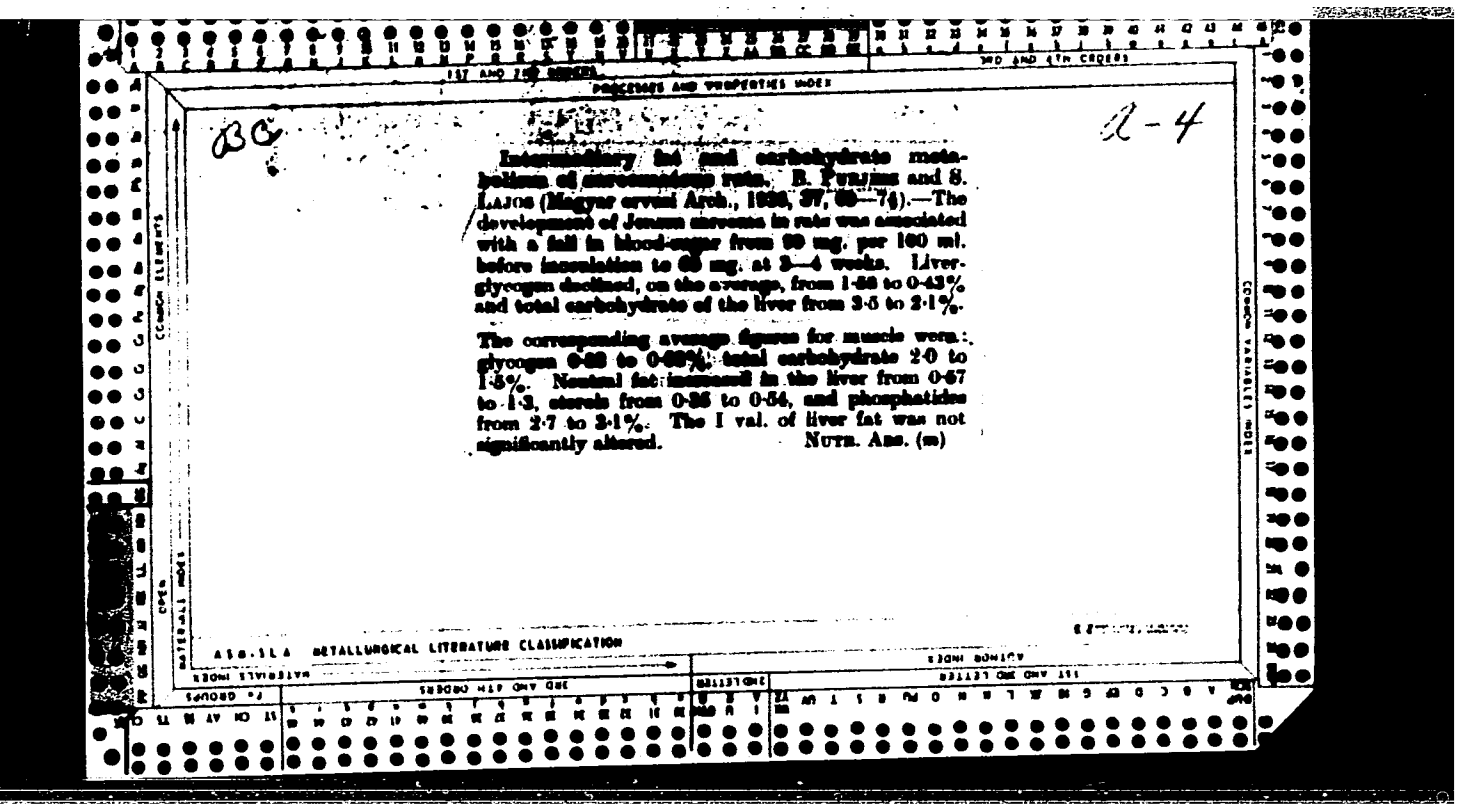
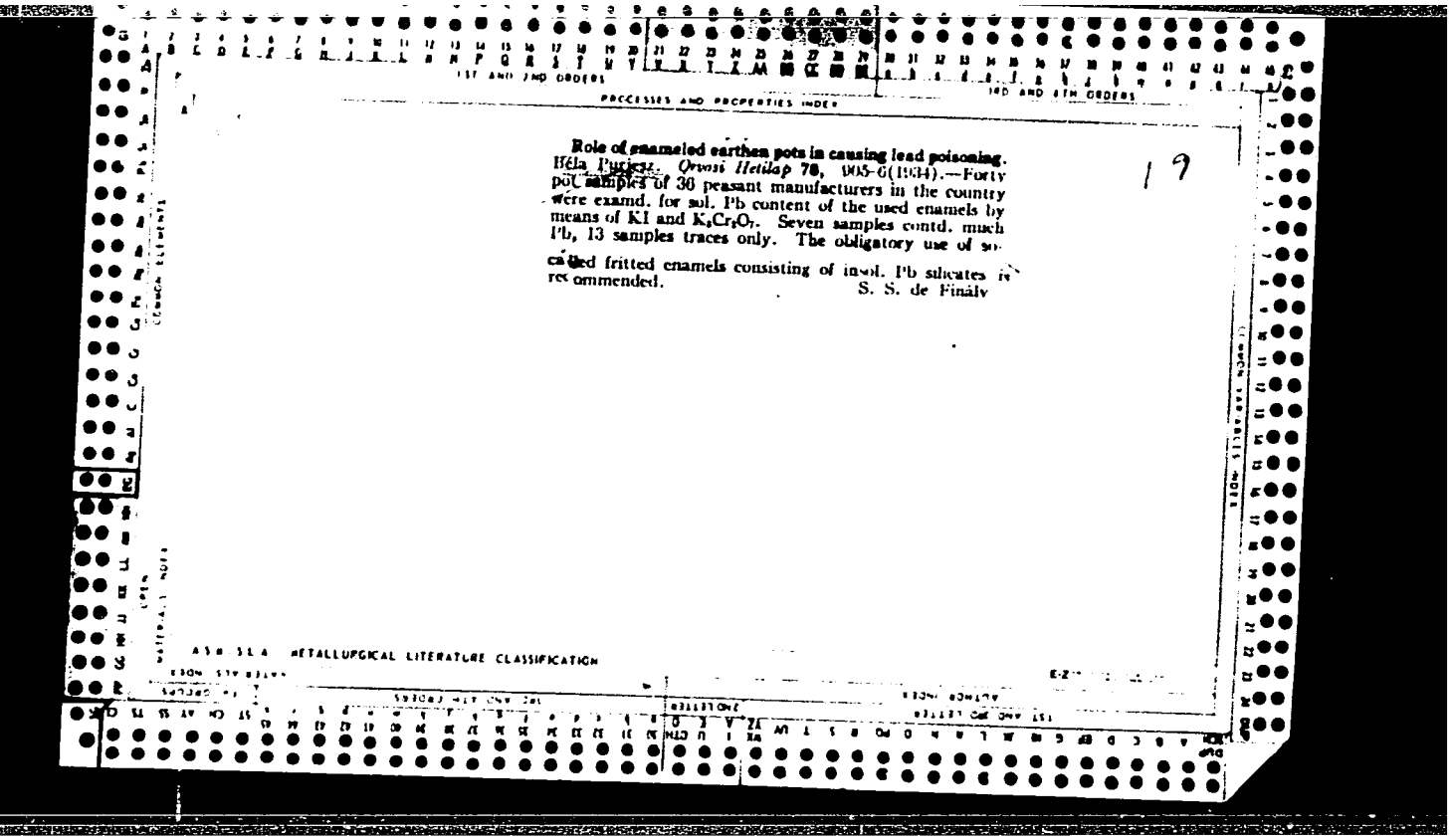


BC

R-4

Intermediary fat and carbohydrate metabolism of micronutrient rats. B. Fürjész and S. Lajos (Magyar orvosi Arch., 1956, 57, 65—74).—The development of Jensen sarcoma in rats was associated with a fall in blood-sugar from 99 mg. per 100 ml. before inoculation to 68 mg. at 3—4 weeks. Liver-glycogen declined, on the average, from 1·68 to 0·43% and total carbohydrate of the liver from 3·5 to 2·1%.

The corresponding average figures for muscle were: glycogen 0·62 to 0·62%, total carbohydrate 2·0 to 1·5%. Neutral fat increased in the liver from 0·67 to 1·3, sterols from 0·35 to 0·54, and phosphatides from 2·7 to 3·1%. The I val. of liver fat was not significantly altered. NUTR. ABS. (m)

