S O D I N, L. G.

L 19632-65   FBD/FSF(h)/EWT(1)/EWG(v)/EEC-4/EEC(t)   Pe-5/Pae-2/Pi-4
SSD/SCD/AFWL/ASD(a)-5/AFETR/RAEM(a)/ESD(dp)/ESD(gs)/ESD(t)   GW/WS

ACCESSION NR: AP5000611   S/0021/64/000/011/1464/1468

AUTHOR: Bazelyan, L. L.; Braude, S. Ya. (Corresponding member   AN
UkrSSR); Vaysberg, V. V.; Krymkin, V. V.; Men', A. V.; Sodin, L. G.

TITLE: Radio emission spectral density of some discrete sources at
frequencies of 20—40 Mc

SOURCE: AN UkrRSR. Dopovidi, no. 11, 1964, 1464-1468

TOPIC TAGS: radio astronomy, radio telescope, radio emission

ABSTRACT: Radiation densities of eight discrete sources of cosmic
radiation in the 20—40-Mc band were measured with a wide-band radio
telescope. The measurements were carried out from October 1963
through February 1964. The radio telescope consisted of two electri-
cally controlled multielement antenna arrays (each with 128 radiators)
spaced 470 m apart along an E-W line. The antennas formed the elements
of a T-shaped interferometer system. The width of the radiation pat-
tern of each antenna was 4.6° at 20 Mc and 2.3° at 40 Mc; the inter-
ference interval at these frequencies was 1.8° and 0.9°, respectively.
Phase-modulated radiometers (i-f bandwidths, 10—15 kc) were used for

Card 1/2

L 19692-65

ACCESSION NR: AP5000611

signal reception. Radiation from each source was recorded simultane-
ously at 20, 25, 31, and 38.5 Mc. Recorder time constant was nearly
30 sec. Cassiopeia-A was used as a standard source of radiation. No
discontinuity of the spectrum was noted for sources situated within
the angles $151° \leqslant \ell^{II} \leqslant 200°$, and $-13° \leqslant b^{II} \leqslant 60°$. Orig. art. has:
2 figures and 2 tables.

ASSOCIATION: Instytut radiofizyky i elektroniky AN URSR (Institute
of Radio Physics and Electronics, AN UkrSSR)

SUBMITTED: 27Mar64   ENCL: 00   SUB CODE: AA, EC

NO REF SOV: 004   OTHER: 006   ATD PRESS: 3161

Card 2/2

ACCESSION NR: AP4039721   S/0141/64/007/002/0215/0224

AUTHOR: Bazelyan, L. L.; Bruk, Yu. M.; Zhuk, I. N.; Men', A. V.; Sodin, L. G.; Shary*kin, N. K.

TITLE: Wide-band radiointerferometer with electric control of antenna pattern

SOURCE: IVUZ. Radiofizika, v. 7, no. 2, 1964, 215-224

TOPIC TAGS: antenna radiation pattern, antenna switching, radio astronomy, radio interferometer, radio emission

ABSTRACT: A broadband (20 — 40 Mcs) radio interferometer with a 470 meter base, oriented east and west, is described. The interferometer is intended for the investigation of radio emission from discrete sources and the cosmic background in the northern hemisphere by directivity-pattern scanning in a ± 90° elevation sector and by using the earth's rotation. The interferometer consists of 220 8-dipole plane arrays with remote digital control of the directivity pattern in the meridional plane. The description covers the principles underlying the control of the beam and the summation of the signals, the arrangement of the antenna, the control elements, the antenna directivity pattern, the antenna effective area, and the antenna gain. The large base facilitates separation of the source radio

Card   1/4

ACCESSION NR: AP4039721

emission from the cosmic background. The two interferometer antennas are differ-
ent and can be used separately. The eastern one can be used as a transit instru-
ment. By using the western antenna with beam scanning, it is possible to make two
or three records of a source passing through the azimuthal pattern, with intervals
of 10 — 20 minutes. The resolution of the interference diagram is 1.6 — 0.8° in
direct ascension and 4° — 2° in declination, at frequencies 20 — 40 Mcs. It is
recommended that the antennas be used separately for the radio emission of the
cosmic background, in which case the resolution is 4 — 2° in ascension and 34 —
17° in declination for the eastern antenna, and 34 — 17° in ascension and 4 — 2°
in declination for the western antenna (both at 20 — 40 Mcs). Some precautions
necessary in the operation of the interferometer are mentioned. Orig. art. has:
9 figures and 2 tables.

ASSOCIATION: Institut radiofiziki i elektroniki AN UkrSSR (Institute of Radio-
physics and Electronics, AN UkrSSR)

SUBMITTED: 28Apr63   ENCL: 02

SUB CODE: AA, EC   NR REF SOV: 001   OTHER: 003

Card   2/4

ACCESSION NR: AP4042515   S/0109/64/009/007/1179/1187

AUTHOR: Sodin, L. G.

TITLE: Statistics of the phased antenna array

SOURCE: Radiotekhnika i elektronika, v. 9, no. 7, 1964, 1179-1187

TOPIC TAGS: antenna, antenna array, phased antenna array, electrically steerable antenna

ABSTRACT: Formulas for the average array field coefficient and power coefficient (describing the radiation pattern) and the average directive gain of a phased array (electrically steerable antenna), with correlated fluctuations of the amplitudes and phases of radiator currents, are developed. Simplified formulas based on the assumption of a small correlation radius as compared to the antenna size are intended for engineering estimates. It is shown that with small radii, the effect of errors upon the radiation pattern depends but little on the correlation

Card 1/2

L 64758-65   EEC-4/EWG(v)/EWT(1)/FBD   GW/WS-4

ACCESSION NR: AP5013821

UR/0021/65/000/005/0580/0583

AUTHOR: Bazelyan, L. L.; Braude, S. Ya. (Corresponding member AN UkrSSR); Krymkin, V. V.; Men', A. V.; Sodin, L. H. (Sodin, L. G.)

TITLE: The frequency spectra of some discrete sources in the decameter radio band

SOURCE: AN UkrRSR. Dopovidi, no. 5, 1965, 580-583

TOPIC TAGS: radio astronomy, radio telescope, cosmic radio source, galactic radiation

ABSTRACT: The results are presented of measurements of the radiation flux of six discrete sources in the 20--40 Mcs band. The measurements were obtained at the radioastronomical observatory of Institut radiofiziki i elektroniki (Institute of Radio Physics and Electronics) AN UkrSSR using a T-like band telescope operating as a meridional instrument. The telescope was described in detail earlier (Izv. VUZov Radiofizika v. 7, 215, 1964). The measurements were compared with the flux of Cassiopea-A which was chosen as the standard. The spectra are found to be linear in the whole frequency range and can thus be classified as being of the spectral type S. It is established that the sources bounded by the galactic coordinates $21° \leq l^{II} < 89°$, $-13° \leq b^{II} \ll 60°$ exhibit no turning points of the frequency spectrum in the given range. Orig. art. has: 6 figures and 2 tables.

Card 1/2

L 64758-65

ACCESSION NR: AP5013821   2

ASSOCIATION: Instytut radiofizyky i elektroniky AN URSR [Institut radiofiziki i elektroniki AN UkrSSR] (Institute of Radio Physics and Electronics, AN UkrSSR)

SUBMITTED: 15Aug64   ENCL: 00   SUB CODE: AA, EC 55

NR REF SOV: 003   OTHER: 004

Card 2/2

L 49801-65 EWT(1)/EEC-4/EEC(t)/T/FCS(k) Pac-4/P1-5/P1-4/P1-4 WR

ACCESSION NR: AP5010090 UR/0109/65/010/004/0603/0609 /3
B

AUTHOR: Sodin, L. G.; Mogul'skiy, Ye. Z.

TITLE: Statistical characteristics of fluctuation of the remote-area field produced by an antenna array

SOURCE: Radiotekhnika i elektronika, v. 10, no. 4, 1965, 603-609

TOPIC TAGS: antenna, antenna array

ABSTRACT: Formulas are developed for the dispersions and crosscorrelation functions of the real and imaginary components of the remote-area field of a multielement antenna array. The major-lobe field has different dispersions for the real and imaginary components; the real-component fluctuation of the field is determined by the real-component fluctuation of the current (the same holds true for the imaginary components). In the minor-lobe directions, the fluctuations of both field components are equal and are equally determined by the real and

Card 1/2

L 49801-65
ACCESSION NR: AP5010090   0

imaginary components of current fluctuations. A formula describing the
distribution density of the field modulus is also derived, as well as formulas for
the correlation functions of field components along two different spacial
directions. With independent current fluctuations, the antenna field fluctuations
in two different lobes are practically uncorrelated. Orig. art. has: 1 figure and
47 formulas.

