"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

BURSA, Stanislaw; REWAJ, Maria

Potentiometric characteristics of Bayarite calcination products. Przem chem 41 no.1:30-33 Ja '62.

1. Katedra Chemii Fizycznej, Politechnika, Szczecin

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

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BURSA, Stanislaw; REWAJ, Maria

Potentiometric characteristics of bayerite calcination products.
Przem chem 41 no.1:30-33 Ja '62.

1. Katedra Chemii Fizycznej, Politechnika, Szczecin

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REWAJ, T.

Effect of the Cu^{++} ion on delayed phenomena in Rochelle salt. Acta physica Pol. 24 no.1:45-50 Jl'63.

1. Institute of Physics, Technical University, Szczecin.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

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L 24879-65 EPF(c)/EWP(j)/EWT(m)/EWP(b)/T/EWP(t) Pc-4/Pr-4 AFFTC RM/JD

ACCESSION NR: AP5002632 P/0045/64/026/006/1093/1100

40
37
B

AUTHOR: Rewaj, T.

TITLE: Effect of x-ray irradiation on the delayed phenomena in triglycine sulfate single crystals

18

SOURCE: Acta physica polonica, v. 26, no. 6, 1964, 1093-1100

TOPIC TAGS: x-irradiation, single crystal, triglycine sulfate, dielectric constant, ferroelectricity, x irradiation effect

ABSTRACT: Measurements were made of dielectric-permittivity variations accompanying the switching on and off of a dc external field polarizing ferroelectric single-crystal triglycine sulfate ($(NH_2CH_2COOH)_3 \cdot H_2SO_4$), with an aim at determining the influence of x-irradiation on the delayed effects occurring in this substance. The measurements were made both in non-irradiated samples and in subsequently irradiated samples with 50-keV x-rays for varying periods of time. The maximum irradiation time was 8 hours, corresponding to a dose of 10 Mr. The measurements were made with a bridge and the test procedure is briefly described.

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The effect of the irradiation is apparent primarily by a shift of the maximum absolute experimentally observed variation of the permittivity towards higher values of the field polarizing the sample. It is suggested that the defects produced by the x-irradiation immobilize the domains in an antiparallel array (neighboring domains oriented oppositely), thus raising the amount of energy required for domain reorientation. This is corroborated by the fact that no delayed phenomena appear in very weak fields and come into play when the field strength is raised. "The author thanks Professor A. Piekara for guidance and Professor A. Metal for making available the measuring capacitors." Orig. art. has: 7 figures and 1 formula.

ASSOCIATION: Institute of Physics, Technical University, Szczecin, Poland

SUBMITTED: 15Apr64 ENCL: 00 SUB CODE: SS

NR REF SOV: 002 OTHER: 012

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REWAI, T.

Effect of X-ray irradiation on delayed phenomena in triglycine sulfate single crystals. Acta physica Pol 26 no.6:1093-1100 '64.

1. Institute of Physics of Szczecin Technical University.
Submitted April 15, 1964.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

L 18333-65 EWT(1)/EPA(s)-2/EEC(t)/EEC(b)-2 Pt-10/Pl-4 IJP(c)/AFETR/AS(mp)-2/AFWL/SSD/ASD(a)-5/ESD(gs GG

ACCESSION NR: AP4045518 P/0045/63/024/001/0045/0050

AUTHOR: Rewaj, T.

TITLE: The effect of Cu^{++} ions on delayed phenomena in Rochelle salt

SOURCE: Acta physica polonica, v. 24, no. 1, 1963, 45-50

TOPIC TAGS: Rochelle salt, dielectric permittivity, copper ion doped, ferroelectricity

ABSTRACT: The ferroelectric properties of single crystals with lattice defects were investigated by measuring time-dependent variations in the dielectric permittivity of Rochelle salt doped with Cu^{++} ions introduced during crystallization. Single crystals were grown from solutions containing 0.01 and 0.06% $CuCO_3 \cdot Cu(OH)_2$ by the dynamic method, lowering the temperature of the saturated solution from +30 to +20C. The dielectric permittivity and its variations with time were measured in a resonance circuit with a measuring bridge at measuring field frequencies of 1 Mc and an amplitude of 12 v/cm.

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ACCESSION NR: AP4045518

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Prior to each measurement, each sample was heated for 1 hour at +30C and kept 1 hour at +20C. Variations in the permittivity ε were measured for 15 minutes after applying and after removing the polarizing voltage. The hysteresis loops of the samples were observed in a Sawyer-Tower circuit at 50 cps. Results are given for pure Rochelle salt and for doped samples. In the case of a crystal grown from a solution containing 0.01% $CuCO_3 \cdot Cu(OH)_2$, ε increased sharply after switching on the polarizing field (low strength). This increase also occurred when the field was removed. Both effects increased with greater field strengths. Increasing the dopant content produced shifts in the maxima of field strengths and increasingly constricted hysteresis loops. The foregoing indicate that doping Rochelle salt with Cu^{++} ions can be considered as favoring immobilization of the domains in antiparallel array. "The author thanks Prof. Dr. A. Piekara for guidance and M. Sci. W. Nowak, Head of the Institute of Physics, Szczecin Technical University for help in assembling the measuring apparatus." Orig. art. has: 5 figures.

Card 2/3

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ACCESSION NR: AP4045518

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ASSOCIATION: Katedra Fizyki Politechniki Szczecinskiej, Szczecin (Institute of Physics, Technical University of Szczecin)

SUBMITTED: 04Dec62 ENCL: 00 SUB CODE: SS, EM

NO REF SOV: 004 OTHER: 002

Card 3/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

G/030/62/002/009/003/004

AUTHOR: Rewaj, T. (POLAND)

TITLE: On the effects of X-ray irradiation on transient phenomena in rochelle salt

PERIODICAL: Physica Status Solidi, v. 2, no. 9, 1962, 1151-1157

TEXT: The aim of the present work is to find a well-defined relation between the defect concentration in ferroelectric crystals and the shape of the transient curves. The procedure adopted in measuring the transient effects was as follows. The dielectric permittivity ε was measured over a period of 15 minutes to ensure that it was stable. The polarizing d.c. voltage was then applied for 15 minutes and the variations produced in ε were measured. On removal of the d.c. polarizing voltage, ε was again measured over a period of 15 minutes. All measurements were carried out on both slopes of the resonance curve. The first reading could be obtained not less than 30 seconds after switching on, or switching off, the polarizing voltage. After a series of measurements at various polarizing fields, the sample was irradiated with X-rays in a

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

G/030/62/002/009/003/004

On the effects of X-ray irradiation...

TUR-type structural analysis apparatus with an iron anticathode source operating at a voltage of 30 kV and current of 8 mA. The radiation intensity at the site of the sample was measured to be about $97 \cdot 10^3 r \cdot hr^{-1}$ using a Philips Dosimeter (type 37470). The sample was irradiated for six consecutive periods of 10 hours, corresponding to a total dose of $\sim 5.8 \cdot 10^6 r$. After each ten hours of irradiation, a full series of measurements of the transient effects was carried out, as above, for various polarizing fields. The transient effects have not hitherto been investigated in pure Rochelle salt. The results for other samples cut from the same crystal showed slight quantitative divergences, although agreeing qualitatively. All samples gave the same value for the sudden decrease in ε from its initial value on switching on the d.c. field (even for very small field strengths), and the same increase in ε, to a value somewhat lower than the initial one, on switching off the field. Moreover, the pure samples (prior to irradiation) lacked the clear time dependence of ε which is normally typical of the transient phenomena when the polarizing field is removed. Comparing the results for pure Rochelle salt

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On the effects of X-ray irradiation...

and $BaTiO_3$ at temperatures not too distant from the Curie point some noteworthy differences appear. Rochelle salt exhibits no jump of ε upward of its initial value on switching on the polarizing field, transient effects at small values of the field strength, and no transients on switching off the field. The pattern for the same sample subsequent to 10 hours' irradiation ($\sim 9.7 \times 10^5$ r) is clearly modified. At low field strengths, there is an increase in ε from its initial value as soon as the field is switched on. Switching the polarizing voltage off is also followed by an upward jump of ε and the typical time-dependence of ε appears. The last two effects increase with the polarizing field strength. It is noteworthy that all transient curves for the irradiated sample lie above the corresponding ones for the sample before irradiation. Converted to a logarithmic time-axis, the transient curves become almost linear. Hence, the variation of the permittivity in the course of the measurement can be expressed by means of the equation

$$\left(\frac{\Delta\varepsilon}{\varepsilon}\right)_{t_2} = \left(\frac{\Delta\varepsilon}{\varepsilon}\right)_{t_1} - A \log \frac{t_2}{t_1}. \qquad (1)$$

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G/030/62/002/009/003/004

On the effects of X-ray irradiation...