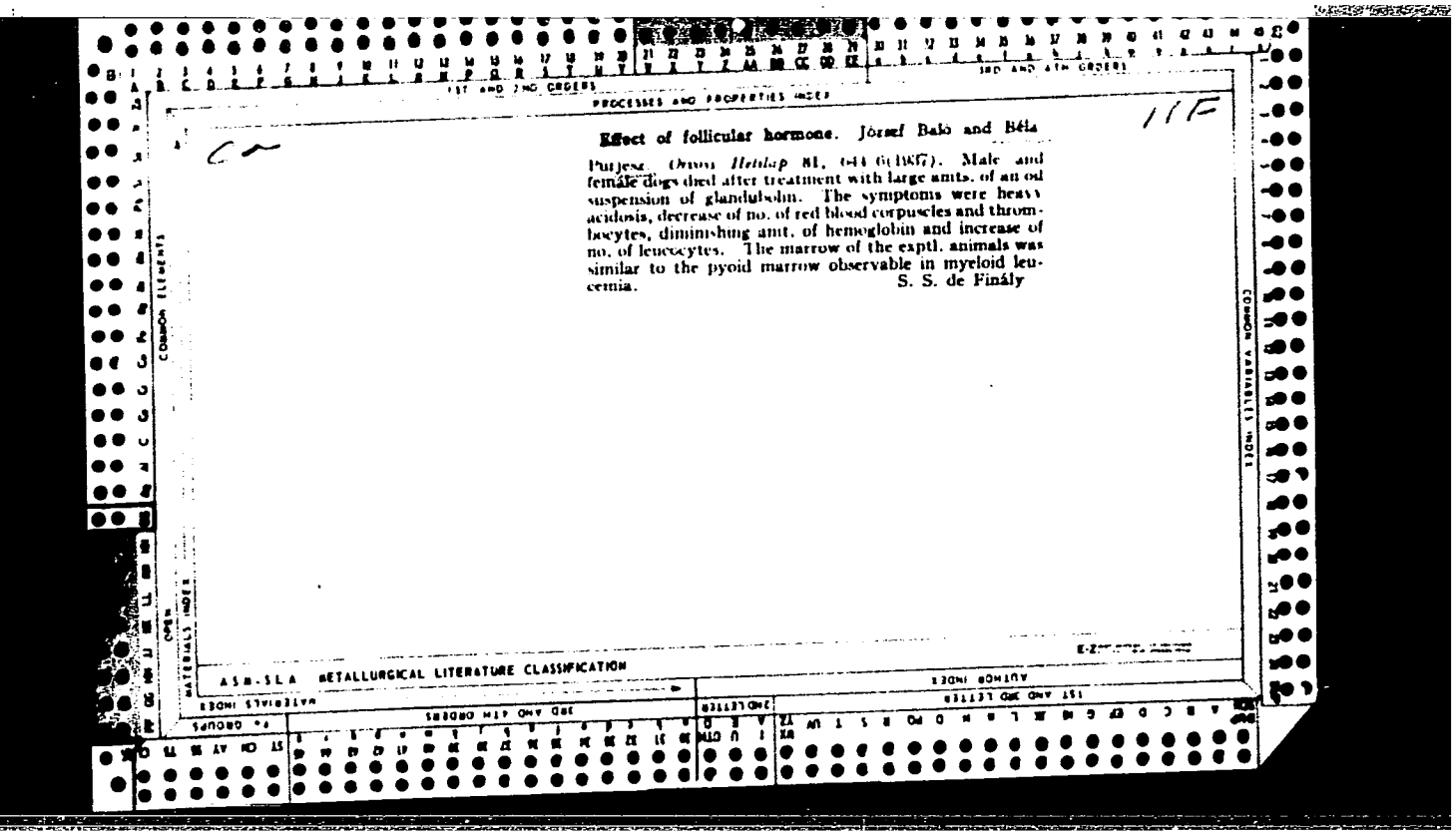


PROCESSES AND PROPERTIES INDEX

Role of enameled earthen pots in causing lead poisoning. Béla Purjesz. *Orvosi Hetilap* **78**, 905-6(1934).—Forty pot samples of 36 peasant manufacturers in the country were examd. for sol. Pb content of the used enamels by means of KI and $K_2Cr_2O_7$. Seven samples contd. much Pb, 13 samples traces only. The obligatory use of so-called fritted enamels consisting of insol. Pb silicates is recommended. S. S. de Finály

19

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

Effect of follicular hormone. Jósef Bakó and Béla Purjesz. *Orvosi Hetilap* 81, 644 6(1937). Male and female dogs died after treatment with large amts. of an oil suspension of glandulobin. The symptoms were heavy acidosis, decrease of no. of red blood corpuscles and thrombocytes, diminishing amt. of hemoglobin and increase of no. of leucocytes. The marrow of the exptl. animals was similar to the pyoid marrow observable in myeloid leucemia.
S. S. de Finály

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RYBACHOK, I.N.; SHUL'GA, P.M.; SOKOLOV, A.P.; PURIY, G.V.

Increasing the efficiency of sedimentation tanks in demulsification units by changing the design of the nipples for fluid inlet and outlet. Nefteprom. delo no.2:31-33 '65. (MIRA 18:5)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti; Volgogradskiy politekhnicheskiy institut i Zhirnovskoye neftepromyslovoye upravleniye.

RYBACHOK, I.N.; MITROFANOV, A.Z.; SOKOLOV, A.I.; FURIY, G.V.

Increasing the output of demulsification units in connection with the use of new demulsifiers. Neftepром. delo no.9:20-22 '64. (MIRA 17:10)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti.

PURIY, K.K. (Kronshtadt)

One hundredth anniversary of the Kronstadt Clothing Factory. Shvein. prom. no.1:39-40 Ja-F '62. (MIRA 15:4)
(Kronstadt--Clothing industry)

PURJESZ, I.; URBAN, G.

Water load and aldosterone secretion. Acta med. Hung. 18 no.2:213-218 '62.

1. Institute of Pathophysiology (Director: J. Sos), University Medical School, Budapest.
(ALDOSTERONE physiology) (WATER pharmacology)

L 29393-66

ACC NR: AT6019811 SOURCE CODE: HU/2505/65/028/002/0163/0170

AUTHOR: Sturcz, Jozsef; Kotra, Zsuzsanna; Purjesz, Istvan; Lakatos, Katalin, S.; Saliga, Margit K.

ORG: [Sturcz, Purjesz, Lakatos, Saliga] Institute of Physiology, Medical University of Budapest (Budapesti Orvostudomanyi Egyetem, Elettani Intezet); [Kotra] KOJAL, Budapest

TITLE: Effect of vagotomy on aldosterone secretion in the dog

SOURCE: Academiae scientiarum hungaricae. Acta physiologica, v. 28, no. 2, 1965, 163-170

TOPIC TAGS: corticosteroid, dog, endocrinology

ABSTRACT: A study was carried out on the effect of vagotomy on the rate of aldosterone secretion in hypovolemic and hypervolemic dogs. The rate of secretion achieved in the hypovolemic state was significantly increased by vagotomy. In the hypervolemic state, vagal section had no effect on the aldosterone output of the adrenals. Under such experimental conditions, the inhibitory effect of hypervolemia on aldosterone secretion was overruled by the stimulating effect of blood loss. The authors thank Ciba, Basel and Organon, Oss, Netherlands for supplies of steroid preparations. Orig. art. has: 3 figures. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: 18Dec64 / ORIG REF: 001 / OTH REF: 028

Card 1/1

STURC, J.; KOTRA, Zsuzsanna; PURJESZ, I.; LAKATOS, Katalin S.; SALIGA, Margit K.

The effect of vagotomy on aldosterone secretion in the dog. Acta physiol. acad. sci. Hung. 28 no.2:163-170 '65.

1. Department of Physiology, University Medical School, Budapest. Submitted December 18, 1964.

VECSEI (Weisz), Pal, dr.; KEMENY, Armandne, dr.; PURJESZ, Istvan, dr.; RITTER, Laszlo, dr.; MARTON, Jozsef; GOSZTONYI, Tamas

Aldosterone production in the resistance phase of general adaptation syndrome. Orv. hetil. 103 no.34:1607-1610 26 Ag '62.

1. Orszagos Reuma es Furdougyi Intezet, Kutato osztaly, Budapesti Orvostudomanyi Egyetem, Korelettani Intezet es az Orszagos Atomenergia Bizottsag Isotop Intezetenek Szerves Kemiai Osztalya.
(ALDOSTERONE physiol) (STRESS physiol)

PURJESZ, I.; RITTER, L.; URBAN, G.; WEISZ, P.

Hyposmosis and aldosterone secretion. Acta physiol. hung. 17 no. 4: 443-448 '60.

1. Institute of Pathophysiology, Medical University, Budapest.
(OSMOSIS)
(ALDOSTERONE physiology)

PURKALIN, M. M.

3

Transl. No. & Country 541 U.S.S.R.

Translation issued by R.A.E., Farnborough

Concerning the Combustion of Methyl Nitrate

Dokl. Akad. Nauk., 50, 281-284, 1945

Authors: K. K. Andreev, M. M. Purkalin

CH

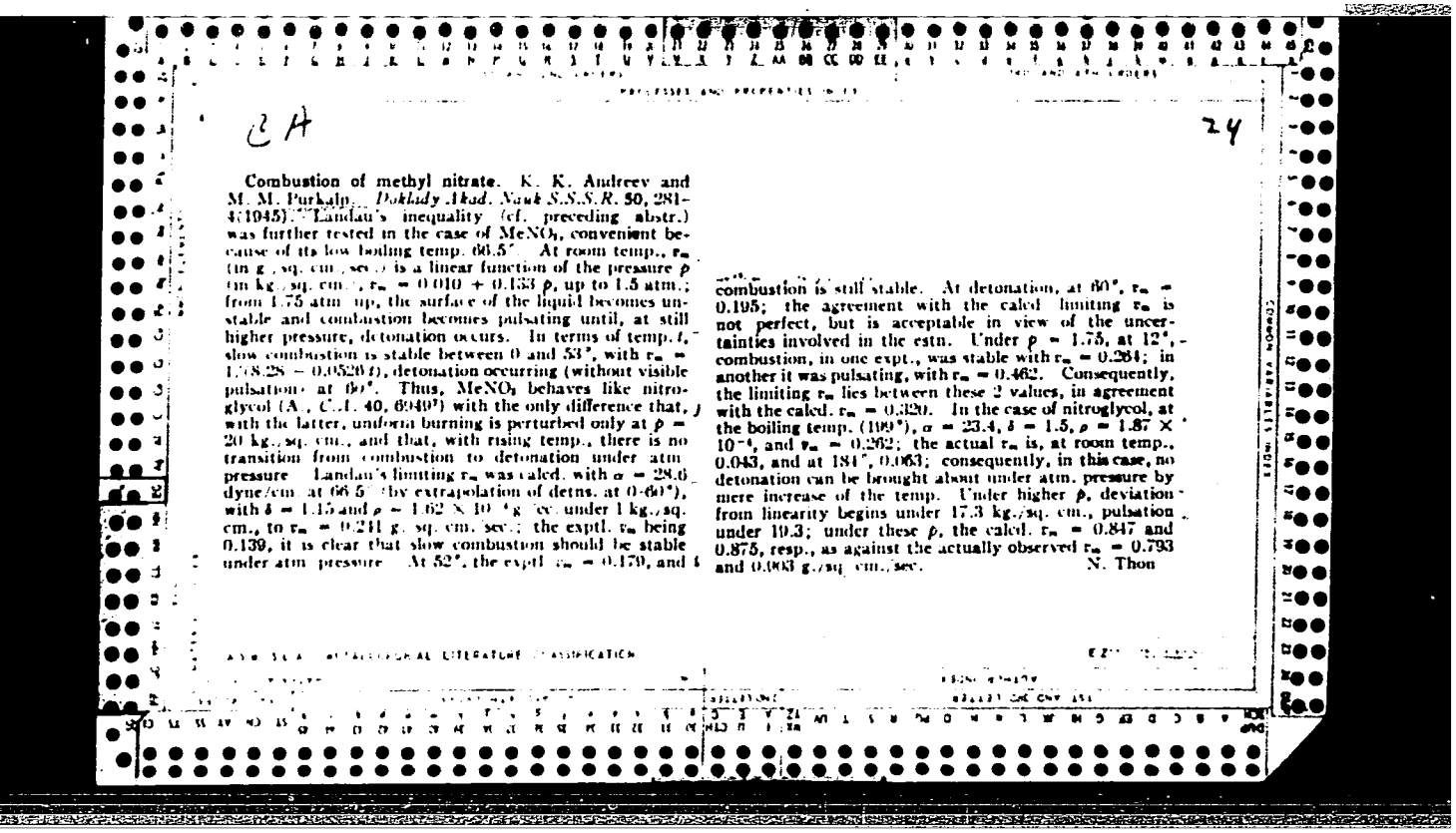
Source: Index Aeronauticus, Vol 11, No. 11, November, 1955, p 131

PURKAIN, M. M.

