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12-22-59

ZONN, W.

SCIENCE

periodicals: POSTEPY ASTRONOMII Vol. 6, no. 3, July/Sept. 1958

ZONN, W. The influence of the non-uniformity of interstellar matter on the results of the investigations of the distribution of stars.
p. 114.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

ZONN, W.
KARPOWICZ, M.

ACTA ASTRONOMICA. (Polska Akademia Nauk. Komitet Astronomii)
Warszawa. Vol. 8, no. 4, 1958. In English.
Poland/

Photographic observations of the eclipsing binary V541 Cygni. p. 187.

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, No. 6, June 1959
Uncl

ZONN, W.

W. Iwanowska's Radioastronomia (Radio Astronomy); a book review. p.361.

POSTEPY FIZYKI. Warszawa, Poland. Vol. 9, no. 3, 1958.

Monthly List of East European Accessions Index (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

ZONN, V. [Zonn, Wlodzimierz], prof.; RUDNITSKIY, K. [Rudnicki, Konrad], doktor; PARENAGO, P.P., red.; PAVLOVSKAYA, Ye.D., kand.fiziko-matemat.nauk, red.; REZOUKHOVA, A.G., tekhn.red.

[Stellar astronomy] Zvezdnaia astronomiia. Pod red. P.P. Parenago. Moskva, Izd-vo inostr.lit-ry, 1959. 448 p. (MIRA 13:1)

1. Direktor astronomicheskoy observatorii Varshavskogo universiteta (for Zonn).

(Stars)

ZONN, V.

QX Cassiopeiae-an eclipsing variable with a great eccentricity of the orbit. Astron. tsir. no.201:11-12 Ap '59. (MIRA 13:2)

1.Varshavskaya observatoriya.
(Stars, Variable)

ZONN, V.

Photographic observations of CE Cassiopeiae. Astron.tsir. no.206:12-13 D '59. (MIRA 13:6)

1. Varshavskaya Astronomicheskaya Observatoriya.
(Cepheids)

VRUBLEVSKAYA, B.; ZONN, V.

New variable star in the vicinity of β Cassiopeiae. Astron.tsir. no.217:11 D '60. (MIRA 14:3)

1. Varshavskaya astronomicheskaya observatoriya.
(Stars, Variable)

ZONN, W.

Impressions from the Fifth COSPAR Symposium, Florence, May 7-20, 1964. Postepy astronom 12 no.4:273-279 O-D '64.

LUGOWSKI, Antoni; ZONN, Wlodzimierz, prof. dr

Dilettantes and their defense. Problemy 20 no.5:303-304 '64

1. Technical University, Warsaw (for Lugowski).

ZONN, W.

Countings of the individual galaxies in selected fields of the Palomar Atlas. Postepy astronom 12 no.2:119 '64.

ZONN, W.

The Fourth International COSPAR Symposium, Warsaw, June 1963.
Postepy astronom 12 no.1:51-54 '64.

ZONN, W.

Activities of the Committee of Space Research. Przegl geofiz 9 no.1:85-90 '64.

ZONN, Wlodzimierz, prof. dr

Pseudo science; remarks on quacks and maniacs. Problemy 19 [i.e. 20] no. 2:114-115 '64.

1. Head, Department of Astronomy, University, Warsaw.

CICHOWICZ, Ludoslaw; ZONN, Wlodzimierz

Poland's contributions in cosmic space research. Postepy astronom 12 no.3:189-194 '64.

ZONN, Wlodzimierz, prof. dr

Committee on Space Research and its symposium [illegible]
Problemy 20 no. [illegible] '64.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065420011-0"

ZONN, Wlodzimierz (Warszawa)

Activities of the Committee on Space Research. Nauka polska 11 no.6:43-49 '63.

ZONN, W.; WROBLEWSKA, B.

Photographic observations of variables in the vicinity of Cassiopeiae. Pt. 2. Acta astronom 14 no. 1:73-76 '64.

1. Astronomical Observatory, University, Warsaw.

ZONN, Wlodzimierz, prof. dr.

Warsaw Symposium of the Committee on Space Research.
Problemy 19 no.8:520-521 '63.

