

L 13901-66 EWT(m)/EWP(j) RM

ACC NR: AP6002863

SOURCE CODE: UR/0286/65/000/024/0020/0020

INVENTOR: Popov, A. F.; Korneyev, N. N.; Golubtsov, S. A.;
Popeleva, P. S.

ORG: none

TITLE: Preparative method for bis(dimethylchlorosilyl)benzene.
Class 12, No. 176892

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 20

TOPIC TAGS: silane

ABSTRACT: An Author Certificate has been issued for a preparative method for bis(dimethylchlorosilyl)benzene, involving the reaction of metallic magnesium with p-dibromobenzene and dimethyldichlorosilane. To simplify the process, it is carried out in the presence of 0.001-0.01 g-mol titanium tetrachloride catalyst/mol metallic magnesium.

[SM]

SUB CODE: 07/ SUBM DATE: 22Jul64/ ATD PRESS: 419/

TS
Card 1/1

UDC: 547.419.5.07

LITVINENKO, I.M.; POPOV, A.F.; TOKAREV, V.I.

Kinetics of reactions complicated by the effect of autocatalysis.
Kinod kat. 6 no.38510-521 My-Je '65.

(MIRA 18:10)

L. Khar'kovskiy gosudarstvennyy universitet.

DEMIRKHANOV, R.A.; GEVORKOV, A.K.; POPOV, A.F.; KHORASANOV, G.L.

Use of decaying plasma in the microwave signal detection. Radiotekh.
i elektron. 8 no.8:1489-1490 Ag '63. (MIRA 16:8)
(Microwaves)

BRAMSON, L.M.; POPOV, A.G.

Utilizing mercury discards. Avt. dor. 24 no.7:31-32 J1 '61.
(MIRA 14:7)

1. Stalinskaya oblastnaya sanepidemstantsiya.
(Donets Basin--Mercury industry--By-products)
(Road materials)

POPOV, A. G.

chem 354. REMOVAL OF SULPHUR FROM WATER GAS. Maidenovskii, L.G. and Popov, A.G. (Trudy Tomsk. Univ. [Trans. Tomsk Univ.], 1954, vol. 126, 180-190) ~~abstr.~~ In Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1956, (10), 30073). Laboratory and industrial experiments on purification of water gas from the active carbon are recorded.

2

0000

BM
LFH

1. POPOV, A. G.
2. USSR (600)
4. Agriculture
7. Organization of the feeding base. Rostov n/D., Rostizdat, 1951.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

POPOV, A.G.

Bee Culture

Forming new colonies with swarming bees Pchelovodstvo 29 No. 10, 1952.

Monthly List of Russian Accessions. Library of Congress, November 1952. UNCLASSIFIED.

Popov, A.G.

POPOV, A.G., inzh.

Control of the fouling of boiler heating surfaces in East
German power plants (from "BWK," no.10 1955). Elek.sta. supplement
no.6:16-20 N-D '57. (MIRA 11:2)
(Germany, East--Boilers)

POPOV, A.G., inzhener.

Efficient systems for feed-water tubing. Elek.sta. 28 no.8:2-4 Ag '57.
(MIRA 10:10)

(Boilers)

S/096/61/000/003/001/012
E194/E155

AUTHOR:

Popov, A.G., Engineer

TITLE:

The Influence of Ultrasonic Vibration on the
Combustion of Carbon

PERIODICAL: Teploenergetika, 1961^q No. 3, pp. 8-10

TEXT: The use of ultrasonic vibration to intensify combustion was proposed in 1946 by Kubanskiy (Author's Certificate No.66283) and the only known experimental work on this subject was carried out in Hungary in 1953. The Hungarian results are briefly reviewed, but were rather inconclusive. The present paper is a report of a study of the influence of ultrasonics on the combustion of carbon. A gas-jet static ultrasonic generator of the Hartmann type was used in conjunction with a parabolic reflector. Rods of electrode carbon 5 mm square were placed at a distance of 80-90 mm from the resonator, and fed from a 1200 W step-down transformer. The cross-section of the rods and their arrangements were chosen to provide favourable conditions for comparing the effect of ultrasonics with that of natural diffusion. The sonic output was determined from the sonic pressure measured

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S/096/61/000/003/001/012
E194/E155

The Influence of Ultrasonic Vibration on the Combustion of Carbon with a piezoelectric receiver, of which brief details are given. The temperature of the reactive surface of the carbon rod was measured with an optical pyrometer, or at temperatures below 800 °C with a chromel-alumel thermocouple. The carbon rods were weighed before and after the tests. The surfaces of the rods were also photographed with a magnification of 60 diameters. The nature of the surface hardly changes during combustion in the kinetic region, which in this case is up to 600 °C. In the temperature range 750 to 800 °C the diffusion factor commences to take effect and there is a change in the condition of the surface, which becomes uneven and covered with microcracks. The reasons for this are briefly discussed. A graph is plotted of the change in weight and it is shown that starting from a temperature of about 800 °C up to 1600 °C a sonic field of 0.085 W/cm² causes an appreciable increase in the rate of combustion and a sonic field of 0.414 W/cm² a fairly substantial increase. Changes in the surface condition of the carbon are described and it is concluded that in an

Card 2/3

POPOV, A.G.

AID P - 2060

Subject : USSR/Electricity

Card 1/2 Pub. 26 - 2/29

Authors : Kaganovich, S. A., Kand. of Tech. Sci., Chalenko, G. N.,
Eng., Popov, A. G., Eng., and Kirillov, S. I., Eng.