This logarithmic time-dependence of ε is in agreement with results on the ageing of ferroelectrics obtained by PLESSNER (J. STANKOWSKA and J. STANKOWSKI, Acta phys. Polon. 19, 217 (1960). The slope A serves as a parameter for the transient effects, being directly related to the change in ε occurring during the measurement; its value depends on the polarizing field strength, increasing with the latter to a maximum for $E = 500\ Vcm^{-1}$, and decreasing at higher values of the field. The dependence of A on field strength for consecutive irradiation doses is shown. Each of the curves has a maximum at a characteristic value of the field strength. As the time of irradiation increases, the maximum in question shifts towards higher values of the field strength, becoming less sharp; after an initial increase, it reaches its highest value at 20 hours irradiation, to decrease markedly as irradiation proceeds. It is proposed that the defects produced by irradiation at first only slow down the reorientational motion of the domains; however, as defects accumulate, they entirely immobilize an increasingly large proportion of the domains, thus preventing them from participating in the polarization of the sample.

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On the effects of X-ray irradiation...

There are six figures. The author thanks Dr. A. Piekar for his guidance and help in the investigation and Docent Dr. Z. Pajak and Dr. J. Stankowski for helpful discussions.

ASSOCIATION: Institute of Physics of the Technical University at Szczecin

SUBMITTED: June 1, 1962

Card 5/5

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

SZYMANSKA, Alina; GAWECKA, Irena; REWERSKI, Wojciech

Studies on the suitability of polyvinyl alcohol for wound dressing purposes. Acta pol. pharm. 19 no.4:363-368 '62.

1. Z Instytutu Lekow w Warszawie Dyrektor: prof. dr P. Kubikowski Z Zakladu Farmakologii Akademii Medycznej w Warszawie Kierownik: prof. dr. Kubikowski.
(POLYVINYLS) (BANDAGES) (WOUNDS AND INJURIES)

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REWERSKI, Wojciech, lek. med.; WYSOKOWSKI, Janusz, lek. med, mgr chem.

Methods of determining Polfa Mysoline. Farmacja Pol 19 no.5:91 10 Mr '63.

1. Zaklad Farmakologii Eksperymentalnej, Akademia Medyczna, Warszawa. Kierownik: prof. dr med. P. Kubikowski

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REWERSKI, Wojciech; WYSOKOWSKI, Janusz

Kinetics of the process of metabolism, absorption and breakdown of drug in the organism. Pol. tyg. lek. 20 no.20:735-737 17 My '65.

1. Z Zakladu Farmakologii Eksperymentalnej AM w Warszawie (Kierownik: prof. dr. med. P. Kubikowski).

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POLAND

REWERSKI, WŁODZIMIERZ, DR. MED. and WISOKOWSKI, JANUSZ, DR. MED. MGR. CHEM.; Department of Experimental Medicine AM [Academy of Medicine] (Zaklad Farmakologii Eksperymentalnej AM [Akademia Medyczna]) Warsaw.

"Methods of Estimation of Mizodin "Polfa"."

Warsaw, Farmacja Polska, Vol 19, No 5, 10 March 63, p 91.

Abstract: A spectrophotometric estimation of Mizodin in blood is described. Mizodin, a drug used in the treatment of grand mal, is also known as Mysoline, Mylepsine, Sertan and Hexamidin. It is 5-ethyl-5-phenyl-hexahydropyridine-4,6-dione.
No references.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

GAWECKA, Irena; KRUS, Stefan; REWERSKI, Wojciech

Effect of certain antibiotics (streptomycin, neomycin, terramycin) on functional and morphological changes of the kidney in experimental animals. Pol. arch. med. wewnet. 35 no.5:627-631 '65.

1. Z Zakladu Farmakologii Eksperymentalnej AM w Warszawie (Kierownik: prof. dr. med. P. Kubikowski) i Zakladu Anatomii Patologicznej AM w Warszawie (p. o. Kierownika: doc. dr. med. R. Walentynowicz-Stanczyk).

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REWERSKI, Wojciech; WYSOKOWSKI, Janusz; GRADOWSKA, Liliana; JUSKOWA, Joanna; LAO, Mieczyslaw

Two cases of barbiturate intoxication treated with peritoneal dialysis. Pol. arch. med. wewnet. 35 no.5:731-733 '65.

1. Z Zakladu Farmakologii Eksperymentalnej AM w Warszawie (Kierownik: prof. dr. med. P. Kubikowski) i z I Kliniki Chorob Wewnetrznych AM w Warszawie (Kierownik: prof. dr. med. T. Orlowski).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

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REWIENKO, Timofiej Andriejewicz

Plastic reconstructive surgery of the femoral neck in some bone diseases. Chir. narzad. ruchu ortop. Pol. 29 no.4: 493-502 '64.

1. Z Instytutu Naukowo-Badawczego Traumatologii Ortopedii i Protezowania w Doneicku (Dyrektor: st. pracownik naukowy, kand. n. med. T.A. Rewienko).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

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RIZ, Slavko, inz.

Sticks of prestressed concrete. Gradevinar 16 no.3:100-104 Mr '64.

1. Member of the Board of Editors, "Gradevinar".

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

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REX-KISS, B.; HORVATH,E.; CSATA,S.

On so-called "sub-groups" of blood groups. Orv. hetil. 105 no.19:857 3 My'64

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REX-KISS, Bela, dr.

Data on patient turnover and on the activities in laboratories of specialists' clinics. Nepegeszsegugy 44 no.9:265-268 S '63.

1. Kozlemeny Az V. ker Rosenberg hazaspar utcai Szakorvosi Rendelointezetbol.

(HOSPITAL OUTPATIENT SERVICE)
(LABORATORIES) (STATISTICS)
(SPECIALISM)

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HEX-KISS, Bela, dr.

Recent results in isoserology and blood transfusion. Magy sebesz 16 no. 4:217-228 Ag '63.

1. Budapesti Orvostudomanyi Egyetem Igazsagugyi Orvostani Intezete.
(BLOOD GROUPS) (BLOOD TRANSFUSION)

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KEIL, B.; ZIKAN, J.; REXOVA, L.; SORM, F.

On proteins. Part 74: Hydrogenation of aromatic amino acids in peptides. Coll Cz Chem 27 no.7:1678-1686 Jl '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague (for Keil and Sorm). 2. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague (for Zikan). 3. Institute of Chemistry, Slovak Academy of Sciences, Bratislava (for Rexova).

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REXOVA, Lubomira, dr.; MARKOVIC, Oskar, inz.

Chemical characterization of some low-molecular elements of bee honey. Chem zvesti 17 no.12:884-890 '63.

1. Ceskoslovenska akademie ved, Chemicky ustav Slovenskej akademie vied, Bratislava, Dubravska cesta (for Rexova).
2. Vyskumny ustav reumatologicky, Piestany (for Markovic).

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CZECHOSLOVAKIA

REXOVA, L; KOPEC, Z; KEIL, B

1. Institute of Chemistry, Slovak Academy of Sciences, Bratislava - (for ?): 2. Institute of Organic Chemistry and Biochemistry, Czecheslovak Academy of Sciences, Prague - (for ?)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1967, pp 678-684

"Isolation and certain properties of wheat β-amylase."

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

MARKOVIC, Oskar, inz.; REXOVA, Lubomira, inz.

Examination of components in the individual varieties of bee poison. Chem zvesti 17 no.9:676-684 '63.

1. Vyzkumny ustav reumatologicky, Piestany (for Markovic).
2. Ceskoslovenska akademie ved, Chemicky ustav Slovenskej akademie vied, Bratislava, Dubravska cesta (for Rexova).

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CZECHOSLOVAKIA

REXOVA-BENKOVA, L; SLEZARIK, A

Institute of Chemistry, Slovak Academy of Sciences, Bratislava - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 1, January 1966, pp 122-129

"Isolation of extracellular pectolytic enzymes produced by Aspergillus niger."

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REYBAKH, M.S.; TSIRLIN, A.M.; KLESHCHEVNIKOVA, S.I.; VOLKOV, V.L.; MATVEYEV, B.I.; KAZAKOVA, N.V.

Wetted-wall apparatus for continuous synthesis of triethoxysilane. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.9:21-23 '62. (MIRA 15:9)

(Distillation apparatus)
(Silane)

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REYBMAN, A. I.

4

Distr: 4E2c

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Paints. B. L. Agranat, I. A. Zholondz, and A. I. Reibman. U.S.S.R. 107,149, Aug. 25, 1957. To insure better dispersion of the pigment the paint components are passed through a tube where they are subjected to the action of sound waves. M. Hosch

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REYBMAN, A.I.; FINKEL'SHTEYN, M.I.

Protection of copper surfaces on sizing machines. Tekst.prom.16 no.12:47-48 D '56. (MLRA 10:1)
(Sizing (Textile)) (Protective coatings)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBMAN, A.I.; FINKEL'SHTEYN, M.I.; IOFFE, R.P.

Protecting metal and concrete surfaces of the Bachman apparatus. Khim. prom. no.6:373-375 S '57. (MIRA 11:1)

1. Leningradskoye otdeleniye Gosudarstvennoy proizvodstvennoy kontory "Lakokraspokrytiye."
(Corrosion and anticorrosives)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBMAN, A.I.;FINKEL'SHTEYN, M.I.