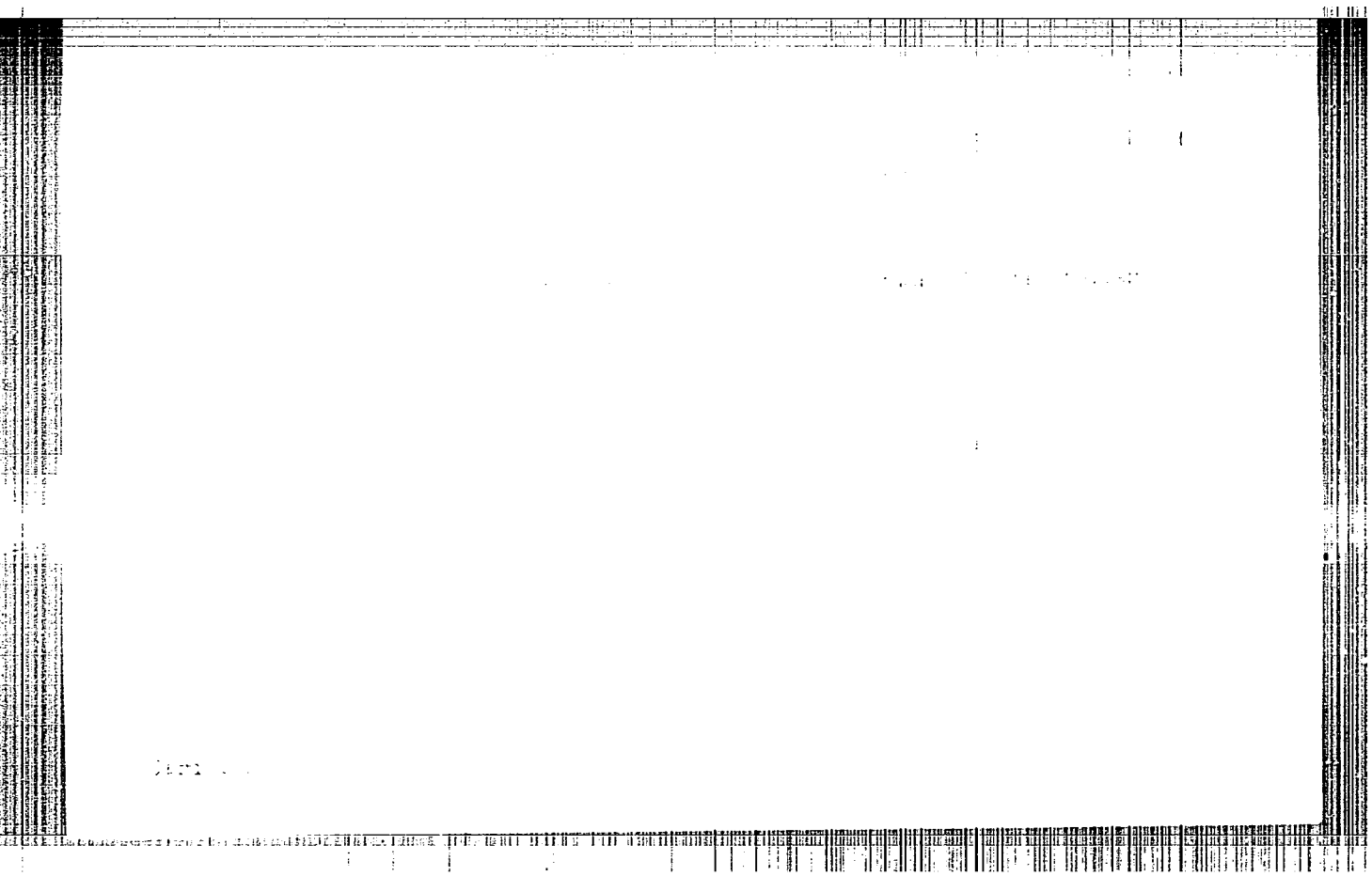
ZONN, W.

On the distribution of color excesses in clouds of interstellar dust. Acta astronom 12 no.3:141-153 '62.

1. Astronomical Observatory, University, Warsaw and Astronomical Institute, Polish Academy of Sciences, Warsaw.

ZONN, W.

Statistical studies on the cluster populations of the galaxies.
Postepy astronom 11 no.1:81-88 '63.



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ZONN, W.

On the distribution of the absorption in the several clouds of interstellar dust. Postepy astronom 10 no.1:93 Ja-M '62.

ZONN, W.

The 3d International Symposium of the Committee on Space Research (COSPAR), Washington D.C., April 30 - May 9, 1962. Postepy astronom 10 no.4:369-373 O-D '62.

ZONN, Wlodzimierz

On pulsating stars, in the light of stellar evolution. Postepy astronom 8 no.4:183-196 '60

ZONN, W.

Again on variable stars of the RR Lyrae type. Postepy astronom 10 no.2:179 '62.

ZONN, W.

Report on the activities of the Warsaw Astronomical Observatory during the period 1950-1961. Postepy astronom 10 no.3:263-271 '62.

ZONN, W.

On the application of two-color photometry to studies on the distribution of stars and interstellar matter. Postepy astronom 10 no.3:257-261 '62.

ZONN, W.

Wladyslaw Dziewulski, obituary. Postepy astronom 10 no.3:301-302 '62.

ZONN, W.

The Second International Symposium of the COSPAR in Florence, April 1961. Postepy astronom 9 no.4:249-251 '61.

ZONN, W.

On the distribution of the color surpluses in individual clouds of interstellar dust. Postepy astronom 10 no.2:161-164 '62.

S/035/62/000/003/012/053
A001/A101

AUTHOR: Zonn, W.

TITLE: On some problems of extragalactic astronomy

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1962, 45, abstract 3A330 ("Postępy astron.", 1961, v. 9, no. 2, 63-74, Polish)

TEXT: Conclusions arrived at by cosmologists and laws discovered by them might have been true or false, but as a rule these laws were universal. In extragalactic astronomy, which is a science more empirical, the laws or regularities being discovered may, but not necessarily, be correct with respect to the whole Universe. Two problems became during the recent times especially actual in extragalactic astronomy. They pertain to gravitation and photometric paradoxes; they are closely connected with the problems of distribution of matter in the Universe and with V. A. Ambartsumyan's question, whether clusters of galaxies are stable formations or not. Analyzing the works on these problems the author writes that there is no trace of any order or permanency and there is no homogeneity in the observed picture of the Universe. As to the problem of

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On some problems of extragalactic astronomy

S/035/62/000/003/012/053
A001/A101

the "birth" of the Universe, which was so actual recently, this problem ceased to be essential, because the Universe is daily being born and is daily dying.

W. Wiśniewski

[Abstracter's note: Complete translation]

Card 2/2

ZONN, Wlodzimierz (Warszawa)

The part of the amateur astronomer. Urania 32 no.11:322-327 N '61.

(Astronomy)

POLAND

ZONN, Wlodzimierz

No affiliation given but town of Warsaw

Crakow, Urania, September 1965, No 9, pp 242-247

"Space science. Part 4: Planet research."

POLAND

ZONN, Wlodzimierz

No affiliation given but city of Warsaw

Crakow, Urania, No 12, December 1965, pp 338-43

"Space science. Part 9: Extraterrestial observatories."