Title : Increasing economy in milling Moscow basin coals

Periodical: Elek. sta., 4, 6-11, Ap 1955

Abstract : The article describes the operation of ball mills for
culm at one of the Moscow Regional Electric Power Plants
and recommends some improvements to save pulverized coal
in the milling process. A description of the Soviet-made
ball mill with pertinent data is included. The separator
was designed by the VTI (All-Union Technical Institute),
and has a well-organized venting of returned pulverized
culm. Its efficiency and capacity are presented. Various
tests of venting returned pulverized coal with different
loads in the ball mill are described, and the consumption
of power needed and detailed data on the returned pulverized

KUSHNERENKO, K.N.; POPOV, A.G.; KOROTAYEV, G.V., gornyy inzh.

Development of the Lebedi open-pit mine. Gor.zhur. no.9:5-19
S '60. (MIRA 13:9)

1. Filial Instituta gornogo dela AN SSSR na Kurskoy magnitnoy
anomali. 2. Nachal'nik Lebedinskogo rudoupravleniya
(for Kushnerenko). 3. Glavnyy inzhener rudoupravleniya Lebedinskogo
(for Popov).

(Lebedi (Belgorod Province)--Mining engineering)
(Kursk Magnetic Anomaly)

POPOV, A.G.; SHCHERBATYKH, I.M.

Method of checking the phase of the power supply in adjacent rail networks. Avtom., telem.i sviaz' 4 no.3:22-24 Mr '60. (MIRA 13:7)

1. Starshiye inzhenery laboratorii signalizatsii i svyazi Yugo-Vostochnoy dorogi.

(Railroads--Electric equipment)
(Electric measurements)

26174
S/044/61/000/006/013/019
C111/C222

16-3400

AUTHOR: Popov, A.G.

TITLE: On the construction of the initial pair of approximations in the method of Chaplygin for differential equations of first order

PERIODICAL: Referativnyy zhurnal. Matematika, no.6, 1961, 21-22, abstract 6V 176. (Tr.Rostovsk.-n/D. in-ta inzh.zh-d.transp., 1959, vyp.28, 83-99)

TEXT: In the introduction the author gives a short historical survey of the methods connected with the method of Chaplygin. Then the author uses the method of Picard, he varies the right-hand side of the equation $y' = f(x,y)$ and obtains arrangements for the construction of the initial approximations for the method of Chaplygin. Three examples are given. ✓

[Abstracter's note: Complete translation.]

Card 1/1

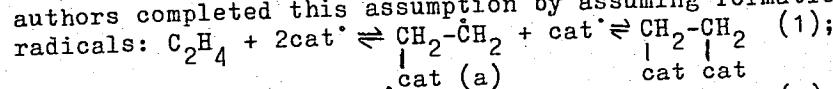
S/020/61/136/001/034/037
B004/B056

AUTHORS: Mardaleyshvili, R. Ye., Popov, A. G., Nikisha, V. V., and Yakushin, F. S.

TITLE: On Two Types of Elementary Reactions in the Catalytic Hydrogenation of Olefins

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 155-158

TEXT: A paper by N. N. Semenov, V. V. Voyevodskiy, and F. F. Vol'kenshteyn (Ref. 1) gave rise to the present investigation. In the former it was assumed that the free valences upon solid surfaces lead to the formation of so-called surface radicals. These cause heterogeneous catalysis. The authors completed this assumption by assuming formation of two types of radicals:



$CH_2-\dot{C}H_2 + \dot{H} \rightleftharpoons \underset{\substack{| \\ cat}}{CH_2}-\underset{\substack{| \\ cat}}{C}H_3 \rightleftharpoons \underset{\substack{| \\ cat(b)}}{CH_2}-\underset{\substack{| \\ cat}}{C}H_3 \quad (2).$ The radicals (a) are bound to the catalyst (cat) by two electrons, the radicals (b) by one electron only.

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On Two Types of Elementary Reactions in the Catalytic Hydrogenation of Olefins

S/020/61/136/001/034/037
B004/B056

The latter recombine with hydrogen according to the scheme
 $\text{CH}_2\text{-CH}_3 + \text{H} \xrightarrow{\text{cat}} \text{C}_2\text{H}_6 + 2\text{cat} \cdot$ (3). However, also disproportionation processes

should occur besides the processes mentioned, if the assumption of surface radicals is correct: $\text{CH}_2\text{-CH}_2 + \text{CH}_2\text{-CH}_2 \xrightarrow{\text{cat}} \text{CH}_2\text{-CH}_3 + \text{CH}=\text{CH}_2$ (4);

$\text{CH}_2\text{-CH}_3 + \text{CH}_2\text{-CH}_3 \xrightarrow{\text{cat}} \text{CH}_2\text{-CH}_2 + \text{C}_2\text{H}_6 + \text{cat} \cdot$ (5);

$\text{CH}_2\text{-CH}_3 + \text{CH}_2\text{-CH}_2 \xrightarrow{\text{cat}} \text{CH}=\text{CH}_2 + \text{C}_2\text{H}_6 + \text{cat} \cdot$ (6). On hydrogenation of a

mixture of two olefins, such a disproportionation would lead to products which do not occur in the case of separate hydrogenation of a single olefin:

$\text{CH}_3\text{-CH-CH}_2 + \text{CH}_2\text{-CH}_2 \xrightarrow{\text{cat}} \text{CH}_2=\text{CH-CH}_2 + \text{CH}_3\text{-CH}_2$ (7). On these conditions

the following predictions are made: 1) In the case of joint hydrogenation of ethylene and propylene, the ratio w_{32}/w_{23} of the initial reaction rates

