CODE: 20,07/ SUBM DATE: 30Jan65/ ORIG REF: 002/ OTH REF: 008

Card 3/3 (1)

GINDIN, Ye. M.

GINDIN, Ye. M. -- "Transport Immobilization (Principles, Methods, Remedies, and Clinical Systems)." Sub 22 Jan 56, Central Inst for the Advanced Training of Physicians. (Dissertation for the degree of Doctorate in Medical Sciences).

30: Vechernaya Moskva January-December 1959

GIMIN, Ye.M., polkovnik meditsinskoy sluzhby, doktor meditsinskikh nauk

Intraperitoneal penicillin injections for treating peritonitis.
Voen.-med. zhur. no.10:29-34 0 '55. (MLA 9:10)
(PENICILLIN) (PERITONITIS)

GINDIN, Ye.M.; POKROVSKAYA, O.L.; LEBEDEVA, L.V.

Burn shock in dogs and the effect of neuroplegic substances on
its course. *Khirurgia* 36 no. 5:87-96 My '60. (MIRA 14:1)
(BURNS AND SCALDS) (HIBERNATION, ARTIFICIAL)

3.2300

80794

SOV/169-59-6-6375

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, pp 140 - 141 (USSR)

AUTHORS: Gindin, Ye.Z., Leykin, G.A., Lozinskiy, A.M., Masevich, A.G.

TITLE: The Optical Observations of Artificial Earth Satellites ✓

PERIODICAL: V sb.: Predvarit. itogi nauchn. issled. s pomoshch'yu pervykh sov. iskustv. sputnikov Zemli i raket, Moscow, AS USSR, 1958, pp 5 - 39 (Engl. Res.)

ABSTRACT: The Astronomicheskii sovet Akademii nauk SSSR (Council of Astronomy of the USSR Academy of Sciences) was put in charge of organizing the optical observations of artificial earth satellites. Sixty-six visual stations and twenty-four photographic stations were established for observing the satellites. The visual observation stations began their activity at the time when the first Soviet satellite was launched, while photographic observations have been performed systematically since the beginning of 1958. The visual observation methods were determined by the task: they must establish the position of a satellite on

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The Optical Observations of Artificial Earth Satellites

the celestial sphere with an accuracy of 0.5 to 1° and the time within 0.5 to 1 sec, and must report the observation results to the computer center within the shortest time. Two "optical barriers", each consisting of about 30 telescopes, were established to facilitate the observation of satellites having a low brightness and moving on the sky with a velocity of 1° per 1 sec, if the orbit is known only approximately. The barriers are located on the meridian and along a vertical circle perpendicular to the visible orbit of the satellite. The sight lines of the telescopes are adjusted in such a way that each section of the optical barrier is covered twice. For determining the time of passage of a satellite with an accuracy exceeding 1 sec, the time signals and the signals given by the observer at the time when the satellite passed, are recorded on tape. After the termination of the observations, the tape recording is reproduced at a low speed and the precise moment of passage is determined by a chronoscope. The coordinates of the satellite are determined by the sidereal maps of A.A. Mikhaylov's atlas or of A. Bechvarzh's atlas. When observing satellites of low brightness (15 - 8 stellar magnitude) the AT-1 telescope is used, which is a small wide-angle telescope having a 50 mm objective lens and six-power magnification. The field of view is 11° .

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SOV/169-59-6-6375

The Optical Observations of Artificial Earth Satellites

The stations observing the satellites are provided with signals of the correct time by feeding to them second tone signals. On the basis of observation data, the computer center informs the stations on the coming passage of a satellite. The station receives a coded telegram containing information on the time and altitude of a satellite's passage in the meridional plane and in the plane in which the nearest point of the orbit is located. Observations of artificial satellites are also performed on the territories of the Chinese People's Republic (KPR), the German Democratic Republic (GDR), Czechoslovakia, Poland, Hungary, Rumania, and Bulgaria, where 45 stations are in operation. Further, observatories in England, Scotland, Ireland, the US and other countries were included in the visual and photographic observation system of the Soviet satellites. At some stations, besides the visual observations, the positions of the carrier rocket and the second Soviet satellite are determined photographically by "Zorkiy" cameras with "Jupiter 8" lenses. At the time of the satellites passage across the field of view of the camera, the shutter is opened for a brief time interval (2 - 5 sec). The begin and the end of the exposure are marked by a chronograph. It is possible to determine by photo-

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SOV/169-59-6-6375

The Optical Observations of Artificial Earth Satellites

graphic observations the position of a satellite with an accuracy of $3' - 5'$ of arc. The Council of Astronomy discussed the problem of using light flashes of short duration on the object for a precise determination of a satellite's position. The position of a satellite may be determined with an accuracy of 2 - 3 sec of arc when using cameras with a long focal length ($F = \sim 1$ m) for photographing the satellite. Using the data of these observations for triangulation on the earth's surface, the distance between different points (especially between continents) and also the shape of the geoid may be determined with an accuracy of 10 m. However, the photography of satellites is made difficult by the following circumstances: 1) the observations are possible only at dusk; 2) cameras with a very great light power are required; 3) the setting of precise time marks is complicated. These difficulties can be overcome if the satellite is equipped with a light source producing brief flashes by which it may be photographed at night. It is expedient to provide series of flashes and not a continuous feed, taking into consideration that at least two or three flashes must arrive in the field of view of the instrument. In this way it is possible to determine not only the position but also the angular velocity of a satellite. Obviously,

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The Optical Observations of Artificial Earth Satellites

a pulse gas discharge lamp should be used as a light source, whose light output reaches 60 lm/w. The brightness of a satellite depends on the following reasons: 1) changes in the satellite's phases, i.e. in the configuration sun - satellite - observer; 2) changes in the distance to the observer; 3) light absorption in the section of its path from the satellite to the observer; 4) rotation and tumbling of a satellite; 5) changes in the state of the satellite's surface. The determination of the period of rotation (tumbling) of the satellite's body and changes of this period in time are of the greatest interest. Another important problem is the investigation of the dependence of the brightness and color of a satellite on the state of the earth's atmosphere. Finally, the third problem is the change of the state of the satellite's surface under the influence of the atmosphere and extraterrestrial agents. For solving the aforementioned problems a precise quantitative determination of brightness changes of a satellite and observations over a possibly great section of its trajectory are necessary. Presently, two methods are used for measuring a satellite's brightness. The first method consists in a

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The Optical Observations of Artificial Earth Satellites

comparison of the brightness of the satellite's trail with the brightness of the trails of neighboring stars on a photography obtained by a stationary camera. The second method consists in a visual comparison of the satellite's brightness with the brightness of stars located along its path. Both methods are used at Soviet observation stations. *u*

L.V. Terent'yeva

Card 6/6

GINDIN, Ye.Z.; LEYKIN, G.A.; LOZINSKIY, A.M.; LUR'YE, M.A.; MASEVICH,
A.G.; SEVERNAYA, O.A.; SEPTSOVA, Yu.Ye.; SLOVOKHOTOVA, N.P.;
TOL'SKAYA, V.A.; TSITOVICH, V.V.

