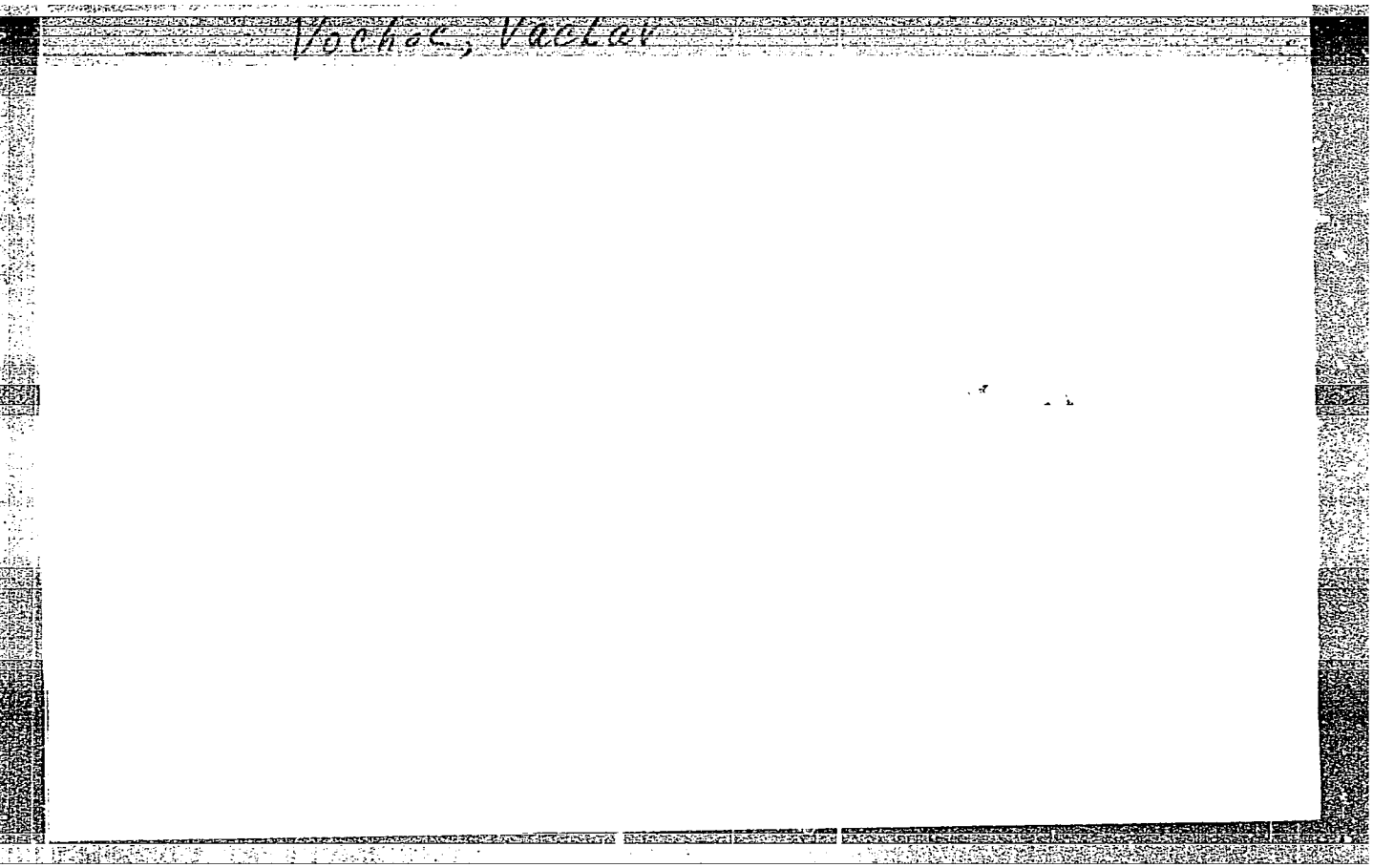


VOCHOC, Vaclav, inz.

Present conditions and development of transformers. El tech obzor 50 no.11:606-609 N '61.

1. Ceskomoravska-Kolben-Danek Praha, n.p.

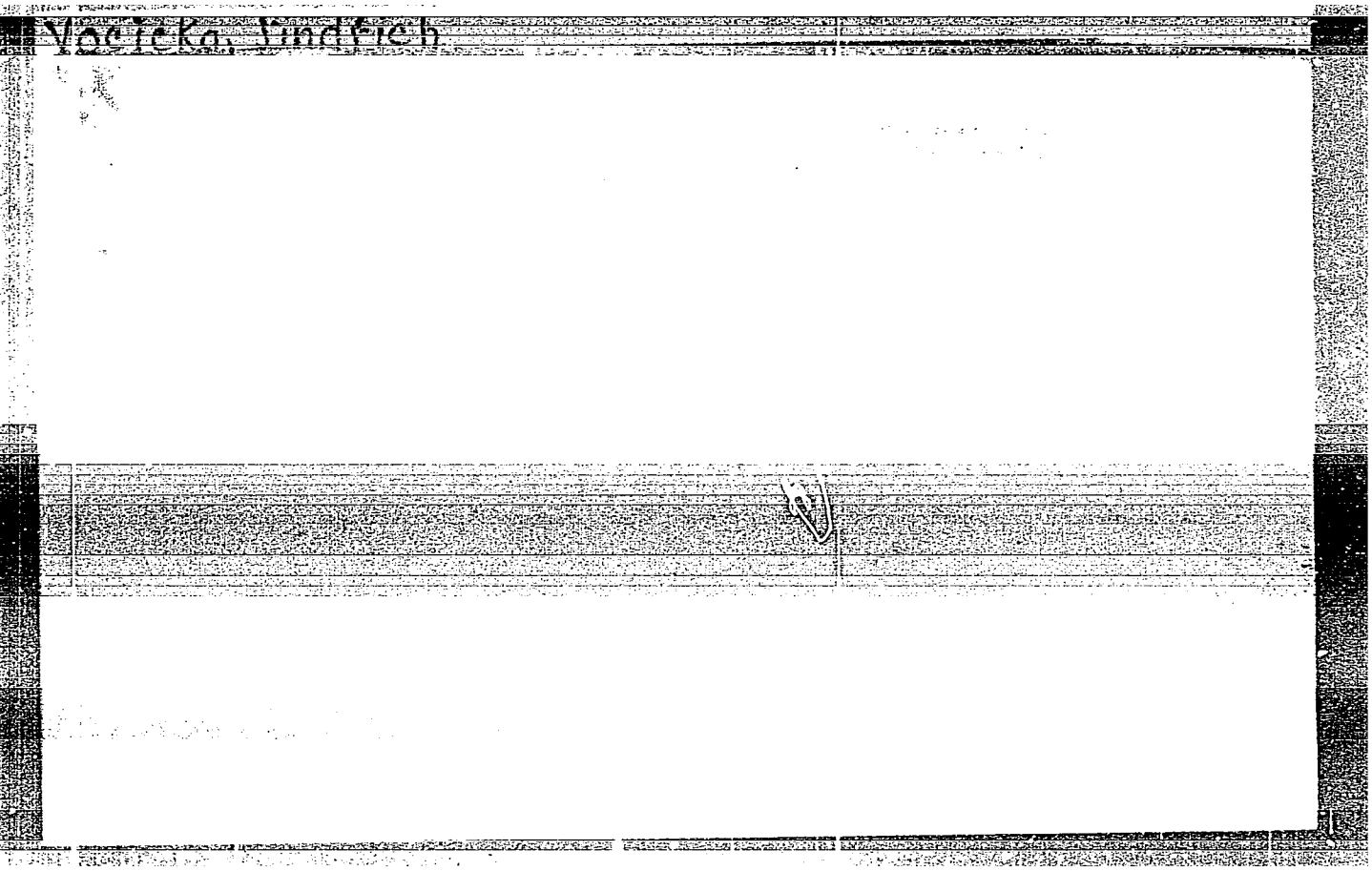
VOCHOC, V., inz.

"Transformers" by [prof., dr., inz.] Wilhelm Schafer. Reviewed by V. Vochoc. El tech obzor 51 no.12:671 D '62

VOCHORISHVILI, G.B.

General pathological and anatomical characteristics of fracture knitting under conditions of food and defense reflexes. Soob. AN Gruz. SSR 18 no.1:95-102 Ja '57. (MLRA 10:5)

1. Laboratoriya kortiko-vistseral'noy patologii Instituta fiziologii im. I.P. Pavlova AN SSSR. 2. Kafedra patologicheskoy anatomii Leningradskogo instituta usovershenstvovaniya vrachey im. S.M. Kirova. 3. Kafedra patologicheskoy anatomii Tbilisskogo meditsinskogo instituta. Predstavleno akademikom V.K. Zhgenti.
(FRACTURES) (CONDITIONED RESPONSE)



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320016-4"

VOCILKA, M., inz.; FIKEROVA, J.

Determining the pulp content in paper by bromination. Sbor cel pap no.7:259-268 '62.

VOCILKA, M.

Some experiences in using the IGT tester for determining the printability of paper. Sbor cel pap 9:187-206 '64.

VOCILKA, Milos, inz.

Testing the scoring ability of paperboard. Papir a celulosa 20 no.1:27-29 Ja '65.

1. Research Institute of Paper and Cellulose, Worksite Prague.

VOCL, J.

Operational practice of students of railroad schools. p. 178

ZELEZNICAR. Praha, Czechoslovakia, No. 7, July 1959

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

U-3

HUNGARY/General Problems of Pathology - Comparative Oncology. Tumors of Man.