L 1313-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG
ACCESSION NR: AP5022264 UR/0363/65/001/007/1128/1129
546.655'623

AUTHOR: Zonn, Z. N.

TITLE: Growing of cerium aluminate single crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 7, 1965, 1128-1129

TOPIC TAGS: cerium compound, aluminate, single crystal growing

ABSTRACT: To prepare cerium aluminate single crystals, three problems had to be solved: (1) creation of a reducing atmosphere under conditions permitting crystallization in accordance with a predetermined heating schedule, (2) selection of a solvent stable in this atmosphere, (3) selection of crucible material stable in this atmosphere and inert toward the solvent. The crucible (made of molybdenum, nickel, or fused graphite) was placed in a corundum capsule and covered with a mixture of activated carbon and Kryptol. Potassium fluoride was used as the solvent. The material to be crystallized was prepared in three ways: (1) combined grinding of CeO_2 and Al_2O_3 in stoichiometric proportion, (2) coprecipitation with ammonia from solutions of cerium nitrate and aluminate nitrate, and roasting to drive off the ammonium salts; (3) preliminary synthesis

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ACCESSION NR: AP5022264

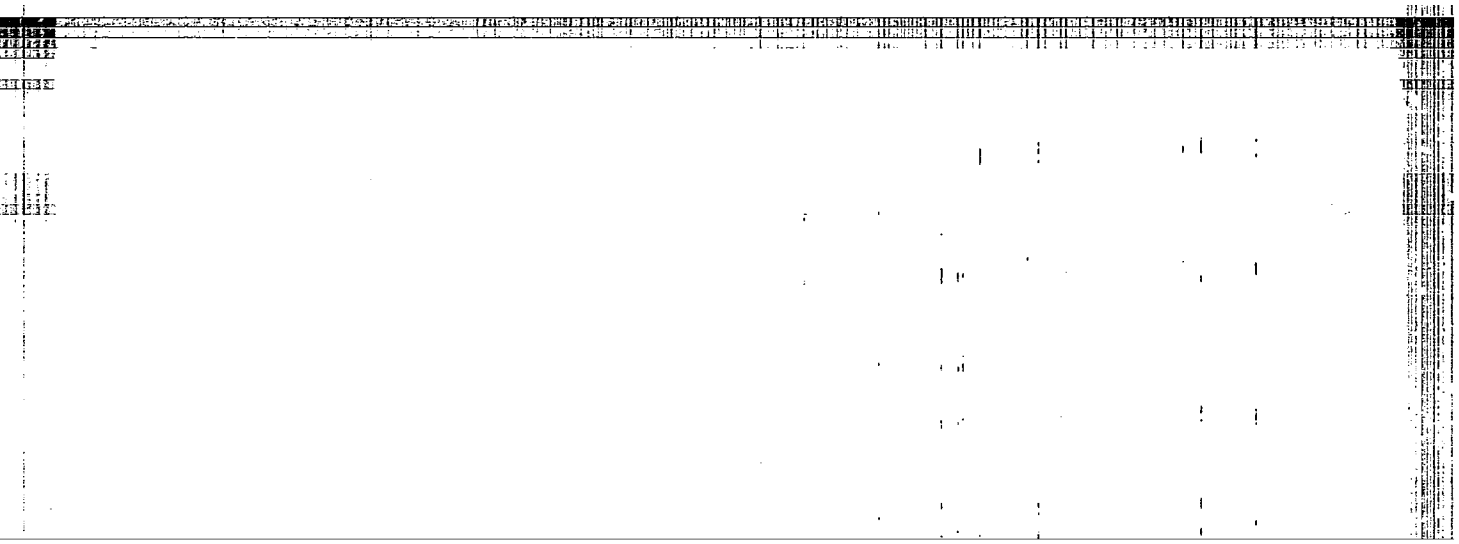
of $CeAlO_3$ at 1600C in an ammonia atmosphere. A mixture of 30% $CeAlO_3$ and 70% KF was used, and the crystallization was carried out by raising the temperature to 1300C, then lowering it at 4-5 degrees per hour to 800C. A radiogram of the $CeAlO_3$ single crystals obtained is given. The proposed method can be used for the synthesis of other compounds as well. Orig. art. has: 3 figures.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 23Apr65 ENCL: 00 SUB CODE: MM, IC

NO REF SOV: 001 OTHER: 002

Card 2/2



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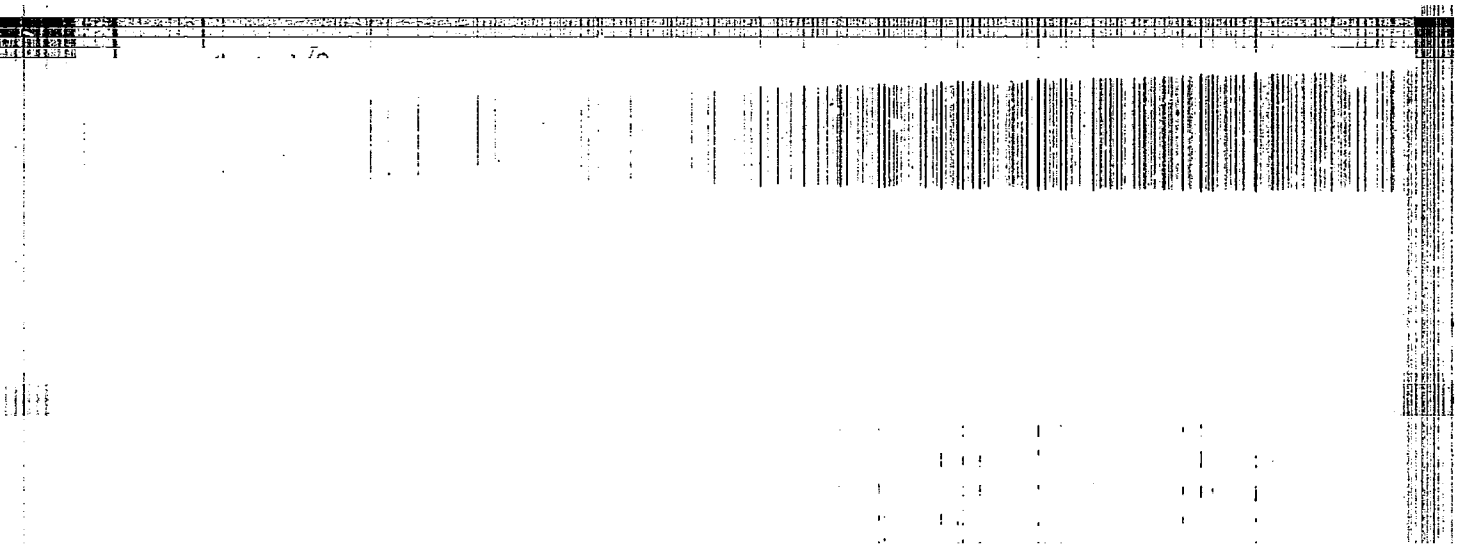