"Liberation of Toxic Gases in the Explosion of Industrial Explosives," Dok.AN, 25, No. 5, 1939; D. I. Mendeleyev Inst. for Chemical Tech. Moscow. c1939-.

PURKAIN, M.M.

"On the Action of Potassium Nitrate in the Formation of Noxious Gases During the Detonation of Industrial Explosives IBID; 51, No. 6, 1946. D.I. Mendelev Inst. Chem. Technol., Moscow, 1945.

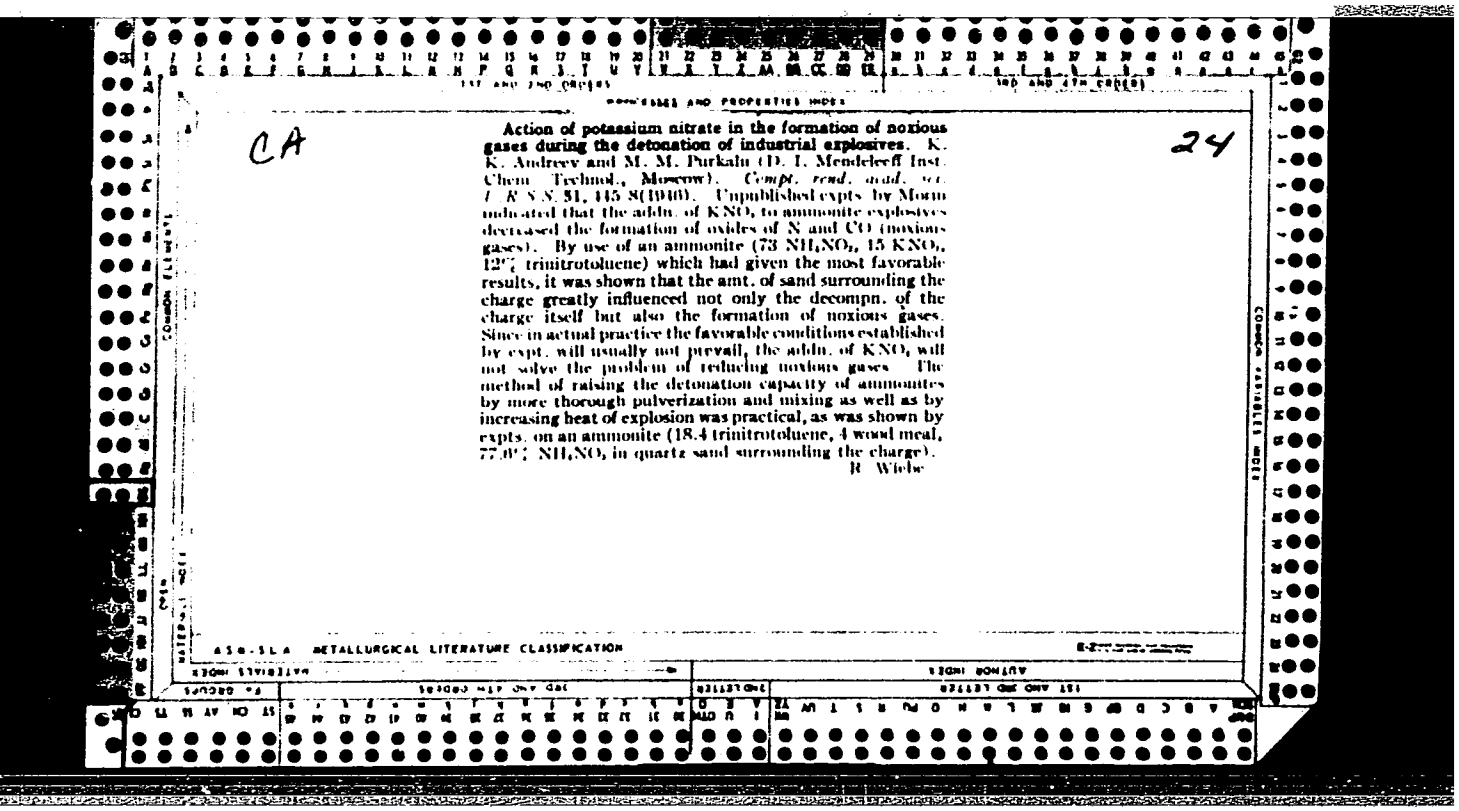


CA

24

Combustion of methyl nitrate. K. K. Andreev and M. M. Purkalp. *Doklady Akad. Nauk S.S.S.R.* 50, 281–4(1945). Landau's inequality (cf. preceding abstr.) was further tested in the case of $MeNO_3$, convenient because of its low boiling temp. 66.5°. At room temp., r_m (in g./sq. cm./sec.) is a linear function of the pressure p (in kg./sq. cm.), $r_m = 0.010 + 0.133\ p$, up to 1.5 atm.; from 1.75 atm. up, the surface of the liquid becomes unstable and combustion becomes pulsating until, at still higher pressure, detonation occurs. In terms of temp. t, slow combustion is stable between 0 and 53°, with $r_m = 1/(8.28 - 0.0520t)$, detonation occurring (without visible pulsation) at 69°. Thus, $MeNO_3$ behaves like nitroglycol (A., C.A. 40, 6940[7]) with the only difference that, with the latter, uniform burning is perturbed only at $p = 20$ kg./sq. cm., and that, with rising temp., there is no transition from combustion to detonation under atm. pressure. Landau's limiting r_m was calcd. with $\sigma = 28.0$ dyne/cm. at 66.5° (by extrapolation of detns. at 0–60°), with $\delta = 1.15$ and $\rho = 1.62 \times 10^{-3}$ g./cc. under 1 kg./sq. cm., to $r_m = 0.241$ g./sq. cm./sec.; the exptl. r_m being 0.139, it is clear that slow combustion should be stable under atm. pressure. At 52°, the exptl. $r_m = 0.170$, and the combustion is still stable. At detonation, at 60°, $r_m = 0.195$; the agreement with the calcd. limiting r_m is not perfect, but is acceptable in view of the uncertainties involved in the estn. Under $p = 1.75$, at 12°, combustion, in one expt., was stable with $r_m = 0.264$; in another it was pulsating, with $r_m = 0.462$. Consequently, the limiting r_m lies between these 2 values, in agreement with the calcd. $r_m = 0.320$. In the case of nitroglycol, at the boiling temp. (199°), $\sigma = 23.4$, $\delta = 1.5$, $\rho = 1.87 \times 10^{-3}$, and $r_m = 0.262$; the actual r_m is, at room temp., 0.043, and at 184°, 0.063; consequently, in this case, no detonation can be brought about under atm. pressure by mere increase of the temp. Under higher p, deviation from linearity begins under 17.3 kg./sq. cm., pulsation under 19.3; under these p, the calcd. $r_m = 0.847$ and 0.875, resp., as against the actually observed $r_m = 0.793$ and 0.803 g./sq. cm./sec.