Brief report of the Astronomical Council of the Academy of
Sciences of the U.S.S.R. on visual and photographic observations
of artificial earth satellites in 1957-1959. Biul. sta. opt.
nahl. isk. sput. Zem. no. 6:1-33 '60. (MIRA 14:2)
(Artificial satellites--Tracking)

L 22430-65 EEO-2/EWT(d)/FBD/FSF(h)/FSS-2/EWT(1)/FS(v)-3/EEC(k)-2/EWA(d)/T/EEC(e)-2/
EED-2 Pn-4/Po-4/Pq-4/Pac-4/Pg-4/Pae-2/Pl-4/Pk-4/Pl-4 GW/WR/ST

ACCESSION NR: AR5001309

S/0269/64/000/010/0004/0004

SOURCE: Ref. zh. *Astronomiya. Otdal'nyy vypusk*, Abs. 10.51.30

AUTHOR: Gindin, Ye. Z., Illenko, M. I., Lur'ye, M. A.

TITLE: Organization of optical observations of artificial earth satellites in the Soviet Union

CITED SOURCE: *Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli, spets. vyp.*, 1962, 83-83

TOPIC TAGS: artificial earth satellite, earth satellite observation, artificial satellite orbital element, satellite tracking camera, satellite observation station, ephemeris, celestial mechanics

TRANSLATION: The direction of optical observations of artificial earth satellites in the Soviet Union is the responsibility of the Astrovet AN SSSR (Astronomical Council, AN SSSR). The observations are made at a network of stations located at universities, teacher's institutes and astronomical institutes. In 1957 there were 66 stations and in 1962 there were 75. Results of observations also are received from a number of foreign countries. This article describes station appa-

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L 22430-65

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3

ratus and stages in its improvement (from AT-1 optical telescopes to automatic tracking cameras). Ephemerides for observations are computed and disseminated by the "Kosmos" (Space) Agency. The results are published in a bulletin of the Astrosoviet. This same publication gives the orbital elements of satellites computed at the Institut teoreticheskoy astronomii (Theoretical astronomy institute). Analysis of discrepancies between observations and theory has made it possible to clarify the real accuracy of observations of artificial earth satellites. It has been found (on the basis of data on the satellite 1960 E₃) that in 1961-1962 in the case of visual observations, there were deviations from the ephemerides of less than 0°.5 in 51.4% of the observations. The number of stations for photographic observations of artificial earth satellites was 30 in 1962. About 15,000 photographs of artificial earth satellites have been obtained in 5 years, of which 70% were suitable for precise analysis. For the most part, the photographs are analyzed by the A. A. Kiselev method (with an accuracy of ±4" in position and ±0^s.003-0^s.005 in time). Computations are centralized and in accordance with a program prepared for a Ural 1 electronic computer. In 5 years 3,085 precise positions of about 30 objects have been published. Photometric observations of artificial earth satellites have been made at a number of stations. Bibliography of 34 items. Kh. Potter.

SUB CODE: AA, SV
Card, 17

ENCL: 00

L 29528-65 ZEO-2/EWT(d)/FED/FSP(n)/FES-3/EMI(1)/FS(σ)-3/EMC(k)-2/EMG(v)/EMA(d)/
 F/EEF(c)-2/EED-2/FED(c)-3 Pe-5/Pz-4/Yk-4/Pl-4/Pa-4/Pc-4/Pq-4/Pac-4/Pze-2

IJP(c) CW/WR

ACCESSION NR: AT5003492

S/3126/62/000/001/0083/0093

AUTHORS: Gindin, Ye. Z.; Illenko, M. I.; Luriye, M. A.

TITLE: Organization for optical observation of artificial earth satellites in the Soviet Union

SOURCE: Nablyudeniya iskusstvonykh sputnikov Zemli, no. 1, 1957-1962. Moscow, 1962. Byulleten'stantsiy opticheskogo nablyudeniya iskusstvonykh sputnikov Zemli; spetsial'nyy vypusk, 83-93.

TOPIC TAGS: artificial satellite, satellite tracking / AT 1 telescope, NAFA 3s/25 camera, KIM 1 microscope, UIM 21 microscope, Ural 1 computer

ABSTRACT: This work is under the direction of the Astronomicheskii sovet (Astronomical Council). Stations have been set up at universities, teaching institutes, and astronomical observatories, and the number is being expanded. More than 10,000 individuals have participated in visual observation of satellites in the last five years. In 1962, 75 stations in the Soviet Union operated in the network. In the last 5 years, 150 000 observations have been made of 39 000 passages of about 100 different satellites and rockets. Visual observation is made chiefly with AT-1 telescopes. All stations are now equipped with all-wave radio

Card 1/3

L 7923-65

ACCESSION NR: AT5003492

reception, chronometers, and quartz chronographs. When observations must be made against a background of few stars, coordinates of the satellite are determined from orientation of the telescope. The telescope is equipped with graduated circles for such coordinate determination. A number of stations have used camera attachments to record the setting of the telescope during observation of a satellite. Numerous techniques have been worked out for fixing time of observation more precisely, particularly for making the time determination automatic. A number of automatic devices for observation itself have also been devised. Results of all observations are telegraphed to the computing center Kosmos for calculation of ephemerides and all orbital elements. Cooperation is maintained among all stations and all countries, including the Smithsonian Institute of the U.S.A. Many Soviet stations have displayed a precision in visual observation generally within 0.5° . Photographic observations are made at a network of stations, chiefly with the standard NAFA-3s/25 camera ($D = 10$ cm, $f = 25$ cm). Quartz clocks are used for timing, and KIM-3 and UIM-21 microscopes are used for measuring the negatives. This network consists of 23 stations. In 5 years, 15 000 photographic prints have been obtained, about 70% of which have been suitable for processing by precise methods. The Kiselev method is chiefly used for determination of points (giving an accuracy of $\pm 4''$ for position and $\pm (0.003-0.005)$ seconds for time). Deutsch, Turner, and Schlesinger methods of computation