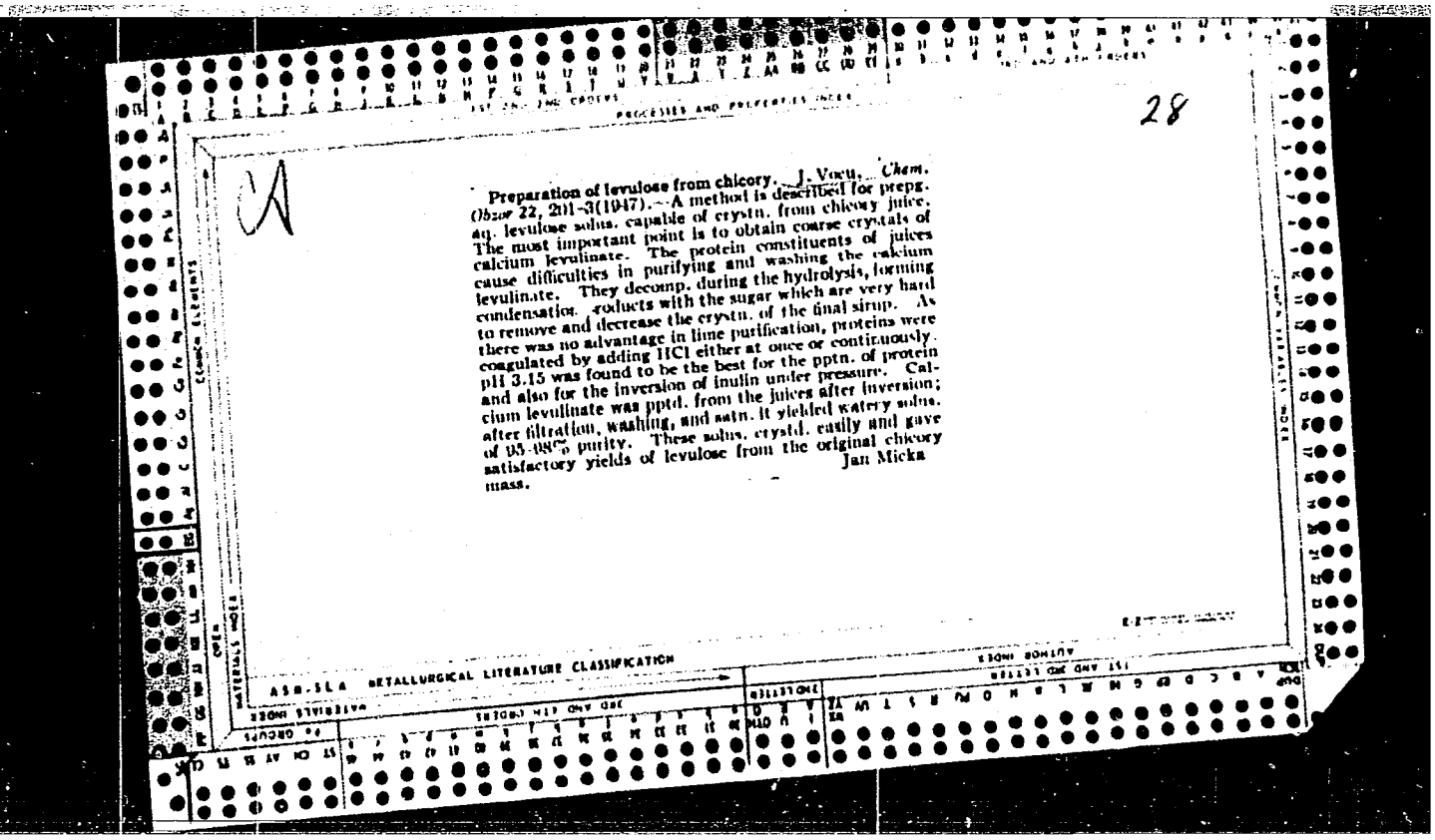
Abs Jour : Ref Zhur - Biol., No 16, 1958, 75557

Author : Vocsei, Anna; Rutkai, Pal
Inst : -
Title : Metastases of Malign Tumors into the Myocardium.

Orig Pub : Orv. hetilap., 1957, 98, No 30, 818-821

Abstract : No abstract.

Card 1/1

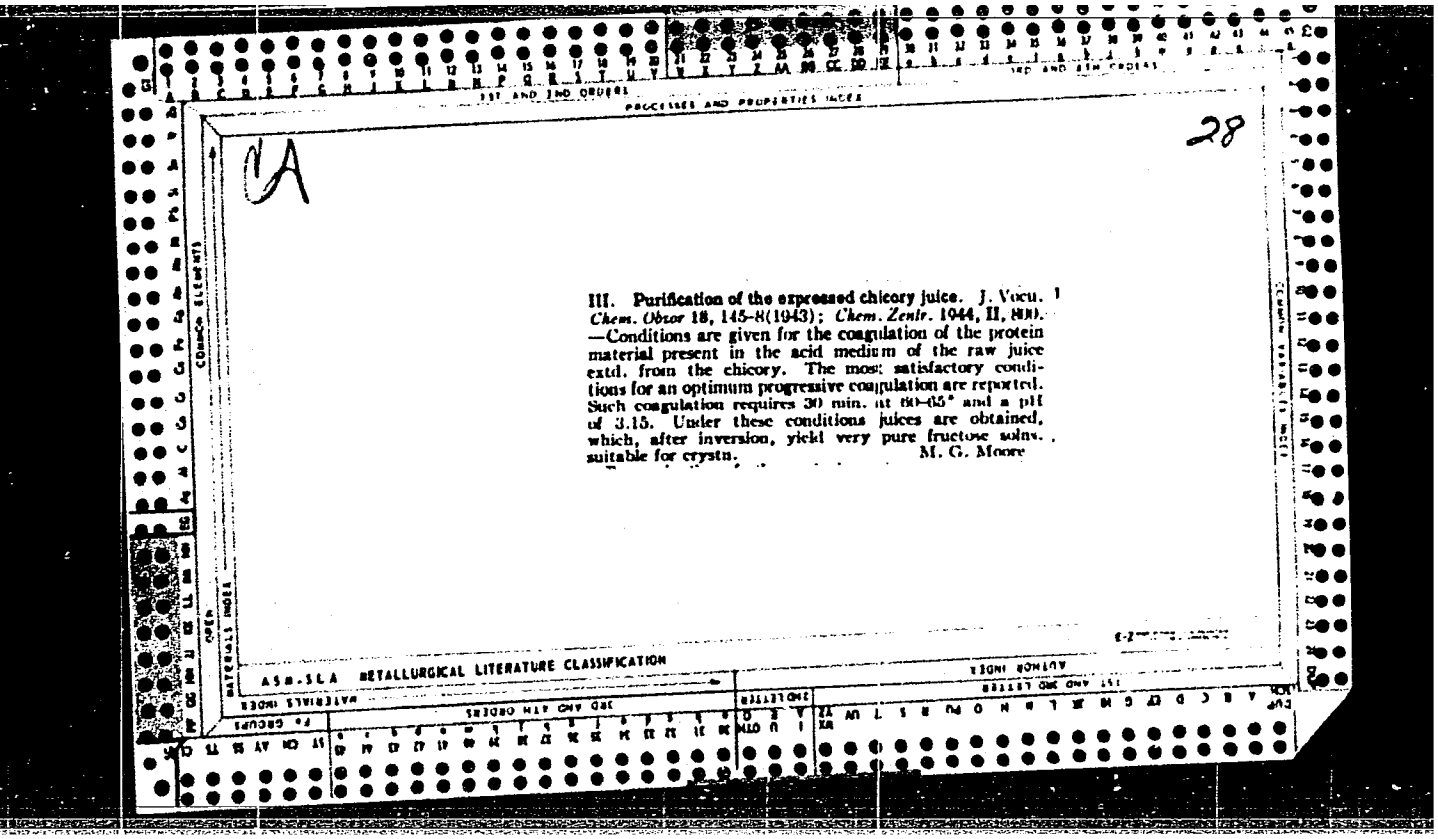


28

Preparation of levulose from chicory. J. Vacu, *Chem. Obzor* 22, 201-3(1947).—A method is described for prepg. aq. levulose solns. capable of crystn. from chicory juice. The most important point is to obtain coarse crystals of calcium levulinate. The protein constituents of juices cause difficulties in purifying and washing the calcium levulinate. They decomp. during the hydrolysis, forming condensation products with the sugar which are very hard to remove and decrease the crystn. of the final sirup. As there was no advantage in lime purification, proteins were coagulated by adding HCl either at once or continuously. pH 3.15 was found to be the best for the pptn. of protein and also for the inversion of inulin under pressure. Calcium levulinate was pptd. from the juices after inversion; after filtration, washing, and satn. it yielded watery solns. of 95-98% purity. These solns. crystd. easily and gave satisfactory yields of levulose from the original chicory mass.

Jan Micka

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

28

III. Purification of the expressed chicory juice. J. Vocu. *Chem. Obzor* 18, 145–8(1943); *Chem. Zentr.* 1944, II, 880. —Conditions are given for the coagulation of the protein material present in the acid medium of the raw juice extd. from the chicory. The most satisfactory conditions for an optimum progressive coagulation are reported. Such coagulation requires 30 min. at 60–65° and a pH of 3.15. Under these conditions juices are obtained, which, after inversion, yield very pure fructose solns., suitable for crystn. M. G. Moore

Vociu, M.

H-27

COUNTRY:	:	Rumania
CATEGORY	:	
ABS. JOUR.	:	RZKhim., No. 5 1960, No. 19752
AUTHOR	:	Vasilescu, I. and Vociu, M.
INST.	:	Not given
TITLE	:	The Production of Calcium Gluconate by the Biochemical Oxidation of Glucose
ORIG. PUB.	:	Rev Chim (RPR), 10, No 2, 89-91 (1959)
ABSTRACT	:	The strain Aspergillus niger has been adapted to the oxidation of glucose to gluconic acid. The fermentation proceeds satisfactorily at 30-40° with an average yield of about 94% in 34 hrs. From authors' summary

CARD: 1/1

VODA, Jiri, inz.; ZABKA, Milan, inz.

Loosening the frozen earth by explosives. Inz stavby 11 no.8: 291-293 Ag '63.

1. Vyskumny ustav stavenictva, Bratislava (for Voda). 2. Zapadoslovenske kamenolomy a strkopisky, Bratislava (for Zabka).

VODA, J.

A half century after the construction of the biggest radiotelegraphic transmitter in the USA, an achievement of the Slovak Rev. Jozef Murgas. p. 433

TECHNICKA PRACA. Bratislava, Czechoslovakia. Vol. 7, No. 10, Oct. 1955

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

VODA, JURAJ

Jozef Murgas, priekopnik radiotelegrafie. (Vyd. 1) Martin, Osveta, 1955. 103 p. (Priekopnici nasej pritomnosti, 2) (Josph Murgas, pioneer in radiotelegraphy. 1st ed. illus., bibl.)