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002065420011-0"

ZONN, Z.N.; YANCHEVSKAYA, I.S.

Crystallization of aluminosilicates in low-melting salts.
Zhur.neorg.khim. 7 no.9:2213-2216 S '62. (MIRA 15:9)

1. Institut khimii silikatov AN SSSR.

(Aluminosilicates) (Crystallization) (Fused salts)

Zonn, Z. N.

AUTHORS Ioffe, V.A., Khvostenko, G.I., : 57 - 9-10/40
Zonn, Z.N.

TITLE The Electrical Properties of Some Single Crystals and Polycrystalline Ferrites.
(Elektricheskiye svoystva nekotorykh monokristallov i polikristallicheskikh ferritov.)

PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 9, pp.1985-1995 (USSR)

ABSTRACT The dependence of the specific resistance, of the dielectricity constant, and of the angle of dielectric losses on temperature at sound frequencies and for solid solutions of nickel-ferrite and zinc-ferrite, of magnesium-ferrite and manganese-ferrite as well as in the case of two single crystals and a ceramic sample of a solid solution of cobalt-ferrite and zinc-ferrite was investigated. All ferrites investigated have a high dielectricity constant within the range of low frequencies and high temperatures. The dependence of the dielectricity constant on frequency and temperature is due to relaxation processes. It is shown that the dielectricity constant of ferrites is a property that is independent of their poly-

CARD 1/2

24934 S/181/61/003/006/031/031
B102/B214

15 2120

AUTHORS: Ioffe, V. A. and Zonn, Z. N.

TITLE: Glasses with high dielectric constant

PERIODICAL: Fizika tverdogo tela, v. 3, no. 6, 1961, 1902-1904

TEXT: The authors investigated the possibility of making glasses on a Bi_2O_3-basis by adding TiO_2, BaO, or PbO without using a vitrifying oxide (such as SiO_2, B_2O_3, or P_2O_5). With 70-80 mole% Bi_2O_3 and addition of 20-30 mole% at 1100-1150°C a transparent melt was obtained which crystallized when cast into molds. The material had an ε of 75-80. In the range 100 cps - 2.5 Mc/sec ε was independent of frequency. $\tan\delta = 0.005 - 0.006$ at 100 cps, and 0.01 at 2.5 Mc/sec. On addition of 10 mole% SiO_2 or B_2O_3 transparent glasses were obtained which, however, still had the tendency to crystallize and devitrification. Stable glasses were obtained only after adding SiO_2 in quantities of over 15 mole%. The composition of the glasses investigated are shown in Fig. 1.

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The glasses were founded in corundum and platinum crucibles in a silite furnace for 30 min. Longer holding times led to a darkening of the glass and a tendency towards devitrification. The softening point of the glasses was 550-850°C. They were stable against water. The glasses with 17-25 mole% SiO_2 had an ε of 38-40 which decreased with increasing SiO_2 content (40 mole% SiO_2, $\varepsilon = 25$). ε was independent of frequency in the range 100 cps-2.5 Mc/sec, and increased linearly with increasing temperature; $\tan\delta = 0.002$-0.003 at 100 cps, and was only slightly frequency dependent. The crystallization of the glasses led to a rise in the values of ε and $\tan\delta$. ε of ordinary silicate glasses and borate glasses lies between 6 and 10, of silicate glasses with high (50 mole%) PbO content between 17 and 18. G. I. Skanavi and A. M. Kashtanova (ZhFT, XXVII, 1770, 1957) obtained devitrified boron-lead-titanium glasses with $\varepsilon = 35$. They explained the high ε value as being due to the formation of crystalline lead titanate. Glasses on the basis of TeO_2 have ε values of 28-32.

Glasses on the basis of bismuth oxide have the highest ε of all inorganic glasses known; their $\tan\delta$ has the same order of magnitude as in alkali-free silicate glasses. Their use in industry appears very promising. There are

24934 S/181/61/003/006/031/031
Glasses with high dielectric constant B102/B214

5 figures and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: H. M. Heaton, H. Moore. J. Soc. Glass Techn. 41, 3, 1957; M. Heynes, H. Rowson, J. Soc. Glass Techn., 41, 347, 1957; J. Ph. Poley. Nature, 174, No. 4423, 268, 1954.

ASSOCIATION: Institut khimii silikatov AN SSSR Leningrad (Institute of Silicate Chemistry of the AS USSR, Leningrad)

SUBMITTED: February 24, 1961

Card 3/4

ZONN, Z.N.