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ACCESSION NR: AT5003492

are also used. Computations are generally made on a Ural-1 computer; distortion may be determined by programming. Programs are being set up for automatic measurements and computation of equatorial coordinates of satellites. The use of moving film has increased precision of location and gathering power (up to 7th star magnitude). Tables list the satellites and rockets observed and the number of observations made. Photometric observations are also being made. Results are published in the Byulleten' stantsii opticheskogo nablyudeniya ISZ (Bulletin of Stations for Optical Observation of Artificial Earth Satellites). Many papers in this bulletin discuss period of reflectivity change, orientation of rotational axis of the satellite, and methods of photometric observation. Orig. art. has: 4 tables.

ASSOCIATION: Astronomicheskij sovst AN SSSR (Astronomical Council AN SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: SV, DC

NO REF SOV: 034

OTHER: 000

Card 3/3

ARTEM'YEV, Yu.N., kand. tekhn. nauk; GAL'PERIN, A.S., kand. tekhn. nauk; TEL'POV, A.S., inzh.; DYADYUSHKO, V.P., inzh.; SELIVANOV, A.I., red.; TEPTOLEV, P.M., spets.red.; KUL'CHITSKIY, R.N., spets. red.; ARKHANGEL'SKIY, B.Ye., spets. red.; GINDINA, I.I., red.

[Specifications and instructions on checking for wear of the parts and couplings of T-40 tractors in repair] Tekhnicheskie usloviia i ukazaniia po defektovke detaiei i sopriazhenii pri remonte traktorov T-40. Moskva, Biuro tekhn. informatsii GOSNITI, 1964. 169 p. (MIRA 18:5)

1. Perovo. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy tekhnologicheskii institut remonta i ekspluatatsii mashinno-traktornogo parka. 2. Laboratoriya issledovaniya iznosov traktorov Gosudarstvennogo vsesoyuznogo nauchno-issledovatel'skogo tekhnologicheskogo instituta remonta i ekspluatatsii mashinno-traktornogo parka, Perovo (for Artem'yev, Gal'perin, Dyadyushko). 3. Vladimirskiy traktornyy zavod (for Teptolev, Kul'chitskiy). 4. Lipetskiy traktornyy zavod (for Arkhangel'skiy).

PEVZNER, R.L., doktor tekhn.nauk; GINDINA, I.M., ekonomist

What the practice of a progressive plant teaches us. Stroi.mat.
9 no.11:13-15 N '63. (MIRA 17:4)

GINDINA, I.M., inzh.

Economic effectiveness of producing and using expanded perlite
as lightweight aggregate. Sbor. trud. ROSNIIMS no.25:150-159
'62 (MIRA 17:8)

SHPORTIY, N. Ya., kand. ekonom. nauk; LINETSKIY, Ya.I., inzh.;
GINDINA, I.M., inzh.

Developing the production and use of perlite concrete elements
and products using perlites from the Mikhov-bala deposit in
the Buryat A.S.S.R. Steer. trud. BOOSNIIMS no. 25:160-165 '63
(MIRA 17:8)

BERKH, Ye.M., kand. ekon. nauk; GINDINA, I.M., ekonomist

How to increase the economic effectiveness of industry. Stroi. mat.
10 no.10:36-37 0 '64. (MIRA 18:2)

YEKISENINA, N.I.; MYGKOVA, L.P.; GINDINA, N.I.; SATAROVA, A.G.; TSENNADMID, Ch.; SVETOVIDOVA, V.M.; POLYANICHKO, M.F.; TANKOV, P.I. (Sochi); BELOSLYUD, Ye.G.; SVERSHKOV, A.N.

Brief news. Sov. med. 28 no.5:151-153 My '65.

(MIRA 18:5)

1. Klinika lechebnogo pitaniya Instituta pitaniya AMN SSSR, Moskva (for Yekisenina, Myagkova, Gindina).
2. Kafedra infektsionnykh bolezney 1-go Leningradskogo meditsinskogo instituta imeni akademika Pavlova (for Satarova).
3. Kafedra laboratornoy klinicheskoy diagnostiki Tsentral'nogo instituta usovershenstvovaniya vrachey i I klinicheskaya bol'nitsa, Ulan-Bator (for Tserennadmid).
4. Saratovskiy nauchno-issledovatel'skiy institut travmatologii i ortopedii (for Svetovidova).
5. Khirurgicheskoye otdeleniye mediko-sanitarnoy chasti zavoda "Krasnyy Oktyabr'", Volgograd (for Beloslyud).
7. Iz Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'noy gigiyeny (for Sverchkov).

GINDINA, M.M.; KOGANOVA, G.V.; LARICHEVA, G.M.; MELKOVA, A.Ye.; POLYAKOVA,
M.G.; SKOBEIKINA, I.F.; IKONNIKOV, V.V., prof. otvetstvennyy red.
ROSHCHINA, L., red.izd-va; LEBEDEV, A., tekhn.red.

[State Bank of the U.S.S.R.; a brief account on the fortieth
anniversary of the October Revolution] Gosudarstvennyi bank SSSR;
kratkii ocherk k sorokaletiiu Oktiebria. Moskva, Gosfinizdat,
1957. 254 p. (MIRA 11:2)

1. Gosudarstvennyy bank, Moscow.
(Banks and banking)

GINDINA, R.I.

USSR.