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

L 41519-65 ARG/EEO-2/EWG(j)/EWT(d)/FBD/FSS-2/EWG(r)/EWT(l)/FBO/EWP(e)/EWA(c)/
EWT(m)/FS(v)-3/EPF(c)/EEC(k)-2/EWG(m)-2/EWP(i)/EWP(f)/EWG(v)/EWP(c)/EWP(v)/EWA(l)/
EPR/EWP(j)/T-2/EWG(a)-2/EWP(h)/EPA(sb)-2/EEC(c)-2/EED-2/EWG(c)/FCS(k)/EWP(b)/
AM6045110 Pi-4/Pw-4/Pz-4/Pn-4/ BOOK EXPLOITATION Pi-4/Fh-4/Pae-2/Po-4/Pr-4/
Po-4/Pe-5/Pq-4/Pac-4/Pr-4 IJP(c) AST/TT/WM/DD/WW/GW/BC/WH

Barvir, Miroslav, (Engineer); Benes, Konrad, (Professor, Doctor); Bouska, Jiri, (Doctor); Hulil, Ivo, (Graduate in Philosophy); Ceplecha, Zdenek, (Candidate of Physical and Mathematical Sciences); Codr, Milan, (Doctor); Dolezal, Vladimir, (Doctor); Dvorak, Josef, (Doctor); Dvorak, Antonin, (Candidate of Medical Sciences); Guth, Vladimir, (Candidate of Medical Sciences, Docent, Doctor); Horak, Zdenek, (Doctor of Physical and Mathematical Sciences, Corresponding Member of the Czechoslovak Academy of Sciences, Professor, Doctor); Hospodar, Jan, (Doctor of Physical and Mathematical Sciences, Doctor); Kleczek, Josip, (Doctor); Kleat, Emil, (Candidate of Physical and Mathematical Sciences); Kolodovsky, Milan; Koml, Vladimir (Doctor); Kopecky, Miloslav, (Candidate of Legal Sciences); Krivsky, Ladislav, (Candidate of Physical and Mathematical Sciences); Kviz, Zdenek, (Candidate of Physical and Mathematical Sciences); Ledvina, Milan, (Engineer); Malcik, Vladimir, (Doctor); Moravek, Milan, (Candidate of Medical Sciences); Mrazek, Jaroslav, (Candidate of Technical Sciences); Neuzil, Ludek, (Doctor); Novotny, Zdenek, (Candidate of Physical and Mathematical Sciences); Novotny, Zdenek, (Doctor); Pernegr, Jaroslav, (Doctor, Candidate of Physical and Mathematical Sciences); Peaek, Rudolf, Professor, Doctor, Engineer); Pipal, Miloslav, (Doctor of Technical Sciences, Corresponding member, of the Czechoslovak Academy of Sciences); Plavec, Miroslav, (Doctor); Pokorny, Zdenek, (Candidate of Physical and Mathematical Sciences, Docent, Doctor);

Card 1/2

14

L 41519-65
AM4045110

Ruml, Vladimir, (Candidate of Medical Sciences, Doctor); Sadil, Josef, (Doctor of Physiological Sciences); Schnal, Ladislav; Stverak, Jiri, (Doctor); Svestka, Zdenek, (Doctor); Tuma, Jaroslav, (Candidate of Physical and Mathematical Sciences, Doctor); Tysl, Vaclav, (Docent, Engineer); Ulehla, Ivan, (Candidate of Technical Sciences, Professor, Doctor); Valnicek, Doris, (Candidate of Physical and Mathematical Sciences, Doctor); Vanysek, Vladimir, (Candidate of Physical and Mathematical Sciences, Docent, Doctor); Vlasak, Marian, (Candidate of Physical and Mathematical Sciences; Doctor); Voda, Miloslav, (Engineer)

Principles of astronautics (Zaklady kosmonautiky) Prague, Orbis, 1964. 445 p. illus., biblio. 5000 copies printed.

TOPIC TAGS: cosmonautics, rocket, satellite, space flight, missile

PURPOSE AND COVERAGE: This publication is a popular scientific reference book for people working in cosmonautics. The book presents a survey of cosmonautics and space flight up to 1 June 1963.

TABLE OF CONTENTS:

Card 2/8

DVORAK, Jaroslav; MUSIL, Rudolf; SEKANINA, Josef; ZUREK, Vladimir; TRACHTULEC, Jan; VODA, Oldrich; CHLUPAC, Ivo; HOMOLA, Vladimir; PESEK, Jiri; ZAK, Lubor; GASPARIK, Jan

Activities of the branches of the Czechoslovak Society for Mineralogy and Geology in Brno, Most, Olomouc, Ostrava, Praha and Zilina. Cas min geol 7 no.3:385-392 '62.

L 64371-65 EWP(e)/EWP(t)/EWP(k)/EWP(z)/EWP(b) JD

ACCESSION NR: AP5023497 RU/0018/64/000/010/0544/0547

AUTHOR: Nagy, Ladislau; Tertan, Alexandru; Szilagyi, Mihai; Voda, Teodor

TITLE: Study on the thermal conductivity of sintered parts on an iron basis

SOURCE: Constructia de masini, no. 10, 1964, 544-547

TOPIC TAGS: iron, powder metal, powder metal sintering, powder metal compaction, heat conductivity

ABSTRACT: The authors studied the thermal conductivity of sintered iron parts in terms of some parameters of the sintering process, namely the pressure at which the powder was compressed, the sintering temperature and the duration of the process. Orig. Art. Incl.: 2 figures, 4 formulas and 6 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, TD

NR REF SOV: 001 OTHER: 003 JPRS

1/1

VODA, Viorel G., elev (Bucuresti)

Solved problems; problem 4532. Gaz mat B 13 no.3:153-154 Mr '62.

VODA, V., elev (Bucuresti)

On teaching logarithms. Gaz mat fiz 14 no.10:534-536 O '62.

VODA, G. Viorel; DUMITRESCU, Florea I.; STRATESCU, Ion, student; IONESCU-TIU, C.; DOBRE, Nelu, prof. (Merei Buzau); POPESCU, Eleodor (Tr. Severin); GHEORGHIU, D.R. (Timisoara); GRIGORE, Viorel (Oroftiana).

Exercises and problems proposed for grades 5-8. Gaz mat B 14 no.12:741-743 D '63.

SANDULACHE, C. (Negresti, Iasi); IONESCU-TIU, C.; PETRU, Simon; MIHAILEANU, N.; VODA, Gh. Viorel (Bucuresti); BATINETU, D.M. (Bucuresti); POPA, Eugen, (Iasi); STRATESCU, Ion

Solved problems. Gaz mat B 15 no.7:301-308 Jl '64.

VODACEK, O.

VODACEK, O. Brown-coal mills for pulverized fuelfiring. p. 486.

Vol. 6, no. 12, Dec. 1956
ENERGETIKA
TECHNOLOGY
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

VODACEK, O., inz.; SANDA, J., inz.; PICKA, V., inz.

Comparison of boilers with various coal grinding systems and their suitability for heavy duty units. Strojirenstvi 14 no.11:866-870 N '64.

1. Research Institute of Electric Equipment, Brno.

KADLEC, Vladimir, doc., dr.; VODACEK, Leo, inz.

Use of linear programing in foundries. Hut listy 16 no.4:256-259 Ap '61.

VODACEK, Leo, inz.; KOZAR, Zdenek, inz.

Solution of the tasks of linear programming on automatic computers. Pod org 18 no. 1:32-34 Ja '64.

1. Ceskomoravska-Kolben-Danek Praha.

VODAČEK, O.

Vodacek, O. Grindability of solid fuels. (2d supplement) p. 17.
ENERGETIKA. Praha. Vol. 5, no. 7, Aug. 1955.

SO: Monthly List of the East European Accession, (EEAL), LC. Vol. 4, no. 10, Oct. 1955. Uncl.

VODACEK, O.

Grindability of solid fuels. (2d supplement) p. 17.
ENERGETIKA, Praha, Vol. 5, no. 7, Aug. 1955.

SO: Monthly List of East European Accessions,(EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

VODACEK, Ota, inz.

Two rotor coal pulverizer. Energetika Cz 12 no.7:376-378 Jl '62.

COJA, N., conf.; RUSU, O.; TURCAS, A.; VODAILO, St.; GRUNFELD, T.

Staphylococcal infection in the puerperant and the newborn. Microbiologia (Bucur) 6 no.1:28 Ja-F '61.

VODAK

CZECHOSLOVAKIA / Chemical Technology. Ceramics, glass, cement, materials, concrete. H

Abs Jour: Ref Zhur Khimiya, No 12, 1958, 40347.

Author : Vodak.
Inst : Not given.
Title : An Electromagnetic Separator for Ceramic Refuse.

Orig Pub: Stavivo, 1957, 35, No 12, 490-491.

Abstract: The working principle, work and efficiency of a new separator for the removal of Fe is described. The apparatus was manufactured in Zapadnocheshskom ceramic plant in Gorni Brsziza, according to the blue prints of NII of technology and mechanization in building industry.

Card 1/1

Czechoslovakia/Weeds and their Control N

Abs Jour : Ref Zhur-Biol., No 2, 1958, 6412

Author : Vodak A.
Inst : Not given
Title : Application of Herbicides, an Important Measure of Weed Control

Orig Pub : Za vysokou urodu, 1957, 5, No 5, 100-103

Abstract : In Czechoslovakia herbicides of domestic origin are used: kainite, cyanamide, green vitriol, sodium of dinitrocresol, nitrous copper oxide, sodium salts 2,4-D and 2-M-4-Kh. The last named salt is used in planting flax, the other in cereal crops. Means of application are described.

Card 1/1

VODAK, ALES

Semena a plody plevelu. Praha, Statni pedagogicke nakl., 1954. 45 p. (Ucebni texty vysokych skol)

SOURCES: EEAL LC Vol. 5 No. 10 Oct. 1956

VODAK, ALES

Osivo a sad. Praha, Statni pedagogicke nakl., 1956.
79 p. (Ucebni texty vysokych skol)

SOURCES: EEAL LC Vol. 5 No. 10 Oct. 1956

VODAK, ALES

"Semena nebo plody nasich kulturnich rostin a nejcastejsich plevelu. Zdenik Kropac, Marie Nejedia: Klicni rostliny nasich beznych plevelu. (Vyd. 1.) Praha Ceskoslovenska akademic zemedelskych ved ve Statnim zemedelskem nakl., 1956. 241 p. (Rostlinna vyroba, 551) (Seeds and spores of our agricultural plants and most common weeds. Zdenek Kropac, Marie Nejedia: Sprouts, of our current weeds. 1st ed. illus., bibl.)
CU Not in DLC

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 7, July 1958

CIMALA, Zytmek, inz.; VODAK, Jar.

Mechanization and automation of transportation in mine stations.
Rudy 12 no.9:355-358 S '64.

1. Jachymovske doly National Enterprise, Rozna.

VODAK, Pavel, SULC, Antonin

School phobia and truancy. Cesk.psychiat. 56 no.2:109-107 Ap '60.

1. Psychiatricke oddeleni KUNZ, Zachytny detsky domov v Liberci.
(CHILD PSYCHOLOGY)

Vodak, V.