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On Two Types of Elementary Reactions in the
Catalytic Hydrogenation of Olefins

S/020/61/136/001/03A/037
B004/B056

will be smaller than w_3/w_2 (ratio of the initial rates in the case of separate hydrogenation of the two olefins). 2) The difference between w_{32}/w_{23} and w_3/w_2 will decrease with increasing hydrogen pressure because then recombination of the surface radicals with hydrogen atoms will be the chief process. 3) The greatest difference between w_{32}/w_{23} and w_3/w_2 must be observed at low temperatures, at which olefin concentration on the catalyst is higher than in the case of high temperatures, and therefore the portion of disproportionations will increase. In order to check these assumptions, joint hydrogenation of ethylene and propylene was carried out in a circulation device with electrically heated platinum wire as catalyst. Reaction was studied by means of a pressure-gauge (measurement of pressure variations in the system) and mass-spectroscopic analysis of the reaction products. The experiments were performed at 525 mm Hg, a ratio of olefins: hydrogen = 1 : 1 to 1 : 20, in the temperature range of 0 - 280°C. The results are presented in Table 1. They confirm the assumptions and predictions made by the authors. Two types of reactions occur on olefin hydrogenation, namely recombination and disproportionation.

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On Two Types of Elementary Reactions in the
Catalytic Hydrogenation of Olefins

S/O20/61/136/001/034/037
B004/B056

Besides, the results may be taken a proof of the existence of surface molecules. There are 2 figures, 1 table, and 7 references: 2 Soviet, 8 US, 5 British, and 1 Japanese.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: July 14, 1960 by N. N. Semenov, Academician

SUBMITTED: July 7, 1960

Card 4/6

S/020/61/136/001/034/037
B004/B056

Table 1 Таблица 1

№№ опытов 1)	мм рт. ст. 2)			мм рт. ст./мин. 3)					$\frac{w_1}{w_2}$	$\frac{w_{21}}{w_{22}}$	$\frac{w_{23}}{w_2}$	$\frac{w_{21}}{w_2}$	$\frac{2w}{w_1 + w_2}$	
	H ₂	C ₂ H ₄	C ₂ H ₆	w ₁	w ₂	w	w ₂₁	w ₂₂						
40	25	25	25	0,45										
26	25	25	25	0,66	0,50	0,445	0,145		1,46	0,32	0,00	0,22	1,06	
11 c	25	25	25	0,95										
4	50	25	25	0,95	1,00	0,645	0,355		1,00	0,55	0,68	0,375	1,05	
7	50	25	25											
3 c	50	25	25	1,87	1,45	1,00	0,65		0,775	0,65	0,54	0,45	1,01	
19	100	25	25											
22 c	100	25	25	2,85	1,65	1,00	0,65							
20	100	25	25											
34	150	25	25	1,62	2,10	1,26	0,84		0,506	0,66	0,44	0,52	0,04	
21	150	25	25											
14 c	150	25	25	3,75	1,00				0,508					
18	200	25	25											
23	200	25	25	3,90										
15	250	25	25	1,90	2,85	1,65	1,20		0,487	0,73	0,423	0,63	0,08	
32	250	25	25											
9 c	250	25	25	2,80	1,35	2,00	1,16	0,835	0,462	0,72	0,415	0,617	0,06	
43	350	25	25											
46	350	25	25	1,06	0,56				0,471	0,73	0,43	0,637	1,04	
45 c	350	25	25											
37	500	25	25											
39	500	25	25											
10 c	500	25	25		0,84	0,484	0,350							

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S/020/61/136/001/034/037
B004/B056

Legend to Table 1. 1) Number of the experiment; 2) torr; 3) torr/min.

Card 6/6

POPOV, A.G.; MARDALEYSHVILI, R.Ye.

Self-hydrogenation of C_2H_4 and C_3H_6 in a separate and simultaneous chemisorption of these gases on Pt, Pd, and Ni films. Vest.Mosk. un. Ser.2:khim. 17 no.1:34-38 Ja-F '62. (MIRA 15:1)

1. Moskovskiy gosudarstvennyy universitet, kafedra khimicheskoy kinetiki.

(Ethylene)

(Propene)

(Hydrogenation)

POPOV, A.G.; MEDOVSHCHIKOV, R.S.

Hydraulic spoil disposal in pits of the Kursk Magnetic Anomaly.
Ger. zhur. no.1:27-31 Ja '62. (MIRA 15:7)

1. Glavnyy inzhener Lebedinskogo rudnika (for Popov).
2. Moskovskiy gornyy institut (for Medovshchikov).
(Kursk magnetic anomaly--Hydraulic conveying)

POPOV, A. G., FRENKEL, S. Y., OSMYUSKAYA, A. T., SAMINSKIY, E. M., and BRESLER, S. E.

"Thermal destruction of various acrylic polymers," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Polymer Research Inst.

B-3,084,395

SOV-69-58-4-2/18

AUTHORS:

Bresler, S.Ye., Os'minskaya, A.T., Popov, A.G., Saminskiy, Ye.M.,
Frenkel', S.Ya.