Protection of internal surfaces of apparatus against the action of sulfuric and fluosilicic acids. Khim.prom.no.8:493-495 D '56. (MIRA 10:1)

1. Leningradskoye otdeleniye Gosudarstvennoy vsesoyuznoy proizvodstvennoy kontory "Lakokraspokrytiye."
(Sulfuric acid) (Fluosiclicic acid) (Corrosion and anticorrosives)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYHMAN, A.I.; GUREVICH, Ye.S., red.

[Painting of apparatus and equipment in the chemical industries] Okraska apparatury i oborudovaniia v khimicheskikh proizvodstvakh. Moskva, Khimiia, 1964. 182 p. (MIRA 18:1)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBMAN, A. I.

4
3 4E2C
2 2 may

Protection of copper surfaces in the sizing apparatus. A. I. Reibman and M. I. Finkelshtein. *Tekstil. Prom.* 16, No. 12, 47-8(1956).—Stains appearing on the viscose staple (I) after sizing are due to CuS formed by sulfide compds. present in I on the Cu surfaces of the sizing app. They can be protected by a specially prepd. lacquer. 15

E. Barabash

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBMAN, A.I.

5
1-4E2c

Chem

Protection of inner surfaces of apparatus designed for use with sulfuric and fluosilicic acids. A. I. Reibman and M. I. Finkelstein. *Khim. Prom.* 1956, 493-5.—A review of corrosion prevention as practiced in Russia.

W. M. Sternberg

fra RS
aerf

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBMAN, A. I.; FINKEL'SHTEYN, M. I.

Anticorrosive lacquer and paint coating for metal equipment and structures in the sulfuric acid and superphosphate industry. Khim.prom.no3:150-152 Ap-My'55. (MIRA 8:10)

1. Leningradskoye otdeleniye Gosudarstvennoy vsesoyuznoy proizvodstvennoy kontory "Lakokraspokrytiye"
(Sulfuric acid) (Corrosion and anticorrosives) (Phosphate industry)

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REYBMAN, A. I.

V Lacquer coating for the protection of metalwork construction in sulfuric acid and superphosphate production. A. I. Reibman and M. I. Finkel'shtein (All-Union State Production "Lakokraspokrytie", Leningrad Branch). *Khim. Prom.* 1958, 160-2.—The importance of proper prepn. of the metal surface is emphasized. The preferred compns. and methods of application are given for various synthetic and chlorinated rubber products used for the protection of the metal surfaces in H_2SO_4 and superphosphate production at elevated temps. of up to 200-300°. W. M. Sternberg

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1

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SHEVANDIN, Ye.M., kand. tekhn. nauk; KOZLYAKOV, V.V., kand. tekhn. nauk; MAKSIMADZHI, A.I., inzh.; BYKOV, V.A., kand. tekhn. nauk; YEVSTIFEYEV, V.A., kand. tekhn. nauk; BELKIN, V.P., doktor tekhn. nauk; REZNITSKIY, L.Ya., kand. tekhn. nauk; PUTOV, N.Ye., prof.; SHIMANSKIY, Yu.A., akademik; GUREYEV, V.A., inzh.; VAKHARLOVSKIY, G.A., inzh.; KERICHEV, V.M.; KVASHUK, N.F., inzh.; NOGID, L.M., prof.; REVZYUK, G.A., inzh.; ARKHANGORODSKIY, A.G., kand. tekhn. nauk; YEFREMOV, inzh.; OSMOLOVSKIY, A.K., kand. tekhn. nauk.

General discussion. Trudy NTO sud. prom. 7 no.1:112-152 '56. (MIRA 10:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut im. A.N. Krylova (for Shevandin). 2. Leningradskiy korablestroitel'nyy institut (for Kozlyakov, Bykov, Putov, Nogid). 3. TSNIISTEF (for Maksimadzhi). 4. TSentral'noye konstruktorskoye byuro Ministerstva sudostroitel'noy promyshlennosti, g. Gor'kiy (Yevstifeyev, Kvashuk, Revzyuk). 5. TSentral'noye-proyektno-konstruktorskoye byuro Ministerstva morskogo flota (for Reznitskiy). 6. Ministerstvo sudostroitel'noy promyshlennosti (for Gureyev). 7. Gosudarstvennyy soyuznyy proyektnyy institut (for Vakharlovskiy). 8. Zavod "Krasnoye Sormovo" (for Kerichev). 9. NKI (for Arkhangorodskiy). 10. Ministerstvo rechnogo flota (for Yefremov). 11. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota (for Osmolovskiy).

(Shipbuilding)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

POLAND/Chemical Technology - Chemical Products and Their Application. Dyeing and Chemical Treatment of Textiles. H-34

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 27411

Author : Rewienska-Kosciukowa Barbara

Inst : Institute of Natural Silk

Title : Development of a Viscosimetric Method for Determination of the Degree of Breakdown of Silk Fibroin.

Orig Pub : Prace Inst. jedwabiu natur., 1957, 2, No 1, 73-92

Abstract : A study of viscosity indices of solutions of silk which has been subjected to the action of boiling solutions of Na_2CO_3 and H_2SO_4 at concentrations of 0.1 and 0.05 N for 20 and 60 minutes. The solutions were prepared with copper-glycerol solvent at concentrations of 2.5, 1.25 and 0.5%, and the measurements carried out after

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KOWALSKI, Marian St.; REWILAK, Mieczyslaw

Rare developmental defect in fetus. Gin. polska 28 no.2; 161-165 Mar-Apr 57.

1. Z Oddzialu Poloznictwa i Chorob Kobiecych Szpitala Miejskiego nr 1 w Sosnowcu Ordynator Oddzialu: dr. med. M. St. Kowalski. Adres: M. Kowalski, Sosnowice, Stalingradzka 30.

(ABNORMALITIES, etiology and pathogenesis, threatened abortion causing extensive abnorm. in stillborn (Pol))

(ABORTION, complications, threatened, causing multiple abnorm. in stillborn (Pol))

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REMO, E.

Danger of the Colorado bettle persists. p. 15. (PLON, Vol. 4, No. 7, 1953.

SO: Monthly List of east European Accessions, L.C., Vol. 3, No. 4, April, 1954

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

Rewsin, J. — RUSSIAN MAGNESITE. *Stroitel Materialy*, No. 1, pp. 98-117 (1932). —R. describes (1) different magnesite deposits found in the Urals and Siberia, (2) their economic significance, (3) Russian magnesite industry, and (4) Russian magnesite in Europe.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Influence of monoiodoacetic acid on the mineral metabolism of parathyroidectomized, tetanus toxin- and strychnine-poisoned dogs. Kalman Lissák and K. Béla Rex. *Magyar Orvosi Arch.* **39**, 433-9(1938).—The acid does not affect the development of tetanus and strychnine convulsions, but its administration temporarily relieves the symptoms of tetanus in parathyroidectomized dogs. This effect is probably due to the changes in blood Ca and P, and not to the influence of the acid on the glucolysis. The diminishing effect of the acid on serum inorg. P is due to the impeded decompn. of hexose phosphates.

B. C. P. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REKS-KISHSH, Be.a [Rex-Kiss, Bela]

New devices for determination of blood groups. Probl. gemat. i perel. krovi 4 no. 10:55-57 O '59. (MIRA 13:8)

1. Iz anatomicheskogo fakul'teta Budapeshtskogo meditsinskogo instituta (direktor - prof. Ferents Kishsh).
(BLOOD GROUPS)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REX-KISS, Bela, Dr.

New devices for blood group determination. Orv. hetil. 99 no.34:1187-1189 24 Aug 58.

1. A Budapesti Orvostudomanyi Egyetem Anatomiai Intezetenek (igazgato: Kiss Ferenc dr. egyet. tanar) es az V. Ker. tanacs Rosenberg hazaspar utcai Szakorvosi Rendelointezetenek (igazgato-foorvos: Orban Endre dr.) kozlemenye.

(BLOOD GROUPS
new plates for determ. (Hun))

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REX-KISS B. Igazsagugyminiszteri rendelet szabalyozza a vercsoportvizsgalatok alkalmazasat az igazsazolgaltatasban The employment of blood group tests in jurisdiction controlled by decree of the Minister of Justice (Hungary) Orvosok Lapja, Budapest 1947, 3/32 (1246-;247)

SO: Medical Microbiology and Hygiene, Section IV, Vol. I, #1-6

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

BC

A-4

Influence of monoiodoacetic acid on the mineral metabolism of parathyroidectomized, tetanus toxin- and strychnine-poisoned dogs. K. Lissák and B. [illegible] (Magyar Orvosi Arch., 1956, 39, 433—439).—The acid does not affect the development of tetanus and strychnine convulsions, but its administration temporarily relieves the symptoms of tetanus in parathyroidectomized dogs. This effect is probably due to the changes in blood-Ca and -P, and not to the influence of the acid on the glycolysis. The diminishing effect of the acid on serum-inorg. P is due to the impeded decomp. of hexose phosphates. A. W. M.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

HEX-KISS, B. 1948

"Results so Far Achieved by Blood Group Determinations Ordered by Law Court."