Work mechanization in the manufacturing plans of heatproof products. p. 96

(Stavivo. Vol. 35, no. 3, Mar. 1957. Praha, Czechoslovakia)

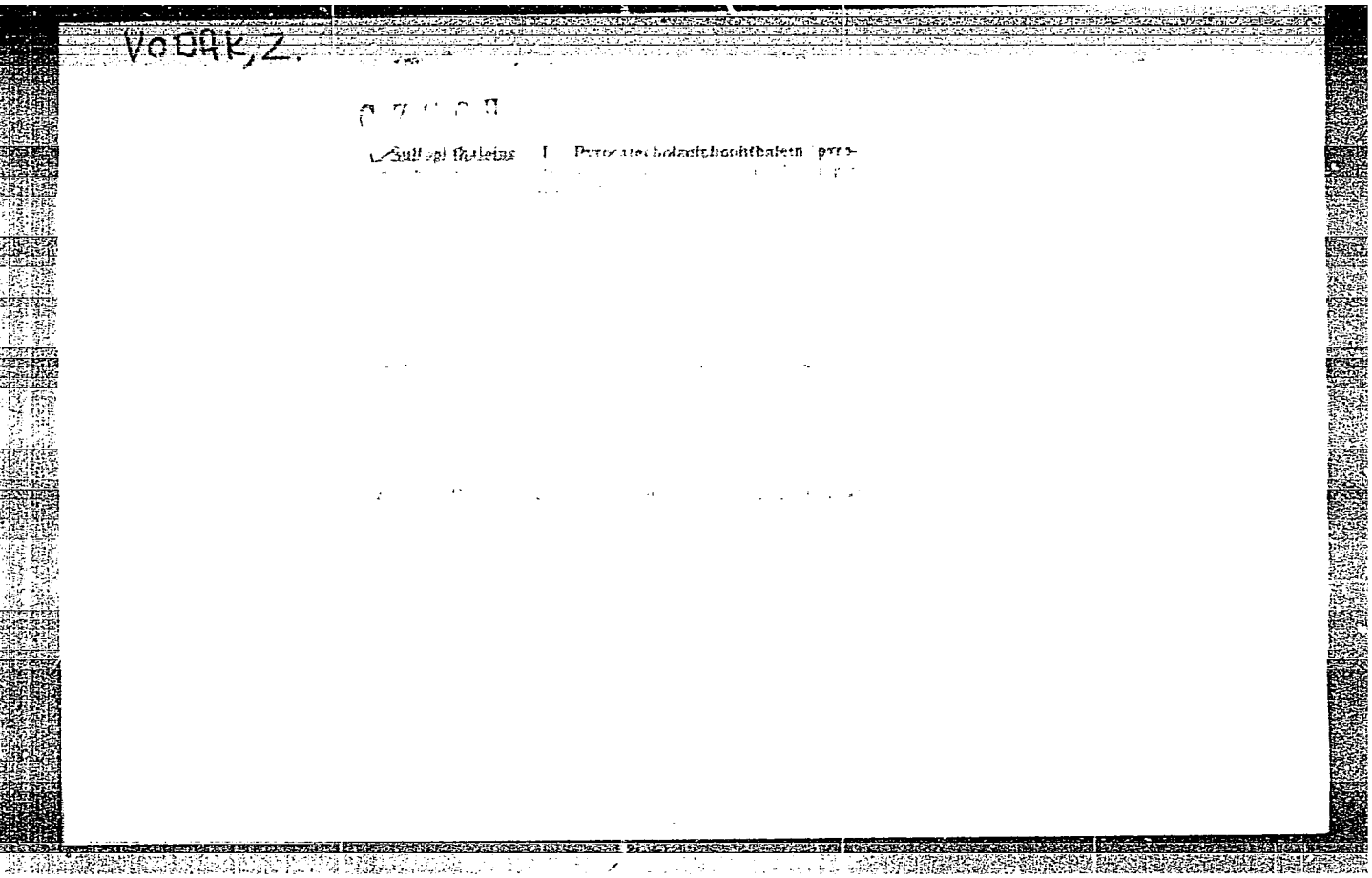
SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

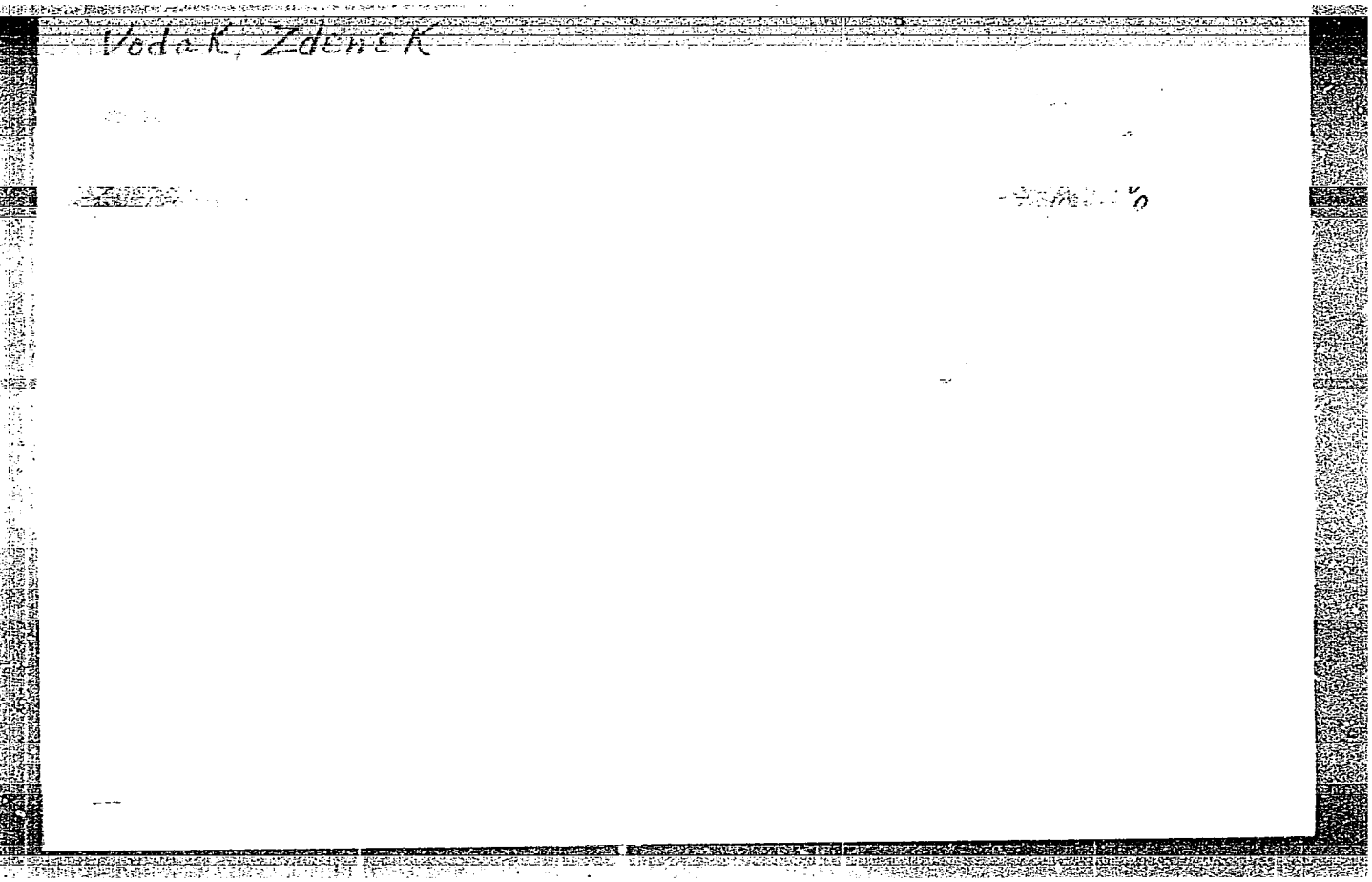
VODAK, V.

Presses for molding flooring tiles and facing tiles of powdered materials.

P. 20. (STAVIVO.) (Praha, Czechoslovakia) Vol. 36, no. 1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 158





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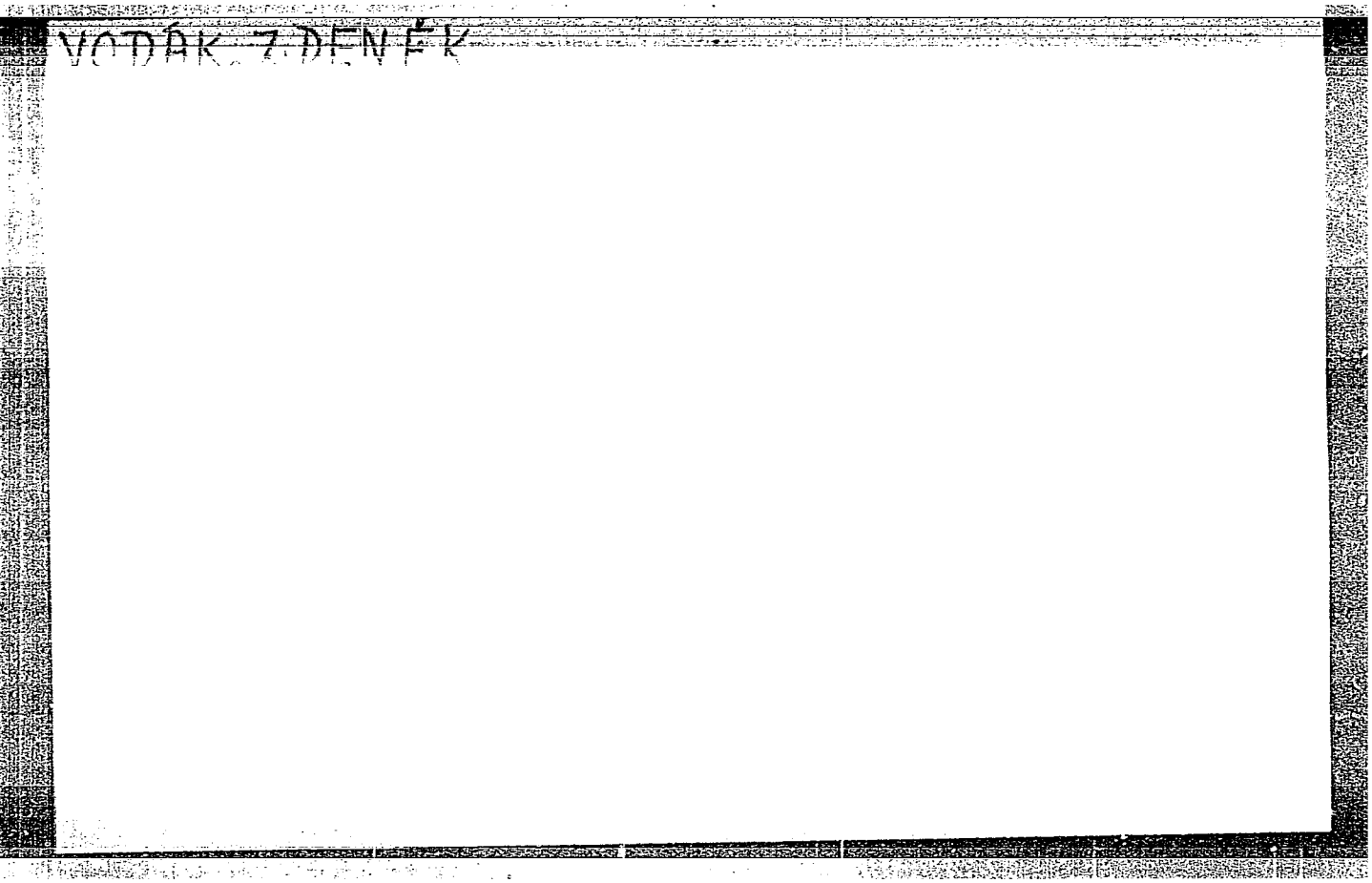