TITLE:

The Thermal Degradation of Polymethylmethacrylate (Termiche-
skaya destruktziya polimetilmetakrilata)

PERIODICAL:

Kolloidnyy zhurnal, 1958, Vol XX, Nr 4, pp 403-416 (USSR)

ABSTRACT:

The production of high-temperature macromolecular compounds made the study of the thermal degradation of polymers necessary. In the article, the kinetics of degradation of polymethylmethacrylate is investigated. Two types of PMMA were used in the experiments, one high-molecular with $M_0 = 3,700,000$ and one low-molecular with $M_0 = 250,000$. Figure 2 shows that the degradation reaches 36 % at temperatures lower than 300°C in the low-molecular compound, and 5-10 % in the high-molecular PMMA. The degradation at temperatures higher than 300°C is represented by Figure 3. In the course of 1-1.5 hours it increases 15-30 times. The activation energy during the process is 53 kcal/mole, which indicates a rupture of the internal C - C bonds. Figure 5 shows that at a degradation of 50 %, the molecular weight is reduced 20 times. The principal cause for the reduction of the molecular weight is not the chain

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SOV-69-58-4-2/18

The Thermal Degradation of Polymethylmethacrylate

depolymerization. The rupture of C - C bonds leads to the formation of new chain endings at which depolymerization sets in. The influence of oxygen on degradation was studied in PMMA powder of 0.1 mm grain size and a sample of massive PMMA of 5 mm in diameter. Molecular oxygen breaks the kinetic chains and reacts with free radicals. In this reaction, peroxides and hydroperoxides are formed which initiate new chains. Table 1 shows that in the presence of oxygen an internal rupture of molecular chains takes place which is, however, not accompanied by noticeable depolymerization. The influence of the monomer on the degradation has been studied on a polymer block of 5x5x8 mm which has been inclosed, together with the monomer, in a glass flask. The flask was kept at 120° C for 1 day. Figure 11 shows that the monomer inhibits degradation by combining with the free radicals without being polymerized during this reaction. Table 2 shows that at temperatures of 180-280° C, an equilibrium is established between polymerization and depolymerization. In the presence of oxygen the monomer inhibits the degradation of PMMA by directing the reaction to polymerization. The degradation

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The Thermal Degradation of Polymethylmethacrylate

SOV-69-58-4-2/18

of PMMA may be inhibited generally by introduction of small amounts of non-polarizable compounds of the vinyl-series (p-methoxyphenylmethacrylamide, p-ethoxyphenylmethacrylamide, diphenylmethacrylamide, etc.) capable of producing radicals of low activity that act as traps for microradicals. There are 10 graphs, 1 diagram, 3 tables, and 20 references, 6 of which are Soviet, 10 English, and 4 German.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad (Institute of High-Molecular Compounds of the USSR Academy of Sciences, Leningrad)

SUBMITTED: October 21, 1957

Card 3/3

1. Acrylic resins--Temperature factors

BRESLER, S.Ye.; KOTON, M.M.; OS'MINSKAYA, A.T.; POROV, A.G.; SAVITSKAYA, M.N.

Increasing polymer thermostability by cyclization in macromolecular chains with partial decomposition. *Vysokom.soed.* 1 no.7:1070-1073
Jl '59. (MIRA 12:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Polymers—Thermal properties)

5:38 D1
 607/20-12-6-22/63
 44412

Authors: Molokochikova, G. F., Bezikov, S. I.,
 Molokochik, S. A., Corresponding Author,
 D. G. Sakhov, A. T., Popov, A. G.

Title: Inhibition of a Chain Decomposition of Polymers by Destitution of the Structure Homogeneity by Means of the Copolymerization Method

Journal: Doklady Akademii Nauk SSSR, 1959, Vol 128, Nr 6, pp 1179 - 1181 (USSR)

Abstract: If a small quantity of a more readily polymerizable monomer B is added to a monomer A polymerization the inhibition effect is induced (see 1). The effect is caused by the low reactivity of the radical B_2^{\cdot} at the end of a growing chain with respect to the principal monomer. The introduction of a more reactive monomer into the polymerization process may expedite the process of radical polymerization. It would be expected that the introduction of a more reactive monomer B into the process of radical polymerization would be inhibited thermal chain decomposition of copolymers of a different kind. This kind of destruction is composed of a different number of small quantities of comonomer B in the case of such a copolymerization process.

decomposition of the homopolymer - $A-A-A \rightarrow A^{\cdot} + A-A-A^{\cdot}$ each elementary act of monomer separation is accompanied by the formation of a free radical of the same type. Subsequent radical destruction of the copolymer is assumed to occur in the chain A which also contains B-links. It is assumed that the rate of the radical decomposition of the copolymer is different from that of the homopolymer. If the radical addition of A but not B is retarded, decomposition is retarded. The decomposition of the copolymer is retarded, for example, in the case of a copolymer of the type A-A-B. In this case, decomposition is retarded because the radical B_2^{\cdot} is more selective with respect to A-links than the radical A_2^{\cdot} is to A-links. The thermal destruction of a copolymer is retarded if the radical addition of B is retarded. The thermal destruction of a copolymer is retarded if the radical addition of A is retarded. The thermal destruction of a copolymer is retarded if the radical addition of B is retarded. The thermal destruction of a copolymer is retarded if the radical addition of A is retarded. The thermal destruction of a copolymer is retarded if the radical addition of B is retarded.

the introduction of methacrylic acid into the polymethyl-methacrylate chain influences the decomposition kinetics of the copolymer. The decomposition rate is only about 1/6 of that of the homopolymer (see 1, 2). A similar picture is observed for the copolymerization of styrene with methyl methacrylate. The increase in thermal stability of the copolymer is explained on the basis of the theory of radical polymerization (see 1, 2). The authors are grateful to the Academy of Sciences, USSR, for their aid in the preparation of this paper.