N. Thon



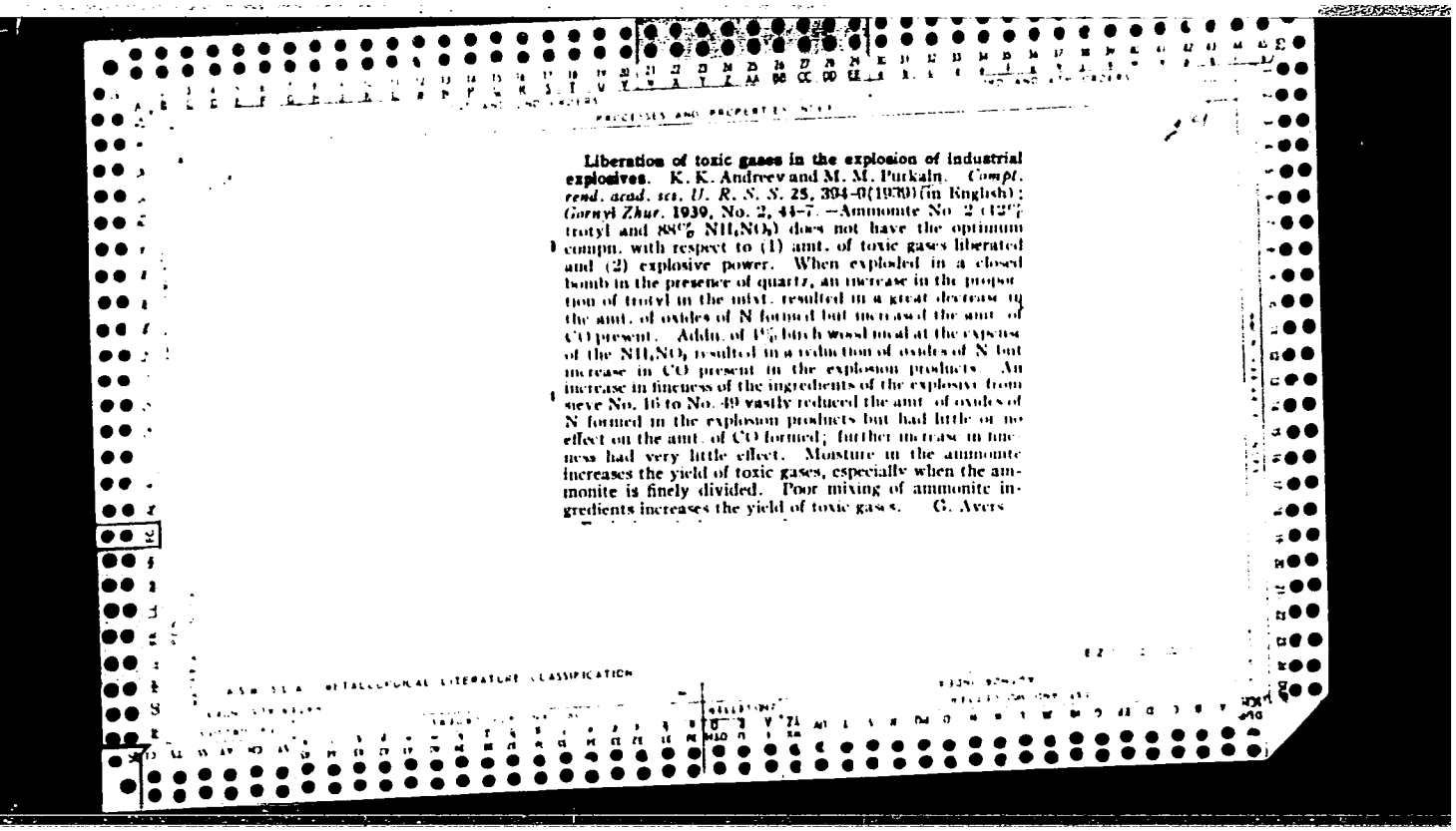
CA

24

Action of potassium nitrate in the formation of noxious gases during the detonation of industrial explosives. K. K. Andreev and M. M. Purkalu (D. I. Mendeleeff Inst. Chem. Technol., Moscow). *Compt. rend. acad. sci. U.R.S.S.* 31, 145-8(1940). Unpublished expts. by Morin indicated that the addn. of KNO_3 to ammonite explosives decreased the formation of oxides of N and CO (noxious gases). By use of an ammonite (73 NH_4NO_3, 15 KNO_3, 12% trinitrotoluene) which had given the most favorable results, it was shown that the amt. of sand surrounding the charge greatly influenced not only the decompn. of the charge itself but also the formation of noxious gases. Since in actual practice the favorable conditions established by expt. will usually not prevail, the addn. of KNO_3 will not solve the problem of reducing noxious gases. The method of raising the detonation capacity of ammonites by more thorough pulverization and mixing as well as by increasing heat of explosion was practical, as was shown by expts. on an ammonite (18.4 trinitrotoluene, 4 wood meal, 77.6% NH_4NO_3 in quartz sand surrounding the charge).

R. Wiebe

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Liberation of toxic gases in the explosion of industrial explosives. K. K. Andreev and M. M. Purkalin. *Compt. rend. acad. sci. U. R. S. S.* **25**, 304–6(1939)(in English); *Gornyi Zhur.* **1939**, No. 2, 44–7.—Ammonite No. 2 (12% trotyl and 88% NH_4NO_3) does not have the optimum compn. with respect to (1) amt. of toxic gases liberated and (2) explosive power. When exploded in a closed bomb in the presence of quartz, an increase in the proportion of trotyl in the mixt. resulted in a great decrease in the amt. of oxides of N formed but increased the amt. of CO present. Addn. of 1% birch wood meal at the expense of the NH_4NO_3 resulted in a reduction of oxides of N but increase in CO present in the explosion products. An increase in fineness of the ingredients of the explosive from sieve No. 16 to No. 49 vastly reduced the amt. of oxides of N formed in the explosion products but had little or no effect on the amt. of CO formed; further increase in fineness had very little effect. Moisture in the ammonite increases the yield of toxic gases, especially when the ammonite is finely divided. Poor mixing of ammonite ingredients increases the yield of toxic gases. G. Avers

PURKAROVA, Marie, inz.

Making use of periodicals on transportation at the enterprise Zavody V.I. Lenina. Zel dop tech 11 no.3:85 '63.

PURKAYASTHA, R.; BALENOVIC, A.

Strecker degradation of α-amino acids with β-phenyl-α, β-dioxopropionanilide. Croat chem acta 32 no.2:109-110 '60. (EEAI 10:4)

1. Chemical Laboratory, Faculty of Sciences, University of Zagreb, Zagreb, Strossmayerov, trg 14, Croatia, Yugoslavia.
(Amino acids)
(Phenyldioxopropionanilide)

. . : [illegible], V.A., ob. red.; MARKOVSHIN, A.V., red.; YERMAKOV, N.P., red.; KOROL'KOV, A.S., red.; PUZANKOV, K.Ye., red.; NESHAYE", P.V., red.; POYARKOV, M.A., red.; PUKHIN, A.V., red.; SOBOLEV, I.D., red.; TARUSHANEVEV, B.F., red.

[Geology of the Northern Sos'va brown coal basin.] Geologiia Severosos'vinskogo burougol'nogo basseina. Moskva, Nedra, 1964. 144p. (Materialy po geologii i poleznym iskopaemym Urala, no.7) (MIRA 18:4)

12-7/23

SUBJECT: USSR/Geology

AUTHOR: Ivankin, P.F., and Purkin, A.V.

TITLE: "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye Rudnogo Altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)

PERIODICAL: "Izvestiya Akademii Nauk SSSR", Seriya Geologicheskaya, 1957, #4, pp 84-97 (USSR).

ABSTRACT: While the system of metallogenic zoning of the south-western territory of the Altay mountains by V.P. Nekhoroshev and P.P. Pilipenko had proved to be a valuable aid at prospecting in the past, these zoning schemes did not meet present requirements. Presently the question of origin of poly-metallic mineralization and its location gained great importance. Experience obtained at numerous large ore fields and deposits of sulfide ore has shown that assumptions of deposits can not be based solely on studies of respective geologic textures, but have to be based also on the knowledge of interrelations existing between the peculiarities of deposits and their geologic texture.

Card 1/4

II-7/23

TITLE: "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye rudnogo altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)

Lead-zink and copper deposits within the Rudnoy Altay area are dispersed over a wide territory and overlie different stratotraphic complexes of the central Paleozoic era. The vertical extent is also considerable, the stratographic thickness being 6-7 km. It is of importance to note that mineralization took place on all known intrusions of magmatic rocks. Peculiarities of sulfide layers are depending largely on the geologic texture and tectonic development, the metamorphosis of rocks and other circumstances accompanying the sedimentation of ore. These peculiarities enable to differentiate the poly-metallic belt of Rudnoy Altay.

The following characteristics can be used for the classification of ore bearing geologic layers: the relation of ore fields and deposits to regional textures and geologic complexes, the inner texture of ore fields and deposits and the shape of the ore layers. According to these symptoms, sulfide deposits of the Rudnoy Altay can be subdivided into 3 basic groups: 1) Ore fields and deposits located beyond the direct influences of

Card 2/4

TITLE: "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye rudnogo altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)

regional wharping zones. 2) Ore fields and deposits located within the regional wharping zones, and 3) Ore fields and deposits located at some distance from the regional wharping zones.

The authors give a detailed account of the geologic peculiarities arising from the varying degree of deformation during and after the process of contortion.

The article contains 5 figures. The bibliography lists 10 references, of which 10 are Slavic (Russian)

ASSOCIATION: Trest "Altaytsvetmetrazvedka" of the Ministry of Non-Ferrous Metallurgy of the Kazakh SSR. Altay Mining Metallurgic Institute of the Academy of Sciences, Kazakh SSR, city of Ust'-Kamenogorsk.

PRESENTED BY:

SUBMITTED: At the Session of TEKHSOVIET of the Ministry of Geology and Conservation of Natural Resources USSR, in conjunction with the Ministry of Non-Ferrous Metals and the Academy of Science of

TITLE: "Structural Metallogenic Zoning of the Rudnyy Altay Ore Deposits Area as a Basis for Exploration and Prospecting". (Strukturno-metallogenicheskoye rayonirovaniye rudnogo altaya kak osnova vedeniya poiskovykh i razvedochnykh rabot)

the Kazakh SSR, July 17, 1954.

AVAILABLE: At the Library of Congress.

Card 4/4

PURKIN, B.

A new scientific research institution for petroleum workers.
Neftianik 1 no.11:31-32 N '56. (MLRA 9:12)
(Petroleum research)

PURKIN, B. (g. Saratov)

Saratov open-work embroidery. Prom.koop.no.8:31 Ag '56. (MLRA 9:10)
(Saratov--Embroidery)

ALEKSEYCHIK, Stepan Nikolayevich;pri uchastii sleduyushchikh: GAL'TSEV-BEZYUK, S.D.; GNEDIN, K.I.: ZAYTSEV, S.M.; KIRICHEK, M.A.; KOZLOV, A.L.; PURKIN, L.B.; RATNER, V.Ya.; RATNOVSKIY, I.I.; RAKHMANOV, K.F.; TABOYAKOV, A.Ya.; TSITENKO, N.D.; GOLUBKOV, I.A., nauchnyy red.; KELAREV, L.A., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Geology and gas and oil potentials of northern Sakhalin] Geologicheskoe stroenie i gazoneftenosnost' severnoi chasti Sakhalina. Leningrad, Gos. nauchn. -tekh.izd.-vo neft. i gorno-toplivnoi lit-ry Leningr. otd-nie, 1959. 226 p. (Leningrad.Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.135).

(Sakhalin--Petroleum geology)
(Sakhalin--Gas, Natural--Geology)

PURKIN, M.M.

New data on the stratigraphy of Carboniferous sediments in the Kokshaal-Tau. Mat. po geol. Tian'-Shania no.3:95-99 '62.
(MIRA 16:7)

(Kokshaal-Tau--Geology, Stratigraphic)

PURKIN, M.M.; POYARKOV, B.V.; ROZHANETS, V.M.