Growing of cerium aluminate single crystals. Izv. AN SSSR. Neorg. mat. 1 no.7:1128-1129 Jl '65. (MIRA 18:9)

1. Institut khimii silikatov AN SSSR.

L 11881-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG/GG

ACC NR: AT6002243

SOURCE CODE: UR/2564/65/006/000/0122/0126

AUTHOR: Zonn, Z. N.; Ioffe, V. A.

ORG: none

TITLE: Growing of rare earth aluminate single crystals with a perovskite structure

SOURCE: AN SSSR. Institut kristallografii. Rost kristallov, v. 6, 1965, 122-126

TOPIC TAGS: single crystal growing, lanthanum compound, praseodymium compound, samarium compound, neodymium compound, aluminate [illegible]

ABSTRACT: Single crystals of $LaAlO_3$, $PrAlO_3$, $SmAlO_3$ and $NdAlO_3$ measuring up to 15 x 10 x 10 mm were obtained from an equimolar mixture of PbO and PbF_2 (ratio of crys tallized substance to solvent [illegible] Pr, Nd and Sm crystals were prepared from a mixture obtained by [illegible] [illegible] polar [illegible] phase transition [illegible] and [illegible] single crystals were prepared by heating [illegible] holding for [illegible] per hour. These crystals contained up to [illegible] of the [illegible] group and up to 2% lead ions as impurities. X-ray powder data for all four types [illegible] are tabulated. They show that the number of lines changes with the crystal [illegible] and with the size of the crystals. Orig. art. has: 5 figures and 1 table.

Card 1/1

SUB CODE: 20 / SUBM DATE: none/ORIG REF: 002/OTH REF: 007

L 11933-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG
ACC NR: AP6001654 SOURCE CODE: UR/0051/65/019/006/0973/0975

AUTHOR: Zonn, Z. N.; Ioffe, V. A.; Feofilov, P. O.

ORG: none

TITLE: Luminescence of chromium and manganese ions in lanthanum aluminate crystals

SOURCE: Optika i spektroskopiya, v. 19, no. 6, 1965, 973-975

TOPIC TAGS: manganese, chromium, ion, lanthanum compound, single crystal, luminescence, aluminate

ABSTRACT: The authors discuss certain results of the study of the spectra and luminescence duration of isoelectronic ions Cr^{3+} and Mn^{4+} (electronic configuration $3d^3$), introduced into the crystal lattice of $LaAlO_3$. Both monocrystals grown from a solution in a melt as well as powdered samples were considered. No difference in the spectroscopic characteristics of the monocrystals and powders was noted. Crystal luminescence, located in the red and near-infrared portions of the spectrum was excited by an SVDSh-250 mercury lamp through a light filter consisting of a $CuSO_4$ solution, which had the effect of blocking the longwave portion of the energizing light. At small chromium concentrations

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UDC: 535.373.1

L 11933-66
ACC NR: AP6001654

the luminescence spectrum consists practically of a doublet with wavelengths of 7335 and 7338 Å. When the Cr^{3+} concentration is increased to 0.5% and above, the form of the luminescence spectrum undergoes definite modifications, which are described. With concentrations amounting to several percent, luminescence of Cr^{3+} in $LaAlO_3$ is entirely quenched. The luminescence spectra at different chromium percentages are illustrated. The luminescence is interpreted as a $^2E \rightarrow {}^4A_2$ transition in the Mn^{4+} ion. Orig. art. has: 3 figures.

SUB CODE: 20 / SUBM DATE: 20Mar65 / ORIG REF: 003 / OTH REF: 008

Card 2/2

REMEZOV, N.P. [deceased]; RODIN, L.Ye.; BAZILEVICH, N.I.; Prinimali uchastiye: ALEKSANDROVA, V.D.; BORISOVA, I.V.; BYKOVA, L.N.; ZONNA, S.V.; KARPOVA, V.G.; MINA, V.N.; NECHAYEVA, N.T.; PONYATOVSKAYA, V.M.; REMEZOVA, G.L.; SAMOYLOVA, Ye.M.; SMIRNOVA, K.M.; SUKHOVERKO, R.V.

Methodological instructions for studying the biological cycle of ash substances and nitrogen of terrestrial plant communities in the main natural zones of the temperate zone. Bot. zhur. 48 no.6:869-877 Je '63. (MIRA 17:1)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad i Pochvennyy institut imeni V.V. Dokuchayeva Ministerstva sel'skogo khozyaystva SSSR, Moskva.

ZONNENBERG, S.M.

Multispindle drilling attachment. Mashinostroitel' no.10:23 O '63. (MIRA 16:12)

S/193/60/000/008/002/018
A004/A001

AUTHOR: Zonnenberg, S. M.

TITLE: The Eight-Position Drum-Type CT-1451 (ST-1451) Machine Tool

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 8, pp.17-19

TEXT: In 1959 the Moskovskiy avtomobil'nyy zavod im. Likhacheva (Moscow Automobile Plant im. Likhachev) has brought out an eight-position drum-type machine tool for the machining of components simultaneously from two sides. The machine tool is composed of the bed with two vertical stands, between which a periodically swivelling drum is mounted on an axle. The drum position is set by a pneumatic indexing mechanism whose pin interlocks with the indexing prisms fitted on the drum periphery. Eight pneumatic clamping devices are mounted on the drum. The compressed air is supplied to them by an air-distributing coupling mounted on the drum axle. The power heads with screw-type flat-cam mechanical feed drive and individual electromotors are located on the stands and on special brackets of the bed. Each power head is fitted, according to the machining cycle, with the corresponding multi-spindle setting. The machine tool is equipped with a worm for the mechanical chip removal. The electric control system of the

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The Eight-Position Drum-Type CT-1451 (ST-1451) Machine Tool

machine is located in a locker at the rear stand. By pressing the "start" button of the machine the following operations are carried out subsequently: unfixing of the drum position; swivelling of the drum through a definite angle; indexing of the working position, rapid and working feed of the tool and return into the initial position connected with the switching-off of the power head electromotors. The author presents the following technical data: drum diameter - 740 mm; number of drum positions - 8; number of power heads - 10; number of parts being simultaneously machined on one position - 1; power of the electromotor of the table swivel mechanism - 1 kw; overall dimensions of the machine - (length) 2,725 x (width) 2,345 x (height) 1,900 mm; weight - 4,150 kg. The operation cycle of the machine is semi-automatic. The operator only replaces the parts being machined and turns the handle of the switching cock of the clamping devices. There is 1 figure.

