

OSIPOV, Konstantin Dmitriyevich; PASYNKOV, Vsevolod Vladimirovich;
REMEZ, G.A., red.; ARENBERG, N.Ya., red.; SMUROV, B.V., tekhn.red.

[Handbook on radio-measuring devices] Spravochnik po radioizmeritel'nym priboram. Moskva, Izd-vo "Sovetskoe radio." Pt.1. [Devices for measuring current, voltage, capacity, and parameters of the circuit elements] Pribory dlia izmereniia toka, napriazheniia, moshchnosti i parametrov elementov skhem. Pod red. G.A.Remeza. 1959. 220 p. (MIRA 13:2)
(Radio measurements--Equipment and supplies)

FEDOTOV, Yakov Andreyevich; SHMARTSEV, Yuriy Vasil'yevich; ARENBERG,
N.Ya., red.; SMUROV, B.V., tekhn.red.

[Transistors] Tranzistory. Moskva, Izd-vo "Sovetskoe radio,"
1960. 429 p. (MIRA 13:10)
(Transistors)

KOLOSCV, Andrey Aleksandrovich; GORBUNOV, Yuriy Ivanovich; NAUMOV,
Yuriy Yevgen'yevich; LUKIN, F.V., doktor tekhn. nauk,
retsenzent; MOZHZHEVELOV, B.N., kand. tekhn. nauk,
retsenzent; ARENBERG, N.Ya., red.

[Solid-state semiconductor networks] Poluprovodnikovye tver-
dye skhemy. Moskva, Svyetskoye Radio, 1965. 503 p.
(MIRA 18:3)

FINK, L.M.; ARENBERG, N.Ya., red.; BELYAYEVA, V.V., tekhn. red.

[Theory of the transmission of discrete communications]
Teoriia peredachi diskretnykh soobshchenii. Moskva,
"Sovetskoe radio," 1963. 575 p. (MIRA 17:2)

GUTKIN, L.S.; LEBEDEV, V.L.; SIFOROV, V.I.; ARENBERG, N.Ya., red.; SVESHNIKOV, A.A., tekhn. red.

[Radio receiving systems] Radiopriemnye ustroistva. By L.S.Gutkin, V.L. Lebedev, V.I.Siforov. Moskva, Izd-vo "Sovetskoe radio." Pt.1. 1961.
702 p. (MIRA 14:12)

(Radio--Receivers and reception)

GABLER, M. [Gabler, Miloš], inzh.; GASHKOVETS, Y. [Haškovec, Jiří], inzh.;
TOMANEK, Ye. [Tománek, Evžen], inzh.; ROZENBLIT, D.G. [translator];
DUNAYEVSKIY, S.Ya. [translator]. Prínimal uchastiye YAKOBSON, N.B.,
kand. tekhn. nauk, red.; ARENBERG, N.Ya., red.; SVESHNIKOV, A.A.,
tekhn. red.

[Magnetic amplifiers] Magnitnye usiliteli. Pod red. S.IA. Dunaev-
skogo. Moskva, Izd-vo "Sovetskoe radio," 1961. 449 p. Translated
from the Czech. (MIRA 14:11)

(Magnetic amplifiers)

GUTKIN, L.S.; LEBEDEV, V.L.; SIFOROV, V.I.; ARENBERG, N.Ya., red.;
SVESHNIKOV, A.A., tekhn. red.

[Radio receiving devices] Radiopriemnye ustroistva. Pod red.
V.I.Siforova. Moskva, Sovetskoe radio. Pt.1. 1961. 702 p.
(MIRA 15:7)

(Radio--Receivers and reception)

ARENBERG, N.Ya., red.; SMUROV, B.V., tekhn. red.

[Session dedicated to the 100th anniversary of the birth of the great Russian scientist and inventor of the radio Aleksandr Stepanovich Popov; summaries of the papers] Nauchnaia sessiia, posviashchennaia stoletiiu so dnia rozhdeniia velikogo russkogo uchenogo izobretatel'ia radio Aleksandra Stepanovicha Popova; annotatsii k dokladam. Moskva, 1959. 148 p.

(MIRA 15:12)

1. Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi.

(Radio)

MORUGIN, Lev Alekseyevich; GLEBOVICH, Gleb Viktorovich; ARENBERG,
N.Ya., red.

[Nanosecond pulse techniques] Nanosekundna'ia impul'snaia
tehnika. Moskva, "Sovetskoe radio," 1964. 623 p.
(MIRA 17:8)

KABANOV, Nikolay Ivanovich; OSETROV, Boris Ivanovich; ARENBERG,
N.Ya., red.

[Reciprocal oblique sounding of the ionosphere] Vozvratno-
naklonnoe zondirovanie ionosfery. Moskva, Sovetskoe radio,
1965. 112 p. (MIRA 18:2)

ARMAND, N.A.; VVEDENSKIY, B.A.; GUSYATINSKIY, I.A.; IGOSHEV, I.P.;
KAZAKOV, L.Ya.; KALININ, A.I.; KOLOSOV, M.A.; LEVSHIN, I.P.;
LOMAKIN, A.N.; NAZAROVA, L.G.; NEMIROVSKIY, A.S.; PROSIN,
A.V.; RYSKIN, E.Ya.; SOKOLOV, A.V.; TARASOV, V.A.; TRASHKOV,
P.S.; TIKHOMIROV, Yu.A.; TROITSKIY, V.N.; FEDOROVA, L.V.;
CHERNYY, F.B.; SHABEL'NIKOV, A.V.; SHIREY, R.A.; SHIFRIN, Ya.S.;
SHUR, A.A.; YAKOVLEV, O.I.; ARENBERG, N.Ya., red.

[Long-distance tropospheric propagation of ultrashort radio
waves] Dal'nee troposfernoe rasprostranenie ul'trakorotkikh
radiovoln. Moskva, Sovetskoe radio, 1965. 414 p.
(MIRA 18:9)

ACCESSION NR: AP4012283

S/0070/64/009/001/0113/0115

AUTHORS: Tsoufova, P.; Arend, G.; Novak, I.

TITLE: Some crystallochemical and physical properties of single barium titanate crystals with addition of cobalt

SOURCE: Kristallografiya, v. 9, no. 1, 1964, 113-115

TOPIC TAGS: barium titanate, cobalt doped barium titanate, physical properties, absorption spectrum, dielectric constant, ceramics, V color center

ABSTRACT: Chemical analysis has shown that Co ions replace Ti ions in the BaTiO₃ lattice and that for the most part they occur in bivalent form. A peak of 0.52 microns was observed on the absorption spectrum. This belongs either to a V color center or to a Co ion with higher valence. The introduction of Co ions into the BaTiO₃ lattice leads to displacement of the absorption edge. It also very strongly affects phase transitions in BaTiO₃. It is impossible to inject the large quantities of Co into BaTiO₃ ceramic material that are injected into single crystals. This difference in behavior may be explained by the presence of F ions in the single crystals. The authors' measurements on the physical

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ACCESSION NR: AP4012283

properties of $BaTiO_3$ with addition of Co are summarized in Figs. 1-3 of the Enclosures. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Fyzikalsky institut ChSAN, Praga (Physics Institute ChSAN)

SUBMITTED: 21Mar63

DATE ACQ: 19Feb64

ENCL: 03

SUB CODE: PH

NO REF SOV: 001

OTHER: 006

Card 2/5

NOVAK, Josef; AREND, Hanus

Determination of titanium in the presence of a small quantity of iron
in barium titanate. Silikaty 7 no.2:150-154 '63.

1. Fyzikalni ustav, Ceskoslovenska akademie ved, Praha.

NOVAK, J.; AREND, H.

Methods of analytic determination of the oxidation and reduction capacities of oxidic substances. Silikaty 9 no.1:59-72 '65.