Stratigraphy and new foraminifer species from Tournaisian deposits of the Borkoldoy Range (Tien Shan). Izv. AN Kir. SSR. Ser. est. i tekh. nauk 3 no.4:15-36 '61. (MIRA 14:12)
(Borkoldoy Range—Geology, Stratigraphic)
(Foraminifera, Fossil)

[illegible], V.G.; [illegible], N.N.; [illegible], Ye.V.; [illegible], N.I.

Surtekhe intrusion of alkali rocks (central Tien Shan).
Zap. Kir. otd. Vses. min. ob-va no.5:39-49 '65.
(MIRA 18:7)

PUSKIN, V.I.

Designing bridges situated below dams. Avt. dor. 28 no.12: 22-23 D '65. (MIRA 19:1)

Plekin, V. S.

Polychlorovinyl resins. G. M. Nodel'man, A. V. Kupfer, V. I. Sedlis, V. S. Purkin, and S. V. Shchutskii. U.S.S.R. 104,703, Feb. 20, 1957. Copolymerization of chlorovinyl compds. with styrene acrylonitrile, and acrylic or methacrylic acid esters is carried out with addn. of 3–10% Et or Bu acrylate based on the wt. of the chlorovinyl compd. This addn. improves the molding qualities of the plastic and lowers the prepn. temp. of the polychlorovinyl resin.

M. Hirsch

[illegible], V. [illegible], et al.

Vinyl plastic. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 195[illegible]. (Mic [illegible])
Collation of the original, as determined from the film: 147 p.

Microfilm Slavic 405 AC

1. Vinyl polymers. I. Iurkin, V. S., jt. au.

PURIN, V. S.

Vinilplast (Vinyl Plastic, by) S. V. Shchutskiy (i)
V. S. Purin. Leningrad, Goskhimizdat, 1953.

147 p. diagrs., graphs, tables.

" iteratura": p. (146)

PURKIN, V. S.

SHCHUTSKIY, S.V., laureat Stalinskoy premii, inzhener, redaktor; PURKIN, V.S.; ELCHENKIN, A.L., redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor

[Vinyl plastic] Viniplast. Leningrad, Gos. nauchno-tekhn. izd-vo khimicheskoi lit-ry, 1953. 147 p. [Microfilm] (MLRA 7:10)
(Vinyl polymers)

ANUFRIYEVA, Ye.V.; VOLCHEK, B.Z.; ILLARIONOVA, N.G.; KALIKHEVICH, V.N.; KOROTKINA, O.Z.; MITIN, Yu.V.; PTITSYN, O.B.; PURKINA, A.V.; ESKIN, V.Ye.

Synthesis of poly-S-carbobenzoxymethyl-L-cysteine and the study of its structure. Biofizika 10 no.2:346-347 '65. (MIRA 18:7)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.

ANUFRIYEVA, Ye.V.; BOLOTINA, I.A.; VOLCHEK, B.Z.; ILLARIONOVA, N.G.; KALIKHEVICH, V.I.; KOROTKINA, O.Z.; MITIN, Yu.V.; PTITSYN, O.B.; PURKINA, A.V.; ESKIN V.Ye.

Study of synthetic polypeptides. Report No.1. Transitions-intramolecular β-strucutre-coil in poly-S-carbobenzoxymethyl-L-cysteine. Biofizika 10 no.6:918-928 '65. (MIRA 19:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.
Submitted April 22, 1965.

MAKLAKOV, L.I.; NIKITIN, V.N.; PURKINA, A.V.

Vibrational spectra of chloroform and deuterochloroform in the liquid and crystalline states. Opt. i spektr. 15 no.3:332-337 S '63. (MIRA 16:10)

PURKINA, R.S.

5

USSR

Spectrum analysis of several catalysts. R. S. Purkina and K. I. Taganov. *Trudy Vsesoyus. Nauch.-Issledovatel. Inst. Khim. Pererabotki Gazov (KHIMGAZ)* 6, 101–9 (1951).—The detn. of Na (0.03–2.% by wt.) in Al_2O_3 catalyst by combustion of the sample in an activated a.-c. arc, and the detn. of K in an Fe catalyst are described.
W. M. Sternberg

(1)

PURKINA, R.S.

PURKINA, R.S.; TAGANOV, K.I.

Spectrum analysis of certain catalysts. Trudy Inst. "Khimgaz" no.6: 101-109 '51. (MLRA 7:8)
(Spectrum analysis) (Catalysts)

YAROSH, A. [Jaros, A.] (Ostrava, Chekhoslovatskaya Sotsialisticheskaya Respublika); PURKINE, O. [Purkyne, O.] (Ostrava, Chekhoslovatskaya Sotsialisticheskaya Respublika)

Outstanding record of Czechoslovakian shaft sinkers. Gor. zhur. no.5:70-71 My '63. (MIRA 16:5)
(Czechoslovakia--Shaft sinking)

S/081/62/000/024/023/052
B117/B186

AUTHORS: Penczek, Piotr, Purko, Romuald

TITLE: Nitrocellulose adhesives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24 (II), 1962, 851, abstract 24P282 (Polimery, tworzywa wielkocząsteczkowe, v. 6, no. 12, 1961, 388 - 391 [Pol.; summaries in Eng. and Russ.])

TEXT: Requirements, properties, and principles of chosing raw material (nitrocellulose, softeners, solvents, diluents, stabilizers, and surface-active substances) for the production of nitrocellulose adhesives are given. The properties, methods of gluing, application and some recipes of nitrocellulose adhesives are described as well as the characteristics of five brands of adhesives produced by the "Pronit" chemical plant of the Polish People's Republic. The method of producing nitrocellulose adhesives patented in Poland (Patent of the Polish People's Republic 44675, RZhKhim, 1962, 24P559). A less expensive adhesive was obtained on the basis of NC_4 nitrocellulose mixed with ethyl alcohol and aromatic hydrocarbons. Non-dried nitrocellulose is used for producing the adhesive. The water is bound with anhydrous sodium or magnesium sulfates. [Abstracter's note:

Card 1/2

S/081/62/000/024/023/052
B117/B186

Nitrocellulose adhesives

Complete translation.

Card 2/2

YUGOSLAVIA

BOSKOV, Zorica; DAUTOVIC, Milan; POPADIC, Slavko; PURKOV, Milan; SECUJAC, Branko and CVETKOV, Radojica; Department of Pediatrics (Decje odeljenje) Chief (Nacelnik) Dr Branko SECUJAC; and Department of Neuropsychiatry (Neuropsihijatrijsko odeljenje) Chief Dr Milan PURKOV, General Hospital (Opsta bolnica) "Gjorgje Jovanovic", Zrenjanin.

"The Problem of Chorea Minor in Children."

Belgrade, Srpski Arkhiv za Tselokupno Lekarstvo, Vol 93, No 3, Mar 65; pp 251-259.

Abstract [English summary modified]: Review of clinical data from the histories of 37 children with chorea minor, treated 1957 to 1964: graphs showing ages and sex; EKG changes; socioeconomic origin; onset by time of year; laboratory and other diagnostic findings; treatment; prevention; infections; psychological factors. Three graphs; 1 Soviet, 1 Yugoslav and 11 Western references; ms received 30 Oct 64.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343620003-9"

BOSKOV, Zorica; DAUTOVIC, Milan; POPADIC, Slavko; PURKOV, Milan; SECUJAC, Branko; CVETKOV, Radojica

The problem of chorea in children. Srpski arh. celok. lek. 93 no.3:251-259 Mr '65.

1. Decje odeljenje Opste bolnice "Djordje Joanovic" u Zrenjaninu (Nacelnik: dr. Branko Secujac) ; Neuropsihijatrijsko odeljenje Opste bolnice "Djordje Joanovic" u Zrenjaninu (Nacelnik: dr. Milan Purkov).

STOJILJKOVIC, Srboljub, doc. dr.; PURKOV, Milan, dr.

Severe mental disorders after the application of artane.
Med. glasn. 14 no.2:71-72 F '60.

1. Neuropsihijatriska klinika Medicinskog fakulteta u Beogradu, Upravnik: prof. dr U. Jekic.
(TRIHEXYPHENIDYL toxicol.)
(PSYCHOSES TOXIC etiol.)

YAROSH, A. [Jaros, A.]; PURKYNE, O.

European record achieved by Czechoslovakian miners by sinking 284 meters of a shaft in one month. Shakht. stroi. 7 no.3: 30-32 Mr '63 (MIRA 17:?)

1. Shakhtostroitel'nyy kombinat Ostravsko-Karvinskogo basseyna, Chekhoslovatskaya Sotsialisticheskaya Respublika.

CZECHOSLOVAKIA / General and Special Zoology. Insects. P
Systematics and Faunistics.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 63935.

Author : Purkyne, C.
Inst : Not given.
Title : A New Species of Otiorrhynchus (O. reichei Strl.) for Czechoslovakia.

Orig Pub: Casop. Slesks. musea. Vedy prirod., 1957, 6, No 1, 36.

Abstract: No abstract.

Card 1/1

PURKYNE, CYRIL

Zoo Praha. (Prague Zoological Garden. 1st ed. illus., map) Prague, Sportovni a turisticke nakl., 1957. 69 p.

A guide to the Prague zoological garden including a map of the routes. Information on the breeding and feeding of animals, their life, hunting such as the snakes, monkeys, etc.

Bibliograficky katalog, CSR, Ceske knihy, No. 34. 1 Oct 57. p. 739.

CZECHOSLOVAKIA

DLOUHOS, M, Prof., Dr, director of the Second Institute of Pathological Anatomy (II. patologickoanatomicky ustav), Faculty of Medicine (Lekarska fakulta), J.Ev. Purkyne University, Brno; and STRNISKA, J., Research Institute of Traumatology (Vyzkumny ustav traumatologicky), Prof. V. NOVAK, director.

"General Use of Antibiotics and Wound Healing (A Histological Investigation)"

Prague, Casopis Lekaru Ceskych, Vol CII, No 32/33, 16 August 1963, pp 1004-1007.