References: 1. M. V. Abramov and A. G. Popov, Doklady Akademii Nauk SSSR, 1958, No. 1, p. 125. 2. A. G. Popov, Doklady Akademii Nauk SSSR, 1958, No. 2, p. 225.

Association: Institute of High-Molecular Compounds of the Academy of Sciences, USSR.

Submitted: July 8, 1959

P.O. V. A.G.

BRENSLER, S.Ye.; OS'MINSKAYA, A.T.; POPOV, A.G.

Thermal degradation of stereoregular polypropylene. Vysokom.
soed. 2 no.1:130-132 Ja '60. (MIRA 13:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Propene)

L 32996-65 EPF(c)/EPR/EAT(a)/EWP(j)/T Pc-4/Pr-4/Ps-4 JAJ/RM/WH

S/0286/65/000/004/0059/0059

ACCESSION NR: AP5007419

AUTHOR: Mikhaylov, N. V.; Tokareva, L. G.; Popov, A. G.; Kheyfits, L. A.; Virezub, S. I.

36
33
B

TITLE: A method for stabilizing polymers. Class 39, No. 168425

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 59

TOPIC TAGS: polymer, stabilization, thermal stability

ABSTRACT: This Author's Certificate introduces a method for stabilizing polymers, e.g. polypropylene, and articles made from them. The polymers are made more resistant to heat and light by adding 2,6-di-(tetrahydrodicyclopentadienyl)-4-methylphenol to the polymer melt as a stabilizer. The Author's Certificate also covers a modification of this method in which the quantity of 2,6-di-(tetrahydrodicyclopentadienyl)-4-methylphenol added is 0.1-1.5% of the weight of the polymer.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skogo institut isskustvennogo volokna (All-Union Scientific Research Institute of Synthetic Fibers); Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh vesh-

Card 1/2

L 32996-65

ACCESSION NR: AP5007419

chestv (All-Union Scientific Research Institute of Synthetic and Natural Fragrant Substances)

SUBMITTED: 05Nov63

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 000

OTHER: 000

Card 2/2

POPOV, A.G.; KRUTYAKOV, V.M.

Determination of the amidase activity of trypsin by the method
of differential spectrophotometry. Biokhimiia 29 no.5:878-
881 J1-Ag '64. (MIRA 18:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.

L 25774-66 EWT(m) IJP(c)

SOURCE CODE: UR/0089/65/019/006/0507/0510

ACC NR: AP6016378

AUTHOR: Hudker, G. I.; Dimov, G. I.; Popov, A. G.; Sviridov, Yu. K.; Sukhina, B. N.;
Timoshin, I. Ya.34
B

ORG: none

TITLE: Experiments with charge exchange injection of protons in a storage ring

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 507-510.

TOPIC TAGS: Van de Graaff accelerator, proton, hydrogen ion

ABSTRACT: Negative hydrogen ions were extracted from a high frequency source and were accelerated in a Van de Graaff machine to 12 μ amp. This beam then struck a neutralizing gas target of hydrogen or carbon dioxide having an optimum thickness of 2.5×10^{16} or 3×10^{15} molecules/cm² respectively. The resulting beam of neutral hydrogen atoms then struck a jet of hydrogen having a thickness of $\sim 10^{17}$ atoms/cm². The hydrogen jet was directed along a radius from the center of a storage ring with an aperture of 8×4 cm and an orbital radius of 42 cm. The particle losses did not exceed a few percent with injections up to 1500 revolutions. The orbital current increased linearly for the first 100 revolutions and remained constant for ~ 150 revolutions. During this period the orbital radius of the beam decreased and then struck the internal hydrogen stream. Thus the injection efficiency was close to 100%. These preliminary results indicate that it is possible to accumulate a proton current that is limited only by the space charge. Orig. art. has: 5 figures. NA

2

SUB CODE: 20 / SUBM DATE: none

Card 1/1 10

I. 29307-66 EWT(m) IJP(c) GD
ACC NR: AT6012261 SOURCE CODE: UR/0000/65/000/000/0001/0013

AUTHORS: Budker, G. I.; Dimov, G. I.; Popov, A. G.; Sviridov, Yu. K.;
Sukhina, B. N.; Timoshin, I. Ya. 53

ORG: Institute of Nuclear Physics, Siberian Department AN SSSR
(Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR) BT/

TITLE: Experimental investigation of charge-exchange injection of
protons in annular accelerators and storage rings

SOURCE: AN SSSR. ¹⁹Sibirskoye otdeleniye. Institut yadernoy fiziki.
Doklady, 1965. Eksperimental'noye issledovaniye perezaryadnoy
inzhektzii protonov v kol'tsevyey uskoriteli i nakopiteli, 1-13

TOPIC TAGS: charge exchange, proton accelerator, energy scattering,
circular accelerator

ABSTRACT: The authors describe experiments on the accumulation of protons in an annular track by means of a charge exchange (Fig. 1). A beam of atoms or negative ions of hydrogen is introduced on a proton orbit in a magnetic field at the point where it crosses a hydrogen jet. The particles lose electrons in the jet and are accumulated on the orbit in the form of protons. The protons passing many times through the jets lose energy and are scattered. In a constant magnetic field the time of

Card 1/3

L 29307-66

ACC NR: AT6012261

accumulation is limited by the loss of the circulating protons to the inner wall of the storage ring. If the average energy loss is compensated for, the storage time is limited by elastic scattering and by the energy scatter of the protons. The experimental setup was described elsewhere (Mezhdunarodnaya konferentsiya po uskoritelyam Dubna, 1963, [International Conference on Accelerators], Moscow, 993 -- 996, 1964). Methods of measuring the proton current and the proton lifetime in the storage ring are briefly described. Various parts of the experimental setup are described in detail. The ion source was a modified electrostatic generator. Up to 10^{12} protons could be accumulated in the beta-tron loop (current ~ 1 ampere). The injection efficiency was close to 100%. Hydrogen and carbon dioxide were used for the input targets, with optimal thickness 2.5×10^{16} and 3×10^{15} mol/cm². An accelerating voltage of 200 v was applied in pulses of 500 μ sec duration, so that accumulation for 2500 revolutions was possible. The loop current increased approximately linearly to 300 ka. The various sources of losses are briefly analyzed. Orig. art. has: 8 figures and 7 formulas.