Orvosok Lapja, Budapest, 1948 4/5(725-726)
Abst: Exc. Med. IV, Vol. 11, No. 4, p. 434

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

PROCESSES AND PROPERTIES INDEX

11 G

Ca

Immunization experiments with antigens of different groups. I. Béla Rex-Kiss and József Kiss (Székesfővárosi Közegészségügyi Intézet, Budapest, Hung.). *Orvosi Lapja Népegészségügy* 3, 405-10(1947).—Intramuscular injections of blood of a group different from that of the subject and of saliva as immunizing agents increased the isohemagglutinin and the isohemolysin contents. In the serum of persons treated a specific antibody is formed which ppts. the homologous antigen in saliva. 14 references. István Finály

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

11B

Applicability of the blood-sugar method of Solomos. Béla Rex-Kiss and Béla Zsadon. *Orvosi Hetilap* **84**, 44-5 (1940).—The following modification of the method of Solomos (*C. A.* **30**, 1081[1]) was used: Measure 2 cc. of fresh oxalated blood into a test tube contg. approx. 2 cc. of 25% CCl_3COOH soln. and 4 cc. of distd. water. Shake the contents of the tube a few min. and remove protein by filtration. In the meantime, deliver 1 cc. of a 0.1% aq. soln. of $K_4Fe(CN)_6$ into a porcelain dish, and then add 1.5 cc. of 4% NaOH soln. and 4 cc. of distd. water. Heat the mixt. to boiling and titrate while hot with the blood filtrate until the liquid becomes colorless. Although the method gives lower values than that of Hagedorn and Jensen (*C. A.* **17**, 2721), it is a practical procedure, can be completed in 15-20 min. and requires no expensive app. S. S. de Finaly

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

ca

11F

Can human blood groups be changed by chemical action? Béla Rex-Kiss and Tibor Szilágyi (Univ. Debrecen, Hungary). *Orvosi Hetilap* **87**, 544-6(1943).—In expts. *in vitro* and *in vivo* adrenaline, atropine, and pilocarpine did not change the group to which the blood of a given person belongs. This result is in agreement with the statements of Papilian and Preda. István Finály

COMMON ELEMENTS

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MATERIALS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

S/081/62/000/005/062/112
B156/B108

24.3500

AUTHORS: Kunze, J., Rexer, E.

TITLE: Investigation of the luminescent power of anthracene-polystyrene scintillators according to the conditions of preparation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 411, abstract 5K121 (Kernenergie, v. 3, no. 12, 1960, 1169 - 1171)

TEXT: The relationship of the luminescent yield of crystalline anthracene and styrene to the amount and type of impurities present, the method of polymerization and the polymerization temperature has been determined. Adding small amounts of organic impurities (0.01 - 1% to anthracene and 0.1 - 1% to styrene) does not affect the luminescent yield. The addition of small amounts of inorganic impurities (H_2O, O_2) greatly reduces the luminescent yield. The polymerization temperature substantially affects the luminescent powers of the crystals. The best polymerization temperature for luminescence is 140 - 150°C. The addition of anthracene (as a

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catalyst) to monostyrene reduces the rate of polymerization. The luminescent yield in this case is about 20% higher than when polymerizing without a catalyst. When crystals have been polymerized by γ-radiation, the luminescent yield is ~20% of that of crystals produced by thermal polymerization. 10 references. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

HUNGARY

REX-KISS, Bela, Dr; Medical University of Budapest, Forensic Medical Institute (Budapesti Orvostudomanyi Egyetem, Igazsagugyi Orvostani Intezet).

"Recent Achievments of Isoserology and Blood Transfusion."

Budapest, Magyar Sebeszet, Vol XVI, No 4, Aug 1963, pages 217-228.

Abstract: [Author's Hungarian summary modified] Recent achievments of isoserological research which are of importance in blood transfusions are discussed by the author. It is pointed out that the eventual presence of isohemolysis and incomplete immune-antibodies might make the use of group O blood as "universal" donor harmful. In the discussion of the Rh system it is stressed, among others, that the use of the husband's blood for the wife is dangerous and contraindicated. Characteristic of the Rh difficulties is their long-latent period, as opposed to the rapid appearance of other blood group incompatibilities. A detailed discussion is presented on the prevention of transfusion side-effects and it is stressed that group O blood should not be used as "universal" donor. It is recommended that all inconclusive Rh tests be sent to the Laboratory of the National Blood Transfusion Service for repeating. The great importance of cross-matching is stressed and, in the author's opinion, it must be carried out before every transfusion. Transfusion accidents indicate that cross-matching must be given its proper significance. Transfusion can never be so urgent that the appropriate tests could be justifiably dispensed with. 19 Western, 5 Eastern European references.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

PUTNOKY, Gyula, dr.; REX-KISS, Bela, dr.

Laboratory problems in modern clinical diagnosis. Orv. hetil. 106 no.39:1843-1850 26 S '65.

1. Orvostovabbkepzo Intezet, Laboratoriumi Vizsgalatok Tanszeke es Budapesti Orvostudomanyi Egyetem, Igazsagugyi Orvostani Intezet.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REX-KISS, Bela, dr.; SZABO, Sandor, dr.

Working methods in the laboratories of dispensaries. Nepegeszsegugy 43 no.7:213-221 Jl '62.

1. Kozlemeny az V. ker. tanacs Rosenberg hazaspar utcai es a VIII. ker. tanacs Trefort utcai Szakorvosi Rendelointezetebol.
(PUBLIC HEALTH ADMINISTRATION) (TECHNOLOGY, MEDICAL)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

27273 S/181/61/003/008/003/034
B102/B201

24.7900

AUTHOR: Rey, D. K.

TITLE: Analysis of the spectrum of electron paramagnetic resonance of the V^{3+} ion in corundum (Al_2O_3)

PERIODICAL: Fizika tverdogo tela, v. 3, no. 8, 1961, 2214 - 2222

TEXT: The spectrum of electron paramagnetic resonance of the V^{3+} ion in Al_2O_3 had not been discovered until recently (G. M. Zverev, A. M. Prokhorov. ZhETF, 39, 1023, 1958; 38, 999, 1960), when the constants of the spin Hamiltonian were determined. Experimental data indicate that the covalent bond in Al_2O_3 could be considerable; the author, therefore, calculated the contribution of the covalent bond to the g-factors and the hyperfine structure constants. The most probable values for covalence factors R and K ($R/K < 1$) are required, as satisfy the experimental values of the g-factors and of the splitting factor D for zero fields. Splitting caused by the trigonal field is small as compared to splitting in the cubic field. To begin with, expressions for the constants of the spin Hamiltonian are

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determined for the V^{3+} ion in Al_2O_3, which is situated in the prevailing cubic field and in the weak trigonal field. States and energies in the ground state ^3F of the V^{3+} ion are first determined in a potential of the form $V = A_2^0 r^2 Y_0^2 + A_4^0 r^4 Y_0^4 + A_4^3 r^4 [Y_3^4 - Y_{-3}^4]$. The results collected in Table 1 are obtained, where

$$\left.\begin{aligned} A &= \frac{A_2^0 r^2}{\sqrt{7}} \langle 3 | Y^2 | 3 \rangle = -A_2^0 r^2 \frac{1}{7} \sqrt{\frac{3}{\pi}}, \\ B &= \frac{A_4^0 r^4}{\sqrt{7}} \langle 3 | Y^4 | 3 \rangle = -A_4^0 r^4 \frac{3}{7} \sqrt{\frac{11}{2\pi}}, \\ C &= \frac{A_4^3 r^4}{\sqrt{7}} \langle 3 | Y^4 | 3 \rangle = -A_4^3 r^4 \frac{3}{7} \sqrt{\frac{11}{2\pi}}, \end{aligned}\right\} \quad (3)$$

and $a = \sqrt{5/6}$, $b = \sqrt{1/6}$, $c = \sqrt{5}/3$, $d = 2/3$. The admixture of lower triplet

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states is now examined in the spin-orbital interaction, using denotations

$$\left.\begin{aligned} |-\rangle &= b|-1\rangle + a|2\rangle, \\ |+\rangle &= -b|1\rangle + a|-2\rangle, \\ |0\rangle &= d|0\rangle + \frac{c}{\sqrt{2}}(|3\rangle - |-3\rangle). \end{aligned}\right\} \quad (5)$$

This leads to the following nonvanishing matrix elements:

$$\left.\begin{aligned} \langle -|L_z|-\rangle &= -\langle +|L_z|+\rangle = \alpha; \\ \langle 0|L_z|-\rangle &= -\langle 0|L_z|+\rangle = \frac{\beta}{\sqrt{2}}, \\ \langle 0|L_y|-\rangle &= \langle 0|L_y|+\rangle = -\frac{i\beta}{\sqrt{2}} \end{aligned}\right\} \quad (7)$$

$$\left.\begin{aligned} \langle -|\lambda L_z|-\rangle &= -\langle +|\lambda L_z|+\rangle = \lambda_z \\ \langle 0|\lambda L_z|-\rangle &= -\langle 0|\lambda L_z|+\rangle = \frac{\lambda_0}{\sqrt{2}}, \\ \langle 0|\lambda L_y|-\rangle &= \langle 0|\lambda L_y|+\rangle = -\frac{i\lambda_0}{\sqrt{2}}, \end{aligned}\right\} \quad (8)$$

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where

$$\left.\begin{aligned} \alpha &= (2a^2 - b^2)K, \\ \beta &= \left(\sqrt{6}\, bd + \sqrt{\tfrac{3}{2}}\, ac\right)K, \\ \lambda_1 &= (2a^2 - b^2)\lambda R, \\ \lambda_2 &= \left(\sqrt{6}\, bd + \sqrt{\tfrac{3}{2}}\, ac\right)\lambda R. \end{aligned}\right| \qquad (9)$$

is valid. Using these, one can find the eigenvalues and eigenfunctions of the Hamiltonian $\mathcal{H} = V + (\lambda \vec{L} \times \vec{S})$ (10); they are given in Table 2. Here,

$$\operatorname{tg}\gamma = \frac{1}{2\lambda_2}\left[\Delta + (\Delta^2 + 4\lambda_2^2)^{1/2}\right],$$
$$\operatorname{tg}\theta = \frac{1}{2\sqrt{2}\,\lambda_2}\left[\Delta - \lambda_1 + \left((\Delta - \lambda_1)^2 + 8\lambda_2^2\right)^{1/2}\right] \qquad (11)$$

is valid.