1. Institute of Physics of the Czechoslovak Academy of Sciences, Prague. Submitted July 15, 1964.

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ATTORNI: None given
TITRE: Conference on Research in the Field of Electrical Ceramics

PERIODICAL: Staloproduct, 1960, Vol 21, Nr 1, p 51
ABSTRACT: This is a very short news item by Engineer M. Turek on this conference. A somewhat longer report has been published in the Czech journal "Staloproduct", 1960, Nr 2, pp 212-213, and the present item is therefore substituted by the report from "Staloproduct" as follows:

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This conference was convened by the Vyzkumny ústav elektrotechniky kernaly (Research Institute for Electrical Ceramics) and was held in Prague-Karlovy Vary, September 10-14, 1959. There were about 100 participants including Professor F. Opatrný, D. Sedláček, East Germany. 22 papers were read. The following titles of papers were read: "Metallizing ceramics with silver and tin-antimony layers"; L. Scherzinger reported on "The study of the dielectric properties of spread on 'BaO-210' and jointly with K. Koller on "The study of the crystallographic phases of the system BaO-210".

Conference on Research in the Field of Electrical Engineering Ceramics

Card
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M. Kříž reported on "Some results gained from local tests of ceramic condensers". A similar explanation of "The relations between experimental results and the structure of the ceramic dielectric". J. Kříž reported on "The influence of the structure of the ceramic dielectric on its properties". The surface of the ceramic dielectric is reported on "The surface of the ceramic dielectric". A paper of J. Kříž on "The dielectric properties of ceramic capacitors". J. Kříž dealt with problems of recording errors in the measurement of the dielectric properties of ceramic capacitors. J. Kříž and V. Hlavinka dealt with the technique of selecting the type of insulators in terms of artificial for. A. Kříž dealt with the field of semi-conducting oxides. J. Kříž dealt with the field of interference of Czech pressure-transmission. J. Kříž dealt with an experiment on the physical interpretation of the influence of crystals of grinding materials on

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Conference on Research in the Field of Electrical Engineering Ceramics

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the mechanical strength of porcelain substances. Z. Hádil dealt with increased electro-mechanical strength of gas insulators. Z. Hádil and A. Hádil dealt with physical relations between the technology of wet pressing of ceramic substances. H. J. Janda, B. Hádil, F. Gofalový and V. Janda dealt with ceramic rings, vtržky and certain possibilities of applying these for research in HV dielectrics. O. Hovorka dealt with entered ceramium for vacuum applications. J. Hladný dealt with the firing range of ceramic substances. Z. Hádil dealt with the influence of ceramic components. V. Hlavinka and J. Kříž dealt with a new method of preparing electrical insulators. J. Kříž dealt with point alloys and solders and with recent developments on metallizing ceramics with common metals. The paper and a report on the discussions will be published in a symposium.

Arend, H. L.

Nov 1956
Siabuproudy, Obzora, Vol. 17, No. 1, 33-6 (1956). In Czech.
Tubular capacitors with varnish protective coating and
employing three different

ARENDA, H. P.

24(2,4) PHASE I BOOK EXPLOITATION CZECH/2433
 International Polarographic Congress. 1st, Prague, 1951
 Shorník I. Mezinárodní polarografického sjezdu. Díl 3: Hlavní referáty přednesené na sjezdu. Průběh sjezdu... Vol 3: Reviews Read at the Congress. Prague, Přírodovědecké vyd-vo [1952] 774 p. 2,000 copies printed.
 Resp. Ed.: Jiří Kratoch, Doctor; Chief Ed. of Publishing House: Milan Šmalník, Doctor; Tech. Ed.: Oldřich Důmka.

PURPOSE: The book is intended for chemists, chemical engineers, and physicists.
 COVERAGE: The book is a collection of reviews and original papers read at the International Polarographic Congress held in Prague in 1951. Uses of polarography in organic and inorganic analysis, biochemistry, medicine, and industrial chemistry are discussed. In the section, English translations of each review are presented. In the section, Original Papers Read at the Congress, only those translations in Russian, German, and English which have not been published in Volume I are presented. The following scientists participated in the opening of the Congress: Professor Wilton Kušila, Dean of the Faculty of Sciences, Warsaw; Professor Jaromír Dolanský, Minister of Planning; Professor Jaroslav Hrovošský, Chairman of the Congress; and Professor Jaroslav Fučík, Chairman of the Center for Scientific Research and Technical Development. References follow each paper.

Fozalet, J.—Apparatus for Oscillographic Polarography [Russian Translation] [German Translation]	281 250 259
Hovroňský, J.—Oscillographic Polarography [Russian Translation] [English Translation]	268 273 279
Brdička, B.—Kinetics of Electrode Processes in Polarography	286

Card 3/14

Arend, H. P.—Polarographic Study of Basic Trivalent Chromium Salt Systems	395
Erivanek, M.—Complexes of Iron with Saccharose	399
Drasovský, M. and M.—Effect of Gelatin and Thymol on Cathodic Deposition of Cations at a Dropping Mercury Electrode [Russian Translation] [German Translation]	404 407 410
Kuta, J.—Study of Hydrogen Overvoltage With a Mercury Electrode With Controlled Dropping Time	413
Dvořák, J.—Effect of Capillary Constants on the Maximum of Oxygen [Russian Translation] [German Translation]	418 421 423
Vavruch, I.—Attempt to Classify Refined Sugars by the Polarographic Method [Russian Translation] [German Translation]	427 286 332

ORIGINAL PAPERS READ AT THE CONGRESS

Kalousek, M., and A.—Tockarzin. Validity of the Nernst Equation in the Deduction of the Polarographic Wave Equation	359
Mláček, A. A.—Polarography in Concentrated Sulfuric Acid [Russian Translation] [English Translation]	366 370 373
Valenta, P.—Study of Current: Discontinuity Appearing on a Cationic Beam Electrode	377
Marek, J.—Discontinuity on Polarographic Curves Observed	

AREND, H. T.

CZECHOSLOVAKIA/Physical Chemistry - Surface Phenomena.
Adsorption. Chromatography. Ion Exchange

B-13

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3998

Author : Arend H. T.

Title : Simple Method of Determining the Size of Closed
Interstices

Orig Pub : Stavivo, 1956, 34, No 5, 181-182

Abstract : For the determination of internal porosity of powder, according to the method of the author, determinations are made of the specific gravity (d) of the initial powder and of several fractions of ground powder having different grain size. In the presence of internal interstices d increases with decrease in grain dimensions up to a certain maximum value which is equal to the actual d of the initial preparation. Comparison of d values of fractions of the powder of different grain size, permits to form an opinion concerning the distribution

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ARENDA, H.T.

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205. Method for the measurement of the dielectric constant of powders and their use in h.f. ceramics. H. T. ARENDA and K. LIEDERMANN (*Silikdy*, I, No. 1, 31, 1957). In Czech. (10 pp., 4 figs., 2 tables).

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CZECH/37-59-1-18/26

AUTHOR: Hanuš Arend

TITLE: Letter to the Editor: Photosensitivity²¹ of Small
Monocrystals of BaTiO₃

PERIODICAL: Ceskoslovensky Casopis Pro Fysiku, 1959, Nr 1, p 108

ABSTRACT: In references 1 and 2, it has been reported that small single crystals of BaTiO₃ contain a surface layer with different dielectric and structural properties. One of the mechanisms leading to such a layer is discussed in this note. The photosensitivity of TiO₂ is known (Ref 3) and is assumed to lead to a photo-chemical release of oxygen from the lattice (Ref 4). A similar process occurs in titanates. The photosensitivity shows up as a change in colour due to illumination. The crystals were prepared by the method of Ref 5 and exposed for 24 hours to light. Compared with unexposed samples, they had changed their colour from yellowish-white to yellowish-grey. We conclude that a surface layer has been formed by the influence of light. There are 5 references, of which 3 are English, 1 is Czech and 1 is German. ✓

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CZECH/37-59-1-18/26

Letter to the Editor: Photosensitivity of Small Monocrystals of
BaTiO₃

ASSOCIATION: Fysikální ústav ČSAV, Praha
(Institute of Physics, Czechoslovak Ac.Sc., Prague)

SUBMITTED: July 7, 1958

Card 2/2



AREND, H.