Abstract [Authors' English summary]: The effect of the general administration of antibiotics on the healing of skin wounds was investigated in 150 rats. It was found that the influence was quantitative. Also affected was the rate of healing. Thirteen references, including 7 Czech, 1 Polish, and 1 Russian.

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Z/048/62/000/006/001/002
D291/D304

AUTHOR: Čapla, V., Engineer, Member of the Cybernetics Commission, J.E. Purkyně Czechoslovak Medical Society

TITLE: Bionics - a new research trend

PERIODICAL: Věda a technika mládeži, no. 6, 1962, 190 - 191

TEXT: This popular science article describes some achievements in the field of medical cybernetics, namely a so-called "biohand" developed in the USSR, and an artificial muscle, developed in Switzerland, and briefly lists some other biological applications of cybernetics. The "biohand" was developed by workers of the Central Research Institute of Prosthetics and Artificial-Limb Designing in Moscow, under the direction of Doctor A.Y. Korbinskiy, in cooperation with the Mechanical Research Institute, USSR AS. This artificial limb, destined for persons with amputated hands and wrists, is operated by bioelectric currents originating at contractions of forearm muscles. These weak currents are amplified by a special transistorized amplifier

Card 1/2

Bionics - a new research trend

which, including the power supply, weighs only 1.2 kg, and can be worn e.g. on the belt. The wrist-hand prosthesis weighs only 1.1 kg. Bionics -- the biological application of information theory is currently occupying workers of the Laboratory for Information Transmission Problems of the USSR AS, headed by A.A. Kharkevich, who have developed an experimental apparatus which discriminates individual sounds or even words, so that it would seem possible to built an automatic device which operates on 'spoken' orders. Soviet scientists have also succeeded in incorporating a live frog's eye into the model of a special automatic control system and in investigating the mutual reactions between a live sense organ and a 'dead' cybernetic machine. There are 5 figures.

Card 2/2

JAROS, Arnost, prof.; PURKYNE, Otakar, prof.

New European record in vertical pit shaft deepening speed in Czechoslovakia: 284.02 m/31 days. Wiadom gorn 14 no. 7/8:212-216 Jl-Ag '63.

Z/048/62/000/023/002/003
D287/D307

AUTHORS: Čapla, V., Engineer and J.E. Purkyně, Member of the Czechoslovak Commission on Cybernetics of the Czechoslovak Medical Association

TITLE: Health machines

PERIODICAL: Věda technika mládeži, no. 23, 1962, 802

TEXT: This is a popular review describing the advantages of diagnostic pills (exact determination of the temperature in the vicinity of the appendix, acidity of gastric secretion, general physiological data). Tuberculosis and some types of carcinoma can be diagnosed by amplification of the radio signals. The second part of the article deals with radio transmitters which enable doctors to observe cardiac changes in sportsmen during training, even at a distance of several miles. The transmitter weighs approximately 1 lb. Electrocardiographs can be plotted in the laboratory or surgery by direct transmission from the training field or track. The transmitters are also used for the observation of pilots. A 'diagnostic

Card 1/2

Z/048/62/000/023/002/003
D287/D307

Health machines

combine', comprising eight different observation machines, was erected in the Institut matematiky Akademie věd Ukrajinské SSR (Institute for Mathematics of the Academy of Sciences of the Ukrainian SSR); 5 of these machines were designed by Škabarová, E.A., Fialko, A.I. and Rubašov, J.S., members of the Institute. This 'combine' records changes in the cardiac activity, e.g. pressure changes within the heart or the activity of the cardiac muscle; further the bioelectric potential of the brain, heart murmurs and low-frequency cardiac vibrations. There are 3 figures.

Card 2/2

IAROS, Arnost (R.S. Cehoslovaca); PURKYNE, Otakar (R.S. Cehoslovaca)

Rapid sinking of a mine shaft in Czechoslovakia. Rev min 14 no.6: 232-235 Je '63.

PURKYNOVA, E.

"The fossil flora of the Doubrava coal seams,"

p. 293 (Casopis Pro Mineralogii A Geologh, Vol. 2, no. 3. 1957, Czchoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7. No. 2,
February 1958

[illegible]VA, V.

"Fossil flora in Nova Ves near Oslavany in Moravia."

p.433 (Vestnik, Vol. 32, no. 6, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 8, August 1958

PURKYNOVA, Eva

Phytostratigraphy of the Moravian-Silesian Carboniferous.
Rospravy mat CSAV 73 no.9:1-36 '63

PURKYNOVA, Eva

New information [illegible] of the Petrovice [illegible] west of Geneva.
Cas min geol 9 no.3: 329-330 '64.

1. Uhelny prumysl, Ostrava.

CZECHOSLOVAKIA

HURNIKOVA, E.

Coal Institute (Uhelny pruzkum), Ostrava

Prague, Casopis pro mineralogii a geologii, No 3, 1964, pp 327-328

"The Outcrops of Petrkovice Formation West of Ostrava. "

PURLICHEV, Dimitur; EFREMOV, Asen

Are there traces of glaciers in the Vladayska River Valley?
Prir i znanie 16 no.2:23 F '63.

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82416

Author : Sevost'yanov, F.G., Kurbanov, S., Purliyev, A.

Inst : Turkmen Agricultural Institute

Title : On the Organization and Application of Irrigation under the Conditions of Square-Pocket Planting of Cotton.

Orig Pub : Tr. Turkm. s.-kh. in-ta, 1957, 9, 35-42

Abstract : Observations on the organization of irrigation for cotton in 1956 on one of the plots at the "Bol'shvik" kolkhoz in Tedzhenskiy Rayon (Turkmen SSR) are described. The soil of the plot represents typical sierozen of medium water permeability. Planting was carried out by the row method with the spaces between rows of 45 centimeters, and after the appearance of the sprouts, the plants were distributed on 45 x 45 centimeters squares by means

Card 1/2

FURLIYEV, Ch.

Upper Barremian pelecypods of the Kel'dzhe Range (Tuarkyr). Izv. AN Turk.SSR.Ser.fiz.-tekh., khim. i geol.nauk no.5:105-111 '65. (MIRA 18:11)

PURLIYEV, Ch.

Some species of Lower Cretaceous oysters from the Tuarkyr. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.1:111-117 '65. (MIRA 18:7)

PURLIYEV, Ch.

Lower Cretaceous Trigoniidae of Tuarkyr. Izv. AN Turk. SSR. Ser. fiz.-tekh. khim. i geol. nauk no.3:89-95 '65. (MIRA 18:12)

1. Institut geologii Gosudarstvennogo geologicheskogo komiteta SSSR. Submitted May 23, 1964.

MASLOV, A.A. (Moskva); PURLOV, Yu.G. (Moskva)

Universal functional generator based on the principle of quadratic approximation. Avtom.i telem. 21 no.2:237-244 F '60. (MIRA 13:5)

(Electronic analog computers)

MASLOV, A.A.; PURLOV, Yu.G.

Electromechanical digital voltmeter. Priborostroenie no.5:10-13 My '62. (MIRA 15:5)
(Voltmeter)

16.9600, 16.8000

7789
SOV/103-21-2-9/14

AUTHOR: Maslov, A. A., Purlov, Yu. G.(Moscow)

TITLE: Universal Functional Converter Based on Principle of Quadratic Approximation

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 2, pp 237-244(USSR)

ABSTRACT: In the study, methods are presented of quadratic approximation of functions given in analytical or graphical forms. The electronic universal functional converter operating on the principle of quadratic approximation is outlined. Methods of sectional-quadratic approximation of nonlinear function. The well known principles of sectional-quadratic approximation are derived on the basis of expression for the remainder term of the Newton law for quadratic interpolation. The subdivision section $h = x_3 - x_1$ is determined by:

$$h \leq 3.43 \sqrt{\frac{\varepsilon}{|f''(x)|_{max}}}$$

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where ε is the given absolute error of the approximation of the function, and $|f'''(\xi)|_{max}$ is the modulus of maximum value of the third derivative at a certain point ξ inside the range (x_1, x_3) (see Fig. 1).

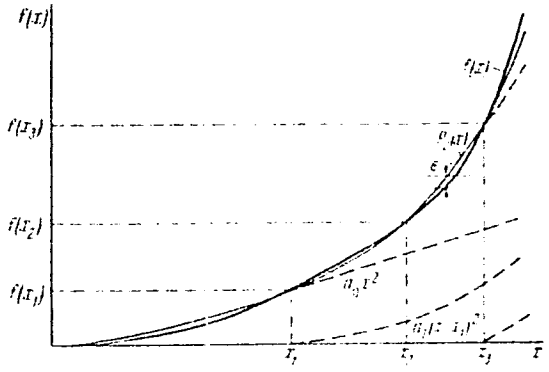

Fig. 1

If function f(x) is given graphically, then, to obtain $f'''(\xi)$ a threefold graphical differentiation should be made. In this case, the graphical method of determining the law is used for the subdivision of the argument. This method is based on the substitution of quadratic approximation of given function f(x) with the error ε of approximation, by the derivative $f'(x)$ with the error ε of approximation. The problem is reduced to obtain function $\varepsilon' = \varphi(\varepsilon, x)$. In Fig. 3 the derivative $f'(x)$ and the derivative of the approximating polynomial $P_2'(x)$ are plotted. The following equation for ε_2' (see Fig. 3) is derived:

$$\varepsilon_2' = \frac{4\varepsilon}{x'x''(3l^2 - 3l + 2)}.$$

Here l is the ratio of section $x'x''$ to x_2. For $l = 1/2$ $\varepsilon_2' \leqslant 16\varepsilon$ /5a, where $a = x'x''$. By the reproduction of various functions the lengths of the neighboring subdivision

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Universal Functional Converter Based on Principle of Quadratic Approximation

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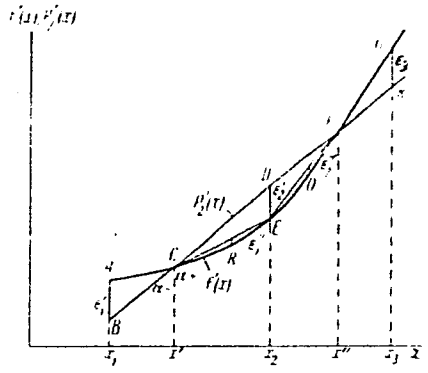