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$$A = pR\left|-\alpha\sin^2\gamma - \varkappa\cos^2\gamma - \frac{1}{105}\left\{-12\cos^2\gamma + 27c^2\cos^2\gamma + \left(9\sqrt{\frac{3}{2}}\,ac + 3\alpha\beta\right)\sin\gamma\cos\gamma\right\}\right|, \quad (21)$$

$$B = pR\left|-\beta\cos\theta\sin\gamma - \frac{\beta}{\sqrt{2}}\sin\theta\cos\gamma - \frac{\varkappa}{\sqrt{2}}\sin\theta\sin\gamma - \varkappa\cos\theta\cos\gamma + \frac{\sqrt{2}}{105}\left\{\left(6 - \frac{3}{4}\beta^2 + \frac{9}{8}a^2\right)\sin\theta\sin\gamma + \left(-\frac{3}{2}\beta^2 + \frac{9}{2}\sqrt{\frac{3}{2}}\,acd - \frac{9}{4}\sqrt{\frac{3}{2}}\,bc^2 + \frac{3}{4}\alpha\beta + \frac{9}{2}\sqrt{\frac{3}{2}}\,a^2bd + \frac{9}{4}\sqrt{\frac{3}{2}}\,ab^2c\right)\sin\theta\cos\gamma + \left(\frac{2}{\sqrt{12}} - \frac{3\beta^2}{\sqrt{12}}\right)\times\cos\theta\cos\gamma - 3\sqrt{2}\left(-\sqrt{3}\,ad + \frac{\sqrt{3}}{2}\,bc\right)^2\cos\theta\cos\gamma\right\}\right|. \quad (22)$$

(21)

(22)

are obtained for A and B after some calculation. The theoretical results

$$D = -\frac{1}{2}\lambda_1 + \frac{1}{2}\left\{(\Delta + \lambda_1)^2 + 8\lambda_2^2\right\}^{1/2} - \frac{1}{2}\left\{\Delta^2 + 4\lambda_2^2\right\}^{1/2}, \quad (13)$$

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(splitting between 3 and the doublet 5.5', cf. Table 2) and

$$\left.\begin{aligned} |3\rangle &= \frac{\sin\theta}{\sqrt{2}}(|-\rangle|1\rangle - |+\rangle|-1\rangle) - \cos\theta|0\rangle|0\rangle, \\ |5'\rangle &= \sin\nu|-\rangle|0\rangle - \cos\nu|0\rangle|-1\rangle, \\ |5\rangle &= \sin\nu|+\rangle|0\rangle + \cos\nu|0\rangle|1\rangle. \end{aligned}\right\} \quad (12)$$

as well as (21) and (22) are compared with experimental results

$$\left.\begin{aligned} g_{\parallel} &= 1.915 \pm 0.002, \\ g_{\perp} &= 1.63 \pm 0.05, \\ D &= (7.0 \pm 0.3)\ \text{см}^{-1}, \\ |A| &= (0.959 \pm 0.005)\cdot 10^{-2}\ \text{см}^{-1}, \\ |E| &< 10^{-2}\ \text{см}^{-1}. \end{aligned}\right\} \quad (23)$$

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27273

S/181/61/003/008/003/034
B102/B201

Analysis of the spectrum of ...

and the hyperfine structure constants are calculated. Results are given in Table 3. The value of 361.4 cm^{-1} obtained for the splitting parameter Δ differs considerably from the value obtained by Pryce and Runciman (1200 cm^{-1}), but does not contradict experimental data. $K \sim 0.8$ is obtained for K, which fits the usual value, while $R = 0.59$ is somewhat lower than usual. Professor A. M. Prokhorov is finally thanked for discussions, and L. S.Korniyenko and G. M. Zverev for interest displayed. There are 3 tables and 12 references: 2 Soviet-bloc and 10 non-Soviet-bloc. The three most important references to English-language publications read as follows: J. Lambe, R. Ager, C. Kikuchi. Bull. Am. Phys. Soc., II, 4, 261, 1959; A. Abragam et al. Proc. Roy. Soc. A230, 169, 1955; M. H. L. Pryce, W. A. Runciman. Diss. Faraday Soc., 26, 34, 1958.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva (Institute of Physics imeni P. N. Lebedev AS USSR, Moscow)

SUBMITTED: January 9, 1961

Card7/10

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

27274 S/181/61/003/008/004/034
B102/B201

24,7900

AUTHOR: Rey, D. K.

TITLE: Theory of the covalent bond for cobalt salts and analysis of the spectrum of paramagnetic resonance of Co^{2+} in corundum

PERIODICAL: Fizika tverdogo tela, v. 3, no. 8, 1961, 2223 - 2239

TEXT: In much the same way as in his previous work (FTT, v. 3, no. 8, 2214) the author now derives expressions for the g-factors and the hyperfine structure constants of Co^{2+}. In so doing, he takes account of the possibility that there may be a mixture between states of trigonal or tetragonal fields and the covalent bond. These expressions are then used to analyze the paramagnetic resonance spectrum of Co^{2+} in Al_2O_3. In all cases, comparisons are made with the results supplied by Abragam and Pryce. The mathematical method is the same as in the previous paper (which considered V^{3+} in Al_2O_3) with the only difference that the tetragonal and the trigonal case are now considered separately. The resulting formulas

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are very bulky. Eigenvalues and states are tabulated (for the Hamiltonian $\mathcal{H} = V + (\lambda \vec{L}\cdot\vec{S})$ as well) likewise separately for the tetragonal and the trigonal case. For the lowest states of the tetragonal case

$$\left.\begin{aligned} |+\rangle &= \delta_1\left|1\,-\tfrac{1}{2}\right\rangle + \delta_2\left|0\,\tfrac{1}{2}\right\rangle + \delta_3\left|1^*\,\tfrac{3}{2}\right\rangle, \\ |-\rangle &= \delta_1\left|1^*\,\tfrac{1}{2}\right\rangle + \delta_2\left|0\,-\tfrac{1}{2}\right\rangle + \delta_3\left|1\,-\tfrac{3}{2}\right\rangle \end{aligned}\right\} \qquad (30)$$

and the trigonal case

$$\left.\begin{aligned} |+\rangle &= \delta_1\left|1\,-\tfrac{1}{2}\right\rangle - \delta_2\left|0\,\tfrac{1}{2}\right\rangle - \delta_3\left|1^*\,\tfrac{3}{2}\right\rangle \\ |-\rangle &= \delta_1\left|1^*\,\tfrac{1}{2}\right\rangle + \delta_2\left|0\,-\tfrac{1}{2}\right\rangle - \delta_3\left|1\,-\tfrac{3}{2}\right\rangle, \end{aligned}\right\} \qquad (31)$$

the following expressions are obtained for the g-factors:

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Theory of the covalent bond...

$$g_{\parallel} = 2|\langle + | L_z + 2S_z | + \rangle| = 2 + \frac{4(a_1+2)}{p^3 + \frac{8}{(x+2)^3} + \frac{6}{x^3}} \left[\frac{3}{x^3} - \frac{4}{(x+2)^3}\right], \quad (32)$$

$$g_{\perp} = 2|\langle + | L_x + 2S_x | - \rangle| = \frac{4}{p^3 + \frac{8}{(x+2)^3} + \frac{6}{x^3}} \times$$

$$\times \left[p^3 + \frac{2a_1 p}{x+2} + \frac{12}{x(x+2)}\right]. \quad (33)$$

The second-order corrections to the g-factors for the effect of the higher excited orbital states are given by

$$g_{\parallel}^{(2)} = 2\left[3(\delta_2^2 - \delta_1^2)\nu_1 + \delta_2^2\nu_2 + \left(\sqrt{6}\delta_2\delta_3 - \sqrt{8}\delta_1\delta_2\right)\nu_3\right], \quad (34)$$

$$g_{\perp}^{(2)} = 2\left[2\delta_1^2\nu_4 + 2\delta_2^2\nu_5 + \sqrt{3}\delta_1\delta_3\nu_6 + \frac{1}{\sqrt{2}}\delta_1\delta_2\nu_7\right]. \quad (35)$$

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Theory of the covalent bond...