SUB CODE: 20/ ORIG REF: 001/ OTH REF: 001

Cord

3/3 BK

BRESLER, S.Ye.; DOBYCHIN, D.P.; POPOV, A.G.

Osmometer with a porous glass membrane. Vyskom. soed. 6
no.1:22-27 Ja'64. (MIRA 17:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

BRESLER, S.Ye.; POPOV, A.G.

Gas-liquid chromatography. Part 3. Zhur. fiz. khim. 37 no.5:
1178-1182 My '63. (MIRA 17:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

KOVALENKO, A.F., inzh.; TRINCHER, Yu.K., inzh.; GRIGOR'YEV, V.Ya., inzh.;
POPOV, A.G., arkhitekt

Unify the parameters of buildings and installations of sintering
and dressing factories. Prom. stroi. 41 no.10:2-5 0 '63.
(MIRA 16:11)

POPOV, A.G., starshiy prepodavatel'

Derivation of the initial pair of approximations in Chaplygin's
method for first-order differential equations. Trudy RIIZHT
no.28:83-99 '59. (MIRA 16:7)

(Differential equations)

MIKHAYLOV, N.V.; TOKAREVA, L.G.; POPOV, A.G.

Thermostabilization of polypropylene and fibers based on it.
Vysokomozed. 5 no.2:188-194 F '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.
(Propene) (Textile fibers, Synthetic—Thermal properties)

BRESLER, S.Ye.; DOBYCHIN, D.P.; POPOV, A.G.

Use of macroporous glass as a solid carrier in gas-liquid chromatography. Zhur.prikl.khim. 36 no.1:66-74 Ja '63.

(MIRA 16:5)

(Gas chromatography) (Glass)

POPOV, A.G. (Chelyabinsk)

Special features of the burning of porous coal. Izv. AN SSSR. Otd.
tekh. nauk. Energ. i transp. no.1:78-84 Ja-F '63. (MIRA 16'5)
(Coal) (Combustion) (Electrodes)

SERBENYUK, TS. V.; POPOV, A. G.

Method for chronic insertion of electrodes into the respiratory center of fish. Nauch. dokl. vys. shkoly; biol. nauki no.3: 80-85 '62. (MIRA 15:7)

1. Rekomendovana kafedroy fiziologii zivotnykh Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova.

(FISHES AS LABORATORY ANIMALS)
(ELECTROPHYSIOLOGY)

DOKOV, R.D.; POPOV, At.G.; GEORGIYEV, G.II.; MIKHAYLOV, Iv.

Morphology of some metasomatic lead-zinc deposits in the Madan ore region. Geol.rud.mestorozh. no.4:29-46 JI-Ag '62.

(MIRA 15:8)

1. Nauchno-issledovatel'skiy geologicheskii institut pri Upravlenii geologicheskoy razvedki i okhrany zemnykh neдр Narodnoy Respubliki Bolgarii.

(Madan region, Bulgaria--Lead ores)

(Madan region, Bulgaria--Zinc ores)

15.8200

45394

S/190/63/005/002/005/024
B101/B102

AUTHORS: Mikhaylov, N. V., Tokareva, L. G., Popov, A. G.

TITLE: Stabilization of polypropylene and of fibers made thereof against heat

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 2, 1963, 188-194

TEXT: The effects due to 0.03 mole/kg additions of stabilizers were compared by measuring the oxygen absorption of the polypropylene at 200, 250, and 300°C and by determining the effect of the stabilizers on the breaking length of fibers drawn from the polymer at 220-250°C. At 200°C, oxidation of the polymer set in without stabilizer after an induction period of 5-7 min. The induction period was prolonged by 2,5-di-tert-butyl-4-methyl phenol (ionol) to 20 min, by П-24 (P-24) phenol - styrene copolymer to 40 min, by 2,2'-methylene-bis-(4-methyl-6-tert-butyl phenol) (2246) to 120 min and by N,N'-phenyl-cyclohexyl-p-phenylene diamine (4010) to 130 min. At 250°C a two-stage induction period was observed, particularly in the presence of dibenzyl sulfide. The first induction period was Card 1/3

Stabilization of polypropylene ...