Light filters for colorimetric analysis in the ultraviolet region of the spectrum. S. N. Andreyev and R. I. Gindina. *Zhur. Priklad. Khim.* 26, 85-9 (1953); *J. Appl. Chem. U.S.S.R.* 26, 71-4 (1953) (Engl. translation).—Light filters with max. transmission at 2670, 2600, and 2700 Å. were made out of 1-3 mm. thick sheets of single crystals of KCl + PbCl₂ and KBr + PbCl₂, grown by the Kyropoulos method. The compns. were: 2670 Å. KCl 90.8%, KBr 8%, PbCl₂ 1.2%; 2600 Å. KCl 79%, KBr 20%, PbCl₂ 1%; 2700 Å. KCl 24.0%, KBr 75%, PbCl₂ 0.4%. Cl or Br in CCl₄ absorbed all wave lengths from 3000 to 6700 Å. The half widths of the filters were 80, 140, and 100 Å., the transmissions 12-13%, 10-11%, and 15%. B-glass filters (prepd. from anhyd. borax) and contg. K₂CrO₄ and MnSO₄ in variable proportions were the following: 3100 Å., 1 mm. thick, 0.2% K₂CrO₄; 3150 Å., 1 mm. thick, 0.15% K₂CrO₄; 3200 Å., 1 mm. thick, 0.1% K₂CrO₄ and 0.5% MnSO₄; 3300 Å., 1.2 mm. thick, 0.07% K₂CrO₄ + 1% MnSO₄. All filters were used in combination with an UFS-1 filter. The transmissions of these 4 filters were 18, 18, 14, and 18% with half band widths of 180, 200, 200, and 280 Å., resp. A film could be prepd. as a filter for 3150 Å. as follows: Cellophane film was rinsed with alc., immersed in 1% aq. KOH at 50° for 1 hr., then immersed in a soln. contg. 2.5% K₂CrO₄ and 0.01% p-nitrosodimethylaniline at 50° for 4 hrs. The transmission was 20-23%, the half width 180 Å. S. Paksgaard.

GINDING, R.I.

3

USSR.

Determination of small quantities of carbon disulfide and acetone by colorimetry in the ultraviolet. S. N. Andreev and R. I. Ginding. *J. Appl. Chem. U.S.S.R.* 26, 89-92 (1953) (Engr. translation).—Sci. Cit. 47, 6329i. H. L. H.

Gindina, R.I.

USSR/Crystals.

B-5

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18330

Author : F.D. Klement, R.I. Gindina.

Inst : Institute of Physics and Astronomy of Academy of Sciences of Estonian SSR.

Title : Nature of Influence of Mechanical disintegration on Properties of Some Crystal Phosphors.

Orig Pub : Tr. In-ta fiz. i astronom. AN EstSSR, 1956, No 4, 3-25

Abstract : When phosphors are disintegrated mechanically, the extinguishing of the luminescence is observed. The phosphors KCl-AgCl and NaCl-TlCl consisting of badly mixing components partly dissociate into the components when ground. The decrease of the activator concentration in the base results in a redistribution of intensities in the radiation spectrum and in the extinguishing of the luminescence. The dissociation of supersaturated solutions is accelerated also by heating. Beside the activator,

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USSR/Crystals.

B-5

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18330

separating as a self-contained phase, causes the truncation of the luminescence in the short wave part of the radiation spectrum by absorption by the activator. In case of the KCl-TlCl and NaCl-AgCl phosphors, consisting of well mixing components, grinding does not result in any decrease of the luminescence brightness and in any redistribution of intensity in the luminescence spectrum. The dissociation of phosphors into components when ground is ascribed to the acceleration of diffusion processes and is explained by the increase of the empty node concentration in the result of the plastic deformation in accordance with Seitz's hypothesis (Seitz F., Phys. Rev., 1950, 80, 239).

Card 2/2

- 87 -

48-5-41/56

SUBJECT: USSR/Luminescence

AUTHORS: Klement F.D. and Gindina R.I.

TITLE: On the Nature of Influence of Mechanical Crushing on the Properties of Some Crystallophosphors (O prirode vliyaniya mekhanicheskogo razdrobleniya na svoystva nekotorykh kristallofosforov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, p 748 (USSR)

ABSTRACT: This investigation was aimed at clarification of the nature of the quenching effect of mechanical crushing on the luminescence of some crystallophosphors. It was assumed that the crushing induces the dissociation of a solid solution when a crystallophosphor can be considered as a supersaturated solid solution of an activator in a basic substance.

This hypothesis was tested experimentally on 4 phosphors: KCl, AgCl; NaCl.TlCl; KCl.TlCl and NaCl.AgCl.

The result was checked by means of "annealing" the phosphors (slow heating at a low temperature, which leads also to decomposition of the supersaturated solution and decrease of brightness.)

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TITLE:

48-5-41/56
On the Nature of Influence of Mechanical Crushing on the Properties of Some Crystallophosphors (O prirode vliyaniya mekhanicheskogo razdrobleniya na svoystva nekotorykh kristallofosforov)
The decomposition of supersaturated solid solutions by crushing is considered thermodynamically and from the viewpoint of diffusion processes in the solid phase.
One Russian reference is cited.

INSTITUTION: Tartu State University

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

23336

3/058/61/000/005/022/063
A001/A101

94,3500 (1137,1138,1395)

AUTHOR: Gindina, R.I.

TITLE: On the role of dislocations and block boundaries in luminescence of alkali-halide crystalline phosphors

PERIODICAL: Referativnyy zhurnal. Fizika, no. 6, 1961, 177, abstract 6V321 ("Tr. In-ta fiz. i astron. AN EstSSR", 1960, no. 12, 271 - 274)

TEXT: To clear up the role of dislocations and block boundaries in the luminescence phenomenon, the author investigated scattering of light and luminescence of a number of monocrystalline alkali-halide phosphors: NaCl-Pb, KCl-Ag, KCl-Cu, KBr-Au, KI-Tl, NaCl-Pb, Mn under a microscope (magnification 120 x 100). A conclusion was drawn from the results obtained that the main centers of luminescence and activator capture centers in alkali-halide crystals are activator ions located in volume points of the crystalline lattice; this conclusion corresponds to the viewpoints of Klement (RZhFiz. 1957, no. 8, 21185) and Lushshik (RZhFiz. 1957, no. 4, 10374).

[Abstracter's note: Complete translation]

N. Maksimova

Card 1/1

S/613/61/000/014/008/019
D207/D303

AUTHOR: Gindina, R. I.