ν_i, α_i, β_i, g, h, etc are, again separately for the two cases, given explicitly. Constants A and B are also indicated explicitly for the two cases. The respective expressions are very bulky; thus, B in the trigonal case extends over 10 lines. Finally, the author deals with the application in the practice. The cobalt ion in Al_2O_3 may occupy two different positions and the values of the spin-Hamiltonian constants are then as follows:

I	II
$g_{\parallel} = 2.292 \pm 0.001$,	$g_{\parallel} = 2.808 \pm 0.003$,
$g_{\perp} = 4.947 \pm 0.003$,	$g_{\perp} = 4.855 \pm 0.005$,
$\left.\begin{array}{l}\lvert A\rvert = 3.24 \pm 0.01 \\ \lvert B\rvert = 9.72 \pm 0.05\end{array}\right\} \times 10^{-3}$ cm^{-1};	$\left.\begin{array}{l}\lvert A\rvert = 2.08 \pm 0.09 \\ \lvert B\rvert = 15.10 \pm 0.11\end{array}\right\} \times 10^{-3}$ cm^{-1}.

For these two groups of lines, the hyperfine structure constants are given in Tables I and II. $\Delta/\lambda^{\alpha 1} = \Delta/(\alpha\lambda R/K)$. R and K are the covalence factors. It has been found as a result of the investigation that the influence of

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Theory of the covalent bond...

both the trigonal field and the covalent bond is of essential importance in the case of Co^{2+} in Al_2O_3; it is therefore impossible to determine these factors separately from experimental data by way of the g-factors. Not unless data regarding the fine structure are used, they can be determined singly; still, definite values must be assumed for P and $\varkappa$. If the constants given by Abragam and Pryce are used ($P = 0.0225\ cm^{-1}$, $\varkappa = 0.325$), the usual values will be obtained for the group of lines I, while the covalence factors for the group of lines II will be somewhat lower than usual. Professor A. M. Prokhorov is finally thanked for discussion, and L. S. Korniyenko and G. M. Zverev for interest displayed. There are 6 tables and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc. The four references to English-language publications read as follows: A. Abragam, M. H. L. Pryce. Proc. Roy. Soc. A206, 173, 1952; M. Tinkham. Proc. Roy. Soc. A236, 549, 1956; G. Racah. Phys. Rev., 62, 438, 1942; G. Racah. Phys. Rev., 63, 367, 1943.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva (Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

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28071
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B102/B104

24.4400 1158, 1395 2106

AUTHOR: Rey, D. K.

TITLE: Theoretical analysis of the g-factors of Ti^{3+} ion in some compounds

PERIODICAL: Fizika tverdogo tela, v. 3, no. 9, 1961, 2525-2534

TEXT: Values of g-factors of Ti^{3+} ion had hitherto been found to differ markedly for different compounds displaying electron paramagnetic resonance of this ion. The author tried to work out a general theory of g-factors for ions in the D-state if a trigonal electrostatic crystal field and a covalent bond were assumed. He started by seeking theoretical expressions of a sufficiently general character for the g-factors. These expressions are found as functions of the two parameters P and Q, where both the mixing of states in the trigonal field and the covalence of the bond are taken into account. If

$$\Delta = \frac{5}{2\sqrt{14}} A - \frac{5}{2\sqrt{14}} B - \frac{1}{2}\left[\frac{9}{14} A^2 + \frac{25}{126} B^2 + \frac{5}{7} AB + \frac{10}{9} C^2\right]^{1/2}, \quad (8)$$

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is negative, the relation

$$g_{\parallel} = 2\,|\sin^2\alpha - (1+P)\cos^2\alpha|,$$
$$g_{\perp} = 2\,|\sqrt{2}\,Q\sin\alpha\cos\alpha + \sin^2\alpha|. \qquad (23)$$

will be satisfied, where $\tan\alpha = -\frac{1}{\sqrt{2}\,\lambda_2}\left[\Delta + \frac{\lambda_1}{2} + \left(\Delta^2 + \frac{9}{4}\lambda_2^2 + \Delta\lambda_2\right)^{1/2}\right]$, and

$$\psi_{1/2} = \cos\alpha\,|+\rangle|-\tfrac{1}{2}\rangle + \sin\alpha\,|0\rangle|\tfrac{1}{2}\rangle,$$
$$\psi_{-1/2} = \cos\alpha\,|-\rangle|\tfrac{1}{2}\rangle - \sin\alpha\,|0\rangle|-\tfrac{1}{2}\rangle, \qquad (21)$$

where, e. g., $|+\rangle|-\frac{1}{2}\rangle$ denotes an arbitrary state formed by the orbital state $|+\rangle$ and the spin state $|-\frac{1}{2}\rangle$. If Δ is positive, and the state is characterized by $\psi_{3/2} = |+\rangle|\frac{1}{2}\rangle$, $\psi_{-3/2} = |-\rangle|-\frac{1}{2}\rangle$, one obtains $g_{\parallel} = 2|1 - P|$ and $g_{\perp} = 0$. Then, the relation

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$$
\begin{aligned}
P &= \left(\frac{2}{3}a^2 + \frac{1}{3}b^2 + \frac{2\sqrt{2}}{3}ab\right)K_{\pi\pi} + \frac{4}{3}\left(a^2 - b^2 - \frac{ab}{\sqrt{2}}\right)K_{\pi\sigma}, \\
Q &= -\left(\sqrt{\frac{2}{3}}a - 2\sqrt{\frac{1}{3}}b\right)K_{\pi\sigma} + \left(\sqrt{\frac{2}{3}}a + \sqrt{\frac{1}{3}}b\right)K_{\pi\pi}, \\
\lambda_1 &= \left(\frac{2}{3}a^2 + \frac{1}{3}b^2 + \frac{2\sqrt{2}}{3}ab\right)\lambda R_{\pi\pi} + \frac{4}{3}\left(a^2 - b^2 - \frac{ab}{\sqrt{2}}\right)\lambda R_{\pi\sigma}, \\
\lambda_2 &= -\left(\sqrt{\frac{2}{3}}a - 2\sqrt{\frac{1}{3}}b\right)\lambda R_{\pi\sigma} + \left(\sqrt{\frac{2}{3}}a + \sqrt{\frac{1}{3}}b\right)\lambda R_{\pi\pi}.
\end{aligned}
\tag{18}
$$

will hold. Denotations are the same as with K. W. H. Stevens (Proc. Roy. Soc. A219, 542, 1953) or M. Tinkham (Proc. Roy. Soc. A236, 549, 1956). In what follows, these results are applied to (1) $CsTi(SO_4)_2 \cdot 12H_2O$, (2) titanium acetyl acetanate, (3) $AlCl_3 \cdot 6\,H_2O$, (4) Al_2O_3. An analysis shows that the admixture of the trigonal field is of essential importance in individual cases, while the covalent bond is also important in other cases. As both factors act simultaneously, their contributions cannot be distinguished. None of these compounds shows any fine structure. To verify

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the values of P and Q it is, therefore, necessary to determine susceptibility and relaxation times. In particular, this applies to Al_2O_3, where a certain ambiguity is observed. Professor A. M. Prokhorov is thanked for discussions, and L. S. Korniyenko along with G. M. Zverev for their interest. There are 5 tables and 10 references: 1 Soviet and 9 non-Soviet. The three most recent references to English-language publications read as follows: B. Bleaney, G. S. Bogle, A. H. Cooke, R. J. Duffus, M. C. M. O'Brien, K. W. H. Stevens. Proc. Phys. Soc., A68, 57, 1955; H. S. Jarrett. Jour. Chem Phys., 27, 1298, 1957; E. Y. Wong. Jour. Chem Phys., 32, 598, 1960.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva (Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

SUBMITTED: January 9,1961

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28072
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B102/B104

24 4400 1136 1395 1482

AUTHOR: Rey, D. K.