Fig. 3

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sections differ little. Thus, when the quantity a is known in the designed section, according to this equation, the admitted value of the error for the next section may be determined. It is shown that the actual error of approximation will not exceed the allowed error. This method is illustrated by Fig. 7. The diodic element is applied to obtain sections corresponding to the quadratic relationship. This element is described by R. A. Bruns (see reference at end of this abstract). Figure 7 gives a diagram of the generator of saw-shaped voltage supplying the diodic element. (The Russian letters at the tubes are designations of the types of Russian tubes.) The blocking oscillator is designed using triode T1; the pentode T3 serves as a discharge tube. The complete diagram of the diodic functional converter is shown in Fig. 8. Here, D. E. are diodic elements; L. E. are linear elements; A_1A_2 are two-solution amplifiers. The saw-shaped high frequency voltage and the reference voltage from the low-ohm divider are applied to the diode elements. By setting

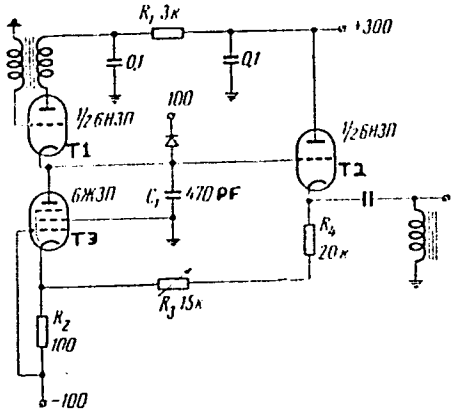

Fig. 7. Diagram of quadratic diode element.

Card 6/9 up the program of the subdivision of the argument, the

Universal Functional Converter Based on Principle of Quadratic Approximation

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SOV/103-21-2-9/14

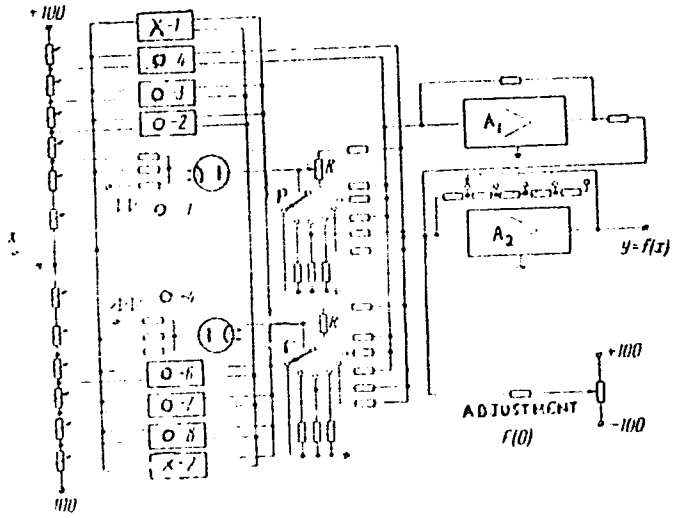

Fig. 8. The complete diagram of functional converter and its technical characteristics: (o) D.E.; (x) L.E.

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resistances of low-ohm divider are partially short circuited. In conclusion, the author says that (1) the functional converter designed on the principle of quadratic approximation has the following basic advantages compared with converters using a straight line sectional approximation: (a) Considerably smaller number of the argument section is necessary for reproducing the function with a given error of approximation. Thus, the diagram is simplified and fewer elements are used. The setup of the function and the adjustment of converter are easier. (b) The functional converter assures a continuous reproduction of the function and eliminates the breaks of the first derivative. (2) The functional converter designed on the principle of quadratic approximation has the following shortcomings: (a) The pass band of the arrangement is determined from the frequency of the saw-shaped voltage. The frequency of this voltage cannot exceed 50-50 kc, because of technical difficulties. Therefore, the pass band of the converter does not exceed 1 kc. (b) Saw-shaped voltage has high frequency components, thus, an

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Universal Functional Converter Based on Principle of Quadratic Approximation

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SOV/103-21-2-9/14

accurate screening must be made. This universal functional converter may be applied to electronic modeling arrangements and various calculating devices. There are 8 figures; and 11 references, 10 Soviet, 1 U.S. The U.S. reference is: R. A. Bruns, An Improved Diode Function Generator for Analog Computers, Memo 20-113, Jet Propulsion Lab., Pasadena, 1956.

SUBMITTED: June 21, 1959

Card 9/9

30204
S/080/61/034/011/019/020
D204/D301

15 1123

AUTHORS: Yakubchik, A.I., Grilikhes, S.Ya., Tikhomirov, B.I., and Purlova, V.S.

TITLE: The bonding of polyethylene to metals and to rubber

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 11, 1961, 2579 - 2581

TEXT: A series of adhesives has been developed which alloy good bonding to be achieved between polyethylene and brass of brass-plated metals and with rubber, without the need for pretreating the surfaces. A short review of the Western work in this field is given and it is considered that partially hydrogenated, linear 1, polybutadiene would form the basis of a satisfactory adhesive, owing to structural similarities with polyethylene. Adhesive compositions were as follows: Partially hydrogenated 1,4 polybutadiene 100, ZnO 40-50, petroleum ether 3-5, sulphur 2-5, trimethyl dihydroquinoline 1, stearic acid 0.5 and mercaptobenzazole 0.5 - 1 parts by weight. The adhesive was dissolved in 10-15 ml toluene per g. of mixture. The solution was applied to the surfaces to be

Card 1/2

bonded whilst still hot, dried to produce films and the surfaces were then pressed together at 100 kg/cm^2, for 10-20 minuts, at 130-200°C. The degree of unsaturation of the polybutadiene was varied between 7 and 25 % and brass containing 65-75 % Cu was used. The bonding strengths, (50 - 100 kg/cm^2), were higher when 1,4 polybutadiene with lower degrees of unsaturation were used. Further improvements in the strength of adhesion are anticipated, as the high values reported in the present paper are said to be easy to obtain under far from ideal conditions. Research into brass-plating is now in progress to extend the above method to metals other than brass. Very good bonding to rubber was obtained, whose strength could not, however, be measured, since the rubber parted in preference to the joint. The bonding mechanism is briefly discussed. There are 1 table and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to English-language publications read as follows: I.D. Morron, India Rubber World, 98, 4, 55, 1938; H. I. Peters and W.H. Lockwood, Rubber World, 138, 3, 418, 1958

ASSOCIATION. Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: June 6, 1961

Card 2/2

PURMAL', A., kand. khim. nauk.

Artificial muscle. Nauka i zhizn' 25 no.11:68 N '58. (MIRA 11:12)

(Muscle)

PURMAL, A. P.

The existence of H_4O_4. A. P. Furmal (D. I. Mendeleev Chem. Technol. Inst., Moscow). *Zhur. Fiz. Khim.* 29, 744(1956); cf. preceding abstr.—New reasons in favor of the existence of H_4O_4 are suggested. For example: 0.1–0.2*M* H_2O_2 solns. are prepd. from 30% com. H_2O_2 and immediately titrated with $KMnO_4$. Similar solns. are illuminated in a quartz flask by a Hg arc until 7–10% of all the O that can be liberated is evolved. After measuring the O_2 evolved, the H_2O_2 concn. in soln. is calcd., and the soln. is titrated with $KMnO_4$. The results obtained by titration are lower than calcd. because the gas measurements det. the bonded O whereas $KMnO_4$ dets. the H in combination with the peroxide O. The 2 methods can agree only in the absence of any other peroxide forms. The proof of H_2O_4 existence requires, however, confirmation by other methods in addn. to the one shown. W. M. Sternberg

PURMAL', A. P.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 20/35

Authors : Purmal', A. P.

Title : Activation energies of radical reactions

Periodical : Zhur. fiz. khim. 30/1, 172-176, Jan 1956

Abstract : Various methods of determining the activation energies of radical reactions are discussed. The possibility of utilizing the method of comparative calculation of chemical properties for the determination of activation energies is explained. The possibility for a practical application of certain equations for the precalculation of the unknown values and correction of the doubtful values of the radical reaction activation energies is analyzed. Eight references: 7 USSR and 1 USA (1938-1955). Table; diagrams.

Institution : The Moscow Chemicotechnological Institute im. D. I. Mendeleyev

Submitted : May 3, 1955

PORMAL, A. P.

27

Photochemical decomposition of hydrogen peroxide. V. I. Vedeneev, G. N. Gerasimov, and A. P. Purmal (Inst. Chem. Phys. Acad. Sci. U.S.S.R., Moscow). *Zhur. Fiz. Khim.* 31, 1216–20(1957); cf. Purmal, *C.A.* 51, 119g.—The reinvestigation of the photochem. H_2O_2 decompn. appeared desirable because of the discovery of H_2O_4 formation during the reaction, as proven by the difference in results of H_2O_2 concn. obtained gas-volumetrically and by $KMnO_4$ oxidation, $(H_2O_4) = (H_2O_2)$ g. vol. $- (H_2O_2)$ $KMnO_4/(2)$, after H_2O_2 was photochemically decompd. without stirring the soln. The remaining H_2O_4 subsequently diffused to the vessel walls and decompd. in a heterogeneous reaction into H_2O_2 and O. In the photochem. H_2O_2 decompn. a max. O-quantum yield, and also a max. H_2O_4 production was obtained at a definite H_2O_2 concn. The av. assocn. of H_2O_2 mols. was assumed to be even greater than in H_2O, with the dimerization by way of H-bond formation, with the production of OH and HO_2 radicals, the latter reacting with $(H_2O_2)_2$ to form H_2O_4, H_2O, and OH. H_2O_4 is, thus, an intermediate in the photochem. or thermal H_2O_2 decompn., and accelerates the reaction. W. M. Sternberg

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4E 3

PURMAL, A.P.

20-6-25/42

AUTHORS: Dekabrun, L. L., Purmal', A. P.