Card 2/2

ZOHNFELBERG, S.M.

The ST-1435, ST-1248, and ST-1413 machine-tool units. Biul.tekh.-ekon.inform. no.9:28-30 '60. (MIRA 13:10)
(Machine tools)

ZONNENBERG, M. [Zonnenberh, M.] inzh.; PANCHENKO, O., inzh.; BASOVICH, G. [Basovych, H.], inzh.

The simplest designs of steaming chambers and plants. Sil'. bud. 7 no.5:9-11 Mr '57. (MIRA 13:6)
(Autoclaves)

BLYUMEN, V., inzh.; ZONNENBERG, M., inzh.; PANCHENKO, O., inzh.

The simplest method for eliminating the air gap between vanes and the working part of the cylinder of the "Kolhospnyi" press. Sil'.bud. 7 no.12:18 D '57. (MIRA 13:5)
(Brickmaking machinery)

ZONNENBERG, M., inzh.; PANCHENKO, A., inzh.

Shaft kiln for burning lime. Sil'.bud. 7 no.7:12-13
Jl '57. (MIRA 12:11)
(Kilns) (Lime)

A.C.S.

Equipment + Apparatus

New types of driers in the ceramic industry. M. P. Zorokhovich and S. A. Dashaskin. Prom. Stroitel. Materialov, 1940, No. 12, pp. 33-36; Khim. Referat. Zhur., 4 (6) 129-30 (1941).—Experiments were made on drying brick in an experimental drier built on the principle of the Odel'skii drier. The water vapor condenses on the cold walls (made of glass), is drained off through ducts in the walls, and is collected in draining troughs. The drying was conducted at an external temperature of 5° to 7°. Two upright partitions separated the drying zone from the zone of condensation; between the two zones was a difference of 30°. The time of drying was 68 hr. with an almost complete absence of culls; 113 kgm. of fuel were required for 1000 normal brick. The low cost of the drier, the low fuel consumption, the absence of mechanical energy, and the fast and even high-grade drying make this a very desirable type of drier. Its possibilities should be tested under plant conditions.

M.Ho.

ZONNENBERG, Semen Moiseyevich; IGNAT'YEV, N.V., kand. tekhn. nauk, retsenzent; BEYZEL'MAN, R.D., inzh., red.; GORDEYEVA, L.P., tekhn. red.; DEMKINA, N.F., tekhn. red.

[Small multipurpose machine tools]Malye agregatnye stanki. Moskva, Mashgiz, 1962. 291 p. (MIRA 15:10)
(Machine tools)

ZONNENBERG, S.M.

Using small machine-tool units at the Likhachev Automobile Plant. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.5:38-43 '62. (MIRA 15:7)
(Moscow--Machine tools)

ZONNENBERG, S.M.

The St-1440 and St-1456 machines designed by the Likhachev Automobile Plant. Biul.tekh.-ekon.inform. no.1:32-34 '61. (MIRA 14:2)

(Machine tools)

ZONNENBERG, S. M.

The ST-1451 eight-position drum-type machine. Biul. tekh.-ekon. inform. no.8:17-19 '60. (MIRA 13:9)
(Milling machines)

ZONNENBERG, S.M.

The St-1448 semiautomatic drilling and screw-cutting milling machine. Biul.tekh.-ekon.inform. no.10:27-28 '60. (MIRA 13:10)
(Machine tools)

S/193/60/000/009/006/013
A004/A001

AUTHOR: Zonnenberg, S.M.

TITLE: The Small-Size Unit-Head Machine Tools CT(ST)-1435, CT(ST)-1248 and CT(ST)-1413 14

PERIODICAL: Byulleten' tekhniko-ekonomicheskoi informatsii, 1960, No. 9, pp. 28 - 30

TEXT: The author enumerates and describes a number of high-efficiency small-size unit-head semi-automatics manufactured by the Moskovskiy avtozavod im. Likhacheva (Moscow Automobile Plant im. Likhachev). The machine tools are, composed of the base, pedestal with swivel face plate, mechanisms for the rotation, fixing and clamping of the table, cooling system, automated pneumatic clamping devices mounted on the table, hydraulic power heads with extensible tail spindle and individual electromotors (of up to 2.8 kw power) and also mechanical threading power heads (with feeds up to 2 mm/rev). With some modifications of the head it is also possible to cut threads of various dimensions, also conical threads. Each power head is equipped with corresponding tool posts for multi-tool machining. The heads operate in the following cycle: rapid feed,

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S/193/60/000/009/006/013
A004/A001

The Small-Size Unit-Head Machine Tools CT(ST)-1435, CT(ST)-1248 and CT(ST)-1413

operating feed and rapid tool removal into the initial position. When the button "start" is pressed, unfixing, turning and adjustment of the face plate position, feed and tool removal are effected automatically. The operation cycle of the machine is semi-automatic. The author gives the technical data of the following machines: ST-1435 five-position small-size unit-head drilling-milling-threading semi-automatic; ST-1248 six-position small-size unit head drilling and threading semi-automatic for the comprehensive machining of front axle gear cases; ST-1413 six-position small-size unit-head semi-automatic, equipped with power heads with two operating feeds. There are 3 figures.