S/190/63/005/002/005/024
B101/B102

10 min, the second ~ 300 min. At 300°C, the absorption curves became complicated in consequence of simultaneous thermooxidation and thermal degradation. The effects of the stabilizers on the polymer and on the drawn polymer fiber were divergent. At 200°C, and with the addition of 2246 or phenol croton aldehyde condensation product Π -26 (P-26), the induction periods were respectively 120 and 130 min for the polymer, but only 45 and 80 min for the fiber. With N,N'-di- β -naphthyl-p-phenylene diamine, the induction period of the polymer was 10 min, that of the fiber 120 min. Crosslinking, and increased solubility of the stabilizer in the fiber as a result of the drawing, are suggested as explanations of the longer induction period of the fiber compared with the polymer. Reduction of the induction period can be due to the stabilizer becoming insoluble in the fiber or being decomposed in the drawing. This problem calls for further investigation. The effect of the stabilizer on the breaking length (km) and elongation (%) of the fiber after 8 hrs heating at 150°C was studied. The best results were obtained with 2,6-di-tert-butyl-4-methyl-phenyl pyrocatechol phosphite, 2,6-diisobornyl-4-methyl phenol (264), 2,2'-thio-bis-(6-tert-butyl-4-methyl phenol) (KAO-6 [KAO-6]), 2264 and mixtures of stabilizers with sulfur-containing organic compounds. Without stabilizer the polypropylene fiber did not endure the test; with the

Card 2/3

POPOV, A.I.

"Dictionary of local geographical terms." Reviewed by A.I.
Popov. Izv.AN SSSR.Ser.geog. no.3:143-144 My-Je '60.
(MIRA 13:6)

(Geography--Dictionaries)

(Russia--Dictionaries and encyclopedias)

1. 10/17/65
ACCESSION NR: AP5013806

ASSOCIATION: Institut fiziki Sibirskogo otdeleniya, Akademiya nauk SSSR
(Physics Institute, Siberian Branch, Academy of Sciences, SSSR)

SUBMITTED: 02Jul64

ENCL: 00

SUB CODE: EC

NO REF SOV: 005

OTHER: 002

ATD PRESS: 4003

Card 2/2 ON

POPOV, A.I.

Possible use of mathematical methods in biology from the
standpoint of dialectical materialism. Vest.LGU 14 no.9:
102-107 '59. (MIRA 12:5)

(BIOMETRY)

POPOV, Aleksandr Ivanovich, prof.; ZYRIN, A.A., red.; ZHUKOVA, Ye.G.,
tekhn. red.

[Introduction to mathematical logic] Vvedenie v matematicheskuiu
logiku. Leningrad, Izd-vo Leningr. univ., 1959. 104 p.

(MIRA 12:9)

(Logic, Symbolic and mathematical)

MORDVINKIN, H.A., inzh.; POPOV, A.I., inzh.; ARSHINOV, I.M., inzh., red.;
KHITROV, P.A., tekhn.red.

[Manual for foremen and brigade leaders on the repair of rail-
road cars] Rukovodstvo masteru i brigadiru po remontu vagonov.
Izd.2.. perer. i dop. Moskva, Gos.transp.zhel-dor.izd-vo, 1959.
521 p. (MIRA 12:5)
(Railroads--Cars--Maintenance and repair)

FOPOV, A.I., kand.tekhn.nauk

Establishing basic parameters for machinery used in raising sunken
material. Sbor. nauch. trud. po lesospl. no.2:85-94 '57. (MIRA 11:7)
(Lumbering--Machinery)

POPOV, A.I.

POBYATOV, V.I.; POPOV, A.I.

Device for unfastening drill pipe bushings. Neftianik 2 no.4:24-25
Ap '57. (MLRA 10:5)

1. Direktor kontory turbinnogo bureniya No. 2 tresta Tuzmasaburneft'.
2. Nachal'nik proizvodstvenno-tekhnicheskogo otdela.
(Oil well drilling--Equipment and supplies)

POPOV, Al
PENCHEV, Iv., Prof.; POPOV, Al.; KOLAROV, Pan.; ANDREJEV, Dim.

Treatment of diabetes mellitus with sulfanilo-ureic preparations. Suvrem. med., Sofia 7 no.10:3-20 1956.

1. Iz Klinikata po vutreshni bolesti s endokrinologija i bolesti na obmianata pri ISUL (Direktor: prof. Iv. Penchev).

(UREA, rel. cpds.

sulfonyl ureas in ther. of diabetes mellitus)

(SULFONAMIDES, ther. use
same)

(DIABETES MELLITUS, ther.
sulfonyl ureas)

POPOV, A. I.

SHUR, Ya. S., BARANOVSKIY, V. Ya. , POPOV, A. I.

Temperature Ratio of the Coercive Force in Ferromagnetic Monocrystals.
ZhETF 9, No. 12, 1939.

Lab. of Magnetic Phenomena, Ural affil. AS

44225

S/056/62/043/006/012/067
B102/B104

24,660

AUTHORS: Val'ter, A. K., Popov, A. I., Storizhko, V. Ye.

TITLE: Elastic scattering of protons from Si^{30} nucleiPERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 6(12), 1962, 2038 - 2041TEXT: The differential elastic proton scattering cross-sections $\sigma(\theta)$ were measured at the c.m. angles $\theta = 90, 125, \text{ and } 141^\circ$ and at $1 \leq E_p \leq 3.65$ Mev. ✓

The monochromatic ($\pm 0.05\%$) protons used in the experiments were obtained from the electrostatic accelerator of the FTI AN USSR. The scattered protons were analyzed by a magnetic spectrometer and detected with a thin CsI(Tl) crystal. The proton current was determined with a beam-catcher and a current integrator. The thin Si^{30} target was prepared in a magnetic separator by introducing Si^{30} ions into spectrally pure graphite. In the energy range investigated, the $\sigma(E_p)$ curves showed 52 resonances that can be related to excited states of the P^{31} nucleus. The most pronounced

Card 1/2

POPOV, A.I.