TITLE: Indication of Radicals by the Nuclear Resonance Method (Indikatsiya radikalov yaderno-rezonansnym metodom)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 6, pp. 983-985 (USSR)

ABSTRACT: The pitch of the signal of nuclear resonance absorption depends on the spin-lattice-relaxation time T_1 (by applying the method of the socalled rapid passage). By reducing T_1 the signal increases. Small additions of paramagnetic ions allow the observation of the signal of absorption of the resonance with samples of great values of T_1 - the temporary study of the applications of the nuclear resonance method for the determination of free radicals with autodyne-controls. A typical oscillogram of the proton resonance absorption of water with an addition of $CuSO_4$ is illustrated in an attached figure. The verification of the opinions of the author on the influence of the radicals on the spin-lattice-relaxation time began with the most simple case, viz. with the solution of a stable radical. Pure benzene produced no signal of a proton-absorption with the used apparatus. With an artifical reduction of the relaxation-time by increasing the viscosity of the system, the authors obtained the expected result. A solution of diffusion oil in benzene (30 per cent by volume) produced a signal of the proton

Card 1/3

resonance exceeding the noise-level. The same solution with an admixture of diphenylpikril-hydrazile produced an absolutely clear signal. According to the opinion of the authors, this effect can be observed on a large scale with more simple radicals. The thermal decomposition of H_2O_2 was chosen as experimental object. Neither water, nor a 30 per cent solution of H_2O_2 produced a proton resonance signal at room temperature. By increasing the temperature the signal of proton absorption of the decomposing H_2O_2 was produced. With a further increase of temperature the signal of proton absorption grew more intensely. The oscillograms recorded with decomposing H_2O_2 are illustrated in an attached figure. With an increase of temperature the relaxation time grows according to the law

$T_1 \sim T/e^{A/T}$. The increase in relaxation-time with the temperature reduces the pitch of the signal of resonance-absorption. The intense reduction of the relaxation time in some solid samples which were exposed to rays of high energy is very important. Such an irradiation produces F-centers. Such an F-center shows a behavior similar to that of a free radical. This method for the indication of the free radicals may complete the more precise and more sensitive method of the paramagnetic re-

Indication of Radicals by the Resonance Method. 20-6-25/42

sonance of electrons.
There are 3 figures, 4 references, 4 of which are Slavic.

ASSOCIATION: Institute of Chemical Physics AN USSR
(Institut khimicheskoy fiziki Akademii nauk SSSR)

PRESENTED: March 29, 1957, by V. N. Kondrat'yev, Academician.

SUBMITTED: March 18, 1957

AVAILABLE: Library of Congress

Card 3/3

SOV-25-58-8-33/61

AUTHOR: Purmal', A.P., Candidate of Chemical Sciences (Brussels)

TITLE: Molecule (Molekula)

PERIODICAL: Nauka i zhizn', 1958, Nr 8, pp 65-66 (USSR)

ABSTRACT: The author tells about the different Soviet exhibits at the Brussels World Fair.
There are 3 photos.

1. Chemistry--USSR

Card 1/1

SOV-25-58-9-16/62

AUTHOR: Purmal', A.P., Candidate of Chemical Sciences

TITLE: "The Living Cell" (Zhivaya kletka")

PERIODICAL: Nauka i zhizn', 1958, Nr 9, pp 37-39 (USSR)

ABSTRACT: The author describes Soviet and foreign exhibits displayed in the Palais of Science at the Brussels World Fair. There are 6 photos.

1. Scientific research--USSR

Card 1/1

SOV-25-58-10-30/48

AUTHOR: Purmal', A.P., Candidate of Chemical Science

TITLE: RMS-2 (RMS-2)

PERIODICAL: Nauka i zhizn', 1959, Nr 10, p 67 (USSR)

ABSTRACT: The article deals with the new Soviet mass spectrometer for the study of radicals which was exhibited at the Brussels Fair. This mass spectrometer was developed by the Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the USSR Academy of Sciences). V.L. Tal'roze, Candidate of Physical and Mathematical Sciences, helped to solve many problems arising in connection with the building of this spectrometer. There is 1 photograph.

1. Spectrometers--Design

Card 1/1

SOV/25-58-11-31/44

AUTHOR: Purmal', A., Candidate of Chemical Sciences

TITLE: An Artificial Muscle (Iskusstvennyy muskul)

PERIODICAL: Nauka i zhizn', 1958, Nr 11, p 68 (USSR)

ABSTRACT: The Swiss scientists Kuehn and Turkauch (Russian transliteration) demonstrated at the Brussels Fair how an apparatus can perform the work of a muscle in converting chemical energy into mechanical energy. Instead of muscular tissue, a substance from the family of giant molecules is used - polyacrylic acid (PAK). Academician N.N. Semenov, Winner of the Nobel Prize, dealt with this "artificial muscle" in his lecture "The Fate of Men in an Atomic Era", held at the Brussels Fair.
There are 3 photos.

Card 1/1

PURMAL', A.P., kand.khim.nauk (Bryussel')

"Molecule." Nauka i zhizn' 25 no.8:65-66 Ag '58. (MIRA 11:9)

1.Korrespondent zhurnala "Nauka i zhizn'."
(Brussels--Exhibitions)

PURMAL', A.P., kand.khim.nauk

RMS-2. Nauka i zhizn' 25 no.10:67 O '58. (MIRA 11:11)
(Mass spectrometry)

AUTHORS: Vedeneyev, V. I., Purmal', A. P. SOV/76-32-7-5/45

TITLE: The Decomposition Energy of C-F Bonds (Energii razryva C-F svyazey)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 7, pp. 1472-1475 (USSR)

ABSTRACT: Only little information is available concerning the above mentioned problem; this is explained by the fact, that many experimental methods are unsuited or supply insufficient results due to the considerable strength of the C-F bonds. On the other hand a calculation of the decomposition energy for monofluorine derivatives of hydrocarbons is thermochemically also impossible because of the lack of data on the heats of formation of the corresponding compounds. The data obtained by Lossing, Ingold and Henderson (Ref 1) as well as those by Farmer et al. (Ref 2) may not be regarded as being of full value because of errors of determinations and insufficient measurements. According to a table representing the decomposition energies of the bindings CF_3-X (X= H, F, Cl, Br and J) as well as data concerning the heats of formation it is assumed that the value of 118 kcal is closest to the real value

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of the decomposition energy CF_3-X. It is found that the F and H atoms as substituents exert the same influence on the strength of the compounds to be cleft, which fact is proved by the results obtained by Rabinovitch and Reed (Ref 7). Proceeding from the value for D(CH_3-F)= 118 kcal the heats of formation for CH_3F, C_2H_5F, n-C_3H_7F, iso-C_3H_7F and tert-C_4H_9F are calculated and data are given which concern the energy of the formation of the C-F bond. It is found that the results obtained by Luft (Ref 11) do not agree with those obtained by the authors of this paper. The exchange of the H-atoms with F does not exert a strong influence on the energy of the splitting of the C-C bonds, as mentioned above. Pritchard and Trotman-Dickenson (Ref 12) estimate the value of D(C-C) in cyclobutane to be 74 kcal, so that the same value may be assumed in the case of octafluorcyclobutane; this is proved by data in publications. There are 4 tables and 13 references, 1 of which is Soviet.

ASSOCIATION: Akademiya nauk SSSR Institut khimicheskoy fiziki, Moskva (Moscow, Institute of Chemical Physics, AS USSR)

1. Hydrocarbons--Decomposition 2. Hydrocarbons--Heat of formation
3. Chemical reactions--Theory 4. Hydrocarbons--Bonding

28(5) SOV/25-59-2-31/48

AUTHOR: Purmal' A.P., Candidate of Chemical Sciences

TITLE: A Nuclear Spectrometer (Yadernyy spektrometr)

PERIODICAL: Nauka i zhizn', 1959, Nr 2, p 69-70 (USSR)

ABSTRACT: The author gives a short explanation of nuclear magnetic resonance in general, and describes the American nuclear resonance spectrometer "V-4012A-HR", which was exhibited at the Brussels Fair in 1958. There are 4 photos.

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SOV/25-59-8-37/48

23(5), 24(4)

AUTHOR: Furmal', A.P., Candidate of Chemical Sciences

TITLE: "LV-1"

PERIODICAL: Nauka i zhizn', 1959, Nr 8, p 65 - 66 (USSR)

ABSTRACT: The Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the AS USSR) under the guidance of A.S. Dubovik, P.V. Kevlishvili and S.I. Zimirman has developed a magnifying glass of time "Lupa vremeni" ("LV-1"). It is based on super-velocity exposures which are counted in microseconds. The apparatus consists of a stationary highly light-sensitive film, and a special optical system built up of several tens of miniature lenses arranged in line. The light beam from the investigated object passes along the whole range of lenses. It is clear that the light ray will meet the hundredth miniature lens somewhat later than e.g. the tenth or twentieth. In such a way a time image develops. The device is intended

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"LV-1"

for studying instantaneous processes accompanied by luminescence such as explosion, detonation, electric impulse discharge, etc, thus opening unlimited possibilities for photographing quick and complicated processes in physics, rocket techniques, hydraulics, biology and medicine. There are 2 sets of drawings.

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Nuclear spectrometer. Nauka i zhizn' 26 no.2:69-70 F '59.
(MIRA 12:2)

(Spectrometer)

5(4) SOV/76-33-8-22/39

AUTHORS: Gerasimov, G. N., Purmal', A. P., Tsentsiper, A. B. (Moscow)

TITLE: Photolysis of H_2O_2 in Alkaline Media

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 8, pp 1806-1807 (USSR)

ABSTRACT: In a previous paper (Ref 1), a chain mechanism of the photochemical decomposition of hydrogen peroxide (I) in aqueous media was suggested. In this pattern, however, active intermediate products with an ion- or ion-radical character were not taken into account. The magnitude of the aggregate quantum yield in the latter case seems to be almost completely independent of the pH of the medium. Since the data found in publications are contradictory, the investigations referred to in the title were carried out by means of an apparatus already described (Ref 1) and, in the main, at 20°C. The reaction rate was determined by gas volumetric or permangenometric measurements of the (I)-concentration. The latter varied from 0.08 to 0.105 mol/l in the various test series. The pH-measurements (in the KOH- and NaOH-solutions) were carried out with a glass electrode and the potentiometer LP-5. The results obtained in the measurements showed that within the

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