Card 2/2

ZONNENBERG, S.M., inzh.

Double-type gripping attachment. Mashinostroitel' no.7:34-35 Jl '59. (MIRA 12:11)
(Machine tools--Attachments)

ZONNENBERG, S.M.

The ST1379-type machine-tool unit with a movable table. Biul.tekh.-ekon.inform. no.9:28-30 '58. (MIRA 11:10)
(Machine tools)

ZONNENBERG, Semen Moiseyevich; LEBEDEV, Aleksandr Sergeyevich; IVANOVA, N.A., red.izd-va; EL'KIND, V.D., tekhn.red.

[Pneumatic gripping devices] Pnevmaticheskie zazhimnye prisposobleniia. Izd.2., perer. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 187 p. (MIRA 12:4)
(Pneumatic tools)

ZONNENBERG, S.M.

Removing chips from holes before screw-thread cutting. Avt. prom. no.12:37 D '58. (MIRA 11:12)

1.Moskovskiy avtozavod imeni Likhacheva.
(Machine-shop practice)

ZONDENBERG, S.M.

LEBEDEV, A.S., writer on technology. Pneumatic gripping devices. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 159 p. (54-37806)

TJ1005.Z6

ZONNENBERG, S.M.

The ST1344 small machine-tool unit. Biul. tekhn.-ekon. inform. no.8:34-35 '58. (MIRA 11:10)
(Machine tools)

AUTHOR: Sonnenberg, S.M. SOV/113-58-12-12/17

TITLE: The Removal of Chips From Openings before Cutting the Thread (Udaleniye struzhki iz otverstiy pered narezaniyem rez'by)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 12, p 37 (USSR)

ABSTRACT: At the Moscow Automobile Plant imeni Likhachev, a special device is used for removing chips from openings in which a thread has to be cut (Figure 3). If the multi-spindle head is lowered on the machined part, compressed air passes through a collector and a bush, and removes the chips. If the spindle head is raised, the compressed air is stopped. There are 3 sets of diagrams.

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev)

Card 1/1

ZONN, Z.N.

IOFFE, V.A.; KHVOSTENKO, G.I.; ZONN, Z.N.

Electric properties of some single crystals and polycrystalline ferrites. Zhur. tekh. fiz. 27 no.9:1985-1995 S '57. (MIRA 10:11)

1. Institut khimii silikatov AN SSSR, Leningrad.
(Ferrates--Electric properties)

PROCESSES AND PROPERTIES INDEX

731. NEW TYPE OF DRYER FOR THE CERAMIC INDUSTRY. M. E. Zandberg and S. A. Damaskin (Prom. Stroitel. Materialov, 2, No. 12, 33, 1940). A type of dryer proposed by Prof. Olelsky has been constructed and operated. The water vapour from the goods condenses on the glass walls, which are constructed with overlapping joints so that the water drains down the outer surface. The temp. of the outside air was from 5-7°C. The fuel consumption was 2·2 cwt. per 1,000 standard bricks. The dryer proved economical to construct and operate, and even tender clays could be successfully dried.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ZONNENBERG, S.M.

Small machine-tool units for machining parts with large-size tools.
Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform.
16 no.4:34-35 '63. (MIRA 16:8)
(Machine tools)

ZONTHEIBERG, S.M.

Small drum-type machine-tool units for machining shaft-type parts. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. 16 no.5:20-23'63. (MIRA 16:7)
(Machine tools)

ZONNENBERG, S.M.

The ST-1400 small machine-tool unit. Biul.tekh.-ekon.inform. no.10:21-22 '58. (MIRA 11:12)
(Machine tools)

ZONNENBERG, S.M.

Automatic chip removal on small machine-tool units. Stan.i instr. 29 no.12:39 D '58. (MIRA 11:12)
(Machine tools--Attachments)

ZONNENBERG, S.M., inzh.

Creative cooperation of designers working in the departments of the chief designer and the chief engineer. Mashinostroitel' no. 8:38-39 Ag '58. (MIRA 11:8)

1. Avtozavod imeni Likhacheva.
(Machinery--Design)

ZONNENBERG, S.H.

Lubricators for intermittent lubrication of screw taps. Stan.i instr. 29 no.6:41 Je '58. (MIRA 11:7)
(Lubrication and lubricants)

ZONDENBERG, S.M., inzh.

Pneumatic jigs for boring holes in brackets. Mashinostroitel' no.2:24-26 F '58. (MIRA 11:3)
(Jigs and fixtures)

SOV-117-58-8-19/28

AUTHOR: Zonnenberg, S.M., Engineer

TITLE: Creative Cooperation of the Designers of the Department of the Chief Designer and of the Chief Technologist (Tvorcheskoye sodruzhestvo konstruktorov otdelov glavnogo konstruktora i glavnogo tekhnologa)

PERIODICAL: Mashinostroitel', 1958, Nr 8, pp 38-39 (USSR)

ABSTRACT: The machine details designed in the department of the chief designer must be produced by a combination of usual or special machine tools which are designed in the department of the chief technologist. In many cases the technologist can recommend a more easily manufactured design which fulfils the same purpose. In the gear casing of the motor ZIL-127, a variant (Figure 1,a) had been designed which was deformed when fastened on the lathe. A new design (Figure 1,b) which had no such drawbacks was recommended by the technologists of the plant. In the crankcase of the motorcar ZIL-157 13 openings had to be made. The opening 1 (Figure 2,a) was located on an inclined plane relative to the other openings. The machining on a special machine tool was very difficult. The designers changed the position of the opening (Figure 2,b). The production could in this way be simplified, because a machine could be

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Creative Cooperation of the Designers of the Department of the Chief Designer and of the Chief Technologist

designed which made all the openings simultaneously. In the crankcase of the front axle of the machine tool ST-1400 the openings were located as shown in Figure 3,a. The technologists recommended an arrangement as in Figure 3,b, so that two openings could be drilled with a two-spindle device simultaneously. The required time could be reduced by this arrangement 2 times. There are 3 diagrams.