K

CZECHOSLOVAKIA/Optics - Physical Optics.

Abs Jour : Ref Zhur Fizika; No 1, 1960, 2065

Author : Arend, Hanus

Inst : Institute of Physics, Czechoslovak Academy of Sciences, Prague

Title : On the Photosensitivity of Minute Single Crystals of BaTiO₃

Orig Pub : Chekosl. fiz. zh., 1959, 9, No 1, 124

Abstract : Under a prolonged (all day) exposure to daylight of small (1 -- 5 μ) crystals of barium titanate, obtained by grinding large artificially-grown single crystals, a change was observed in the color from white with a trace of yellow to gray-yellow. This change is the result of partial photochemical decomposition of the barium titanate, which has the same

Card 1/2

AREN, H. I.

Distr: 4E2c 1

Color changes in $BaTiO_3$ single crystals in hydrogen atmospheres at high temperatures. Hanuš T. Arend and Paula Couřková (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys.* 9, 751-2(1959)(in English).—Single crystals prepd. by crystn. in the system $BaCl_2-BaO-BaTiO_3$ were studied. The resulting $BaTiO_3$ crystals were heat-treated in dry and moist H near 1000° . The crystals changed from yellow to yellow-gray to blue-gray to brownish black in dry H, probably because of O vacancies; less coloration occurs in moist H. A. Kremheller

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Z/037/60/000/01/008/014
E073/E535

AUTHORS: Janovec, Václav; Březina, Bohuslav; Arend, Hanuš T.

TITLE: The Physical Properties and Preparation of Ferroelectric Triglycinsulphate

PERIODICAL: Československý časopis pro fysiku, 1960, Nr 1,
pp 63-80 + 92b and c (2 plates)

ABSTRACT: In the introduction it is pointed out that many authors believe that triglycinsulphate and its isomorphous compounds, namely, triglycinselenate and triglycin-fluoroberylate, have great potentialities as ferroelectric materials. A number of papers have been published on the study of the physical properties and on questions of preparation of single crystals of these substances. In this paper the authors attempt to summarize this published information; they restrict themselves to setting out established facts since knowledge available so far does not allow unequivocal interpretation of the results. The subject matter is discussed under the following paragraph headings: preparation of the compounds;

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The Physical Properties and Preparation of Ferroelectric
Triglycinsulphate

crystallographic properties; domain structures;
dielectric properties (dielectric hysteresis and the
process of repolarization; permittivity; piezo-electric
properties); properties of triglycinsulphate in the
region of transformation from the ferroelectric to the
non-ferroelectric state; possibilities of application,
the main one being for memory elements of computers.
There are 15 figures, 2 tables and 34 references,
8 of which are Soviet, 2 Swiss, 2 French and 22 English.

ASSOCIATION: Fysikální ústav ČSAV, Praha (Physics Institute,
Czechoslovak Academy of Sciences, Prague)

SUBMITTED: July 30, 1959



Card 2/2

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81105

Z/012/60/000/01/003/015
E073/E535

AUTHOR: Arend, Hanuš T.

TITLE: On Certain Influences of the Temperature Regime on the Quality of $BaTiO_3$ Single Crystals During Crystallization from the System $BaCl_2$ - BaO - $BaTiO_3$

PERIODICAL: Silikáty, 1960, No 1, pp 29-35

ABSTRACT: The quality of single $BaTiO_3$ crystals can be characterized as follows: the shape and the size of the crystals, the character of the surface, the domain structure, the chemical composition and the lattice defects and, finally, the mechanical stresses. It is obvious that some of these properties are inter-related. On the basis of published information it can be concluded that the thermal regime of the crystallization, characterized primarily by the maximum temperature and by the speed of reducing the temperature during crystallization, has a considerable influence on the shape, size and surface of the crystals. On the basis of this conclusion the author has attempted to produce Card 1/3 various types of crystals by means of a suitable thermal X

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On Certain Influences of the Temperature Regime on the Quality of BaTiO_3 Single Crystals During Crystallization from the System $\text{BaCl}_2\text{-BaO-BaTiO}_3$

regime, maintaining the molar ratios of the starting mixtures which were proposed by Šafrata, Beneš and Bednářová (Refs 7 and 8). The molar ratios used in the experiments were

$3 \text{ BaCl}_2 \cdot 2 \text{ H}_2\text{O} : 1.5 \text{ BaCO}_3 : 1 \text{ TiO}_2$.

A graph of the thermal regime applied during the crystallization of various types of crystals is reproduced in Fig 1. Figs 3-5 show (magnifications of up to 100 times) crystals of various shapes which were produced. Fig 6 shows a crystal with a defective surface. It is shown that by suitable choice of the thermal regime it is possible to produce crystals which are suitable for physical measurements inside an electrical field and also larger crystals which are suitable for optical and chemical work. In contrast to

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On Certain Influences of the Temperature Regime on the Quality of BaTiO_3 Single Crystals During Crystallization from the System $\text{BaCl}_2\text{-BaO-BaTiO}_3$

crystals produced by the fluoride method described by Remeika (Ref 2), the crystals produced according to the method described in this paper are mostly a-domain ones. The author points out considerable shortcomings in the technique of growing Ba-TiO_3 single crystals.

He believes that more perfect methods of preparing single BaTiO_3 crystals, which could utilise the growth on well defined nuclei, should be sought in the first instance by using systems with lower melting points. Acknowledgments are expressed to B. Březina for taking the photographic exposures. There are 6 figures and 9 references, 3 of which are Czech, 3 Soviet, 1 Swiss and 2 English.

ASSOCIATION: Fysikální ústav ČSAV, Praha (Physics Institute, ČSAV, Prague)

SUBMITTED: May 21, 1959

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D006/D102

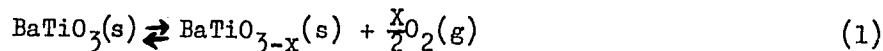
152670

AUTHORS: Arend, Hanuš, Doctor, and Coufova, Pavla

TITLE: Influence of firing regime on the oxygen nonstoichiometry of barium titanate

PERIODICAL: Sklár a keramik, no. 2, 1961, 68-69

TEXT: At elevated temperatures, barium titanate readily transforms into compounds with oxygen nonstoichiometry. So far, no systematic investigation of the thermal dissociation and its reaction kinetics has been made and the firing technology of ceramic bodies containing BaTiO₃ was based on practical experiences only. The authors conducted an experimental investigation of the structural changes of BaTiO₃ single-crystals exposed to elevated temperatures in various atmospheres. The formation of oxygen nonstoichiometry of BaTiO₃ can schematically be expressed as



The originating lattice defects cause color changes of the material which

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Influence of firing regime ...

can objectively be observed by measuring the absorption spectra within the visible spectrum range. In their investigation the authors used the method of freezing the high-temperature state. For this purpose they designed a special tilting kiln whose detailed description will be published in the periodical Silikaty (Ref. 4). [Abstracter's note: This is obviously a misprint, since reference 4, which is indicated in this connection, reads as follows: P. Coufova, H. Arend: Will be published in Cs. Cas. Fys.]. The specimens were heated to 1,150°C in various atmospheres (argon + 0.2 volume % O₂; nitrogen + 8 volume % O₂; 100% O₂; 100% H₂). It was found that at this temperature oxygen nonstoichiometry takes place in all used temperatures, even in 100% O₂. The thermal dissociation of BaTiO₃ in pure oxygen starts at somewhat above 900°C; in an argon atmosphere with 0.2 volume % O₂ at somewhat above 600°C; in a nitrogen atmosphere with 8 volume % O₂ at somewhat above 700°C; and in a pure hydrogen atmosphere at about 300°C. Depending on the composition, ceramic bodies containing BaTiO₃ are usually fired at 1,300 - 1,450° C. Consequently, formation of nonstoichiometric BaTiO₃ will start already on the ascending leg of the firing curve and will

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Card 2/3

AREND, Hanus; COUFOVA, Pavla

A simple furnace for examination of the oxygen nonstoichiometry of titanates. Silikaty 5 no.2:159-162 '61.