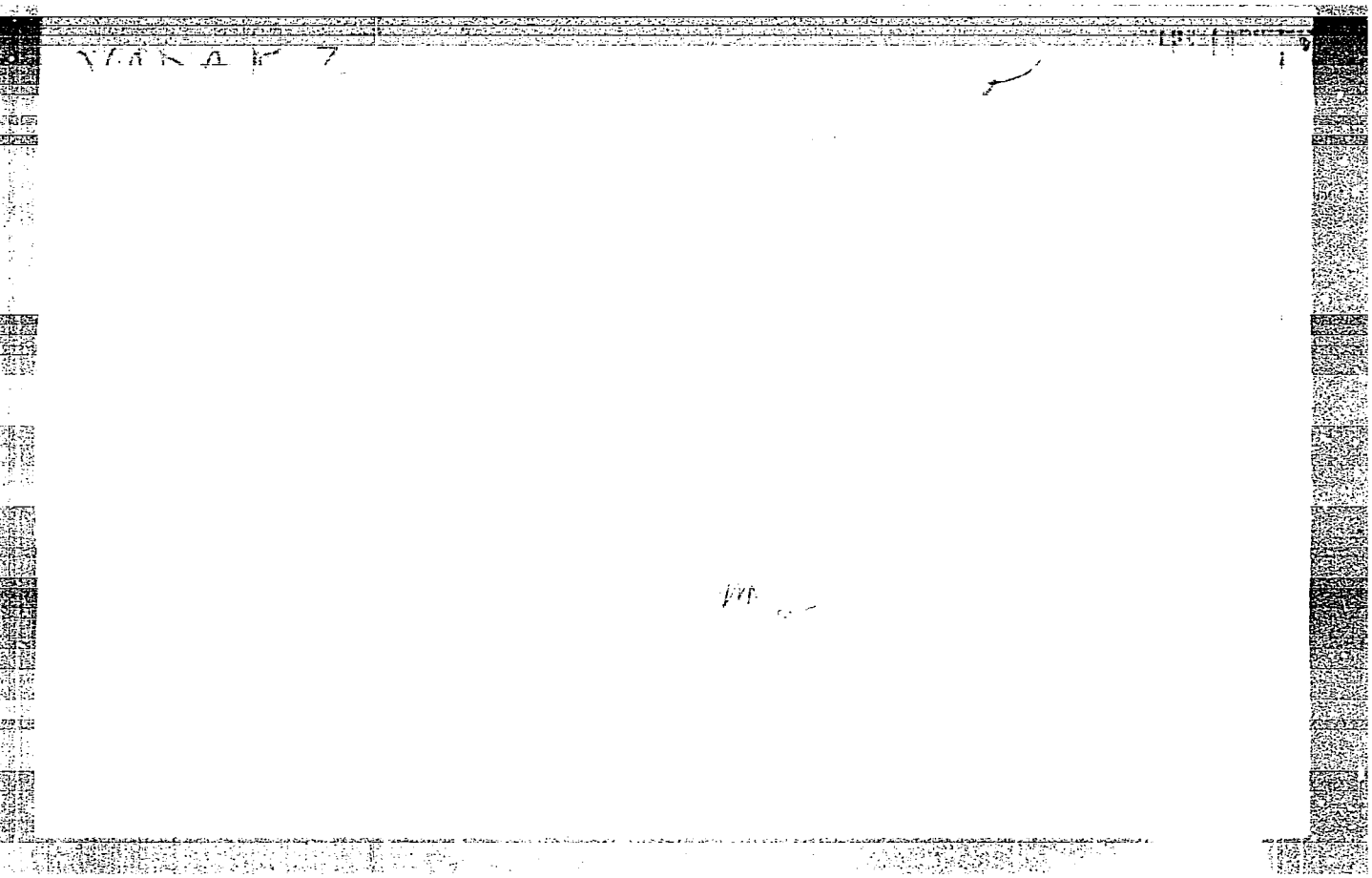

E-2

VODAK ZDENEK

CZEC[illegible]KIA/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26819.

Author : Vodak, Zdeněk; Leminger, Otakar.
Inst :
Title : Sulfonephthaleins. II. Preparation and Properties of Pyrogallosulfonephthalein (Pyrogallic Red, New Chelatometric Indicator.

Orig Pub: Chem. listy, 1956, 50, No. 6, 943 - 947.

Abstract: An improved method of preparation of pyrogallosulfonephthalein (I) is described. 276 g of anhydride of o-sulfobenzoic acid, 378 g of pyrogallic acid and 480 ml of xylene are heated distilling the forming water off, 135 min. later xylene is distilled off with steam, the precipitate is dissolved in the solution of 190 g of

(Ib)

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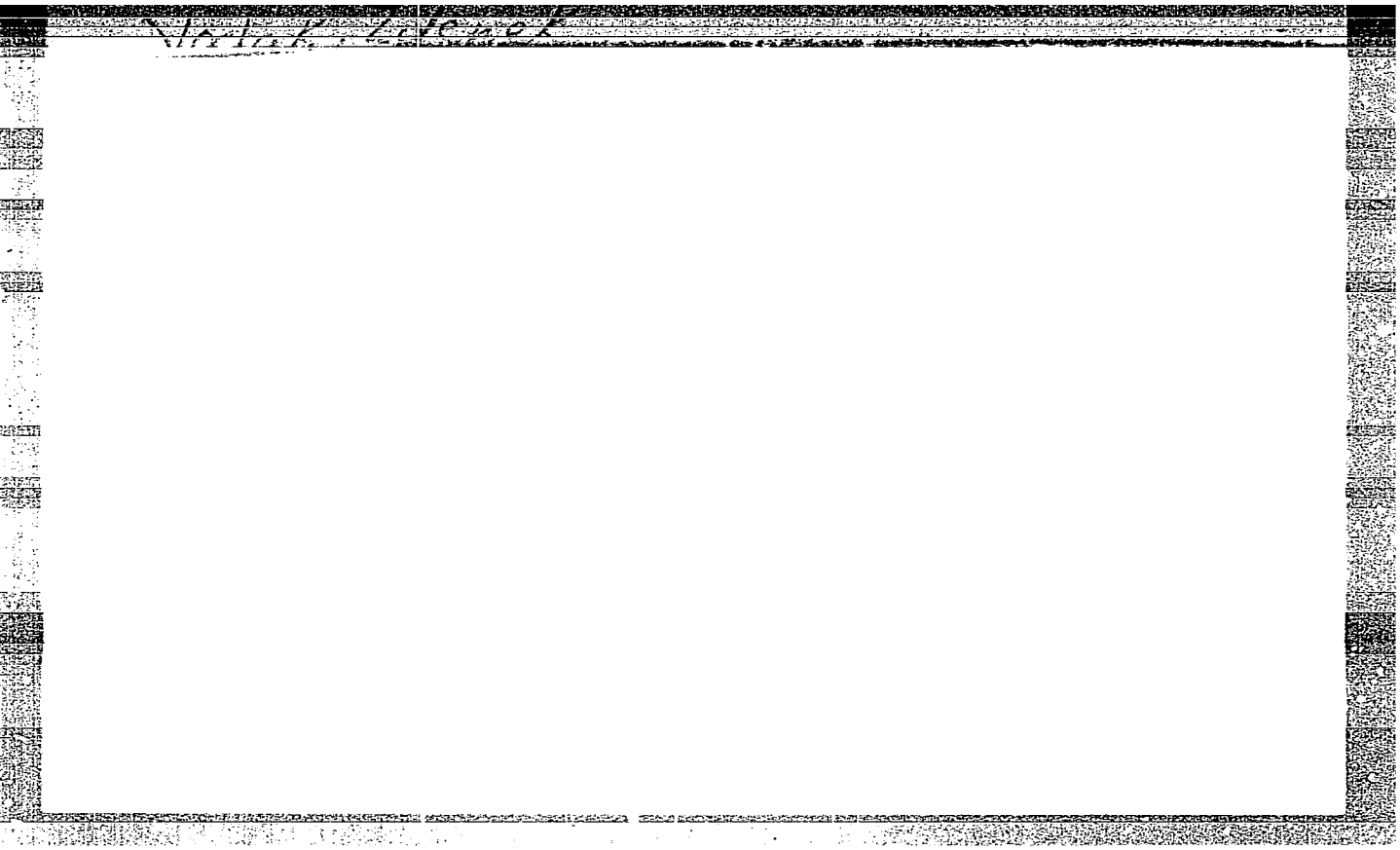

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320016-4"

VODAK, Z.; LEMINGER, O.

"Specific chromatographic test for silver cations using pyrogallolsulfonephthalein and its dibromo derivatives. In German."

p. 1050 (Collection of Czechoslovak Chemical Communications. Sbornik Chekhoslovatskikh Khimicheskikh Rabot.) Vol. 22, no. 3, June 1957. Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

LEMINGER, Otakar; FARSKY, Miroslav; VODAK, Zdenek

Contribution to the preparation of γ-(2,4-dichlorophenoxy) butric acid. Chem prum 14 no.6:302-304 Je '64.

1. Spolek pro chemickou a hutni vyrobu National Enterprise, Usti nad Labem.

VODAK, Zdenek; ADAMKOVA, Ludmila

Nonpressure polymerization of isobutylene catalyzed with acid ion-exchanging substances. Chem prum 14 no.12:660-661 D '64

1. Spolek pro chemickou a hutni vyrobu National Enterprise, Usti nad Labem.

VODAKOV, Yu. A.

57-27-7-26/40

AUTHORS: Lomakina, G. A., Vodakov, Yu. A., Naumov, G. P., Maslakovets, Yu. P.

TITLE: A Valve Photocell of Cadmium Telluride. (A Preliminary Report) (Ventil'nyy fotoelement iz tellurida kadmiya. (Predvaritel'noye soobshcheniye)).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, p. 1594 (USSR)

ABSTRACT: For the production of p-n transitions n-type plates of CdTe with an area of 1 to 2 qcm consisting of several (3 to 5) crystals were used. Their specific conductivity was $\sigma \approx 40$ Ohm^{-1}. cm^{-1}, thermal-EMK $\alpha \simeq 200$ μV/ degree. The width of the forbidden zone was 1,34 eV. The thin p-layer was formed by means of thermal diffusion of elements of the first group of the periodic law. The ohmic contact on the n-layer was obtained by melting of indium and on the p-layer by melting of gold. The p-n transitions obtained in this manner were very "directed" with a distinctly marked saturation in the inverse direction. In sunlight with 30 mW/qcm the photo-EMK of this photoelectric

Card 1/2

A Valve Photocell of Cadmium Telluride
(A Preliminary Report)

57-27-7-26/40

cell amounted to more than 500 mV and the short-circuit amperage 2 mA/qcm. The loaded part of the volt-ampere characteristic in this connection approached the rectangular form. The efficiency of such a photoelectric cell has the order of magnitude of 2 %. This value, however, is by far no boundary value for photocells of CdTe. The maximum of the spectral sensitivity of the obtained photocells lay within the boundaries of 0.75 to 0.78 μ and the long-wave boundary of photosensitivity was 0.9 μ. The photoelectric cells of cadmium-telluride possess a high sensitivity as compared to X-rays.