ASSOCIATION: none

SUBMITTED: 07Mar64   ENCL: 00   SUB CODE: EC

NO REF SOV: 002   OTHER: 002

Card 2/2

L 58385-65   FPD/EWT(1)/EWG(v)/EEC-4/EEC(t)   Pe-5/Pae-2/P1-4   GW/WS-4
ACCESSION NR: AP5015584   UR/0033/65/042/003/0618/0628
                                                            523.164.42

AUTHOR: Bazelyan, L. L.; Braude, S. Ya.; Vaysberg, V. V.; Krymkin, V. V.;
Men', A. V.; Sodin, L. G.

TITLE: Investigation of the spectra of discrete cosmic radio emission sources at
frequencies below 40 Mc

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 3, 1965, 618-628

TOPIC TAGS: cosmic radio emission, radio emission source, radio emission meas-
urement, radio telescope

ABSTRACT: The spectra of 14 discrete sources (in the 20—40-Mc range) were in-
vestigated at the Radio Astronomy Observatory of the Institute of Radio Physics
and Electronics, Academy of Sciences UkrSSR, from October 1963 through July 1964.
All observations were made between 2200 and 0800 hours local time. The radio tele-
scope employed an interferometer, and its antenna system consisted of two wideband
multielement electrically phased arrays, each measuring 176 x 17 m and spaced
470 m apart on an east-west line. Each array consisted of 178 horizontal dipoles.
Pattern width was 4° for 20 Mc and 2° for 40 Mc. Lobe width of the interference

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L. 58385-65
ACCESSION NR: AP5015594

pattern was 1.6° for 20 Mc and 0.8° for 40 Mc. Beam declination along the meridian was regulated by remote-control delay lines. The telescope radiometers were phase modulated by phase shifting the signal of one of the antennas through 180° at a frequency of 60 cps. The signals of each antenna were amplified by hf preamplifiers. The passband of the preamplifiers and of the phase shifter was about 20 Mc. The adjustable passbands of the four radiometers made it possible to record each source at four frequencies simultaneously (20, 25, 30—31, and 38.5 Mc). The recordings were calibrated with a standard-signal generator fed through a calibrated attenuator and a splitter to the preamplifier inputs. All the sources were measured by comparing them with the standard flux of source 3C 461 (Cas-A), which at 20 Mc is 450×10^{-24} w/m^2 cps. Flux densities ($S \cdot 10^{24}$ w/Mc) and the mean probable errors ($\Delta\%$) for fourteen of the sources are listed in Table 1 of . Enclosure. On the basis of these and previous measurements of Cas-A, Signus-A, Virgo-A, and Taurus-A, the spectra of 18 discrete sources can be divided into two classes: spectra with a constant spectral index from 20 to 1400—3200 Mc (13 sources) and spectra with a spectral index which is a function of the frequency (5 sources). Orig. art. has: 3 figures and 2 tables. [DW]

ASSOCIATION: Institut radiofiziki i elektroniki . nauk Ukr.SSR (Institute of Radio Physics and Electronics, Academy of Sciences UkrSSR)

Card 2/4

L 58385-65
ACCESSION NR: AP5015584

SUBMITTED: 13Sep64   ENCL: 01   SUB CODE:M,EC

NO REF SOV: 016   OTHER: 015   ATD.PRESS: 4046

Card 3/4

AUTHOR: Bruk, Yu. M. (Active member); Sodin, L. G. (Active member)

ORG: Scientific and Technical Society of Radio Engineering and Electrocommunication (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Calculating principal parameters of phased antenna arrays having discrete tier-type asynchronous control of beam parameters

TOPIC TAGS: antenna array, phased array antenna

ABSTRACT: A method is described of essential simplification of the time-delay system of beam-position control by using discrete delay lines arranged in a binary scheme. Both the parallel and parallel-tier ("herringbone") time systems are considered. The binary scheme yields 2^m delay discrete positions with m cells in each line. This advantage is further enhanced by using a rational phasing scheme (see figure); φ_1 and φ_2 are the phasing errors in the first and second tiers, respectively. Asynchronous control of tiers results in phase errors of radiator currents. These errors

O Phase shifter
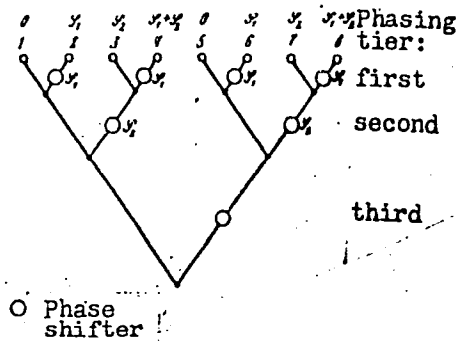
Card 1/2   UDC: 621.396.677

ACC NR: AP6023856

are investigated, and the pattern distortion, main-lobe displacement, and directive-gain reduction caused by these errors are determined. The distribution of phase errors over the antenna aperture is represented as a trigonometric polynomial. Formulas are derived for selecting the discreteness and determining the number of switching elements from known permissible directive-gain reduction or spurious side-lobe radiation. The greater the number $N = 2^m$ of delay positions, the greater the simplification of the phased antenna array that can be achieved. Orig. art. has: 3 figures, 30 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 27Jul64 / ORIG REF: 003 / OTH REF: 002

Card 2/2

ACC NR: AP6036368   SOURCE CODE: UR/0109/66/011/011/1953/1959

AUTHOR: Sodin, L. G.

ORG: none

TITLE: Statistical analysis of nonequidistant linear antenna arrays

SOURCE: Radiotekhnika i elektronika, v. 11, no. 11, 1966, 1953-1959

TOPIC TAGS: antenna array, antenna theory

ABSTRACT: Y. T. Lo's statistical analysis of nonequidistant arrays (IEEE Trans., AP-12, 1964, 257) is not entirely correct insofar as side lobes are concerned. M. I. Skolnik's et al. analysis (IEEE Trans., AP-12, 1964, 408) ignores field fluctuations. The present article fills these gaps. The antenna is assumed to consist of a sufficient number of radiators so that an independent failure of one of them still permits regarding the laws of distribution of various

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ACC NR: AP6036368

sums as normal. The directional pattern is required to satisfy only two
conditions: major-lobe width and minor-lobes radiation level. Accordingly,
formulas for statistical parameters of the directional pattern, for field distribu-
tion density, and for the probability of exceeding a specified level of radiation
from minor lobes are derived. These formulas permit designing, with any degree
of surety, a linear antenna array (with a decreased number of radiators) on the
basis of a specified side-lobe-radiation level. However, the exact deployment of
$\overline{N}$ radiators in N possible points remains vague; the method of dynamic
programing seems promising for solving this optimization problem. Orig. art.
has: 1 figure, 35 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 07Jun65 / ORIG REF: 003 / OTH REF: 011

Card 2/2

SERY, Vladimir; MATEJOVSKA, Dobromila; JEZEK, Zdenek; SODJA, Ivan

    'An epidemic of gastroenteritis caused by portable water. Cesk. epidem. mikrob. imun. 10 no.4:226-239 '61.

    1. Ustav epidemiologie a mikrobiologie v Praze.
        (GASTROENTERITIS epidemiol)   (WATER SUPPLY microbiol)

FEDOVA,D. DRASNAR, M.; SVEJDA, J.; PIRKOVA, Z.; SODJA, J.; SYRUCEK, L.

Epidemic of influenza in Czechoslovakia in February-April 1964.
J. hyg. epidem. (Praha) 9 no.1:95-110 '65

1. Institute of Epidemiology and Microbiology, Prague.

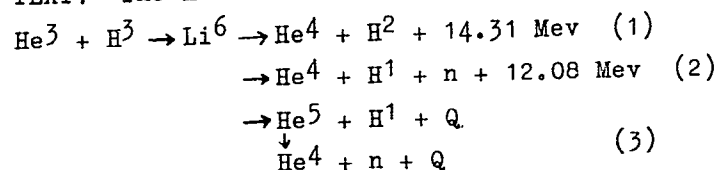*24.6600*
26.2212
21.1100

83164

S/056/60/039/002/001/044
B006/B056

AUTHORS: Li Ga Yen, Osetinskiy, G. M., Sodnom, N., Govorov, A. M.,
             Sizov, I. V., Salatskiy, V. I.