TITLE: The role of block boundaries and dislocations in the luminescence of activated alkali-halide phosphors

SOURCE: Akademiya nauk Estonskoy SSR. Institut fiziki i astronomii. Trudy. No. 14, 1961. Issledovaniya po lyuminesentsii. 168-189

TEXT: The author investigated the location and nature of luminescence centers in alkali-halide phosphors. The following phosphors were studied: KCl:AgCl, KCl:CuCl, KI:TlI, KBr:In, NaCl:Pb:Mn. The phosphors, containing 0.1-7 mol.% of the activating compound in melt, were grown by the Kyropoulos method, except for KBr/In and KCl:CuCl which were activated by diffusion from gaseous phase. Topography of luminescent emission was studied microscopically (X120 to X600) using 0.1 - 0.2 mm thick phosphor plates. A biological microscope МБИ-1 (MBI-1) with a dark field condenser ОИ-13 (OI-13), a light source ОИ-7 (OI-7) and a photographic attachment МФН-1

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The role of block boundaries ...

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D207/D303

(MFN-1) were used for KCl:AgCl. The other phosphors were examined with an ultraviolet microscope $M\gamma\phi-3M$ (MUF-3M) with a quartz condenser, a mercury-in-quartz lamp $CB\Delta-120A$ (SVD-120A). The following light filters were used to select exciting wavelengths: $\gamma\phi C-1$ (UFS-1), $\gamma\phi C-2$ (UFS-2), $CC-4 + CC-8$ (SS-4 + SS-8) and a $Cl_2 + Br_2$ gas filter. Absorption, excitation and emission spectra were recorded using a spectrophotometer $C\phi-4$ (SF-4), a photomultiplier $\phi\gamma-18$ (FEU-18), filters $\gamma\phi C-4$ (UFS-4) and $BC-7$ (BS-7), and a hydrogen lamp $BC\phi\gamma-3$ (VSFU-3). The effects of heat treatment, of plastic deformation (hydraulic compression by 30 - 70%), of X-irradiation (several minutes from a 55 kV, 20 mA tube); and of bleaching with the mercury light (10 min from the lamp without any filter) were investigated. The results showed that the luminescence centers were not located at block boundaries (block dimensions were 0.1 - 0.01 mm). Luminescence was generated mainly at centers which were activator ions located at normal lattice sites within the blocks; such centers predominated at low activator concentrations and low defect densities. More complex luminescence centers and stable

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The role of block boundaries ...

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D207/D303

electron traps were formed by activator ions in association with point defects. Acknowledgments are made to F. D. Klement for discussing the subject and to Ch. B. Lushchik for directing the work. There are 7 figures and 45 references: 28 Soviet-bloc and 17 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: H. Yoshimura, J. Phys. Soc. Japan, 15, 435 (1960); W. Van der Vorst and W. Dekeyser, Phil. Mag., 1, 882 (1956); W. Johnston and J. Gilman, J. Appl. Phys., 30, no. 2, 129 (1959); W. Tiller, J. Appl. Phys., 29, 611, (1958).

SUBMITTED: August 4, 1960

Card 3/3

20828

24,7500 (1136, 1143, 1160)

S/048/61/025/003/016/047
B104/B214

AUTHOR: Gindina, R. I.

TITLE: Decoration of dislocations and activator distributions in unstable alkali halide phosphors

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 354-355

TEXT: This paper was read at the Ninth Conference on Luminescence (Crystal Phosphors) held in Kiyev from June 20 to June 25, 1960. In the last few years, the opinion has spread that the luminescence centers and the electron traps lying on the block boundaries play a dominant role in luminescence effects in alkali halide crystals. It was attempted here to prove this hypothesis. Ultramicroscopic studies of the decomposition of unstable solid solutions (NaCl-PbCl₂, KCl-CuCl, KCl-AgCl, and KBr-Au) after different heat treatments showed that the colloidal impurity salt particles collect and settle on the dislocations of the block surfaces on annealing at high temperatures. At lower temperatures, these phenomena appear at the net of volume dislocations. From the results it
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Decoration of dislocations...

S/048/61/025/003/016/047
B104/B214

is concluded that block boundaries are no favored positions for the activators in the hardened crystals. In this connection, it is remarkable that the collection of impurities occasioned by annealing leads to an increase in the activator absorption and luminescence. Ultramicroscopic studies showed that the luminescence of the phosphors studied here is uniformly distributed over the crystal lattice and cannot be localized or concentrated at the block boundaries. The number of dislocations can be considerably increased by strong mechanical deformation; additional luminescence centers (centers II) appear, in which process the activator concentration per unit thickness of the specimen remains practically unchanged. All the results did not agree with the hypothesis of the relationship between the activator ions and the block boundaries. Further, it was found that plastic deformations of a KCl-AgCl crystal (0.3 mole% in the melt) produce new luminescence centers (centers II) in this phosphor, whose absorption bands lie at 226 and 236 $m\mu$. The luminescence in these bands has a maximum excitation at 350 $m\mu$. The centers II are produced also on irradiation by x-rays, and the resulting localization of electrons at these centers lowers considerably the luminescence of centers II. Here again atomic centers with $\lambda_{max} = 288 m\mu$ and $\lambda_{max} = 436 m\mu$ arise. These

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Decoration of dislocations...

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B104/B214

results agree with the view earlier expressed, according to which centers II can be regarded as activator ions arranged in series with point lattice defects. By a strong magnification of KCl-AgCl phosphor irradiated by x-rays it could be proved that the activator ions are distributed in the body. In some cases, a significant role could be assigned in luminescence to the block boundaries and to the surroundings of dislocations. An increase in the luminescence of Mn^{++} ions in the neighborhood of block boundaries and dislocations was found on annealing of NaCl-Pb, Mn phosphor. This might be related to the higher concentration of Pb^{++} and Mn^{++} ions in the vicinity of dislocations, to which concentration is to be ascribed a sensitizing effect. There are 2 figures and 10 references: 9 Soviet-bloc.

Card 3/3

S/613/61/000/017/011/011
D051/D113

AUTHOR: Gindina, R.I.