TITLE: Electron paramagnetic resonance spectrum of the V^{4+} ion in rutile (TiO_2)

PERIODICAL: Fizika tverdogo tela, v. 3, no. 9, 1961, 2535-2539

TEXT: The electron paramagnetic resonance spectrum of the V^{3+} ion in TiO_2 has not been discovered until recently. Attempts made to explain experimental data by a theoretical analysis of the behavior of the single 3d-electron of this ion and to obtain suitable expressions for the g-factors and the potential parameters led to diverging results. The author tried to obtain expressions of a sufficiently general character for the g-factors and for parameters A. He started by assuming a covalent bond to exist between the 3d-electron and the surrounding p-electrons of the oxygen atom, and by assigning a weak tetragonal component to the strong cubic field. While the weak rhombic component established experimentally may be neglected since the error caused by it is small, a deviation from

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Stevens's results will be observed if that component is taken into account in the relation for the potential

$$V = A_0^2 r^2 Y_0^2 + A_2^2 r^2 (Y_2^2 + Y_{-2}^2) + A_0^4 r^4 Y_0^4 + A_4^4 r^4 (Y_4^4 + Y_{-4}^4) + A_2^4 r^4 (Y_2^4 + Y_{-2}^4), \quad (1)$$

If an anisotropic bond is assumed, one obtains $g_{\parallel} = 2\,|\sin^2\alpha - (1+K_{\parallel})\cos^2\alpha|$, $g_{\perp} = 2\,|\sqrt{2}\,K_{\perp}\sin\alpha\cos\alpha + \sin^2\alpha|$, where $K_{\parallel} = \langle 1|L_z|1\rangle$ and $K_{\perp} = \langle 1|L_x|0\rangle$ and

$$|\alpha\rangle = \cos\theta\,|1, -\tfrac{1}{2}\rangle - \sin\theta\,|1, \tfrac{1}{2}\rangle$$

$$|\beta\rangle = \cos\theta\,|-1, \tfrac{1}{2}\rangle + \sin\theta\,|-1, -\tfrac{1}{2}\rangle$$

In case of a very weak rhombic field one may put $\cos\theta \simeq 1$ and $\sin\theta \simeq 0$, so that the relation

$$g_x = 2\,|\cos^2\theta(\sqrt{2}\,K_{\perp}\sin\alpha\cos\alpha + \sin^2\alpha) + \sin\theta\cos\theta(\cos\alpha + K_{\perp}\sin\alpha)|,$$
$$g_y = 2\,|\cos^2\theta(\sqrt{2}\,K_{\perp}\sin\alpha\cos\alpha + \sin^2\alpha) - \sin\theta\cos\theta(\cos\alpha + K_{\perp}\sin\alpha)|,$$
$$g_z = 2\,|\cos^2\theta(\sin^2\alpha - (1+K_{\parallel})\cos^2\alpha) - \sin^2\theta(1 - K_{\parallel})|. \quad (10)$$

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will result for the g-factors of the lowest states. The constants A are obtained in case of a covalent bond and by considering the rhombic field from

$$A_x = PN^2 \left| \left\{ -\varkappa \sin^2 \alpha + \frac{11}{7\sqrt{2}} \sin 2\alpha - \frac{1}{7} \cos 2\alpha + \frac{1}{7} \right\} \cos^2 \theta + \right.$$
$$\left. + \frac{4}{7} \sin \theta \cos \theta \cos \alpha + \frac{17\sqrt{2}}{7} \sin \theta \cos \theta \sin \alpha + 2\varkappa \sin \theta \cos \theta \cos \alpha \right|, \qquad (11)$$
$$A_y = PN^2 \left| \left\{ -\varkappa \sin^2 \alpha + \frac{11}{7\sqrt{2}} \sin 2\alpha - \frac{1}{7} \cos 2\alpha + \frac{1}{7} \right\} \cos^2 \theta - \right.$$
$$\left. - \frac{4}{7} \sin \theta \cos \theta \cos \alpha - 2\varkappa \sin \theta \cos \theta \cos \alpha - \frac{17\sqrt{2}}{7} \sin \theta \cos \theta \sin \alpha \right|,$$
$$A_z = PN^2 \left| \left\{ \varkappa \cos 2\alpha - \frac{10}{7} - \frac{6}{7} \cos 2\alpha + \frac{3\sqrt{2}}{7} \sin 2\alpha \right\} \cos^2 \theta + \right.$$
$$\left. + \left(-\varkappa + \frac{12}{7} \right) \sin^2 \theta \right|,$$

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where $P = 2\gamma\beta N\langle\frac{1}{r^3}\rangle$, N is the normalization constant of dc-states of the covalent bond, and $\varkappa$ is a coefficient related to the contribution of the 3s 3d 4s configuration. The following numerical data are obtained for the special case of V^{4+} in TiO_2 using the foregoing formulas:

$$g_\perp \begin{cases} g_x = 1.955 \pm 0.001 \\ g_y = 1.913 \pm 0.001 \\ g_z = 1.912 \pm 0.001 \end{cases} \quad \left.\begin{matrix} A_x = 14.15 \pm 0.07 \\ A_y = 3.09 \pm 0.03 \\ A_z = 4.41 \pm 0.03 \end{matrix}\right\} \times 10^{-3}\ \text{см}^{-1}$$

$K_\perp$	$K_\parallel$	α
1.0	21.0	91°45′
0.30	1.05	94 10
0.28	0.76	95 10
0.27	0.61	95 18
0.26	0.38	95 30

As may be seen, the experimental values of the g-factors are obtained by putting $K_\perp < 0.3$. If, in addition, $K_\perp = K_\parallel$, the value of 0.26 will be most favorable. This small value can be explained by a migration of the electron to neighboring atoms. Taking the rhombic field into account

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results in a difference of 0.001 (or 0.003 according to Gerritsen and Lewis) between g_x and g_y. θ, however, is not large enough to influence $K_\perp$ and $K_\parallel$ appreciably. An attempt to make the theoretical values obtained for A fit experimental data is unsuccessful. It does not seem to be generally possible to use a single constant χ for all directions, no matter whether the rhombic constant is or is not taken into account. Hence, the hyperfine structure constants cannot be calculated by assuming a single 3d-electron. There are 2 tables and 7 references: 2 Soviet and 5 non-Soviet. The four most important references to English-language publications read as follows: H. T. Gerritsen, H. R. Lewis. Phys. Rev., 119, 1010, 1960; B. Blaney, G. S. Bogle, A. H. Cooke, R. T. Duffus, M. C. M. O'Brien, K. W. H. Stevens. Proc. Phys. Soc., A68, 57, 1955; K. W. H. Stevens. Proc. Roy. Soc., A219, 542, 1953; A. Abragam, M. H. L. Pryce. Proc. Roy. Soc., A205, 135, 1951.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva (Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

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REY, J

SZABO.;Gy.;SOLTI, F.;REY, J.;MARTON, I.

Effects of decrease in the effectively circulating blood volume on the renal function in Addison's disease. Magy. belorv. arch. 10 no.1:30-32 Feb '57.

1. A Budapesti Orvostudomanyi Egyetem-I. sz. Belklinikajanak (Igazgato: Russnyak Istvan dr. egyetemi tanar) kozlemenye.

(ADDISONS DISEASE, physiol.
eff. of decrease in effectively circulating blood volume on renal funct. (Hun))
(KIDNEYS, in various dis.
Addison's dis., eff. of decrease in effectively circulating blood volume on funct. (Hun))

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PELEVIN, L.; NAYANZIN, I., inzh.; BATURIN, N.; RMY, Yu., tekhnolog (g.Khar'kov); TSIPERFIN, I.; KARLENKOV, B., aktivist; KAL'MANOVICH, M.; SERGIYENYA, K., normirovshchik; IGNATOV, L. (g.Tashkent)

From readers' letters. Izobr.i rats. no.6:38-40 Je '59. (MIRA 12:9)

1. Nachal'nik proizvodstvenno-tekhnicheskogo otdela neftepromyslovogo upravleniya "Tuymazyneft'", g.Oktyabr'skiy, BashASSR (for Pelevin). 2. Proizvodstvenno-tekhnicheskiy otdel neftepromyslovogo upravleniya "Tuymazyneft'", g.Oktyabr'skiy, BashASSR (for Nayanzin). 3. Starshiy inzhener tekhnicheskogo otdela parovozno-vagonnogo zavoda, g.Ulan-Ude (for Baturin). 4. Nachal'nik Byuro sodeystviya ratsionalizatsii i izobretatel'stvu Odesskogo zavoda zapasnykh chastey, g.Odessa (for TSiperfin). 5. Nachal'nik Byuro sodeystviya ratsionalizatsii i izobretatel'stvu Penzenskogo dizel'nogo zavoda, g.Penza (for Karlenkov). 6. Nikolayevskiy oblastnoy sovet Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov, g.Nikolayev (for Kal'manovich). 7. Khar'kovskiy traktornyy zavod, g.Khar'kov (for Sergiyenya).

(Efficiency, Industrial)

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

AMS/A+B

1950
K

551.577.37(497.1)

K-99

*Reya, Oskar. Maksimalne intenzitete padavin v Slovenskem Primorju. [Maximum intensity of precipitation in the Slovenian littoral.] *Geografski Vestnik, Ljubljana*, Vol. 20-21, p. 87-110, 1948-1949. 8 figs., 2 tables, 5 refs. Summaries in Russian and French DLC—Maximum 24 hour, 1 hour and 1 minute rainfalls are calculated for 42 places (1923-1936). Charts show the areal distribution of intense rainfall for eight of these occasions in the region to the north and east of Trieste. Heaviest rains come with cold fronts, not thundershowers. *Subject Headings:* Rainfall intensity, Yugoslavia.—*M.R.*

Hydrometeorology
or
Hydrology

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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S/137/62/000/001/117/237
A052/A101

AUTHOR: Reyakin, V. P.

TITLE: Theoretical diagrams of electrolytic alloys and how to plot them

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 1, abstract 1I5 ("Izv. Irkutskogo s.-kh. in-ta", no.16, 1960, 78-85)

TEXT: A method is suggested of plotting constitution diagrams of electrolytic alloys in the coordinate system potential-versus composition or potential-versus electrodeposition conditions of alloy. The potential values are plotted on Y-axis and the values of components or values of electrodeposition parameters (i.g. temperature, composition and acidity of electrolyte, current density etc.) are plotted on X-axis. Examples of plotting constitution diagrams of electrolytic Fe-Ni, Fe-Zn and Fe-H alloys are given.