1. Fysikalni ustav, Ceskoslovenska akademie ved, Praha.

S/058/62/000/003/044/092
A061/A101

AUTHORS: Coufova, P., Arend, H.

TITLE: The nature of color centers in oxygen-deficient BaTiO₃ single crystals

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1962, 26, abstract 3V193
("Chekosl. fiz. zh.", 1961, v. B11, no. 6, 416 - 423, English;
Russian summary)

TEXT: Two bands with maxima at 0.48 and 0.64 μ , the position of which did not depend on the kinetics of nonstoichiometric O₂ formation, were established in the absorption spectrum of O₂-deficient BaTiO₃ single crystals. The color centers, responsible for both bands, are n-type. A model of color center - electron, trapped by an oxygen vacancy, is suggested for the band at 0.64 μ . As regards the band at 0.48 μ , the results obtained do not permit any acceptable model to be given for the corresponding color center. ↓

[Abstracter's note: Complete translation]

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9.2180

Z/013/62/000/004/005/006
D006/D102

AUTHOR: Arend, Hanuš, Doctor

TITLE: On the crystallochemical modification of the properties of barium titanite by heterovalent substitution

PERIODICAL: Sklář a keramik, no. 4, 1962, 145-146

TEXT: Various methods of modifying the $BaTiO_3$ basic crystal lattice are described, which make possible the various technical applications of this crystal (capacitor dielectrics; piezoelectric converters; nonlinear elements of low-current circuits; thermistors with positive thermal characteristic of resistivity; etc). The heterovalent substitution of Ba^{2+} and Ti^{4+} ions by positive ions of a higher valence, aimed at obtaining materials with a positive temperature coefficient of resistivity, is dealt with in detail. The nature of the defective lattice structure, due to the introduction of polyvalent ions, is explained by the case of substitution in $BaTiO_3$ of Ti^{4+} ions by Nb^{5+} ions. Heterovalent substitution is an effective means of controlling the polarization and conductivity mechanisms by artificially induced lattice defects and, therefore, a thorough study of the physical and chemical changes involved may bring valuable results for produc-

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Card 1/2

AREND, H.; COUFOVA, P.

The compensation of heterovalent ferric ions in the lattice of barium titanate single crystals. Chekosl fiz zhurnal 13 no.1:55-61 '63.

1. Fyzikalni ustav, Ceskoslovenska akademie ved, Praha.

ACCESSION NR: AP4016123

Z/0012/64/000/001/0059/0062

AUTHOR: Novak, Josef; Arend, Hanus

TITLE: Determination of fluorine in aluminum oxide, by means of melting and decomposition of the sample in a mixture of sodium carbonate, silicon and titanium oxides

SOURCE: Silikaty, no. 1, 1964, 59-62

TOPIC TAGS: fluorine colorimetry, aluminum nitride analysis, corundum analysis, fluorine determination, sodium carbonate, silicon, titanium oxide

ABSTRACT: A new method of colorimetric determination of fluorine is based on the decolorization of complexes of zirconyl ions with xylenol orange due to the presence of fluorine. It is suitable for the determination of F in single crystals of synthetic corundum, and in aluminum nitride. It is fast, accurate and well reproducible. The sample is melted in a Pt crucible with sodium carbonate, Ti and Si dioxides, digested with water, and the water solution filtered and added to the mixture of zirconyl nitrate and xylenol orange. Loss of color after 24 hours is compared to a set of standard colors. Orig. art. has 2 tables. ASSOCIATION: Fyzikalni ustav CSAV (Institute of Phys. Sci., Czechoslovak Academy of Sciences), Prague

Card 1/1 SUBMITTED: 8 Jul 63

AREND, H.

"Zone melting" by William G. Pfann. Reviewed by H. Arend.
Chem listy 58 no. 3:335 Mr '64.

NOVAK, Josef; APEND, Hanus

Determination of fluorine on aluminum oxide after decomposition
in a mixture of sodium carbonate, silicic and titanio oxides.
Silikaty 8 no.1:59-62. '64.

1. Fyzikalni ustav, Ceskoslovenska akademie ved, Praha.

AREND, H.

Fifth International Symposium on Reactivity of Solid Substances
(Munich, August 2-8, 1964). Cs cas fys 15 no.2:175-176 '65.

1. Institute of Physics of the Czechoslovak Academy of Sciences,
Prague. Submitted September 26, 1964.

TSOUFOVA, P. [Caufova, P.]; AREND, G. [Arend, H.]; NOVAK, I. [Novak, J.]

Some crystallochemical and physical properties of cobalt-containing barium titanate single crystals. Kristallografiia '9 no.1:113-115 Ja-F '64. (MIRA 17:3)

1. Fizicheskiy institut Chekhoslovatskoy Akademii nauk, Praga.

AREND, Rudolf, KEDRA, Mieczyslaw.

Manifestations of involvements of the neutral nervous system
in acute rheumatism. Polskie arch.med.wewn. 25 no:4a:811-828
1955.

Z Kliniki Neurologicznej A.M. we Wroclawiu, Kierownik: prof.
dr. R. Arend i z III Kliniki Chorob Wewnętrznych A.M. we
Wroclawiu, Kierownik: prof. dr E. Szczeklik.

(RHEUMATIC FEVER, pathology,
CNS)

(CENTRAL NERVOUS SYSTEM, in various diseases,
rheumatic fever)

AREND, Rudolf; FERENS, Zofia

Cysticercus filling the aqueduct of Sylvius. *Neur. &c. polska*
6 no.3:329-341 May-June 56.

1. Z Kliniki chorob nerwowych Akad. Med. we Wroclawiu, kier.
prof. dr. R. Arend.

(CEREBRAL VENTRICLES, diseases,
cysticercosis of aqueduct of Sylvius (Pol))

(CYSTICERCOSIS,
aqueduct of Sylvius (Pol))

AREND, Rudolf; SOKOLOWSKI, Stefan; MEMPEL, Eugeniusz

Unusual syndrome in a case of gigantic subdural hematoma cured surgically. Neur. &c. polska 6 no.4:465-477 July-Aug 56.

1. Z Kliniki Neurologicznej Akademii Medycznej we Wroclawiu
Kierownik: prof. dr. med. R. Arenk i z Oddzialu Neurochirurgii
Wojskowego Szpitala Klinicznego w Lodzi Ordynator: dr. med.
S. Sokolowski.

(CEREBRAL HEMORRHAGE, manifest.

unusual manifest. in subdural hematoma cured surgically
(Pol))

AREND, Rudolf

Clinical aspects and therapy of cerebral arteriosclerosis and of apoplexy. Polski tygod. lek. 11 no.13:584-591 26 Mar 56.

1. Z Kliniki Chorob Nerwowych A.M. we Wroclawiu; kierownik: prof. dr. R. Arend. Wroclaw, ul. Kraszewskiego 25, Klinika Neurologiczna.