ASSOCIATION: Institute for Semiconductors AS USSR, Leningrad
(Institut poluprovodnikov AN SSSR, Leningrad)

SUBMITTED: January 30, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Photoelectric cells-Development 2. Photoelectric cells-Design
3. Cadium-telluride-Applications

VODAKOV, Yu.A.; LOMAKINA, G.A.; NAUMOV, G.P.; MASLAKOVETS, Yu.P.

Properties of p - n junctions in photocells from cadmium telluride. Fiz. tver. tela 2 no.1:15-22 Jan '60. (MIRA 14:9)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Cadmium telluride--Electric properties)
(Photoelectric cells)

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S/181/60/002/01/01/035
B008/B011

9.4160

AUTHORS: Vodakov, Yu. A., Lomakina, G. A., Naumov, G. P., Maslakovets, Yu. P.

TITLE: A Photocell Made of Cadmium Telluride With a p-n Junction

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 1, pp. 3 - 7

TEXT: The authors report on the properties of a new cadmium-telluride photocell. Cadmium-telluride crystals with a cubic modification were used for its preparation. The light characteristics of the CdTe photocells are similar to those of Ge and Si photocells, which have a p-n junction. Fig. 1 shows the characteristics of the CdTe cell for an irradiation of 4, 30, 300 and 3,000 lux. Current-voltage characteristics of the CdTe photocell are shown in Fig. 2 for room temperature, in Fig. 3 for +50°C, and in Fig. 4 for +101°C. According to their character, they are similar to those of silicon photocells. Fig. 5 shows the temperature dependence of the electromotive force, of short-circuit current, and of the maximum capacitance yielded to the outer circuit under continuous exposure. Fig. 6 shows the characteristics of another

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A Photocell Made of Cadmium Telluride With a p-n Junction

S/181/60/002/01/01/035
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photocell at a relatively short exposure. Fig. 7 shows the temperature dependence of the short-circuit current, of the electromotive force and of the maximum capacitance yielded to the outer circuit. Fig. 8 shows, in relative units, the spectral sensitivity of the CdTe photocell referred to an equal amount of quanta and to an equal incident radiation energy. Cadmium-telluride photocells with p-n junction are very sensitive to ultraviolet and X rays. CdTe photocells have at present an efficiency of 4% and can be utilized for solar batteries.[29] The lower efficiency is compensated by their simpler and less expensive preparation. Due to their spectral sensitivity and a high duty factor of the characteristics, they might be used to solve some technical problems. The authors thank T. L. Koval'chik for his discussion of experimental results and G. B. Dubrovskiy for his examination of the spectral sensitivity of the photocells. B. K. Subashev is also mentioned. There are 8 figures and 6 references, 4 of which are Soviet.

81251

A Photocell Made of Cadmium Telluride With a p-n Junction

S/181/60/002/01/01/035
B008/B011

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad
(Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: April 9, 1959

Card 3/3

S/181/60/002/01/03/035
B008/B011

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24.7700

AUTHORS: Vodakov, Yu. A., Lomakina, G. A., Naumov, G. P., Maslakovets, Yu. P.

TITLE: Properties of p-n Junctions in Cadmium Telluride Photocells

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 1, pp. 15-22

TEXT: The current-voltage characteristics of cadmium telluride photocells were thoroughly studied by means of a circuit (Fig. 1) consisting of the current source, a diode, a current generator (which simulates the photocurrent), a resistor connected in series, and a shunt (Figs. 1 to 10). The technique used for the preparation of cadmium telluride photocells leads to the formation of a p-n junction. The depth of its position can be regulated. In the resulting p-type layer the minority carriers have a very short lifetime, and the electrical conductivity of the layer is poor. For this reason it plays the part of a filter with respect to the incident radiation, and is the main cause responsible for the high resistances. The authors obtained photocells with p-n junctions, whose current-voltage

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Properties of p-n Junctions in Cadmium Telluride Photocells

S/181/60/002/01/03/035
B008/B011

characteristics at room temperature complied quantitatively with Shockley's theory which considers a recombination in the p-n junction. Near the surface, such characteristics are very difficult to obtain. Their form is in most cases distorted by a "hump". A tunnel effect is assumed to occur in CdTe photocells on narrow points of the p-n junctions. By applying the suitable technique it is possible to obtain a p-n junction with a relatively high efficiency even near the surface, both on a low and a high exposure level. An efficiency of 4% was attained with the best photocells in the sunlight, although, with a band width of 1.4 ev, the conversion coefficient of solar radiation into electric energy should be considerably higher. This low efficiency is for a large part explained by the presence of a semitransparent metal electrode through which only about 50% of the incident light passes. The second factor affecting the efficiency of CdTe photocells, is the short lifetime both in p-type and n-type CdTe. The efficiency could be only increased by prolonging the lifetime of the minority carriers in p-type and n-type cadmium telluride. An increase of up to 7% should be expected in this case. This, however, would entail, due to a complicated technique, a considerable increase in the cost of the photocell. When preparing photocells with an efficiency

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Properties of p-n Junctions in Cadmium Telluride Photocells

of about 4% it is, however, possible to restrict oneself to relatively simple methods of preparation. The authors thank B. Ya. Moyzhes for discussing the results. There are 10 figures and 7 references, 2 of which are Soviet.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: April 9, 1959

Card 3/3

24.7700

S/181/60/002/01/13/035
B008/B011

AUTHORS: Vodakov, Yu. A., Lomakina, G. A., Naumov, G. P., Maslakovets, Yu. P.

TITLE: Investigation of the Surface Layers on Cadmium Telluride Crystals

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 1, pp. 55-61

TEXT: The authors describe experiments made for the investigation of the surface layers of cadmium telluride (Figs. 1-6). The diffusion coefficient is calculated in an appendix. The mechanism of the formation of p-type surface layers was investigated. The respective conductivity in CdTe is due to an admixture of elements of groups I and V or by the presence of Cd vacancies. The most likely is the formation of Cd vacancies or the disappearance of the donor impurity from the surface, which, in the case of p-type CdTe partly compensates the acceptor impurity. Two mechanisms may be assumed which, in the air and at a temperature of 200°C, lead to the formation of Cd vacancies: The one is the diffusion of oxygen into the surface layer and, hence, formation of

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Investigation of the Surface Layers on Cadmium Telluride Crystals

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metalloid excess therein. The second mechanism is the disappearance of cadmium from the surface layer; also this process can be strongly influenced by the presence of oxygen. Compared to the glowing in the air, pre-heating in deoxidized argon or hydrogen has a somewhat inhibiting effect on the diffusion process, but all the same, p-type conductive layers are formed. Also in this case, the influence of oxygen is not excluded. In the authors' opinion, the stimulating main factor is atmospheric oxygen. It was not clarified, however, which type of influence predominates here. On longer standing in the air or on preheating up to a correspondingly high temperature, the properties of CdTe are irreversibly changed only from the surface. Important changes in volume properties start occurring when the processes beginning from the surface penetrate the material to a considerable depth. The same phenomena can be observed in n-type CdTe crystals with low resistivity. Strikingly high is the diffusion coefficient of acceptor impurity (appendix), which raises the surface layer conductivity. Its height can be explained by the great number of vacancies and mechanical tensions in the crystal lattice, occurring in consequence of the treatment and etching of the surface. The authors thank B. Ya. Moyzhes

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and T. L. Koval'chik for assistance given. There are 6 figures and 3 references: 1 Soviet.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: April 9, 1959

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S/181/62/004/003/043/045
B101/B102

AUTHORS: Lomakina, G. A., and Vodakov, Yu. A.

TITLE: Phonon drag effect in α-SiC crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 3, 1962, 820 - 822

TEXT: Because of the high thermal conductivity of SiC a special method was developed of measuring the thermo-emf in n-type and p-type α-SiC crystals. In rectangular, 0.5 mm thick specimens of monocrystalline SiC (resistivity up to 10^4 ohm·cm) two pits with a diameter less than 0.5 mm were produced by means of ultrasound, the distance of the pits from each other being greater than their diameter. Electrical contacts were fit into the bottom of the pits and chromel-alumel thermocouples were pressed in. The measured temperature coefficient α_e of thermo-emf for n-type and p-type specimens was not consistent with the equation of Pisarenko: $\alpha_e = (k/e)\left\{A + \ln\left[2\,(2\pi m^* k/h^2)^{3/2}\right] - \ln n + (3/2)\ln T\right\}$ where $m_n^* = 0.6\ m_o$; $m_p^* = 1\ m_o$ or $2m_o$, $A = 2$. The deviations are explained by phonon drag

which may arise due to the high thermal conductivity of SiC. The phonon drag effect α_{ph} calculated according to C. Herring (see below) for specimens with carrier concentrations of $5.6 \cdot 10^{16}$ cm^{-3} and $2.7 \cdot 10^{17}$ cm^{-3} gave a linear dependence $\alpha_{ph} = BT^{-2.3}$. In n-type SiC with a carrier concentration of $3.6 \cdot 10^{18}$ cm^{-3} a deviation from the straight line was observed which is caused either by degeneracy or by saturation. For p-type SiC, at temperatures higher than room temperature, α_{ph} was linear just as in n-type SiC, but owing to the low hole mobility its value was higher. The considerable decrease of α_{ph} at lower temperatures cannot be explained by the vanishing of phonon drag since at the same time the thermo-emf becomes smaller than α_e. It is assumed that the thermo-emf in p-type SiC is reduced by an additional electrical conductivity caused by an impurity band. There are 2 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The two references to English-language publications read as follows: I. A. Lely a. F. A. Kröger, Semiconductors and phosphors, New York, 525, 1958; C. Herring, Semiconductors and

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Phonon drag effect... S/181/62/004/003/043/045
B101/B102

phosphors, New York, 184, 1:58.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AS USSR, Leningrad)

SUBMITTED: December 25, 1961

Card 3/3

L 14979-63 EWT(1)/EWP(q)/EWT(m)/BDS AFFTC/ASD/SSD JD
ACCESSION NR: AP3005330 S/0181/63/005/008/2228/2229

AUTHOR: Blank, Yu. S.; Vodakov, Yu. A.; Mostovskiy, A. A. 59 58

TITLE: Some results of investigations of electroluminescence 21 in silicon carbide 27 27 p-n junctions

SOURCE: Fizika tverdogo tela, v. 5, no. 8, 1963, 2228-2229

TOPIC TAGS: silicon carbide electroluminescence, carrier-injection electroluminescence, injection luminescence, silicon carbide diode, light-generating diode