TITLE: Investigation of the $\underline{He^3 + H^3 \text{ Reaction}}$ /9

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
             Vol. 39, No. 2 (8), pp. 225-229

TEXT: The $He^3 + H^3$ reaction develops according to the following modes:

$$He^3 + H^3 \rightarrow Li^6 \rightarrow He^4 + H^2 + 14.31 \text{ Mev} \quad (1)$$
$$\rightarrow He^4 + H^1 + n + 12.08 \text{ Mev} \quad (2)$$
$$\rightarrow He^5 + H^1 + Q$$
$$\downarrow$$
$$He^4 + n + Q \quad (3)$$

The authors determined the total cross section of this reaction by
integral neutron counting, using a thin gas target. The ratio between the

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Investigation of the He³ + H³ Reaction

S/056/60/039/002/001/044
B006/B056

results obtained by Mook (Ref. 2) are plotted. One of the charged-particle spectra recorded for determining the branch ratios is shown in Fig. 2. The spectrum has two peaks corresponding to the alpha particles and the deuterons of branch (1). Between these peaks is the continuous spectrum of the protons from (2). The proton peak corresponding to the ground state of He⁵ is, as regards energy, near the deuteron peak of (1), and could not be separated spectrometrically. Analogous spectra were recorded at triton energies (150 - 950 kev), which were equal in each case. The average fractions of the three branches in the reaction were determined to be $(41\pm2)\%$ (1); $(55\pm2)\%$ (2); $(4\pm1)\%$ (3); the total reaction cross sections in the range 150 - 970 kev amounted to 3.2 - 63.0 mb. From the experimentally determined proton energies of (3), the He⁵ decay energy was determined from the relation

$$\varepsilon(He^5) = 0.4\ E_{H3} - 1.2\ E_{H1} + 12.08\ \text{Mev, where}\ E_{H1} = (9.6 \pm 0.1)\ \text{Mev.}$$

$\varepsilon = (0.8 \pm 0.1)$ Mev was obtained. This value agrees quite satisfactorily with those obtained by other authors. The authors finally thank Professor V. P. Dzhelepov, Professor I. M. Frank, and L. P. Lapidus

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Investigation of the $He^3 + H^3$ Reaction

S/056/60/039/002/001/044
B006/B056

for their interest and discussions, and they also express their
gratitude to the members of the generator team I. A. Chepurchenko,
N. N. Schetchikov, and M. V. Savenkova. There are 2 figures and 8
references: 3 Soviet and 5 US.

ASSOCIATION: Ob";yedinennyy institut yadernykh issledovaniy (Joint
Institute of Nuclear Research)

SUBMITTED: January 27, 1960

Card 4/4

ACCESSION NR: AR4015666   S/0081/63/000/021/0478/0478

SOURCE: RZh. Khimiya, Abs. 21S36

AUTHOR: Sodnomov, B. M.

TITLE: Effect of the duration of stationary contact on the magnitude of the static friction force for polymers

CITED SOURCE: Uch. zap. Buryatsk. gos. ped. in-t, vy*p. 22, 1961, 17-23

TOPIC TAGS: polymer, polymer friction, static friction, static friction force, stationary polymer contact, stationary contact period

ABSTRACT: A study of static friction for a numer of polymer materials (laminated polastics, polyethylene) and glass in contact with organic glass showed that the static friction force increases with an increase in the duration of contact. This, increase attenuates with time. Diagrams are given for the dependence of static friction force on time. The author suggests that the mutual intrusion of surfaces in contact with each other is accompanied by plastic amalgamation of the material in the contact area. I. U.

DATE ACQ: 09Dec63   SUB CODE: MA   ENCL: 00
  Card 1/1

SO....., ...   Cand. Physico-Mathematical Sci.

"Arithmetic Sums of Sets." Sub 25 Jun 51, Moscow State Pedagogical Inst.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 400, 9 May 54.

SODNOMOV, B. S.

Sodnomov, B. S.   On arithmetic sums of sets.   Doklady
Akad. Nauk SSSR (N.S.) 80, 173–175 (1951).   (Russian)

Let E_1 and E_2 be subsets of the real line R. The arithmetic
sum $E_1 + E_2$ is defined as the set of all $x + y$, for $x \epsilon E_1$ and
$y \epsilon E_2$. Let T denote the smallest family of subsets of R con-
taining all Borel sets and closed under the formation of
arithmetic sums. The author states and sketches proofs for
the following. (1) For every ordinal number $\alpha < \Omega$, there
exists a projective set of class CA_α and a perfect set whose
arithmetic sum is of class $A_{\alpha+1}$. (2) There exist a set of type
G_δ and a perfect set whose arithmetic sum is an analytic set
which is not measurable Borel. (3) If every set in T is
Lebesgue measurable, then every projective set is Lebesgue
measurable.   E. Hewitt (Seattle, Wash.).

Source: Mathematical Reviews,   Vol 13 No. 6

Sodnomov, B. S.

USSR/Mathematics - Topology

Card 1/1   Pub. 22 - 5/45

Authors   : Sodnomov, B. S.

Title   : An example of two sets of the G_δ type, the arithmetic sum of which is an immeasurable B (set)

Periodical : Dok. AN SSSR 99/4, 507-510, Dec 1, 1954

Abstract   : The process of constructing two G_δ type sets, the arithmetic sum of which is an A-set, i. e., an immeasurable set B, is described. An example of such a construction is given. Two Russian references (1951).

Institution : ...

Presented by: Academician P. S. Alexandroff, September 29, 1954

Sodnomov, B.S.

Sodnomov, B. S. Noncontradictoriness of a projective
estimate of certain noneffective sets. Uspehi Mat.
Nauk (N.S.) 10 (1955), no. 1(63), 155–158. (Russian)
This paper is based on results of P. S. Novikov [Trudy
Mat. Inst. Steklov. 38 (1951), 279–316; MR 14, 234]. The
author proves the following theorem and corollary.
Theorem: Let {S} be a system of sets for which a universal
set exists, then the following statement is non-contra-
dictory: Among the sets obtained by applying the axiom
of choice (of Gödel's system Σ) to {S}, there exists a
projective set. If K is the universal set and λ the projective
set of the theorem, and if K is of class α, then, the author
notes, the statement that λ is of class not exceeding
$\max(2, \alpha) + 2$ is non-contradictory. Corollary: The following
statements are non-contradictory: 1. Among the non-
Lebesgue-measurable sets obtained by selecting one point
from each system of rationalities there exists a set of class
not exceeding 3. 2. The well known Hausdorff decompo-
sition of the sphere can be realized by projective sets of
class not exceeding 3.

1 – F/W

Sodnomov, B.S.

The author uses in the proof of the theorem the single-valued function $f^*(x, t)$, "defined on a certain subset F of a sieve C_0" of unbounded index" constructed by Novikov in the paper cited above. The following lemma is also used. Lemma: The set of lower points of every projective class A_n is of class not higher than A_{n+1}. $M_0(x_1^0, \cdots, x_n^0)$ is called a lower point of a set E in the direction of the axis Ox_i if $M_0 \in E$, but each point $M(x_1^0, \cdots, x_i, \cdots, x_n^0)$ with $x_i < x_i^0$ does not belong to E.   E. J. Cogan.

S CDNC MC O BS.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.)Moscow,
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Muchnik, A. A. (Moscow). Solution of Post's Reduction   184
Problem.

Sodnomov, B. S. (Ulan-Ude).Consistency of Projectivity   184-185
of Some Uncommon Sets.

Trakhtenbrot, B. A. (Penza). Descriptive Classifications   185
in Recursive Arithmetics.

Uspenskiy, V. A. (Moscow). Calculable Operations,
Calculable Operators, and Constructively Continuous   185
Functions.

There are 2 references, 1 of which is USSR, and
another English.

Uspenskiy, V. A. (Moscow). Concept of Program and   186
Computed Operators.

Mention is made of Kolmogorov, A. N.
Card 59/80

SODOLOVSKIY, V.M.

Bakelite-bonded material. V. M. Sodolovskii. U.S.S.R. 106,512, July 25, 1957. A material suitable for making parts by pressing and reinforcement with metallic inserts, e.g. parts for flotation cells, is prepd. from 100 kg. of ground corundum ore and 7-8 kg. of liquid Bakelite, or 100 kg. ground corundum ore, 8 kg. Bakelite powder, and 3 kg. Bakelite varnish.   M. Hoseh

SODOLOVSKIY, V.M.

Wear-resistant parts made of abrasive materials. Obog.rud 4 no.3:
43-47 '59.   (MIRA 14:8)
(Abrasives)   (Mechanical wear)

SODOMKA, B.