(CEREBRAL HEMORRHAGE,

(Pol))

(ARTERIOSCLEROSIS,
cerebral (Pol))

(BRAIN, blood supply,
arteriosclerosis (Pol))

EXCERPTA MEDICA Sec 8 Vol 12/12 Neurology Dec 59

6268. MOVEMENT COMPENSATION IN HEMIPLEGIA AFTER VASCULAR APOPLEXY - Kompensacja ruchów w porażeniu połowicznym po naczyniowym udarze mózgu - Arend R. Klin. Chor. Nerw. A. M., Wrocław - NEUROL. NEUROCHIR. PSYCHIAT. POL. 1957, 7/5 (747-759)

After discussing the spontaneous return of damaged function, directed rehabilitation is discussed, which is based on 3 factors: (a) Existence of 2nd motor representation, supplementary motor area and uncrossed pyramidal tract. (b) Knowledge of the principles of neurokinetodynamics. (c) Knowledge of the principles of the spontaneous compensation. Pharmacotherapy and rehabilitation procedure current in the Neurological Clinic in Wrocław, are discussed.
Mausmanowa - Warsaw (VIII, 18, 19)

EXCERPTA MEDICA Sec 8 Vol 12/11 Neurology Nov 59

5499. PHOSPHOHEXOSE-ISOMERASE ACTIVITY IN THE CSF - Wartość kliniczna oznaczania aktywności fosfoheksoizomerazy w płynie mózgowo-rdzeniowym - Arend R., Orłowski M. and Hulanicka K. Klin. Neurol. and III Klin. Chor. Wewn. A.M., Wrocław - POL. TYG. LEK. WIAD. LEK. 1959, 14/8 (345-347) Tables 2

The normal range of phosphohexose-isomerase activity (18-38 n) was taken as that in patients without any demonstrable disturbances in the CNS, the CSF having a normal protein and cell content. The highest phosphohexose isomerase activity (265-2,125 n) was found in the CSF in tuberculous meningitis (9 cases). In cured cases (3 patients) the activity returned to normal. A great increase in phosphohexose-isomerase activity confirms the diagnosis in cases with a decrease of glucose and/or chlorine levels in the CSF while in cases of non-purulent meningitis with normal glucose and chlorine levels this increase may draw attention to the possibility of tuberculous aetiology. In various other neurological and psychiatric disturbances the phosphohexose-isomerase activity remains in the normal range or is only slightly increased (45.5 - 173 n), the findings being different in different diseases.

(II, 8)

AREND, Rudolf

Eriopathogenesis of vascular diseases of the brain (selected problems). Neur.&c.polska 10 no.5:577-582 '60.

(BRAIN blood supply)

AREND, Rudolf; FERENS, Zofia

Osseous (calcium) plaques in the arachnoid of the spinal cord.
Neurologia etc. polska 11 no.6:781-791 '61.

1. Z Kliniki Chorob Nerwowych AM we Wroclawiu Kierownik: prof. dr
R.Arend.

(ARACHNOID pathol) (CALCIFICATION case reports)

AREND, Rudolf; BRZECKI, Andrzej; KRZYSZTONIOWA, Zofia

Results of the treatment of multiple sclerosis with Proper-
Myl. Pol. tyg. lek. 18 no. 41:1527-1529 7 0 '63.

1. Z Kliniki Neurologicznej AM we Wroclawiu; kierownik: prof.
dr. R. Arend.

(CRYPTOCOCCUS) (CANDIDA) (SACCHAROMYCES)
(MULTIPLE SCLEROSIS) (BIOLOGICAL PRODUCTS)

I 13227-63 BDS/EWT(d)/FCC(w) AFFTC S/044/63/000/003/044/047
 IJP(C)/JXT(DE) (P) 53
 AUTHOR: Arend, Sylvain
 TITLE: Orthogonal polynomials and their application to mathematical representation of experimental phenomena
 PERIODICAL: Referativnyy Zhurnal, Matematika, no. 3, 1963, 14, Abstract 3V55
 (Compte Rendu du 1-er Sympos. Internat. Calculs Geod. Cracovie, 1959. Cracow, 1961, 63-75; in French).
 TEXT: The author examines problems connected with finding the best approximation $F(x)$ (by the least squares method) to the function $f(x)$ given as a table of $2n + 1$ or $2n$ values obtained experimentally. The approximation is in the form

$$F(x) = b_0 P_0(x) + b_1 P_1(x) + \dots + b_m P_m(x),$$

where the $P_m(x)$ are orthogonal polynomials and the b_m are numerical coefficients. In this case the function $F(x)$ is considered the best approximation if

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L 13227-63

Orthogonal polynomials and their application to

S/044/63/000/003/044/047

$$\sum (F(x) - f(x))^2 = \min.$$

An accurate and rapid method is set forth for successive determination of the numerical values of the coefficients; the properties of Cracovians are utilized. The give function $f(x)$ is represented approximately by straight lines and by parabolas of various orders. Numerical examples are presented. There are five references.

[Abstracter's note: Complete translations]

Card 2/2

AREND, U., dots.; KÜBAR, H., kand. vet. nauk; LAMBUR, E., kand.
vet. nauk; PÕLDVERE, K., kand. med. nauk; TEHVER, J.,
prof.; KRUUS, A., red.; VAHTRE, I., tekhn. red.

[Laboratory manual of histology] Histoloogia praktikum.
J. Tehveri uldtoimetusel. Tallinn, Eesti Riiklik Kirjastus,
1963. 142 p. (MIRA 16:12)
(Histology--Handbooks, manuals, etc.)

AREND, YU. E.

AREND, YU. E. - "On the Effect of Damage to the Large Hemisphere of the Cranial Brain on the Process of Organization of the Necrotic Tissue (Experimental Morphological Investigation)." Tartu State U, Tartu, 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 24, June 1956, Moscow

AREND, Yu.M. (Tartu)

Effect of lesions of the cerebral hemispheres on the process of organization of necrotic tissues. Arkh.pat. 18 no.6:121-122 '56. (MLRA 9:12)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. A.O.Val'des) Tartuskogo gosudarstvennogo universiteta.

(BRAIN, physiology.

eff. of exper. lesion on necrotic tissues (Rus))

AREND, Yu.E.

Character of the process of organization of necrotic foci in the
liver during injury and stimulation of the cortical and subcortical
areas of the brain. Arkh. pat. 22 no. 4:56-63 '60: (MIRA 14:1)
(CEREBRAL CORTEX) (LIVER)

AREND, Yu. E. (Tartu, Estonskaya SSR, ul. Linda, d.9, kv.2)

Use of platinum chloride in the impregnation of argyrophil fibers.
Ark. anat. gist. i embr. 36 no.5:99 My '59. (MIRA 12:7)

1. Kafedra gistologii (zav. - prof. Yu. T. Tekhver) meditsinskogo
fakul'teta Tartuskogo universiteta.

(HISTOLOGY,

platinum chloride impregnation of argyrophil fibers (Rus))

57

AREND, Yu.E. [Arend. J.]; KHUSSAR, Yu.P. [Hussar, J.]

Effect of the preparation Vipratox on the morphology of various organs and the reactivity of connective tissues. Farmakol. toksik. 26 no.3:343-348 My-Je'63 (MIRA 17:2)

1. Kafedra gistologii (zav. - prof. Yu.T.Tekhver [Tehver, J.]) Tartuskogo gosudarstvennogo universiteta.

SIRENKO, L.A.; VOLKOV, I.V.; MUZYCHENKO, A.D.; ARENDARCHUK, V.V.;
BRAYON, A.P.; CHERNOUSOVA, V.M.