TITLE: On the luminescence of alkali halide whiskers

SOURCE: Akademiya nauk Estonskoy SSR. Institut fiziki i astronomii.
Trudy, no. 17, 1961. Issledovaniya po lyuminotsentsii, 148-149

TEXT: The luminescence of NaCl whiskers (thread-like crystals) activated by Sn and Ag was microscopically studied. The whiskers were grown through a porous diaphragm at room temperature. 8-10 μ - as well as 10-30 μ - thick whiskers showed luminescence regularly distributed in the crystal. Axial dislocations which are characteristic for more than 10 μ -thick whiskers, could not be revealed in the luminescence of such crystals when observing them with an Myb-3M (MUF-3M) microscope. Non-activated \approx 10 μ -thick NaCl and KCl whiskers showed regular coloring subsequent to X-ray radiation. The experiments are considered as evidence of the possibility of observing

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On the luminescence ...

S/613/61/000/017/011/011
D051/D113

luminescence and coloring in crystals deprived of structural dislocations, an assertion, however, to be verified by more detailed structural investigations. A specified description of the experiments will be given in the next paper.

SUBMITTED: November 2, 1961

Card 2/2

S/613/61/000/017/003/011
D051/D113

24.3500 (1137, 1138, 1163)

AUTHORS: Lushchik, Ch.B., Gindina, R.I., Zazubovich, S.G., and
Lushchik, N.Ye.

TITLE: Polarization characteristics of some alkali halide crystal
phosphors

SOURCE: Akademiya nauk Estonskoy SSR. Institut fiziki i astronomii.
Trudy, no. 17, 1961. Issledovaniya po lyuminestsentsii, 38-49

TEXT: The polarization characteristics of the luminescence of alkali halide
crystals activated by mercury-like (Ga^+ , In^+ , Tl^+ , Pb^{++} , Bi^{+++}) and noble
(Cu^+ , Ag^+ , Au^+) ions were investigated. The study was conducted so as to
explain how far activator ions interact with different types of crystal de-
fects and whether these defects spread to luminescence centers whose "core"
is composed of mercury-like and noble ions. The polarization method em-
ployed was developed by P.P.Feofilov who used it to reveal the anisotropy
of colored centers and luminescence centers established by rare earth ions

Card 1/2

Polarization characteristics ...

S/613/61/000/017/003/011
D051/D113

in certain metal fluorides. It was shown that the emission of the main luminescence centers at 293° K is not polarized in most phosphors. The luminescence centers in KCl-Bi and NaCl-Ag phosphors reveal a strong polarization of luminescence. Azimuthal dependences of the degree of polarization show that the oscillators are oriented along the C_4 axes. It is doubtful whether such an orientation testifies to an anion defect near the activator. The polarization diagram of KCl-Bi corresponds to that of absorption and emission by electric linear oscillators. The polarization spectra of KCl-Bi, NaCl-Ag, KCl-Tl, and NaCl-Tl were investigated and discussed. There are 6 figures. The most important English-language reference is: C.Click, W.Compton, Phys.Chem. Solids, 7, 170, 1958;

SUBMITTED: April 21, 1961

Card 2/2

L 16866-63

EWT(1)/EWP(q)/EWT(m)/BDS/EEC(b)-2 AFFTC/ASD/SSD P1-4 JD
s/0058/63/000/007/D081/D081

ACCESSION NR: AR3006308

SOURCE: RZh. Fizika, Abs. 7D588

64
62

AUTHOR: Gindina, R. I.

TITLE: Microstructure and luminescence centers of some alkali-
halide crystal phosphors 21 27

CITED SOURCE: Sb. Fiz. shchelochno-galoidn. kristallov. Riga, 1962,
133-139. Diskus., 139

TOPIC TAGS: phosphor, alkali-halide crystal, microstructure,
luminescence center

TRANSLATION: The microstructure of some alkali-halide phosphors
(NaCl-Pb, KCl-Ag, KCl-Cu) decorated with non-isomorphous impurities
was investigated. The role of the boundaries of the blocks, dislo-
cations, and point-like defects in the formation of luminescence

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L 16866-63
ACCESSION NR: AR3006308

2

centers was considered. The microstructure of the luminescence centers in some ionic crystals was discussed. A connection was established between the glow centers and the activator capture centers. A study was made of the influence of x-ray and ultraviolet radiation on the chemistry of defects in crystals activated with silver. N. Maksimova.

DATE ACQ: 15Aug63

SUB CODE: PH

ENCL: 00

Card 2/2

L 60351-62 EWT(1)/EWT(m)/T/ENP (t)/ZEC(b)-2/EWP(b)/EWA(c) Pi-4 IJP(c)

ACCESSION NR: A15013686 JD/GG

UR/2613/64/000/030/0003/0015

AUTHOR: Vale, G. K.; Gindina, R. I.; Lushchik, Ch. B.; Elango, A. A.

43

TITLE: Electronic processes in ionic-crystal whiskers

42

SOURCE: AN EstSSR: Institut fiziki i astronomii. Trudy, no. 30, 1964. Issledovaniya po lyuminestsentsii (Research on luminescence), 3-15

B+1

TOPIC TAGS: ionic crystal, filamentary crystal, electronic process, energy migration, color center, electron vibrational process, radiation coloration

ABSTRACT: The article reports the results of comparative investigations of the optical characteristics of ordinary and whisker-type alkali-halide crystals (NaCl, KCl, KCl-Tl, and KI-Tl) and on determining the nature of the luminescence centers, energy migration from the main substance to the luminescence centers, the occurrence of scintillations induced by alpha particles, and the kinetics of production of color centers by means of x-rays. The tests were made on pure NaCl, KCl, KBr, and KI whiskers and on activated KCl-Ag, NaCl-Tl, NaCl-Ag, NaCl-Sn, and KI-Tl whiskers, which were found to have a minimum of imperfections or dislocations (with the exception of KCl-Ag). Measurement of the emission and excitation spectra have shown that the main luminescence centers in KI-Tl and KCl-Tl phosphors are not due to associations of the impurity atoms with dislocations. The highly perfect struc-

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L 60351-65

ACCESSION NR: A15013686

ture of the whiskers results in a decrease in the energy loss when the energy migrates to the luminescence centers. The main luminescence centers as well as the F centers and the electro-vibrational processes in the centers are practically the same in crystals and in whiskers. Another similarity to ordinary imperfect crystals is that the x-ray coloration of the whiskers occurs in two stages. This means that the dislocation mechanism plays a smaller role in the coloration of ionic crystals than expected. Orig. art. has: 6 figures.