SODOMKA, B. Determining the reciprocal even flow of liquids. p. 253

Vol. 11, no. 11, Nov. 1956
PAPIR A CELULOSA
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession Vol. 6, No. 2, 1957

Sodomka, J.

Can the properties of viscose fibers be improved through increasing the crystal ratio? K. Schwertuissek, J. Sodomka, and O. Knorkova. (Vyzkumny ustav vlnarsky, Brno, Czech.). Textil 10, 105-8(1955).—Increasing the crystal ratio can exercise favorable changes only on fibers with high orientation. The properties of such fibers will resemble the properties of natural cellulose. The crystn. process depends merely on temp., not on pressure.   I. Hyne

②

Z/009/61/000/006/002/002
E112/E135

AUTHOR: Sodomka, Josef

TITLE: Determination of vinyl acetate in vinyl chloride -
              vinyl acetate copolymers

PERIODICAL: Chemický průmysl, 1961, No.6, pp. 333-335

TEXT: A new method for a quantitative analysis of vinyl
acetate in vinyl chloride-vinyl acetate copolymers is described.
It is claimed to be superior to existing methods and to be
particularly adaptable to plant control. The method is based on
the use of tetrahydrofurane, which is an excellent solvent for the
polymer at room temperature. Vinyl acetate is saponified in
tetrahydrofurane solution with an alcoholic KOH solution and excess
KOH is estimated with H_2SO_4, using thymol blue as an indicator.
However, during saponification, some vinylchloride is attacked,
with liberation of HCl, which is estimated potentiometrically with
$AgNO_3$ solution. Times required for a quantitative saponification
of the acetyl-groups vary with vinyl acetate content, normality of
KOH, saponification temperature and weight of sample to be
analysed. A table is included, listing concentration, saponifica-
tion times and temperatures, to be approximately adhered to during
Card 1/4

Z/009/61/000/006/002/002
E112/E135

Determination of vinyl acetate in vinyl chloride-vinyl acetate
copolymers

analysis. Practical procedure (abridged): Sample is weighed into
a 100 ml conical flask, fitted with electromagnetic stirrer and
reflux condenser, and placed in a thermostat. Tetrahydrofurane
(THF) is then added (20 ml). The quantity of THF can be reduced
for samples with 5 to 60% vinyl acetate to 10 ml. When solution
is completed, 5 ml alcoholic KOH are added at a thermostat
temperature of 30 °C (saponification times should conform with
instruction given in table). On conclusion of the saponification,
30 ml ethanole (1:1) and 1 ml thymol blue are added, which will
cause precipitation of the saponified copolymer. Excess of KOH is
titrated with H2SO4 (colour change from green to orange). The
solution is then acidified with one ml 0,1 N-H2SO4 and Cl is
estimated potentiometrically with AgNO . Using 0,1 N-reagents,
the vinyl acetate content is computed using the following equation:

$$\text{vinyl acetate (in \%)} = \frac{0.86088 \cdot [(A - B) \cdot f - (C \cdot f)]}{N}$$

Card 2/ 4

Z/009/61/000/006/002/002
E112/E135

Determination of vinyl acetate in vinyl chloride-vinyl acetate copolymers

while for 0.05 N-reagents, the following equation is operative:

$$\text{Vinyl acetate (in \%)} = \frac{0.43044 \cdot [(A - B) \cdot f - (c \cdot f)]}{N}$$

where: A = consumption of 0.1 N or 0.05 N-H_2SO_4 in blank test;
        B = consumption of H_2SO_4 in proper analysis;
        C = consumption of 0.1 N or 0.05 N-$AgNO_3$;
        f = factors of standard solutions;
        N = weight of sample (in g).

The accuracy of the estimation was found to be ± 3.5% for a copolymer containing about 1% vinyl acetate and better than ± 5% for a copolymer containing more than 20% vinyl acetate.
There are 1 figure (graph showing the rate of saponification of copolymer for various vinyl acetate ratios), 2 tables and 3 references: 2 German and 1 Italian.

Card 3/4

Z/009/61/000/006/002/002

Determination of vinyl acetate E112/E135

ASSOCIATION: Výzkumný ústav makromolekulární chemie, Brno
             (Research Institute for Macromolecular Chemistry,
             Brno)

SUBMITTED: October 30, 1959

Card 4/4

SODOMKA, J.

Ceramic panels for thin partition walls. Stavivo 41 no.7:
240-241 Jl '63.

1. Vyvojove oddeleni VCC, Hrochuv Tynec.

CZECHOSLOVAKIA/Solid State Physics - General.

Abs Jour   : Ref Zhur - Fizika, No 6, 1959, 12942

Author   : Sodomka, Lubomir
Inst   : -
Title   : From the Scientific Program of the Fourth International
              Congress of the Crystallographic Union.

Orig Pub   : Pokroky mat. pys. A Astron., 1958, 3, No 3, 385-387.

Abstract   : A brief description is given of the contents of the pa-
              pers at the Fourth Congress of the Crystallographic
              Union (Montreal, 10 -- 26 July 1957).

Card 1/1
- 33 -

CZECHOSLOVAKIA/Elasticity. Photocells and Semiconductor Device.   H

Abs Jour   : Ref Zhur Fizika, No 12, 1959, 27940

Author   : Sodomka, Lubomir
Inst   : -
Title   : Electroluminescent Amplifiers and Radiation Conver-
              ters

Orig Pub   : Jemna mech. a opt., 1958, 3, No 11, 369-371

Abstract   : Survey article, which expounds briefly on the operat-
              ing principles of amplifiers and converters of radia-
              tion, based on electroluminescence of corresponding
              substances. Also described are two types of new con-
              verters.

Card 1/1
- 93 -

SODOMKA, L.

Design and construction of Soller diaphrams. Jemna mech opt 6
no.9:277-278 S '62.

1. Vysoka skola stronji a textilni, Liberec.

Z/030/63/000/002/001/001
E112/E453

AUTHORS: Sodomka, L., Kleprlík, A.

TITLE: Preparation and properties of electroconductive,
            transparent films on glass sheet

PERIODICAL: Jemná mechanika a optika, no.2, 1963, 43-46

TEXT: The application of electroconductive coatings to glass
sheet by exposing the latter to the vapours of metal chlorides in
a reducing atmosphere was described in a previous article
(Sbornik ved. prací VŠST, Liberec, III, Praha, 1962, 31).   The
problem is now reexamined in more detail.   Glass sheet, heated
to 450 to 500°C was treated with an atomized solution of SnCl2
and SnCl4 in a mixture of ethanol, isopropanol, isopropylamyl
acetate and glacial acetic acid, with the addition in some cases
of varying amounts of SbCl5 to further improve the conductivity.
The effects of layer-thickness and SbCl5 - additions on
conductivity and transparency were investigated.   The thickness
of the iridized films may be gauged by the apparent color of the
film, caused by interference of the light reflected therefrom.
As the thickness of the film increases, its apparent color changes

Card 1/2

Preparation and properties ...

Z/030/63/000/002/001/001
E112/E453

and the succession of colors permits to identify the order of
thickness.   Best results with respect to conductivity and
transparency were obtained with standard compositions to which
1.0 and 1.5% respectively of Sb was added and with coatings
characterized by a third order of thickness.   Conductivity
increased linearly with increased thickness.   In thicknesses
beyond the fifth order, however, the crystal structure of the film
tends to degenerate.   Antimony-containing coating of the second
order of thickness showed decreased homogeneity.   Good
transparency was preserved up to the fourth order of thickness.
The coated layers were investigated by electron-diffraction
methods and by the electron microscope;   it was found that they
are composed of tin oxides permanently incorporated in the glass
surface by entering the tetrahedral framework of the silicates.
There are 5 figures and 2 tables.

ASSOCIATION: VŠST Liberec

SUBMITTED: October 11, 1962

Card 2/2

G/030/63/003/002/010/012
B163/B138

AUTHORS: Pastrňák, J., and Součková, L.