Effect of electric current on the mass species of blue-green
algae in cultivation. Hidrobiol. zhur. 1 no.4:69-70 '65.
(MIRA 18:10)

1. Institut gidrobiologii AN UkrSSR; Institut elektrodinamiki
AN UkrSSR i Kiyevskiy gosudarstvennyy universitet.

ABU ALI IBN SINA (AVICENNA) [deceased]; KARIMOV, U.I., kand.filolog. nauk [translator]; TERNOVSKIY, V.N., prof., akademik, otv.red.; ARENDS, A.K., kand.filolog.nauk, otv.red.; PETROV, B.D., kand.med. nauk, red.; AZIMDZHANOVA, S.A., kand.istor.nauk, red.; ASKAROV, A.A., red.; DZHUMAYEV, V.K., kand.med.nauk, red.; KARASIK, V.M., red.; RASULEV, A., starshiy nauchnyy sotrudnik, red.; MIL'MAN, Z.A., red.; BABAKHANOVA, A.G., tekhn.red.

[Canon of medical science] Kanon vrachebnoi nauki. Tashkent, Izd-vo Akad.nauk Uzbekskoi SSR. Book 5. 1960. 329 p.

(MIRA 13:12)

1. Zaveduyushchiy otdelom nauchnogo opisaniya i katalogizatsii rukopisey Instituta vostokovedeniya Akademii nauk UzSSR (for Karimov).
 2. Akademiya meditsinskikh nauk SSSR (for Ternovskiy).
 3. Zaveduyushchiy otdelom izucheniya i publikatsii rukopisnykh pamyatnikov Instituta vostokovedeniya AN UzSSR (for Arends).
 4. Zaveduyushchiy kafedroy istorii meditsiny Moskovskogo meditsinskogo instituta (for Petrov).
 5. Chlen-korrespondent AN UzSSR (for Askarov).
 6. Deyatvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Karasik).
 7. Institut vostokovedeniya AN UzSSR (for Rasulev).
- (MEDICINE, ARABIC)

ABU ALI IBN SINA (AVICENNA) [deceased]; SAL'YE, M.A., kand.filol.nauk, starshiy nauchnyy sotrudnik [translator]; TERNOVSKIY, V.N., prof., akademik, otv.red.; PETROV, B.D., kand.med.nauk, red.; ASKAROV, A.A., red.; KARIMOV, U.I., kand.filol.nauk, red.; AZIMDZHANOVA, S.A., kand.istor.nauk, red.; ARENDS, A.K., kand.filol.nauk, red.; DZHUMAYEV, V.K., kand.med.nauk; RASULOV, A., starshiy.nauchnyy sotrudnik; MIL'MAN, Z.A., red.; GOR'KOVAYA, Z.P., tekhn.red.

[Canon of medical science] Kanon vrachebnoi nauki. Tashkent, Izd-vo Akad.nauk Uzbekskoi SSR. Book 4. 1960. 767 p.

(MIRA 13:12)

1. Institut vostokovedeniya AN UzSSR (for Sal'ye).
2. Akademiya meditsinskikh nauk SSSR (for Ternovskiy).
3. Zaveduyushchiy kafedroy istorii meditsiny Moskovskogo meditsinskogo instituta (for Petrov).
4. Zaveduyushchiy laboratoriyey Instituta krayevoy meditsiny, chlen-korrespondent AN UzSSR (for Askarov).

(MEDICINE, ARABIC)

ACC NR: AP7006273

SOURCE CODE: UR/0310/67/000/001/0027/0028

AUTHOR: Begunkov, A.; Arendarchuk, G.

ORG: TsTKB

TITLE: A universal system of industrial pneumatic components

SOURCE: Rechnoy transport, no. 1, 1967, 27-28

TOPIC TAGS: pneumatic control, pneumatic device, *industrial automatic control, automatic control equipment, ship component*

ABSTRACT: The Institute of Automation and Telemechanics of the USSR Academy of Sciences in cooperation with the Moscow "Tizpribor" plant has developed a universal system of pneumatic components to be used in industrial process-control equipment. The system comprises pneumatic amplifiers, capacitances, resistances, relays and other analogs of electric and electronic components. All of the pneumatic components perform simple functions, and are lightweight and small in size. They are mounted on special switching plates made of plastic material. At present the Ust¹-Kaurengarsk Plant produces serially 40 different types of pneumatic components for use in automatic control systems of river-going vessels. The power supply is air compressed to 1.4 kg/cm². The range of signals received by the pneumatic components is from

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UDC: 658.512-525

ACC NR: AP7006273

0.2—1 kg/cm²; the range of discrete signals is 0—1.4 kg/cm². Automatic control equipment made of these components is fireproof and explosion proof, and can be operated at temperatures ranging from +5 to 50°C with 95% humidity. Orig. art. has: 4 figures. [JR]

SUB CODE: 13/ SUBM DATE: none

Card 2/2

ARENDARCIK, Jozef

Fysiologie krve, mizy, obehu krevniho a mizniho. Fysiologie dychani. (Physiology of Blood, Lymph, Blood and Lymph Circulation; Physiology of Respiration; a university textbook. 1st ed. illus., bibl.) For the students of the faculties of veterinary medicine and zootechny. Prague, SPN, 1957, 121 p.

Bibliograficky katalog, CSR, Ceske knihy, No. 33. 24 Sept 57. p. 715.

ARENDARCIK, J.

Studies on the activity of certain blood coagulation factors in animals with special reference to liver function. Cesk. fysiол. 8 no.3:170-171 Apr 59.

1. Katedra porovnavacej fyziologie Veterinarskej fakulty VSP v Kosiciach, Prednescene na III. fyziologickych dnoch v Brne dna 15. 1. 1959.

(BLOOD COAGULATION,

circ. coagulation factors in animals (Cz))

ARENDARCIK, J.

Liver function tests in animals. I. Chromo-excretion. Cesk. fysiол.
8 no.4:316 July 59.

1. Katedra porovnavacej fyziologie Veterinarskej fakulty VSP, Kosice.
(LIVER FUNCTION TESTS)

ARENDA RC IK, J.

Studies on the activity of certain blood-coagulation factors
with special reference to liver function. Cesk. fysiол. 8 no.4:
322-323 July 59.

1. Katedra porovnavcej fyziologie Veterinarskej fakulty VSP, Kosice.
(LIVER, physiол.) (BLOOD COAGULATION, physiол.)

ARENDARCIK, J.; ITZE, L.

Studies on the sensitivity of certain liver function tests in sheep.
Cesk.fysiol. 9 no.2:184-185 Mr '60.

1. Kataedra porovnavacej fyziologie Veterinarskej fak. VSP, Kosice.
(LIVER FUNCTION TESTS)

ARENDARCIK, J.; ITZE, L.

Contribution to the study of the sensitivity of certain liver function tests in sheep. *Cesk.fysiol.* 9 no.3:216-217 My '60.

1. Katedra porovnavacej fyziologie Veterinarskej fakulty VSP, Kosice.

(LIVER FUNCTION TESTS)

ARENDARCIK, J.; ITZE, L.; ZAYMUS, J.

Determination and value of certain antithrombins in animals with special reference to liver function. Cesk. fysiolog. 9 no.4:383-384 J1 '60.

1. Katedra porovnavacej fyziologie Veterinarskej fakulty VSP, Kosice.
(LIVER FUNCTION TESTS)
(BLOOD COAGULATION)

ARENDARCIK, Jozef, MVDr. doc.; ITZE, Lubomir, promovany veterinarni lekar

Dynamics of the activity of hypophyseal gonadotrophins
(FSH. + ICSH.) in urine of pregnant animals. Veter medicina
9 no.1:29-34 Ja '64.

1. Chair of Comparative Physiology, Faculty of Veterinary Medicine,
Higher School of Agriculture, Kosice. Head of the Chair: [doc. MVDr.]
Jozef Arendarcik.