ASSOCIATION: Avtozavod imeni Likhacheva (Motorcar Plant imeni Likhachev)

1. Machine tools - Design

25(1) PHASE I BOOK EXPLOITATION SOV/2288

Zonnenberg, Semen Moiseyevich, and Aleksandr Sergeyevich Lebedev

Pnevmaticheskiye zazhimnyye prisposobleniya (Pneumatic Clamping Fixtures) 2nd ed., rev. Moscow, Mashgiz, 1959. 187 p. Errata slip inserted. 6,000 copies printed.

Ed. of Publishing House: N.A. Ivanova; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Metalworking and Tool Making: R.D. Beyzel'man, Engineer.

PURPOSE: This book is intended for designersand technologists of machine building plants and may be useful to students of mechanical engineering.

COVERAGE: The authors discuss fundamental problems of designing modern pneumatic clamping fixtures, giving a description of fittings and control systems, and describing the problems of automation of these fixtures. Special attention is given to clamping mechanisms and to the principal schemes of the fixtures. The authors also describe fixtures for various types

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of machining.

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Pneumatic Clamping Fixtures

AVAILABLE: Library of Congress (TJ1187.Z6 1959)

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10-15-59

ZONNENBERG, S.M.; KVASKOV, A.I.

Machine tool manufacture and automatization of universal equipment at the Kikhachev Automobile Plant. Stan.i instr. 28 no.11:34-35 N '57. (MIRA 10:12)

(Machine tools)
(Automatic control)

ZONNENBERG, S.M.

AUTHOR: Zonnenberg, S.M., Engineer, 117-2-11/29

TITLE: Pneumatic Jig for Drilling Holes in Brackets (Pnevmaticheskiy konduktor dlya sverleniya otverstiy v kronshteynakh)

PERIODICAL: Mashinostroitel', 1958, # 2, pp 24-26 (USSR)

ABSTRACT: The article describes and illustrates by detailed drawings a special pneumatic jig for simultaneous drilling of holes in two right-angled planes of brackets. The jig is used with a multi-spindle drilling head. It has increased the work efficiency and considerably reduced the prime costs of bracket-type parts.

The jig is in use at the Moscow Automobile Plant imeni Likhachev.

There are 3 drawings.

AVAILABLE: Library of Congress

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ZONNENBERG, S.M.; STORCHAN, V.T.

The ST-1480-A automatic tooth-chamfering machine. Biul.tekh.-ekon. inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.9:38-40 '62. (MIRA 15:9)

(Gear-shaping machines)

Zonnenberg, S.M.

AUTHOR: Zonnenberg, S.M.

117-3-14/28

TITLE: Pneumatic Two-Position Device (Dvukhpozitsionnoye pnevmaticheskoye prisposobleniye)

PERIODICAL: Mashinostroitel', 1958, # 3, p 33 (USSR)

ABSTRACT: A drilling machine device especially designed for the simultaneous drilling of multiple bolt holes in two sides of a bracket is shown in an illustration. The drilling operation is done on two such brackets at a time, by two separate multiple drilling heads. After drilling the holes in one side, the bracket is removed and set into the second position for drilling the holes in the other surface, while the next part is set into place in the first position, after which drilling goes on simultaneously in both. This device has cut the manufacturing cost of these brackets by about 50 %. The description is detailed and accompanied by a detailed drawing.

There are 2 figures.

AVAILABLE: Library of Congress

Card 1/1

AUTHOR: ZONNENBERG,S.M., TRISANTOVICH,Ye.V. PA - 3625

TITLE: A Die for the Clamping of Bevel Gears when Hardening. (Shtamp dlya zazhima konicheskikh zubchatykh kolos pri zakalke, Russian).

PERIODICAL: Stanki i Instrument, 1957, Vol 28, Nr 6, pp 34 - 35 (U.S.S.R.)

ABSTRACT: In order to avoid warping the thermal treatment of particularly precise gears is carried out in special clamping dies on hardening presses. Hardening is carried out as follows: The heated gear is clamped in a die which is mounted on a pneumatic press, and in this position it is chilled in oil. The die and a pneumatic hardening press are shown by 3 illustrations and their finish and operation are described in detail.

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

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ZONNENBERG, S.M.; TRISANTOVICH, Ye.V.

Dies for clamping bevel gears during hardening. Stan.i instr. 28 no.6:34-35 Je '57. (MLRA 10:8)
(Dies (Metalworking))
(Metals--Hardening)

ZONNENBERG, S.M.

Small machine units with automatic gripping mechanisms. Stan. 1 instr. 27 no.11:28-30 N '56. (MLRA 10:1)
(Machine tools--Attachments)

ZONNENBERG, S.M.

Bin charging and power feed of machine parts for automatic undercut grinding. Stan. i instr. 26 no.7:35-36 Jl '56.
(MLRA 9:10)

(Grinding and polishing)

ZONNENBERG, S. M.

AID P - 5190

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 12/24

Author : Zonnenberg, S. M.

Title : Bunker loading and automatic feed of parts in automatic deep grinding.

Periodical : Stan. i instr., 7, 35-36, Jl 1956

Abstract : The author describes the design and operation of an automatic loading mechanism for small cylindrical parts processed in the centerless grinding machine at the Automobile Plant im. I. A. Likhachev. Two drawings.

Institution : As above

Submitted : No date

ZONNENBERG, S.M.

Mot le bench radial drilling machine. Stan.i instr. 25 no.4:34 Ap '54.
(MLRA 7:6)

(Drilling and boring machinery)