TITLE: Production of thin layers of the nitrides of aluminum,
             gallium, and indium in a gas discharge

PERIODICAL: Physica status solidi, v. 3, no. 2, 1963, K 71-K 74

TEXT: Chloride of aluminum, gallium or indium, respectively is evaporated
from a boat in a quartz tube with a N_2 gas flow. Evaporation and reaction
temperatures, which give satisfactory results, are given in Table 1.
Fig. 1 shows the experimental arrangement. The nitrides are formed by the
reaction $2 \ AlCl_3 \rightarrow N_2 \rightarrow 2 \ AlN + 3 \ Cl_2$ etc. This reaction is promoted by a
d-c discharge in the reaction tube with a voltage of 1.5 kv and 10 ma
discharge current. The quartz plate on to which the nitrides are
deposited must be carefully polished and degreased. According to the
layer thickness required (1 μm to several tenths μm) the duration of
the reaction is varied between 1 and 8 hours. If an additional activator
substance is brought into the reaction tube, activated layers containing

Card 1/3

Production of thin layers of the ...

G/030/63/003/002/010/012
3163/B138

Mn, Cu, or Si can be produced, which can be used for cathodoluminescence investigations. There are 1 figure and 1 table.

ASSOCIATION: Physikalisches Institut der Tschechoslovakischen Akademie der Wissenschaften, Prag (Physics Institute of the Czechoslovakian Academy of Sciences, Prague)

SUBMITTED: January 8, 1963

Table 1

Nitride	original material	evaporation temperature of chloride °C	pressure in the reaction tube mm Hg	temperature in the reaction tube °C
AlN	$AlCl_3$	100 – 110	3 – 5	950 – 980
GaN	$GaCl_3$	60 – 70	3 – 5	650 – 680
InN	$InCl_3$	380 – 420	3 – 5	560 – 590

Card 2/3

Production of thin layers of the ...

G/030/63/003/002/010/012
B163/B138

Fig. 1. 1 Electrodes, 2 - boat with chloride, 3 - quartz plate,
      4 - reaction furnace with Kanthal winding, 5 - auxiliary furnace
      for the chloride evaporation
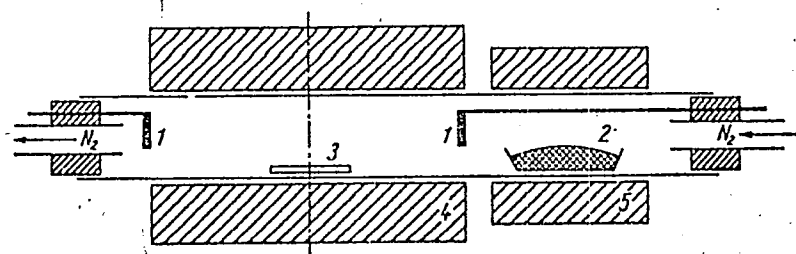
Card 3/3

G/030/63/003/002/011/012
B163/B138

AUTHORS: Karel, F., and Součková, L.

TITLE: Cathodoluminescence of aluminum nitride

PERIODICAL: Physica status solidi, v. 3, no. 2, 1963, K 78-K 81

TEXT: The spectral distribution of the cathodoluminescence of AlN
activated with Si, Mn, or Cu was measured. The specimens were thin layers
deposited on quartz substrates in a gas discharge during the reaction of
nitrogen with aluminum chloride, and powders produced by nitriding
aluminum powder and heat treatment with Si or the chlorides of Mn or Cl.
X-ray diffraction was used to check that the matrix really consisted of AlN,
and the admixture concentrations were determined spectroscopically. For
the cathodoluminescence measurements the layers were covered with a
vacuum-evaporated Al layer on the irradiated side. The cathodoluminescence
was excited by a fixed unfocussed electron beam of 4 to 10 kv acceleration
voltage. Si activated specimens show a wide emission band with a maximum
at 3900 Å, Mn activated specimens have a narrower peak at 6100 Å. Cr
activated specimens have a blue band at 4600 Å, and a green one at 5580 Å

Card 1/2

Cathodoluminescence of aluminum ...

G/030/63/003/002/011/012
B163/B138

whose relative intensity depends on the electron energy. For 4 kev the blue band is more strongly excited, for 8 kev the green one. The cathodoluminescence spectra are essentially the same for both evaporated and powder layers. There are 2 figures.

ASSOCIATION: Physikálisches Institut der Tschechoslovakischen Akademie der Wissenschaften, Prag (Physics Institute of the Czechoslovakian Academy of Sciences, Prague)

SUBMITTED: January 8, 1963

Card 2/2

SODOMKA, Lubomir

Conference on the texture of metallic and nonmetallic materials
and on the orientation of monocrystals. Pokroky mat fyz astr 8
no.3:167-168 '63.

SODOMKA, L.

Influence of pressure on the luminescence of zinc sulfide
powder, baroluminescence. Jemna mech opt 8 no.8:238-241
Ag'63.

1. Vysoka skola strojni a textilni, Liberec.

CHUDACEK, I.; SODOMKA, L.

The influence of pressure on the luminescence of zinc sulfide single crystals. Chekhosl fiz zhurnal 13 no.3:209-210 '63.

1. Fakulta tehnicke fyziky, Liberec.

L 12888-65   EWG(j)/EWT(1)/EWP(e)/EWT(m)/EPF(c)/EPR/T/EWP(t)/EEC(b)-2/EWP(b)
Pq-4/Pr-4/Ps-4   IJP(c)/AFWL/ASD(a)-5/ESD(dp)/ESD(t)   RWH/JD/GG/WH
ACCESSION NR: AP4044506   Z/0030/64/000/008/0237/0239

AUTHORS: Sodomka, L.; Haskova, E.

TITLE: Effect of glass substrate on the semiconducting properties
of thin transparent layers of tin oxide

SOURCE: Jemna mechanika a optika, no. 8, 1964, 237-239

TOPIC TAGS: semiconductor property, thin film, tin oxide, trans-
parent coating

ABSTRACT: These layers are used as electroluminescence electrodes,
antistatic coatings, and for various other applications, and since
they are frequently exposed to high temperatures and to corrosive
reagents, their endurance to heat was tested with various glass sub-
strates by measuring the variation in resistance with heat supplied
to the layer. Two substrates were used, of soft plate glass and of
silicon glass. The substrates measured 70 x 70 mm, and the layers

Card   1/3

L 12888-65
ACCESSION NR: AP4044506

were about 0.6 nm thick. The test setup is shown in Fig. 1 of the
enclosure. The layer resistance and transparency were 53 ohms and
85% for the silicon glass and 109 ohm and 86% for the plate glass.
The results indicate that the layers on soft plate glass can operate
stably only up to 300C, whereas those on silicon glass can operate
at least up to 680C, because the solubility of the SnO_2 is dependent
on the thermal properties of the glass (especially the temperature
dependence of its viscosity). Orig. art. has: 5 figures and 1
formula.

ASSOCIATION: VSST, Liberec

SUBMITTED: 00   ENCL: 01

SUB CODE: MT, SS   NR REF SOV: 000   OTHER: 007

Card 2/3

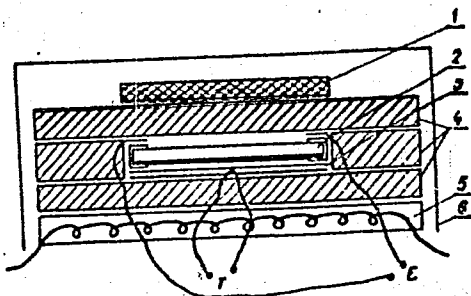Fig. 1. Experimental setup for measuring the thermal endurance of semiconducting transparent layers.

1 - Weight, 2 - sample, 3 - mica platelet, 4 - "eternit" plate, 5 - heating coil, 6 - cover, T - thermocouple, E - silver electrodes

Card 3/3

SODOMKA, L.; KLEPRLIK, A.

Preparation of electroluminescent layers.   Jemna mech opt 9 no.11:
345 N '64.

1. Higher School of Mechanical and Textile Engineering, Liberec.

SODOMKA, L.

Electroluminescence decay due to motion of electrodes.
Chekhosl fiz zhurnal 14 no.1;42-53 '64.

1. The College of Mechanical and Textile Engineering,
Liberec.

Z/0056/64/014/005/0352/0366

ACCESSION NR: AP4038558

AUTHOR: Sodomka, L.

TITLE: The influence of ball milling upon the structure and electroluminescence of zinc sulfide powder

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 5, 1964, 352-366

TOPIC TAGS: zinc sulfide, copper activated zinc sulfide, Mn activated zinc sulfide, zinc sulfide powder, zinc sulfide powder structure, zinc sulfide powder electro-luminescence, ball milling, ZnS powder ball milling, luminophore, electroluminophore

ABSTRACT: This article describes the influence of ball milling on the structure and electroluminescence of zinc sulfide activated with manganese and copper. The starting powder was coarse grained with average grain size of 30 microns. This raw material was dry-milled in a spherical glass mill always under the same conditions and with a graduated milling time. The electroluminescence of the initial and milled samples was first measured on a three-prism ROW spectrograph. The electro-luminescent spectral and integrated emittance were measured and x-ray studies of the structural changes caused in the powder through milling were made. The x-ray data were used to formulate a milling mechanism which was based on brittle fracture.