Z. Rogachevskaya

[Abstracter's note: Complete translation]

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L 16294-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM
ACCESSION NR: AP4045842 S/0064/64/000/009/0659/0663

AUTHOR: Reybakh, M. S.; Tsirlin, A. M.; Kleshchevnikova, S. I.

B

TITLE: Continuous synthesis of triethoxysilane

SOURCE: Khimicheskaya promy*shlennost', no. 9, 1964, 659-663

TOPIC TAGS: triethoxysilane, triethoxysilane synthesis, continous synthesis, trichlorosilane, absolute alcohol, HCl removal, triethoxysilane dissociation, triethoxysilane yield, HCl desorption

ABSTRACT: In the search for higher yields (above the maximum 65%) of the title compound, the influence of technological factors (period of contact of the reaction product with HCl, ratio of starter materials, reaction temperature) upon the yield was examined. The experimental laboratory equipment is figured. Reaction specimens were tested for amount of triethoxysilane, chlorine, HCl, tetraethoxysilane and alcohol. The period of contact was determined at 30C, the amount of the starter materials, i. e. $HSiCl_3$ and absolute ethanol was 100 and

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L 16294-65
ACCESSION NR: AP4045842

175 cc in all experiments, the influence of temperature was tested between 30 and 100C. Dissociation of the synthesized triethoxysilane (80% yield) under the influence of HCl was observed as early as one minute after the start of the reaction. Optimal alcohol addition was found at 97-98% of the stoichiometric value, with a 2-3% excess of trichlorosilane, to make up for its possible evaporation. The optimum temperature, 30C was obtained upon mixing the starter materials at 20C. Removal of HCl from the reaction zone is required for high yields, thus necessitates a continuous process which is described for use in the pilot equipment. Its main feature is a film column for HCl desorption; HCl is then removed together with the blown-through nitrogen, thus remains only about 40 seconds in contact with the reaction mixture. Under these conditions the yield was 97%. This process was used with test-manufacturing equipment and yielded 6 kg triethoxysilane in one hour (97% yield). Orig. art. has: 5 figures, 3 tables and 6 formulas

ASSOCIATION: None
SUBMITTED: 00 ENCL: 00
SUB CODE: GC NO REF SOV: 007 OTHER: 006

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

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REYBAKH, M.S.; TSIRLIN, A.M.; MOZHAYKIN, A.S.; BORISOV, M.F.; TISHINA, N.N.

Studying the continuous process of cohydrolysis of organosilicon monomers used for the manufacture of electric insulation lacquers. Lakokras.mat. i ikh prim. no.2:64-67 '64. (MIRA 17:4)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

L 25787-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AR4040353 S/0081/64/000/006/N010/N010

SOURCE: Ref. zh. Khimiya, Abs. 6N79

AUTHOR: Reybakh, M. S.; Kazakova, N. V.; Tsirlin, A. M.; Matveyev, B. I.

TITLE: Effect of some technological factors on the yield of triethoxysilane

CITED SOURCE: Vestn. tekhn. i. ekon. inform. N.-i. in-t tekhn.-ekon. issled. Gos. kom-ta khim. i neft. prom-sti pri Gosplane SSSR, vyp, 9, 1963, 10-12

TOPIC TAGS: triethoxysilane synthesis, reaction temperature, contact time, trichlorosilane, alkoxysilane synthesis

TRANSLATION: The authors studied the effect of temperature, reaction time and the proportions of the starting materials on the synthesis of triethoxysilane from $SiHCl_3$ and ethanol. The optimum conditions were a temperature of 30-32C, a 97% alcohol content (with respect to the stoichiometric amount) and a contact time of 1 minute. The reaction product was freed of HCl and distilled, producing $HSi(OC_2H_5)_3$ in 80-83% yield with a 10-15% content of $Si(OC_2H_5)_4$ and chloroethers. In a pilot plant, approximately 3 kg of pure $HSi(OC_2H_5)_3$ could be produced in one cycle. A schematic illustration of the apparatus is included.

L. R.

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L 25787-65

ACCESSION NR: AR4040353

SUB CODE: OC, GC ENCL: 00 O

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

S/193/62/000/009/001/002
A004/A101

AUTHORS: Reybakh, M. S., Tsirlin, A. M., Kleshchevnikova, S. I., Volkov, V. L., Matveyev, B. I., Kazakova, N. V.

TITLE: Film-type apparatus for the continuous triethoxysilane synthesis

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 9, 1962, 21 - 23

TEXT: This new apparatus for the continuous triethoxysilane synthesis, in which the reaction and desorption zones are separated, has been developed by an organization of the Gosudarstvenny komitet po khimii (State Committee on Chemistry) at the Council of Ministers of the USSR. The apparatus is a film-type mass-exchange column, whose design and operation are described. A table gives comparative data on the triethoxysilane synthesis in film-type and bubbler apparatus. The raw material consumption in the former is only half of the latter, while the output of the film-type apparatus is by 25% higher than that of the bubbler type. Comparing the technical and design data of the continuous film-type apparatus with those of the periodic bubbler apparatus, it is shown that the working volume and hydraulic resistance of the film-type apparatus are considerably lower than

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those of the bubbler apparatus, while the specific surface of heat exchange and the specific surface of phase contact are many times larger (345 and 130 times respectively), which ensures a sharp reduction in desorption time. There are 1 figure and 2 tables.

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REYBAKH, M.S.; TSIRLIN, A.M.; KLESHCHEVNIKOVA, S.I.

Continuous synthesis of triethoxysilane. Khim. prom. 40 no.9:659-663 S '64. (MIRA 17:11)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBAKH, [illegible]; [illegible]N, A.M.; MOZHAYKINA, A.[illegible]; K[illegible]SHCHEVNIKOVA, [illegible].

Continuous method for the production of tetraethoxysilane. Khim.prom. 41 no.4:15-17 Ap '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

MERPERT, M.P., REYBAKH, Yu. S.

Grinding high-precision rings in mass production. Stan.i instr. 31 no.4:22-25 Ap '60. (MIRA 13:6)
(Grinding and polishing)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

REYBAKH, Yu.S.; RIVKIN, A.I.

Balancing a grinding wheel with balls during the run-out of spindles. Stan.i instr. 31 no.7:13-16 Jl '60. (MIRA 13:7)

(Grinding wheels) (Balancing of machinery)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

S/121/60/000/007/003/011

AUTHORS: Reybakh, Yu.S., Rivkin, A.I.

TITLE: Balancing Grinding Disks With the Aid of Balls During the Spindle Run-Out

PERIODICAL: Stanki i Instrument, 1960, No. 7, pp. 13-16

TEXT: Tests were carried out at the ENIMS to investigate the balancing of grinding disks by balls on the 3153 model grinding machine. The design of the spindle bearings of the machine was not altered to a great extent. The 3153 grinding machine was fitted with triple-bushing bearings, one of the bushings being spring-supported. The experiments carried out showed that in the case of the bearings possessing one spring-supported bushing (this design of grinding bearing is used e.g. with the grinding machines Nos. 3153, 3110, 310 and others), the grinding disk can be balanced without a special spindle suspension in the front bearings (the design of the bushings is in this case only subjected to insignificant alterations). Balancing is achieved during the spindle run-out at definite numbers of revolution, as it can be presumed on account of elasticity variations in the system spindle - lubrication film - bushing - grinding stock, owing to which such a ratio of critical speed to spindle speed is produced which

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S/121/60/000/007/003/011

Balancing Grinding Disks With the Aid of Balls During the Spindle Run-Out

ensures the balls being rolled over into the "light" section of the system and being balanced by self-adjustment. The authors point out that the equipment necessary for the use of this method is simple and that it does not require great expenditures to have it fitted to the existing types of grinding machines. The introduction of this balancing method makes it possible to automate the process, reduce the balancing time from some hours to some seconds and does not necessitate the taking off of the grinding disk from the machine. The average balancing accuracy achieved is satisfactory. The residual double amplitude of horizontal vibrations of the stock relative to the machine table amount to 2 μ. There are 3 diagrams, 1 photo and 7 oscillograms.

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REYBEL', I.M., kand.khim.nauk

Aquation kinetics of some binuclear complex cobalt ammines. Trudy Kish.sel'khoz.inst. 26:25-33 '62. (MIRA 16:5)
(Cobalt compounds) (Ammines) (Aquation)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

KHAKHAM, I.B., kand.khim.nauk; REYBEL', I.M., kand.khim.nauk

Decomposition kinetics of decammine-μ-peroxodicobalti salts in the presence of activated carbon. Trudy Kish.sel'khoz.inst. 26:17-24 '62. (MIRA 16:5)
(Cobalt compounds) (Ammines) (Carbon, Activated)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001444720016-2

[illegible], [illegible], [illegible], I.M.

"Inorganic chemistry" by [illegible]. Reviewed by [illegible], Ablov, [illegible].M. Reibel'. Zhur. neorg. khim. 10 no.1:309-310 Ja '65. (MIRA 18:11)

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