ASSOCIATION: Institut fiziki i astronomii AN EstSSR (Institute of Physics and Astronomy, AN EstSSR)

SUBMITTED: 07Oct65

ENCL: 00

SUB CODE: SS, OP

RR REF SOV: 014

OTHER: 010

Lab
Card 2/2

L 60346-65 EWT(1) IJP(c)

ACCESSION NR: AT5013687

UR/2613/64/000/030/0016/0026

AUTHOR: Gindina, R. I.; Maaros, A. A.; Khaav, A. A.

20
17
B+1

TITLE: On the nature of the main centers of luminescence in the crystal phosphor KCl-Tl

21

SOURCE: AN EstSSR. Institut fiziki i astronomii. Trudy, no. 30, 1964. Issledovaniya po lyuminestsentsii (Research on luminescence), 16-26

TOPIC TAGS: potassium chloride luminor, crystal phosphor, luminescence center concentration, thallium activation, solid solution

ABSTRACT: Single-crystal phosphors grown by the Stockbarger method were investigated, as well as thin layers of KCl·TlCl taken off quartz substrates. To determine the relative location of the impurity responsible for the luminescence in the host crystal, the concentration of the Tl⁺ ions was determined by chemical (polarigraphic), x-ray diffraction, and absorption methods. The test procedures are described briefly. The results show that the concentrations obtained by all three methods were practically the same. It can therefore be concluded unambiguously that in the absorption produced by the KCl-Tl phosphor the major part is played by the Tl⁺ ions that occupy the regular lattice points of the host crystal. Both the luminescence and the absorption are caused by the impurity ions located at the

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L 60346-65

ACCESSION NR: AT5013687

3

regular sites. The results therefore confirm that a typical alkali-halide crystal phosphor such as KCl-Tl is a substitutional solid solution of the activator host. "The authors thank F. D. Klement and Ch. B. Lushchik for suggesting the topic and for guidance." Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Institut fiziki i astronomii AN EstSSR (Institute of Physics and Astronomy, AN EstSSR)

SUBMITTED: 13Oct64

ENCL: 00

SUB CODE: *SS, OP*

NR REF SOV: 010

OTHER: 005

Card 2/2 *DDP*

L 7027-65 EWT(m)/EWP(q)/EWP(b) ESD(gs)/RAEM(t) JD/JG

ACCESSION NR: AP4046047

S/0070/64/009/005/0712/0717

AUTHORS: Elango, A. A.; Gindina, R. I.

TITLE: On the decoration of the microstructure of alkali-halide crystals during the decay of solid solutions

SOURCE: Kristallografiya, v. 9, no. 5, 1964, 712-717

TOPIC TAGS: crystal microstructure, alkali halide, solid solution, decomposition, impurity concentration, dislocation net, defect formation

ABSTRACT: This is a continuation of the preliminary work reported by Gindina (Tr. In-ta fiz. i astron. AN ESSR, No. 11, 91, 1960). Its purpose is to study the physicochemical principles of the new method developed for decoration of the microstructure of crystals, to ascertain the influence exerted on the decoration of the crystal microstructure by decomposition of solid solutions of such factors as the

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L 7027-65

ACCESSION NR: AP4046047

0

heating temperature and the impurity concentration. To this end, the dislocation structure of alkali-halide crystals was decorated with low-isomorphism impurities in the systems NaCl.PbCl₂, KCl.AgCl, NaCl.TlCl, NaCl.SnCl₂, by decay of solid solutions. The NaCl.PbCl₂ system was used to investigate a dependence of the character of the solid-solution decay and of the decoration on the impurity concentration and on the heat treatment of the crystals. The experimental procedure is briefly described. An effort was made to ascertain the particular temperature region (from the wide range 780--350C) at which the best conditions for the dislocation decoration are obtained. It is concluded that high temperatures are more effective for preferred precipitation of the PbCl₂ phase in the defects of the crystal lattice. Furthermore, at high temperature the decay of the solid solutions proceeds via a mechanism in which the nucleus of the precipitated phase (PbCl₂) has at the very outset an interface with

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L 7027-65

ACCESSION NR: AP4046047

3

the initial material. It is also shown that individual heat treatment is necessary for each given system and for each given concentration. Another conclusion is that the decoration of the NaCl.PbCl_2 is produced via coagulates of point defects which arise during the quenching in plastic deformation of the crystals. "The authors thank Ch. B. Lushchik for suggesting the topic and for a discussion of the results." Orig. art. has: 3 figures.

ASSOCIATION: Institut fiziki i astronomii AN Estonskoy SSR
(Institute of Physics and Astronomy, AN Estonian SSR)

SUBMITTED: 18Dec63

ENCL: 00

SUB CODE: SS, IC

NR REF SOV: 009

OTHER: 007

Card 3/3

GINDINA, R.I.; VALE, G.K.; ELANGO, A.A.

Luminescence and coloration of filamentary alkali halide crystals.
Izv. AN SSSR. Ser.fiz. 29 no.3:401-403 Mr '65.

(MIRA 18:4)

1. Institut fiziki i astronomii AN Estonskoy SSR.

GINDIS, A. P.; BERSHITSKIY, A. A.

Cleaning and degreasing piston rings of internal combustion engines by means of ultrasonic oscillations. Avt. prom. 28 no.9: 40-43 S '62. (MIRA 15:10)

1. Basovaya laboratoriya ul'trazvuka Odesskogo soveta narodnogo khozyaystva.

(Piston rings—Cleaning)

(Ultrasonic waves—Industrial applications)

S/122/63/000/002/012/012
D262/D308

AUTHOR: Gindis, A. P., Engineer

TITLE: Use of ultrasound for cleaning of engine piston rings

PERIODICAL: Vestnik mashinostroyeniya, ^{4/3}no. 2, 1963, 72-74

TEXT: An experimental installation consisting of an electric vacuum tube oscillator, magnetostriction radiator and bath is employed. Ultrasonic oscillations from the radiator membrane are transferred through the water layer in the bath into a glass vessel resting on the membrane, and filled with cleaning solution of alkali salts with additions of surface-active substances, in which piston rings are suspended. The experiments have shown that optimal results can be obtained at low frequencies in the range of 22 kc/s, and at high frequencies in the range of 550 kc/s; the cleaned rings do not need special passivation, and have good corrosion resistance. There are 1 figure and 1 table.