Cord 1/3

ACCESSION NR: AP4038558

who made it possible to measure the electroluminescent spectral emittance, Prof. A. Kochanovska for advice in evaluating the x-ray results, M. Trlifaj, K. Patek and J. Kubatova for advice in interpreting the electroluminescent spectral emittance and A. Kloprlik for help in elaborating the results." Orig. art. has: 8 figures, 4 tables and 8 equations.

ASSOCIATION: College of Mechanical and Textile Engineering, Liberec

SUBMITTED: 17Sep63   DATE ACQ: 09Jun64   ENCL: 00

SUB CODE: NM, SS   NO REF SOV: 006   OTHER: 019

Card 3/3

ACCESSION NR: AP4035481

luminescence emitted at the points of contact of the supporting rods depends on
mass of the dropped weight and on the height of the drop. No luminescence was ob-
served under static loads. The following formula is in qualitative agreement with
the results:

$$L = -k \frac{m\sqrt{2gh}}{Sl^2}$$

where L is the luminescence intensity, m is the mass of the weight, g is the acce-
leration of gravity, h is the height of the drop, S is the area of the supporting
rod ends, and k is a constant that depends on the temperature, initial pressure, etc.
In a further experiment, designed to determine the effect of the rate of change of
pressure on the luminescence intensity, the plate was loaded with a constant weight
and the phosphor layer was covered with a sheet of copper foil (to protect it and
minimize friction) and the plate was moved horizontally. In this case it was found
that the luminescence intensity dependence on the pressure (weight) on the specimen
and the rate of displacement:

$$L = k \frac{mg}{S \cdot l} v$$

where l is the diameter of the flat, and the other designations are the same as
above. Luminescence was also observed when a stream of phosphor particles was blown
at the surface of a phosphor layer and against any solid substrate; the luminescence
increased with the velocity and mass of the particles. The color of the tribolumi-

Card 2/3

SODOMKA, L.

Influence of structural parameters on electroluminescent
emittance. Chekhosl fiz zhurnal 14 no. 7:526-532 '64.

1. Higher School of Mechanical and Textile Engineering,
Liberec, Halkova 6.

SOUCEK, F.

The form of the pressure and luminescence brightness during impact on a luminescent paper. Chekhosl fiz zhurnal 14 no.10:200-202   '64.

1. Higher School of Mechanical and Textile Engineering, Liberec.

L 52009-65   ENT(1)   Pi-4   IJP(c)

ACCESSION NR: AF5015607   CZ/0030/64/000/011/0345/0345

AUTHOR: Sodomka, L.; Kleprlik, A.

TITLE: Making electroluminescent layers

SOURCE: Jemna mechanika a optika, no. 11, 1964, 345

TOPIC TAGS: electroluminescence, epoxy plastic, benzene

ABSTRACT: The article describes a method of making electroluminescent layers of epoxy resins diluted with benzene.

ASSOCIATION: VSST, Liberec

SUBMITTED: 00   ENCL: 00   SUB CODE: OP, MT

NO REF SOV: 000   OTHER: 006   JPRS

Card 1/1

SODOMKA, Lubomir

Some results of the influence of ball milling on the
electroluminescence of zinc sulfide powders. Acta physica
Pol 26 no.3/4:809-814 S-O '64.

1. College of Mechanical and Textile Engineering, Liberec,
Czechoslovakia.

L 31782-66   T/EWP(t)/ETI   IJP(c)   JD/GG

SOURCE CODE: CZ/0030/65/000/004/0110/0112

ACC NR: AP6021643

50
B

AUTHOR: Haskova, E.; Sodomka, L.

ORG: VSST, Liberec

TITLE: Operating characteristics of thin semiconducting transparent layers of SnO sub 2

SOURCE: Jemna mechanika a optika, no. 4, 1965, 110-112

TOPIC TAGS: glass, semiconductor research, semiconducting material, tin compound, electric current

ABSTRACT: The article refers to a previous article by the authors published in no. 8, 1964 of the same journal and deals with the relations between the substrate material (type of glass) and the properties of thin SnO_2 layers at higher temperatures. The experimentally established relations are of importance in the use of layers of that type for electrically heating the glass by a direct passage of current. Orig. art. has: 6 figures and 2 tables. /JPRS/

SUB CODE: 20, 11 / SUBM DATE: 22Dec64 / ORIG REF: 005

UDC: 538.216.2

Card 1/1

SODOMKA, Lubomir

"Electroluminescence and related effects" by H.F.Ivey. Reviewed
by Lubomir Sodomka. Cs cas fys 15 no.3:273 '65.

1. Higher School of Mechanical and Textile Engineering, Liberec.
Submitted November 13, 1964.

SODOMKA, L.

Influence of imperfections on electroluminescent emittance.
Chekhosl fiz zhurnal 15 no.3:216-218 '65.

1. Higher School of Mechanical and Textile Engineering,
Liberec, Halkova 6. Submitted October 10, 1964.

SODOMKA, L.

On the influence of the orientation of crystallites on their electroluminescence. Chekhosl fiz zhurnal 15 no.4:257-260 '65.

Recovery of electroluminescence by aging of ball milled powders. Ibid.:261-266

1. Higher School of Mechanical and Textile Engineering, Liberec, Halkova 6. Submitted April 17, 1964.

L 33988-66   IJP(c)

SOURCE CODE: CZ/0037/66/000/001/0006/0010

ACC NR: AP6025476

AUTHOR: Sodomka, Lubomir

ORG: Technical Institute of Machinery and Textiles, Liberec (Vysoka skola strojni a textilni)

TITLE: Electrooptical characteristics of electroluminescent powders

SOURCE: Ceskoslovensky casopis pro fysiku, no. 1, 1966, 6-10

TOPIC TAGS: electroluminescence, electric current, luminescent material

ABSTRACT: The article reports on the measurement of the current characteristics of several electroluminescent powders. The measurements showed that their quality can be described by introducing the electroluminescent slope and the ineffective current, quantities which are defined in this paper. Orig. art. has: 6 figures. [Based on author's Eng. abst.] [JPRS: 35,386]

SUB CODE: 20, 11 / SUBM DATE: 10Jun65 / ORIG REF: 002 / SOV REF: 001

Card 1/1

L 41240-66   T/EMP(t)/ETI   IJP(c)   JD

ACC NR: AP6030507   SOURCE CODE: CZ/0030/66/000/003/0073/0074

AUTHOR: Sodomka, L. (Candidate of sciences)

ORG: Department of Physics, VSST, Liberec (Katedra fyziky VSST)

TITLE: Some special features and technical parameters of a topographic and texture goniometer

SOURCE: Jemna mechanika a optika, no. 3, 1966, 73-74

TOPIC TAGS: goniometer, x ray diffraction analysis

ABSTRACT: The article presents the technical parameters of the TD 60 topographic and texture goniometer and some of its features as compared with other goniometers of the same kind now in use. The instrument is designed for the quantitative determination of single crystal textures using a counter registration and for visualizing dislocations in X-ray diffraction technique. Orig. art. has: 4 figures. [Based on author's Eng. abst.] [JPRS: 36,645]

SUB CODE: 17, 20 / SUBM DATE: 07Oct65 / ORIG REF: 005

Card 1/1 m LP   UDC: 548.73: 539.26

KUSHNIR, V.F.; SOLOPCHENKO, G.N.

Using single-circuit parametric oscillator in nuclear magnetic
resonance equipment. Izv.vys.ucheb.zav.; prib. 7 no.2:53-57 '64.
(MIRA 18:4)

1. Leningradskiy elektrotekhnicheskiy institut svyazi imeni
prof. M.A.Bonch-Bruyevichai Leningradskiy politek' icheskiy
institut imeni Kalinina. Rekomendovana kafedroy elektroizmeri-
tel'noy tekhniki Leningradskogo politekhnicheskogo instituta.

L 39713-65   EWP(k)/EWA(c)/EWT(m)/EWP(b)/T/EWA(d)/EWP(t)   Pf-4   JD/HW

ACCESSION NR: AP5006328

S/0126/65/019/002/0226/0240

AUTHOR: Sokolkov, Ye. N.; Sodovskiy, V. D.