ITZE, Lubomir; ARENDARCIK, Jozef, doc. MVDr., C.Sc.; SKARDA, Rudolf

Investigation of gonadotropic substances in the urine of gravid mares by paper electrophoresis. Endokr. Pol. 16 no.2: 167-176 Mr-Apr'65.

1. Chair of Comparative Physiology, Veterinary Faculty of the Agricultural College, Kosice (Head: doc. MVDr. J. Arendarcik, C.Sc.).

CZECHOSLOVAKIA

ARENDARCIK, J., ITZE, L; Chair of Comparative Physiology,
Veterinary Faculty (Katedra Porovnavacej Fyziologie, Veterin-
arska Fakulta) Kosice.

"Immunological Study of Gonadotropins."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 2, Feb 66, p 92

Abstract: Experiments were conducted on 6 rabbits. Praedyn-
Spora was used as antigen. The hyperimmune anti-GS obtained
in this manner are suitable for serological reactions used in
the study of the level of gonadotropic hormones, No references.
Submitted at "16 Days of Physiology", at Kosice, 27 Sep 65.

1/1

CZECHOSLOVAKIA

ARENDARCIK, J.; LEHOCKY, J.; Chair of Comparative Physiology,
Veterinary Faculty (Katedra Porovnavacej Fyziologie, Veterinarska
Fakulta), Kosice.

"FSH and ICSH in the Urine of Cows During the Estrual Cycle."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, p 366

Abstract: The activity of the follicle-stimulating and intersti-
tial cells stimulating hormones (FSH and ISCH) during the sexual
cycle of cows was investigated. Maximum values of FSH were
found on the 5th and 15th day, and maximum values of ICSH on the
1st, 5th, 10th, 15th, and 20th day. The formation and secretion
of hypophyseal gonadotropins in cows was proved. 2 Western, 1
Czech reference. Submitted at 3 days of physiology of domestic
animals at Liblice, 10 Dec 65.

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CZECHOSLOVAKIA

ITZE, L.; AREMDARCIK, J.; Chair of Comparative Physiology (Katedra Porovnavacej Fyziologie), Kosice.

"On the Study of Antigonadotropic Serum by Means of the Latex-Fixation Test."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, p 379

Abstract: Determination of rabbit antigonadotropic hyperimmune serum by titration using the latex-fixation test was investigated. The results were reproducible, with a higher degree of accuracy than obtained by other tests, and are more sensitive. 2 Western, 1 Czech reference. Submitted at 3 Days of Physiology of Domestic Animals at Liblice, 10 Dec 65.

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- 17 -

ARENDARENKO, V.; ZELIKSON, M.

Centralized transportation of fertilizers on fields.
Avt.transp. 40 no.11:13-14 N '62. (MIRA 15:12)

1. Test gruzovykh perevozok Leningradskogo upravleniya avtotransporta.
(Fertilizers and manures--Transportation)

Получено
TRET'YAKOV, L., inzhener; ARENDAREV, S.

Equipment for the production of large panel partitions. Gor.1
sel'.stroi. no.7:13-14 J1 '57. (MLRA 10:10)
(Walls)

ARENDAREVS'KIY, L.F.

Simplified method of cultivating tissues in vitro. Medych.shur. 22 no.4:95-97 '52. (MIRA 6:10)

1. Instytut eksperimental'noyi biolohiyi i patolohiyi im. akad. O.O.Bohomol'tsya Ministerstva okhoroni zdorov'ya URSR. (Tissue culture)

ARENDAREVSKIY, L. F.

"Various External Factors Influencing the Growth of Tumorous Tissues".
Uch. Zap. Kiyevsk. N. -I. Rentgeno-radiol. i Onkol. In-ta, No. 4, pp 100-112, 1953.

A total of 3500 explantates from 60 cases of human stomach cancer and its metastases into the lymph nodes were studied. Growth yielded only solid and glandular forms. Streptomycin was used to suppress infection. Tumor cells develop most successfully in a medium of human embryonal material upon the addition of glucose with ascorbic acid, adrenalin, and acetylcholine (carbocholine). Stimulation of the growth of cancerous epithelium was accompanied by intensive proliferation of connective tissue elements. Upon inhibition of the growth of the latter (by the decrease or exclusion of embryonal material, inactivation of the nutritive medium, addition of ATS, plasmol, cholesterolin, or testosterone), cancer cells are simultaneously suppressed, and gradually degenerate. If at the same time squamous growth is established under conditions unfavorable to the proliferation of connective tissue by placing the material on a solid medium which has been kept in a thermostat for 3-4 days, and by covering the little pieces with drops of plasma or placing it on cellophane, a pure culture of blastomatous epithelium is obtained. The maximum period of growth outside the organism was 93 days. (RZhBiol, No. 10, 1955)

SO: Sum No 884, 9 Apr 1956

ARENDAREVS'KIY, L.F.

Problems of the etiology, pathogenesis, prevention and therapy
of malignant tumors; data of the Republic Scientific Conference
on Problems of Cancer. Medych.shur.24 no.3:132-135 '54.
(NEOPLASMS, (MLRA 8:10)
conf.)

ARENDAREVSKIY, L.F., SIZENKO, S.P.,

"The Influence of Phenamine on Radioactive Phosphorus Accumulated Normal and Tumorous", in the book Experience in the Use Of Radioactive Isotopes in Medicine R. Ye. KAVETSKIY and I.T. SHEVCHENKO, published by the GOSMEDIZDAT Publishing House of the UKRAINIAN SSR, KIEV 1955, represents medical transactions of a conference held in KIEV from 18-20 January 1954.

So: 1100235

ARENDAREVSKIY, L.F., SIZENKO, S.P.

"Therapeutic Effect of Radioactive Phosphorus Applied to Intertwined (Grafted) Tumors" p. 224, in the book Experience in the Use of Radioactive Isotopes in Medicine R. Ye. KAVETSKIY and I.T. SHEVCHENKO, publishing House of the UKRAINIAN SSR, KIEV 1955, represents medical transactions of a conference held in KIEV from 18-20 January 1954.

So: 1100235

ARENDAREVSKIY, L.F., Cand Med Sci -- (diss) "Method of cultivating
normal and pathological ^{ly changed} tissues ~~changes~~ on cellophane and its
significance in the study of certain problems of tumor growth."
Dnepropetrovsk, 1958. 19 pp (Min of Health UkSSR. Dnepropetrovsk
State Med Inst) 200 copies (KL, 27-58, 11⁶-6)

- 187 -

ARENDAREVSKIY, Leonid Fedorovich, kand.med.nauk; ZNACHKOVSKIY, N.G.,
red.; GITSHTEYN, A.D., tekhred.

[Nature of cancer and ways of preventing it] Priroda raka i
puti ego preduprezhdeniia. Kiev, Gos.med.izd-vo USSR, 1959.
47 p. (MIRA 13:6)

(CANCER)

ARENDAROVSKIY, L.F., red.; POTOTSKAYA, L.A., tekhred.

[Pathogenesis, prophylaxis, diagnosis and treatment of malignant neoplasms; joint collection of research papers] Patogenez, profilaktika, diagnostika i lechenie zlokachestvennykh novoobrazovaniy; ob"edinennyyi sbornik nauchnykh rabot. Kiev, Gos.med.izd-vo USSR, 1959. 325 p. (MIRA 12:10)

1. Ukraine. Ministerstvo zdravookhraneniya. Problemnaya komissiya po onkologii.

(CANCER)

SHEVCHENKO, I.T., prof., otv.red. (Kiyev); GORODETSKIY, A.A., prof., red.; ZARKEVICH, N.F., dotsent, red. (Kiyev); ZNACHKOVSKIY, N.G., starshiy nauchnyy sotrudnik, red. (Kiyev); IVANOV, V.N., akademik, red. (Kiyev); KAVETSKIY, R.Ye., akademik, red. (Kiyev); POKROVSKIY, A.S., prof., red.; ARENDAREVSKIY, L.F., red.; LOKHMATYY, Ye.G., tekhred.