Card 1/1

GINDIS, A.P., inzh.; SHORGIN, V.S., inzh.; Primal uchastiye
TARASHCHUK, A.Kh.

Saturation of electric motor windings with insulating
lacquers using an ultrasonic technique. Energ. i elektrotekh.
prom. no.1:30-32 Ja-Mr'64. (MIRA 17:5)

GINDIS, A.P.; BABICHENKO, A.S.

Experience in the industrial application of ultrasonic waves for the intensification of bristle washing and degreasing processes. Kozh. obrab. prom. 6 no.8:35-36 Ag 1964. (MIRA 17:10)

GINDIS, I.Z.

Pathological changes in the higher nervous activity in various forms of schizophrenia. Zhur. vys. nerv. deiat. 10 no. 3:408-413 My-Je '60. (MIRA 14:2)

1. Psychoneurological Hospital and Chair of Psychiatry, Medical Institute, Perm.

(SCHIZOPHRENIA) (CONDITIONED RESPONSE)

GINDIS, I.Z.

Index of the stability of unconditioned defense reflexes (PSR) and its character in various forms of schizophrenia. Trudy Gos.nauch.-issl.inst.psikh. 27:108-111 '61. (MIRA 15:10)

1. Permskaya psikhonevrologicheskaya bol'nitsa. Glavnyy vrach - I.S.Ivanov. Nauchnyy rukovoditel' - prof. A.O.Edel'shteyn.
(SCHIZOPHRENIA) (REFLEXES)

GINDIS, I.Z.

Transitory conditions in schizophrenia. Report no.1: Manic euphoria
as a stage of therapeutic remission in schizophrenia. Zhur. nevr.
i psikh. 61 no.4:594-599 '61. (MIRA 14:7)

1. Permskaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach I.S.
Ivanov) i kafedra psikhiatrii (zav. - prof. A.J.Edel'shteyn) Permskogo
meditsinskogo instituta.
(SCHIZOPHRENIA)

GINDIS, I.Z.

Transitory (preremission) states in schizophrenia. Report
No.2. Prognostic importance of postinsulin transitory states.
Zhur. nevr. i psikh. 62 no.12:1868-1873 '62. (MIRA 16:11)

1. Vladimirskaia oblastnaya psikhonevrologicheskaya bol'nitsa
(glavnyy vrach P.L.Gorelikov).

*

VASIL'YEV, Yu.S., dots., kand. tekhn. nauk; VEL'NER, Kh.A., dots.,
kand. tekhn. nauk; GINDUS, D.O., inzh.; GOLOVACHEVSKIY,
N.I., dots., kand. tekhn. nauk; GROMOV, A.I., inzh.;
DOMANSKIY, L.K., inzh.; ISAYEV, Yu.M., inzh.; KULESH, N.P.,
dots., kand. tekhn. nauk; MIKHALEV, B.N., dots., kand.
tekhn. nauk; MOROZOV, A.A., prof., doktor tekhn. nauk
[deceased]; NALIMOV, S.M., st. nauchn. sotr., kand. tekhn.
nauk; REZNIKOVSKIY, A.Sh., kand. tekhn. nauk; SVANIDZE, G.G.,
doktor tekhn. nauk; TANANAYEV, A.V., dots., kand. tekhn. nauk;
KHAZANOVA, A.Z., inzh.; CHERNYATIN, I.A., st. nauchn.
sotr., kand. tekhn. nauk; SHCHAVELEV, D.S., prof., doktor
tekhn. nauk; YAGODIN, N.N., st. nauchn. sotr., kand. tekhn.
nauk; LEONOVA, B.I., red.

[Utilization of water power] Ispol'zovanie vodnoi energii.
Moskva, Energiia, 1965. 563 p. (MIRA 19:1)

AKININ, P.I., inzh.; GINDIS, Ya. P., inzh.

Control of a slag-granulating unit. Mekh.i avtom. proizv. 15
no.6:17-18 Je '61. (MIRA 14:6)
(Electronic control) (Steel--Metallurgy)

GRIGOR'YEV, V. [Hryhor'iev, V.]; FEL'DSHON, Z., kand.tekhn.nauk; GINDIS,
Ya. [Hindis, IA.], inzh.; AKININ, P., inzh.

Automation of the production of slag "pumice" on a centrifugal
machine. Bud.mat.i konstr. no.5:22-25 S-0 '62. (MIRA 15:11)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury
UkrSSR (for Grigor'yev).

(Automation control) (Slag)

LUKOVSKIY, Yu. [Lukovs'kiy, IU.], inzh.; ZEMBITSKIY, B. [Zembyts'kiy, B.], inzh.;
AKININ, P., inzh.; RUTUS, N., inzh.; GINDIS, Ya. [Hindis, IA.], inzh.;
YERIKHERZON, L., inzh.

Determination of the optimum program of automatic manipulation of
buckets containing molten slag at granulation plants. Bud. 'mat. i
konstr. 4 no.1:5-7 Ja-F '62. (MIHA 15:7)
(Zhdanov—Slag)

AKININ, P.I., inzh.; GINDIS, Ya.P., inzh.; KHROMYKH, I.I., inzh.

Automatic slagging-off from ladles. Mekh.i avtom.proizv. 16
no.9:20 S '62. (MIRA 15:9)
(Zaporozh'ye--Iron and steel plants)
(Automation)

AKININ, P. I., inzh.; BUGAYEV, A. B., inzh.; GAZIN, V. V., inzh.;
GINDIS, Ya. P., inzh.; ZAYTSEV, V. V., inzh.; KARPENKO, V. M.,
inzh.

Automatic control of ladle turning. Mekh.i avtom.proizv.18
no. 5:14-16 My '64. (MIRA 17:5)

GINDIS, Ya.P., inzh.; KOTOV, V.M., inzh.

Automatic operation of a granulating basin. Mekh. i avtom.proizv.
19 no.1:7-8 Ja '65. (MIRA 18:3)

GINDL, Eugen

Conservative Kovacs' method for artificial interruption of pregnancy. Cesk.gyn.25[39] no.9:657-660 N '60.

1. Por.gyn.odd. OUNZ Lipt. Mikulas, prednosta MUDr. E.Gindl.
(ABORTION THERAPEUTIC)