TITLE: Ausforming of metals and alloys

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 2, 1965, 226-240

TOPIC TAGS: ausforming, hardening method, structural steel, austenitic steel, high temperature metal

ABSTRACT: The authors review ausforming as a method for hardening metals and alloys. The method was introduced at the Institut fiziki metallov (Institute of Physics of Metals) in 1954. Ausforming consists of a combination of plastic deformation at temperatures higher than recrystallization temperatures, and tempering (avoiding recrystallization processes). The method is based on taking advantage of the peculiar structural state which arises during high temperature plastic deformation. This structural state is distinguished by serration of the grain boundaries and by the appearance of a system of slightly disoriented fragments in the body of the grain with a characteristic fine structure. These structural imperfections, combined with concentration irregularities which arise during high temperature

Card 1/2

Card 2/2

SODOWSKA, Wanda; ZIELINSKI, Witold

Synthesis of anhydrous formaldehyde. Magy kem lap 16 no.11:
520-523 N '61.

1. Muanyagkutato Intezet, Varso.

SOERPINSKI,Waclaw,Prof.,Dr.

Triangular numbers. Problemy 18 no.1:5-9   '62

SKŁAD, W.

Evaluation of welded structures. p. 372.

PRZEGLAD SPAWALNICTWA. (Stowarzyszenie Inzynierow i Technikow Mechanikow Polskichs i Instytut Spawalnictwa) Warszawa, Poland. Vol. 11, no. 10/11, Oct./Nov. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1959.

Uncls.

KOVACS, Pal, dr.,; SOFALVI, Csaba, dr.,; SIMON, Janos, dr.

Spondylodesis in the therapy of spinal tuberculosis. Orv. hetil.
97 no.9:236-239 26 Feb 56

1. A Hodmezovasarhelyi Varosi Tanacs Korhaza (igazato-foorvos: Ormos
Pal dr.) Kakasszeki Csontgumokoros es Tudosebeszeti Osztalyanak
(forvos; Kovacs Pal dr.) kozlemenye.
       (TUBERCULOSIS, SPINAL, surg.
          spondylodesis, indic., technic & results (Hun))

SOFAN, E.

Some contributions to the theory of the functioning of the amplidyne
in a constant state. Studii fiz tehn Iasi 11 no.2:189-214 '60.

(Dynamos) (Electric coils)

SOFAN, Eug.

Principles of a new method for the magnetic computation of certain electric machines. Studii fiz tehn Iasi 12 no.2:367-373 '61

SOFER, A.A., inzh.

Graphite-metal packed stuffing boxes for refrigerating compressors.
Khol.tekh. 38 no.2:11-14 Mr-Ap '61.   (MIRA 14:3)

1. TSentral'noye konstruktorskoye byuro kholodil'nogo mashinostroyeniya.
                    (Air compressors)

GUREVICH, Ye.S., inzh.; SOFER, A.A., inzh.; ROMANOVSKIY, N.V., inzh.;
SHUMELISHSKIY, M.G.; BEZHANISHVILI, E.M., inzh.;
YAKOBSON, Ye.V., inzh.

Development of the design of large refrigeration compressors.
Khol. tekh. 39 no.5:4-11 S-O '62.   (MIRA 16:7)

1. TSentral'noye konstruktorskoye byuro kholodil'nogo mashino-
stroyeniya (for Gurevich, Sofer, Romanovskiy). 2. Moskovskiy
zavod "Kompressor" (for Shumelishskiy, Bezhanishvili, Yakobson).
        (Refrigeration and refrigerating machinery)

SOFEYKOV, Ya.

Progressive method for loading lumber. Sel'. stroi. 14 no.7:24
Л '59.   (MIRA 12:10)

1.Glavnyy mekhanik tresta stroitel'stva i stroymaterialov Tyumenskogo
upravleniya po stroitel'stvu v kolkhozakh.
                    (Lumbering equipment and supplies)

SOFEYKOVA, Z.T

*245. The Separation of Titanium from Aluminum and Iron, Using Fluorides. (In Russian.) Sh. T. Talipov and Z. T. Sofeikova. *Factory Laboratory* (U.S.S.R.), v. 13, July 1947, p. 816-819.
Method described is based on the greater solubility of Na_3TiF_6 in comparison with Na_3AlF_6 and Na_3FeF_6. Results of its use are tabulated.

SOF'INA, V.V.

Activation of the process of hydrogen absorption by palladium.
Prib. i tekh. eksp. 8 no.4:174-175 Jl-Ag '63.   (MIRA 16:12)

SOFEYKOVA, Z. T.

1. Determination of fluorine in insoluble fluorides by the method of I. V. Tananaev. Sh. T. Talipov, Z. T. Sofeikova, and T. B. Amirkhanova. Trudy Sredneaziat. Gosudarst. Univ. (Tashkent) 33, No. 4, 75-82(1952); cf. C.A. 47, 46.—When this earlier method was studied by detns. of CaF₂, the abs. error was about 2%. The following modified method is proposed. Mix 0.1 g. of fluoride sample and 1 g. ferrosilicon in a 100-ml. round-bottomed flask connected with a thermometer, dropping funnel, and condenser; add 60 ml. of 12N H₂SO₄ through the funnel and then pass air into the mixt. while the flask is heated. The distd. H₂SiF₆ is collected in a flask contg. KCl. After distn. is complete (as shown by a temp. of 180° in the flask and by cooling of the delivery tube) any H₂SO₄ in the distillate is oxidized with I₂ and the color is removed with Na₂S₂O₃; the K₂SiF₆ is neutralized to a methyl orange-indigo carmine end point, and then the distillate is titrated to a phenolphthalein end point. With this modified method the error averaged only about 0.33%; results of detns. on natural phosphates approximated those by the Th method. Errors tend to be neg., since the main source of error is incomplete distn. The changes in the method (use of ferrosilicon, passage of air, increasing the amt. of H₂SO₄, etc.) improved the accuracy, shortened the distn. time, and simplified treatment of the distillate. F (11-65 mg.) was detd. as above.   Malcolm Anderson

②

SOFEYKOVA, Z. T.

Determination of sodium as Na_3AlF_6. Sh. T. Talipov and
Z. T. Sofeykova. Trudy Sredneaziat. Gosudarst. Univ.
(Tashkent) 33, No. 4, 91-3(1952).—NaCl solns. of various
concns. (5-20 mg. as Na) were placed in tubes, $\frac{1}{4}$ their vol.
of satd. ($NH_4)_3AlF_6$ (7.66 g./l. at 25°) was added, and the
solns. were centrifuged 4-5 min. The supernatant fluids
were decanted and the ppts. were washed 3-4 times with
0.5% ($NH_4)_3AlF_6$, then 2-3 times with 1:1 alc.-H_2O. The
ppts. were dried to 120-30° and weighed as Na_3AlF_6 (cryo-
lite). The method is rapid and comparable in accuracy to
the sulfate method, as detns. on mirabilite by both methods
showed. F⁻ ions, given here by hydrolysis of ($NH_4)_3AlF_6$,
lowers the soly. of Na_3AlF_6; the presence of 0.1 mole/l. of
F⁻ reduces the soly. of Na_3AlF_6 from 1.86×10^{-4} (in pure
H_2O) to 0.3×10^{-4} moles/l. Presumably the presence of
other alkali metals interferes with this method. M. A.

Gravimetric determination of magnesium as $KMgF_3$. Sh. T. Talipov and Z. T. Sofeikova. Trudy Sredneaziat. Gosudarst. Univ. 33, No. 4, 95-8 (1952).—Solns. contg. various concns. of $MgSO_4$ were placed in tubes with 10 ml. of 6.5-7% KF soln., and the colloidal ppts. that formed were centrifuged. The supernatant liquids were drained off and the ppts. were washed 5 times with 60% alc. (aq.) and 3 times with 80% alc., the ppts. being centrifuged after each washing. The ppts. were dried at 130°, ignited to const. wt. at 450-500°, and weighed as $KMgF_3$. To det. Mg in Al alloys, dissolve a 2-g. sample of alloy in 35 ml. of 25% NaOH and filter, wash the ppt. with hot 1% Na_2CO_3, and then redissolve in 40 ml. of hot HCl contg. some HNO_3. Neutralize the combined filtrates with NH_4OH, and remove Cu, Pb, Fe, and other elements with H_2S; then det. Mg as above and also by the phosphate method. The method is recommended for up to 0.1 g. MgO. Best results are given with a Mg^{++}:KF molar ratio of 1:3; when this ratio is too high, MgF_2 may be formed. ---- Malcolm Anderson

DRITS, M.Ye.; FRIDLYANDER, I.N.; SOFIANO, N.K., red.; SIVKOVA, N.N.,
tekhn.red.