[Transactions of the Second Oncological Congress and the Third Congress of Radiologists of the Ukrainian S.S.R., Kiev, June 18-24, 1956] Trudy II s"ezda onkologov i III s"ezda rentgenologov i radiologov USSR, 18-24 iyunia 1956 g.g. Kiev, Gos.med.izd-vo USSR, 1959. 678 p. (MIRA 13:7)

1. S"yezd onkologov, 2nd. Kiev, 1956. 2. Chlen-korrespondent AN USSR (for Gorodetskiy). 3. AN USSR (for Ivanov, Kavetskiy). (CANCER--CONGRESSES) (RADIOLOGY, MEDICAL--CONGRESSES)

ARENAROVSKIY, L.F.

Conference devoted to Professor Aleksai Antoninovich Krontov-
skii. Vop.onk. 5 no.2:250-252 '59. (MIRA 12:6)
(ONCOLOGY--CONGRESSSES)

ARENAREVSKY, L. F. (USSR)

"Changeability of tumours under the influence of growth-inhibiting and growth-stimulating factors."

report submitted for the European Conference on Tumor Biology ²(VICC),
Warsaw, Poland
22-27 May 1961

Arenarevsky, L. F.-Roenteno-radiological and Oncological Institute, Tolstoy Street
7, Kiev

ARENDAREVSKIY, L.F.

Examining conditions obstructing the stimulating effect of an operative trauma on the growth and metastatic spreading of a tumor. Uch. zap. KRROI 7:268-274, '61. (MIRA 16:8)
(CANCER RESEARCH) (SURGERY, OPERATIVE)

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"Fiberboard covers for inside walls, Biuletyn," p. A29. "Researches concerning
ceramic reinforced ceilings, Biuletyn," p. A31 "The works of the Institute
of Building Technique in the first half year of 1953. (To be contd.)
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Prefabricated hall construction with thin slab shed roofs. p. 114.
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ARENDARSKI, J.

Ventilation blocks made from slag concrete. p. 277

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Warszawa

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Feb. 1956

ARZOLINOLIN

Synthesis of 6-methoxy-4-[(4-diethylamino-1-methylbutyl)amino]-2-styrylquinoline. M. V. Rubtsov and A. E. Arzularuk (Ministry of Health, Moscow). *J. Gen. Chem. (U.S.S.R.)* 16, 215-20(1940).—6-Methoxy-4-chloroquinoline (I) (20 g.) and 350 cc. 35% NaHSO₃ solution were heated to boiling for 1.5 hrs. and allowed to stand overnight, yielded Na 6-methoxy-6-quinolinesulfonate, which was converted to 22 g. free acid (II), m. 201° (decompn.), by treatment with HCl; the acid is fairly sol. in hot water, hot EtOH, almost insol. in cold water, Me₂CO, and cold EtOH; the air-dried acid is a dihydrate which loses water at 100°. II (5 g.), heated with 30 g. BaH in the presence of a little piperidine to 175-85° for 4 hrs., gave 5.6 g. 6-methoxy-2-styryl-6-quinolinesulfonic acid (III), yellow, not m. up to 343°. Na salt white needles (from water), moderately sol. in water, EtOH, Me₂CO, insol. in Et₂O. III (4.5 g.), 0 g. 1-diethylamino-4-aminopentane (IV) and 9 cc. water were heated to 140° for 20 hrs., dild. with 50 cc. water, extd. with Et₂O and the ext. steam-distd.; extn. of the residue with Et₂O and drying with K₂CO₃, followed by evapn. of the solvent, soln. in Me₂CO, and treatment with the calcd. amt. of alc. HCl, yielded 0.7 g. 6-methoxy-4-[(4-diethylamino-1-methylbutyl)amino]-2-styrylquinoline-2HCl, yellow, m. 245° (decompn.) (from EtOH-Me₂CO); free base (V), colorless, m. 124.5-5° (from ligroin). I (14 g.) and 21 g. IV, heated to 195-200° for 5 hrs., dissolved in 2:1 HCl, treated with 80% KOH, extd. with Et₂O, and recrystd. from ligroin, gave 10 g. 6-methoxy-4-[(4-diethylamino-1-methylbutyl)amino]quinoline (VI), m. 126-7°. VI (6 g.), 12 g. BaH, and 20 drops piperidine were heated to 175-80° for 4 hrs., steam-distd., treated with 6 cc. concd. HCl and 20 cc. H₂O, heated to 100-5°, dild. with 150 cc. water, and the supernatant liquid decanted from the residue, etc. The soln. extd. with CHCl₃ to remove

colored impurities, heated to boiling, and treated with NH₄OH, yielded 4.7 g. crude V, m. 120-2°, purified by soln. in dry Me₂CO, addn. of the calcd. amt. of Fe. HCl, and dild. by Me₂CO; the HCl salt was then converted conventionally to V.
G. M. Kosolapoff

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ARENARUK, A.P.

Derivatives of 4-(diethylaminoalkylamino)quinoline.
M. V. Rubtsov and A. P. Arendaruk (U.S.S.R. Ministry
of Med. Ind., Moscow). *J. Gen. Chem. (U.S.S.R.)* 19,
No. 9, 3121-5(1949) (English translation). See C.A. 44,
2980c R. J. C.

(A)
ARENDAK, A.P.

Derivatives of 4-(diethylaminoalkylamino)quinoline. M. V. Rubtsov and A. P. Arendark. *Zhur. Obshchei Khim* (J. Gen. Chem.) 19, 1680 (1940); cf. C. A. 41, 1284.

1-Chloroquinaldine (10 g.) and 30 g. $\text{Et}_3\text{N}(\text{C}_2\text{H}_5)_2$ (NH₂)Me (I) heated 10 hrs. to 100-200°, cooled, dil. with H₂O, and extr. with CHCl_3 , gave 15 g. 4-(1-diethylamino-1-methylbutylamino)quinaldine (II), m. 200-1°. This (11 g.), 30 g. H_2N , and 1 g. piperidine after 7 hrs. at 155-160° gave by purification with Et_2O and aq. HCl, 8 g. 2-styryl analog of II, m. 109-10° (from petr. ether). 1-chloroquinaldine (10 g.) and 15 g. 6-ethoxy-1-chloroquinaldine after 8 hrs. at 185-90°, followed by standing 2 days at 0°, after diln. with 200 ml. H₂O, gave 9.5 g. 6-ethoxy-4-(1-diethylamino-1-methylbutylamino)quinaldine, m. 107-8° (from Et_2O), which on heating with H_2N and piperidine (as above) gave, after repeated purification through extr. with Et_2O and 10% HCl, 2 g. 2-styryl analog, m. 114-5° (from petr. ether), in addn. to some 3 g. Et_2O -insol. dibenzoate salt of the same base, m. 124-5°. 6-Acetamido-1-chloroquinaldine similarly gave 3 g. 6-acetamido-4-(1-diethylamino-1-methylbutylamino)quinaldine, m. 137-8° (from Me_2CO), which gave the 2-styryl compl., m. 139-40° (from Et_2O). Hydrogenation of 2 g. 6-methoxy-4-

4-(1-diethylamino-1-methylbutylamino)-2-styrylquinoline (HCl) over Pd in H₂O gave 1.43 g. 2-phenethyl analog (III), m. 85-6° (from petr. ether). The 6-EtO homolog of III, prepd. similarly, m. 102-3° (from petr. ether). 4-(1-diethylamino-1-methylbutylamino)-2-phenethylquinoline, m. 82-3° (from petr. ether). G. M. Kosolapoff

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Inst of Pharmacology, Experimental Chemotherapy, and Chemoprophylaxis, Acad Med
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W-30928

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