ABSTRACT: The production of light emission in silicon carbide p-n junctions by the application of continuous and pulsed electric fields has been investigated with the aim of appraising the practical potentialities of the phenomenon. The measurements showed that the intensity of luminescence at continuous excitation, varies linearly with the current density and that only a few volts produce a luminescence on the order of 100 nit. At an excitation with pulses of 5—20 μsec at 200 cps the afterglow inertia is about 10 μsec, and the intensity decreases 5%; pulses of about 1.2 μsec were required for saturation intensities,

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and a brightness of 1 stilb was momentarily achieved with 100-μsec pulses. Depending on the quality of the samples, the light emitted was green, yellow, or red. Orig. art. has: 3 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AN SSSR)

SUBMITTED: 20Mar63 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: PH NO REF SOV: 000 OTHER: 007

Card 2/2

L 30173-66 EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6012513 SOURCE CODE: UR/0181/66/008/004/1298/1299

AUTHORS: Vodakov, Yu. A.; Mokhov, Ye. N.; Reyfman, M. B. 84 81 B

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Diffusion of boron and aluminum in n-SiC

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1298-1299

TOPIC TAGS: silicon carbide, physical diffusion, boron, aluminum, pn junction, temperature dependence, activation energy

ABSTRACT: In view of the lack of data on the diffusion of boron and aluminum in n-SiC, in spite of the fact that it is extensively used for diffusion p-n junctions, the authors measured diffusion produced in a closed system based on vacuum-dense graphite from the gas phase at 1800 -- 2250C. The diffusion time reached 30 hours. n-type α-SiC was used with nitrogen concentration 1×10^{19}--2×10^{17} at/cm^3. The diffusion coefficient was calculated from the depth of the p-n junction, which in turn was measured by taking an oblique cut, using a thermal probe, and chemical decoration. Plots of the temperature dependence of the diffusion coefficients and empirical formulas corresponding to them are given.

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SHIMANOV, K.I., inzh.; VODAKHOV, L.A., inzh.

Prevent exogenous fires in mines. Bezop. truda v prom. 5 no. 5:13-15 My '61. (MIRA 14:5)

1. Upravleniye Sverdlovskogo okruga Gosgortekhnadzora RSFSR.
(Mine fires)

ZAYTSEV, A.P., red.; BORZOV, K.V., red.; BOGUSLAVSKIY, Yu.K., red.; BELOUSOV, V.G., red.; VODAKHOV, L.A., red.; IZRAITEL', S.A., red.; KOL', A.N., red.; LISYUK, S.S., red.; MOISEYEV, S.L., red.; MEL'NIKOV, N.V., red.; MOROZOV, V.P., red.; MUDROV, P.A., red.; POLYAKOVA, Z.K., red.; PODERNI, Yu.S., red.; POLESIN, Ya.L., red.; POKROVSKIY, L.A., red.; SLASTUNOV, V.G., red.; SKURAT, V.K., red.; STRUNIN, M.A., red.; SOKOLOVSKIY, M.M., red.; FEOKTISTOV, A.T., red.; CHESNOKOV, M.M., red.; SHUKHOV, A.N., red.; YAMSHCHIKOV, S.M., red.; BYKHOVSKAYA, S.N., red.izd-va; BERESLAVSKAYA, L.Sh., tekhn.red.

[Unified safety regulations in open-cut mining] Edinye pravila bezopasnosti pri razrabotke mestorozhdenii poleznykh iskopaemykh otkrytym sposobom. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 61 p. (MIRA 13:7)

1. Russia (1917- R.S.F.S.R.) Gosudarstvennyi komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru. (Strip mining--Safety measures)

GORDIN, Iosif Mikhaylovich; VODAKOV, A.A., inzhener, nauchnyy redaktor; KAPLAN, M.Ya., redaktor; PUL'KINA, Te.A., tekhnicheskiy redaktor.

[Extensible panel scaffolding for bricklaying] Panel'nye razdvizhnye podmosti dlia kirpichnoi kladki. Leningrad, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 46 p. (MLRA 8:1)
(Bricklaying) (Scaffolding)

ZHELTIKOV, V.F.; GORDIN, I.M.; SPIVAKOV, M.S.; ALEKSEYEV, N.P.; VODAKOV, A.A.

Adjustable scaffolding for bricklaying. Rats. i izobr. predl. v stroi. no.91:7-9 '54. (MLRA 8:8)

1. Trest Lenmekhmontazhstroy ispolkoma Lengorsoveta.
(Bricklaying) (Scaffolding)

VODAKOVA, E.I.

Effect of the functional state of the central nervous system on the development of experimental "thyrogenous" hypertension in animals of different ages. Sbor. nauch. trud. Ukr. nauch.-issl. inst. eksper. endok. 15:191-199 '59. (MIRA 14:11)
(HYPERTENSION) (AGE) (CEREBRAL CORTEX)

VODAKOVA, N.I. (Khar'kov, Sumskaya ul. d.47, kv.20); SHEDYUKOVA, O.A., (Khar'kov, ul. Oktyabr'skoy Revolyutsii, d.24, kv. 25)

Growth and development of tumors implanted in rats of various ages following induction of experimental neuroses. Vop.onk. 1 no.3: 121-125 '55. (MLRA 10:1)

1. Iz otdela vozrastnoy endokrinologii (zaveduyushchiy - Z.M.Dinershteyn) Ukrainskogo instituta eksperimental'noy endokrinologii (direktor - kandidat meditsinskikh nauk S.V.Maksimov)

(NEOPLASMS, experimental,
eff. of neuroses on develop. in rats of various ages)
(NEUROSES, experimental,
eff. of cancer growth in rats of various ages)
(AGING, physiology,
age factor in cancer responses to exper. neuroses in rats)

BUJAS, Z.; VIDACEK, S.; VODANOVIC, Mirjana

Effect of some pharmacological agents on the efficiency of repeated physical performances. Arh hig rada 11 no.4:261-287 '60.

1. Institut za medicinska istrazivanja i medicinu rada, Zagreb.

(EXERTION) (FATIGUE)

YUGOSLAVIA

BUJAS, Z., PAVLINA, Z., SREMEC, B., VIDACEK, S., and VODANOVIC, M., Institute of Medical Research and Occupational Medicine, Zagreb

"Subjective Rating of Fatigue"

Zagreb, Arhiv za Higijenu Rada i Toksikologiju, Vol 17, No 3, 1966, pp 275-290

Abstract: After being subjected to a static strain as a result of holding a 7.17 kg weight for 30, 60, 90, 120, 150, and 180 sec, persons on whom the tests were performed rated their feeling of fatigue on an arbitrary scale. At the same time, the effort of four active muscle groups was determined electromyographically and then summed up. The subjective degree of fatigue as a function of the duration φ of the static effort could be expressed by the equation $\Psi = 0.0048\ (\varphi - 30")^{1,54}$ representing the average result, while the effort measured on the electromyograph corresponded on the average to $EMG = 0.0051\ (\varphi - 30")^{1,51}$. Individual variations were expressed in deviations to the same extent from the general curves for both Ψ and EMF. Tables and graphs, 13 references (all Western). English summary. Manuscript received 9 Mar 66.

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VODAR, A., inzh.

Boats made of iron. Tekh. mol. 26 no. 6:27 '58. (MIRA 11:7)
(Boatbuilding)

AUTHOR: Vodar, A., Civil Engineer 29-58-6-13/19

TITLE: Boat Made of Iron (Lodka iz zheleza)

PERIODICAL: Tekhnika Molodezhi, 1958, Vol 26, Nr 6, pp 27-27 (USSR)

ABSTRACT: Numerous readers built boats according to the description published in "Tekhnika molodezhi" 1956, number 7. Many readers write, however, to the editor that in several regions it is difficult to get veneer plates for this purpose. The editor publishes today an article by civil engineer A. Vodar, in order to comply with the readers' wishes. The author describes in detail the construction of a boat of iron with three seats and adds plan drawings as well. The author himself built such a boat and sailed already hundreds of kilometers in it. This boat has a weight of 30 kg and costs approximately 150 Roubles. It is solid, watertight and stable. A tire is fixed under the seat in order to prevent the boat from sinking in the case of overturning. A single tire is sufficient for keeping a boat filled with water on the surface. An outboard motor of 1,5 - 5 HP is mounted at the stern. The boat can, however,

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Boat Made of Iron 29-58-6-13/19

be used as rowing boat as well. There are 2 figures.

1. Boats--Materials 2. Boats--Construction 3. Iron--Applications

Card 2/2

VODA'EK, L.

Experiences and comparisons from a trip to the USSR. p. 489.
STROJIRENSKA VYROBA. (Ministerstvo strojirenstvi) Praha. Vol. 3, no. 12, Dec. 1955.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

VOD'R, A. A.

Vodar, A. A. - "Perfecting a contact device for an automatic registering micrometer", Soobshch. Gos. astron. in-ta im. Shternberga, No. 31, 1949, p. 14-16.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19 1949).

VODAR, A. A.

Vodar, A. A. - "The printing chronograph", Soobshch. Gos. astron. in-ta im. Shternberga, No. 31, 1949, p. 8-13.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

VODÁR, A. Á.

"Electrical sychronizing systems", Astron. Zhur., 16, No. 2, 1939. (submitted 15 Nov 1938)

Report U-1518, 23 October 1951.

VODAREK, L.

Method of producing parts with slotted hubs, p. 186, STROJIRENSKA VYROBA (Ministerstvo strojirenstvi) Praha, Vol. 3, No. 5, May 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 12, December 1956

VODAREK, L. ; REHUREK, J.

Adjustable heads; a universal tool for horizontal drilling machines.

P. 13. (STROJIRENSKA VYROBA) (Praha, Czechoslovakia) Vol. 6, no. 1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

VODAREK, Ludvik; REHUREK, Jaroslav

Adjustable heads; universal tool holders for horizontal boring and milling machines, turret lathes and multispindle automatic machines. Stroj vyr 9 no.12:600-602 '61.

1. Zavody presneho strojirenstvi Gottwaldov, n.p., Gottwaldov.

VODARICI, C.

RUMANIA/Chemical Technology - Chemical Products and Their Application, Part 3. - Fermentation Industry. H-27

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 48418

Author : C. Vodarici
Inst : -
Title : Record Sugar Content in Wine from Murfatlar.

Orig Pub : Gradina, via si livada, 1957, 6, No 8, 26-29

Abstract : The climatic conditions of the Murfatlar region are described. In 1956 they created optimum conditions for the development and ripening of grapes and for the production of high quality sorts of wine thereof. The juice of the grape sorts Pinaud Gris and Chardonne contained the greatest amount of sugar in the last 25 years, i.e., 400 g and 384 g per liter respectively, the mean crop having been 3803 kg per ha.

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VODARSKIY, Ya. Ye. (Moskva)

Medics in Russia in the 18th century. Fel'd. i akush. 27 no.6: 56-58 Je '62. (MIRA 15:7)

(MEDICAL PERSONNEL)

VODARSKIY, E. A.