[Aluminum-base alloys; their applications and prospects of use
in the economy] Splavy na osnove aliuminiia; primenenie i
perspektivy ispol'zovaniia ikh v narodnom khoziaistve. Moskva,
Vses.in-t nauchn.i tekhn.informatsii, 1959. 57 p. (MIRA 13:6)
(Aluminum alloys)

TRET'YAKOV, A.P., kand.tekhn.nauk; BLIZNYANSKIY, A.S., inzh., red.;
    SOFIANO, N.K., red.; PEREVERZEVA, T.A., tekhn.red.

[Modern powerful diesel locomotives, built in foreign countries]
Sovremennye moshchnye zarubezhnye teplovozy. Red.A.S.Bliznianskii.
Moskva, Vses.in-t nauchn.i tekhn.informatsii, 1959. 89 p.
                                        (MIRA 13:3)

        (Diesel locomotives)

SHUL'GA, V.Ya., kand.tekhn.nauk; AL'BREKHT, V.G., prof., red.; CHUKANOVA,
L.V., red.; SOFIANO, N.K., red.; PEREVERZEVA, T., tekhn.red.

[Continuous railroad tracks on reinforced-concrete ties] Bessty-
kovyi put' na podrel'sovom osnovanii iz zhelezobetona. Pod red.
V.G.Al'brekht. Moskva, Vses.in-t nauchn. i tekhn.informatsii,
1959. 90 p.   (MIRA 13:11)
    (Railroads--Track)   (Railroads--Ties, Concrete)

SOFIANO, T. A.

VOLKOVA, S.P.; SOFIANO, T.A.; TIKHOMIROV, V.V.

Short bibliography on the history of geological sciences in the
U.S.S.R.; no.2: Mineralogy. Och.po ist.geol.znan. no.2:233-257 '53.
(MLRA 7:5)
(Bibliography--Mineralogy) (Mineralogy--Bibliography)

TIKHOMIROV, V.V.; SOFIANO, T.A.

From the history of geological sciences; memorable dates in
January-February, 1954. Izv.AN SSSR Ser.geol. no.1:120-123 Ja-F
'54.   (MLRA 7:3)
                                                          (Geologists)

SOFIANO, T. A.

USSR/ Geology - History

Card 1/1 Pub. 46 - 11/19

Authors : Tikhomirov, V. V., and Sofiano, T. A.

Title : From the history of geological sciences

Periodical : Izv. AN SSSR. Ser. geol. 3, 143 - 144, May - Jun 1954

Abstract : Schedule is presented of memorable dates and anniversaries to be celebrated by the Geological Society of the USSR during the months of May - June each year. Four USSR references (1939 - 1949).

Institution: .....

Submitted: .....

SOFIANO, T. A.

USSR/ Geology   Scientists

Card   : 1/1   Pub. 46 - 9/16

Authors   : Tikhomirov, V. V., and Sofiano, T. A.

Title   : From the history of geological sciences

Periodical : Izv. AN SSSR. Ser. geol. 4, 121 - 127, July - August 1954

Abstract   : Memorable dates for July - October 1954 (birthdays, anniversaries and
              commemorative dates) of present and past geologists of the USSR.

Institution : ....

Submitted   : April 23, 1954

SOFIANO, T-A.

USSR/ Miscellaneous - Memorable dates

Card 1/1   Feb. 46 - 13/19

Authors   : Tikhomirov, V. V.; Sofiano, T. A.

Title   : From the history of geological sciences

Periodical : Izv. AN SSSR. Ser. geol. 5, 145 - 149, Sep - Oct 1954

Abstract   : The founding of the University of Kazan (npw called V. I. Ul'yanov-
              Lenin University) on 5 November 1804 is recalled. The 20's of the last
              century saw the beginning of interest in geology at this institution,
              and this has since developed so that the university has such specialties
              as geochemistry, geophysical methods of research, geoloy of petroleum,
              hydrogeology, and others. In commemorating the birth of Aleksey Petrov
              Pavlov 100 years ago the life work of this outstanding geologist is re-
              counted. An account is given of the work of Andrey Dimitrevich
              Arkhangel'skiy, the occasion being the 75th anniversary of his birth.
              A description is given of the work of the traveler and naturalist Ivan
              Gottlib Ivanovich Georgi, born 225 years ago. The 150th anniversary of
              the death of Iogan Tobiy EgorovichLovits (1757 - 1804) is the occasion
              for recalling the work of this mathematician and astronomer.

Institution: .....

Submitted: June 12 1954

SOFIANO, T.A.

USSR/ Geology - History

Card   1/1   Pub. 46 -11/24

Authors   : Tikhomirov, V. V., and Sofiano, T. A.

Title   : From the history of geological sciences

Periodical : Izv. AN SSSR. Ser. geol. 6, 103-107, Nov-Dec 1954

Abstract   : Historical data connected with the development of geological sciences
              in Russia are presented. During the months of January-February 1955,
              the Institute of Geology at the Academy of Sciences, USSR will
              celebrate: the 150-th birthday of S. S. Kutorgi, first known Russian
              geologist; 100-th birthday of A. O. Mikhal'skiy, Chief, Petersburg
              Mining Institute (1882); and other anniversaries. Seven USSR references
              (1863-1954).

Institution : .....

Submitted   : July 10, 1954

TIKHOMIROV, V.V.; SOFIANO, T.A.

From the history of geological sciences (memorable dates in
March-April, 1954). Izv. AN SSSR. Ser.geol. 19 no.2:148-151
Mr-Ap '54.   (MLRA 7:7)
        (Geologists)

SOFIANO, T.A.

TIKHOMIROV, V.V.; SOFIANO, T.A.

From the history of geological sciences (memorable dates for November-December, 1954). Izv.AN SSSR. Ser.geol. 19 no.5:145-149 S-O '54.   (MLRA 7:10)

(Geologists)

TIKHOMIROV, V.V.; SOFIANO, T.A.

Forgotten Russian geologist, A.D.Ozer/kii. Biul.MOIP.Otd.geol. 29
no.1:83-87 Ja-F '54.   (MIRA 7:4)
        (Ozerskii, Aleksandr Dmitrievich, 1813-1880)

SOFJANO, T. A.

TIKHOMIROV. V.V.; SOFJANO, T.A.

A.D.Ozerskii, honored member of the mineralogical society.
Zap.Vses.min.ob-va 83 no.2:142-147 '54.   (MLRA 7:7)
      (Ozerskii, Aleksandr Dmitrievich, 1813-1880)

SOFIANO, T. A.

USSR/ Scientists - Geology

Card   1/2   Pub. 46 - 14/21

Authors   : Tikhomirov, V. V., and Sofiano, T. A.

Title   : From the history of geological science - Memorable anniversaries

Periodical : Izv. AN SSSR. Ser. geol. 1, 127-129, Jan-Feb 1955

Abstract   : Anniversaries as set forth below occurred in March and April of 1955.
March 8 marked 200 years since the death of Stepan Petrovich
Krasheninnikov (1711-1815). This academician and professor of
botany and natural history contributed to the geological knowledge
of Russia through his expeditions. March 3 was the 200th anniversary
of the birth of the academician Ivan Filippovich German (1755-1815).
Through his expeditions, German added to the collection of mineral
and geological specimens. The 30th of April marked the 150th
anniversary of the death of Apollos Apollosovich Musin-Pushkin

Institution : ......

Submitted   : ......

Periodical : Izv. AN SSSR. Ser. geol. 1, 127-129, Jan-Feb 1955

Card 2/2   : Pub. 46 - 14/21

Abstract   : (1760-1805), who contributed to geological knowledge about the
               Caucasus. March 21 was the 50th anniversary of the birth of
               the Czech, Radim Novacek (1905-1942), who was outstanding in
               mineralogy. Three references: 2 USSR and 1 Czech (1946-1951).

VOLKOVA,S.P.; SOFIANO,T.A.; TIKHOMIROV,V.V.

Short bibliography on the history of geological sciences in the
U.S.S.R. Och.po ist.geol.znan. no.3:199-215 '55. (MLRA 8:10)
(Bibliography--Geology)

VOLKOVA, S.P.;   SOFIANO, T.A.;   TIKHOMIROV, V.V.

Short bibliography on the history of geological sciences in the
U.S.S.R. No.4: Coal geology. Och.po ist.geol.znan. no.4:229-242
'55.   (MLRA 9:5)

(Bibliography--Coal geology)