River regulation 2. izd Moskva, Vodnyi transport, 1939. 267 p. maps.
(49-57194)

Tc530.V6 1939

1. Rivers - Regulation.

VODARSKIY, E. A.

Gavan' verkhnego b'efa Zaporozhskogo porta. [Harbor in the head waters of the port of Zaporozhye]. (Vodnyi transport, 1934, no. 7, p. 9-10; illus.) DLC: HE561.R8

SO: Soviet Transportation and Communication, A Bibliography, Library of Cpngress, Reference Department, Washington, 1952, Unclassified.

VODARSKII, YE.A.

Rechnye puti. [Waterways]. (Vodnyi transport, 1934, no. 11, p. 4-5).

DLC: HE561.R8

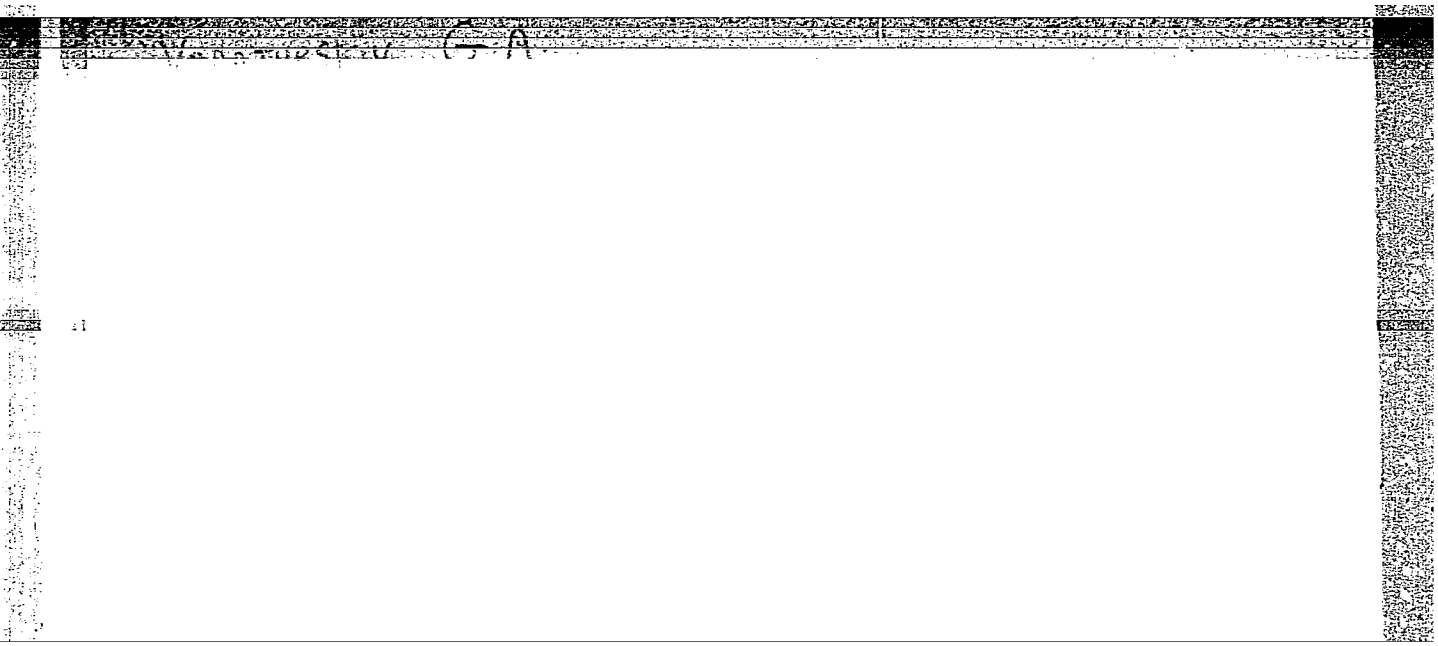
SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952 Unclassified.

TRISHIN, F.I.; VODAZURSKIY, G.A.

Method for fast determination of the ash content of flour. Izv. vys. ucheb. zav.; pishch. tekh. no.1:113-116 '58. (MIRA 11:8)

1. Odesskiy tekhnologicheskiy institut imeni I.V. Stalina, Kafedra analiticheskoy khimii.

(Flour--Analysis)



MIHALCA, E., assist. prof.; MARGINEANU, O.; GROSU, M.; VODCAILO, L.; STEIN, S.; ROSENFELD, C.

Considerations in connexion with dyspepsia due to colon bacilli.
Rumanian M Rev. no.3:37-41 '61.
(DYSPEPSIA etiology)
(ESCHERICHIA COLI INFECTIONS case reports)

RUMANIA/General Biology - General Hydrobiology. B.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 94717

Author : Vodeanitkii, V.A.
Inst : -
Title : New Data on Biological Productivity of the Black Sea.

Orig Pub : Bul. Inst. cercetari piscicole, 1957, 16, No 4, 5-11

Abstract : No abstract.

Card 1/1

VODEHNAL, JOSEF

Prague, Chemicke Listy, Vol 56, No 4, April 1962

1. "The Chemistry of Trans-Curium Elements," Miroslav KRIVANEK of the Joint Nuclear Research Institute (original-language version not given) in Dubna, USSR; and Miroslav KYRS, formerly of the A. Zapotocky Military Academy (Vojenska Akademie A. Zapotockeho) in Brno, present address: the CSAV [Ceskoslovenska Akademie Ved; Czechoslovak Academy of Sciences] Nuclear Research Institute (Ustav jaderneho vyzkumu) in Rez near Prague; pp 361-368.

2. "Induced Reactions in Analytical Chemistry," by Z. H.; pp 369-371.

3. "Application of Organic Reagents in Amperometric Titrations of Certain Rare Elements," F. VYDRA [affiliation not given]; pp 372-375.

4. "Determination of the Permeability of Foils for Sulphur Dioxide," Josef HAVLICEK and Ladislav HANZIK of the Packaging Institute (Obalovy ustav), Prague; pp 375-382.

5. "Measurement of the Efficiency of Flotation Foaming Agents," Petr KONDELIK and Jan KLOUCEK, CSAV Institute of Geochemistry and Mineral Raw Materials (Ustav geochemie a nerostnych surovin), Prague; pp 382-389.

6. "Peristaltic Pump for Dosing Small Quantities of Polluted Liquids," Jiri TENYGL, CSAV Polarographic Institute (Polarograficky ustav), Prague; pp 389-391.

7. "Cells for the Near Infra-Red Region, Suitable for the UR-10 Spectrophotometer," Josef VODEHNAL and Ivo KOSSLER, CSAV Institute of Physical Chemistry (Ustav fysikalni chemie), Prague; pp 392-393.

8. Briefs; pp 394-405.

9. Book reviews; pp 406-413.

10. "About Publishing. Part II. Forms of Publications," J. SKODA and M. KRAUS [affiliations not given]; pp 415-417.

11. "Comments on the Teaching of Biochemistry at the Natural Sciences Faculties," L. KOVAC [affiliation not given]; pp 417-420.

12. "The 1961 Nobel Prize for Chemistry," [illegible]. KOSTIR [affiliation not given]; p 421.

13. "Report on the 24 November 1961 Session of the Central Committee of the Czechoslovak Chemical Society within the CSAV," unsigned; pp 422-426.

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(2)

CZECHOSLOVAKIA

STEPAN, V; VODEHNAL, J; KOSSLER, I; GAYLORD, N.G

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague - (for Stepan, Vodehnal and Kossler). 2: Gaylord Associates Inc., Newark, U.S.A - (for Gaylord)

Prague, Collection of Czechoslovak Chemical Communications, No 7, July 1966, pp 2878-2888

"Cyclo- and cyclized diene polymers. Part 6: Infra-red spectra of cyclopolycyclopentadiene and polycyclopentadienes."

BIELICKY, Tibor; VODEK, Vladimir

Morphological and biochemical changes in the liver in chronic erythematosus. Cesk. derm. 37 no.3:155-159 Je '62.

1. II. dermatovenerologicka klinika fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr. J. Obrtel, DrSc. II. interni klinika fakulty vseobecneho lekarstvi Karlovy university v Praze, prednosta prof. dr. V. Hoenig, DrSc.
(LUPUS ERYTHEMATOSUS pathol) (LIVER pathol)

S/186/60/002/002/012/022
E071/E433

AUTHORS: Pushlenkov, M.F., Nikitina, G.P. and Voden, V.G.

TITLE: A study of the formation of uranyl nitrate complexes with phosphorusorganic compounds. II

PERIODICAL: Radiokhimiya, 1960, Vol.2, No.2, pp.215-221

TEXT: In Part I (Ref.1: V.G.Voden, G.P.Nikitina, M.F.Pushlenkov, Radiokhimiya, 1, 2, 121 (1959)) it was established that uranyl nitrate is transferred from the aqueous phase ($[HNO_3]$ = 0.2 to 1.1 M) into the organic phase in the form of a disolvate $UO_2(NO_3)_2 \cdot 2T$ (where T = DBEBPh di-n.butyl ester of n.butylphosphinic acid or TBPhO - tri-n.butylphosphinoxide). The stability constants (K_K) for the compounds $UO_2(NO_3)_2 \cdot 2TBPh$ and $UO_2(NO_3)_2 \cdot 2DBEBPh$ were determined by the distribution method (12 and 9.5 x 10^2 respectively). The calculated stability constant for the latter compound was 6.3 x 10^2. The difference between the determined and calculated values of the constants was assumed as being due to the presence of oxide impurities which changes the slope of the curve $\ln S = f[NO_3^-]_w$ from 0.6 to 1 and correspondingly increases the value of the constant

$$S = \frac{[NO_3^-]_w^2 [T]_o^2}{K_p}$$

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where $[NO_3^-]_w$ is the concentration of NO_3^- ions in the equilibrium aqueous solution; $[T]_o^2$ - concentration of T in the organic solution; K_p - coefficient of distribution of $UO_2(NO_3)_2$ between the aqueous and organic phases. The stability constant for $UO_2(NO_3)_2 2TBPhO$ was obtained only by calculation, since the dependence of ln S on $[NO_3^-]$ was represented by a curve indicating the presence of some factors influencing the distribution which were not taken into consideration. For the system: aqueous solution of uranyl nitrate - solution of n.butyl ester of di-n.butylphosphinic acid in carbon tetrachloride, neither the composition of the complex extracted nor its stability constant were determined. The scope of the present work was to determine the composition and the stability of the complex extracted in the latter system, the determination of the stability constant of $UO_2(NO_3)_2 \cdot 2DBEBPh$ when the DBEBPh is known to be free from oxide admixtures and to explain the curvature of the relationship $S = f[NO_3^-]_w$ for the system: aqueous solution of $UO_2(NO_3)_2$ - TBPhO in CCl_4. For this purpose it was necessary to obtain three relationships:
1) $\lg K_p = f(\lg [BEDBPh]_o)$, where K_p - coefficient of distribution of $UO_2(NO_3)_2$ between the aqueous and organic phases;