Pseudofrozen formations. Vest.Mosk.un.Ser.5: Geog. 17 (MIRA 15:8)
no.3:10-17 My-Je '62.

1. Kafedra geografii polyarnykh stran i glyatsiologii Moskovskogo
universiteta. (Rocks, Sedimentary) (Frozen ground)

POPOV, A.I., prof., otv. red.; TATARINOVA, Ye.I., red.

[Problems of paleogeography and morphogeny in the polar countries and highland; a collection of articles] Problemy paleogeografii i morfogeneza v poliarnykh stranakh v vysokogor'e; sbornik statei. Otv. red. A.I.Popov. Moskva, Izd-vo Mosk. univ., 1964. 183 p. (MIRA 17:7)

1. Moscow. Universitet. Kafedra geografii polyarnykh stran i glyatsiologii

FCPOV, A. I.

25576

Nekotoryye Voprosy Paleografii Chetvertichnogo Perioda v Zapadnoy Sibiri. Voprosy Geografii, SB. 12, 1949, s. 29 - 54.

SO: LETOPIS No. 34

POPOV, A. I.

PA 246T79

USSR/Geophysics -- Permafrost

Mar/Apr 53

"Peculiarities of Lithogenesis of Alluvial Plains Under Conditions of a Severe Climate," A.I. Popov, Inst of Permafrost, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geograf" No 2, pp 29-41

Discussion of hypotheses of the origin of ice in Siberia proposed by A. Ye. Figurin, I. A. Lopatin, A.A. Bunge, E.B. Toll', M.M. Yermolayev, and A.A. Grigor'yev. Concludes that hypotheses of the nival and glacial origin of fossil ice in Siberia plains are unsatisfactory.

246T79

POPOV, A. I.

USSR/ Geology

Card 1/1 Pub. 86 - 17/42

Authors : Popov, A. I., Dr. Geog. Sc., Ins. of Congelation Sc., Acad. Sc. USSR

Title : Origin of underground ice

Periodical : Priroda 45/1, 95-97, Jan 56

Abstract : A discussion is presented of the possible origin of underground ice found in northern Asia and northern America where the surface consists of a layer of earth beneath which are enormous deposits of ice. It is in sludge embedded in this ice that the remains of mammoths are found. From an analysis of various theories on the formation of this ice conclusions are drawn as to which are the most logical. Illustrations.

Institution :

Submitted :

GAR'KOVETS, V.G.; ZHUKOVSKIY, L.G.; POPOV, A.I.; KOCHNEV, Ye.A.; POPOV, V.I.;
PETROV, N.P.

Importance of facial-paragenetic dissection of series in facial-
paleogeographic, determinative, and detailed prospecting in Central
Asia. Izv. AN Uz.SSR. Ser. geol. no.1:13-16 '57. (MIRA 11:9)
(Soviet Central Asia--Geology, Stratigraphic) (Prospecting)

POPOV, A.I.

POPOV, A.I.

Permafrost history in the U.S.S.R. during the Quaternary period. Vest. Mosk. un. Ser. biol., pochv., geol., geog. 12 no.3:49-62 '57. (MIRA 10:12)

1. Kafedra geografii polyarnykh stran Moskovskogo gosudarstvennogo uni-

versiteta.

(Frozen ground)

(Paleogeography)

POPOV, A. I.

FRONT BOOK EXPLOITATION 80/2355

3(5A)

Mezov. Universitet. Geograficheski Fakultet. Informatsionny sbornik o sboratah Geograficheskogo Fakulteta Mezovskogo Universiteta za 1958 god. Sofia: Geograficheski Institut, 1958. 236 p. Brevata slip inserted, 800 copies printed.

Prof. M. I. O. E. Tshubinskiy, Professor of Geography, is interested in glacial phenomena.

Program: This book describes the activities of the Geography Department of the Mezov State University in connection with International Geophysical Year. The work is divided into 4 parts, each dealing with specific regional expeditions. These are: the Mount Elbrus Expedition, the Khibiny Expedition, the Antarctic Expedition, and the Antarctic Expedition. Additional articles discuss problems in glaciology and research techniques. References accompany each article.

THE I.G.Y. ELBRUS EXPEDITION

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Smirnov, V.P. Preliminary Results of the Sieremographic Soundings of the Antarctic Snow Cover During the First Soviet Antarctic Expedition of the Academy of Sciences, USSR, 1955-57	217
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PLAN I BOOK EXHIBITION NOV/21/55

5(14)

Moscow. Universitet. Geograficheskiy fakul'tet. Institutnaya sbornik o sverkh geograficheskogo rabotaya. Institutnaya sbornik o sverkh geograficheskogo rabotaya. Institutnaya sbornik o sverkh geograficheskogo rabotaya. Institutnaya sbornik o sverkh geograficheskogo rabotaya. Institutnaya sbornik o sverkh geograficheskogo rabotaya.

Prof. M.: G. E. Rubinskiy, Professor

PURPOSE: This book is intended for earth scientists, particularly those interested in glacial phenomena. CONTENTS: This book describes the activities of the Geography Department of Moscow State University in connection with International Geological Year. The work is divided into four sections each dealing with a specific regional expedition. These are: the West Siberian Expedition, the Ghibiny Expedition, the Peary Expedition, and the Antarctic Expedition. Additional articles discuss problems in glaciology and research techniques. References accompany each article.

THE I.G.I. YEAR'S EXHIBITION

204

Table of Contents Information Table for Traces of Ancient Substrata, Ye.M. Information Table for Traces of Ancient Substrata in Mountains

209

REMARKS Study of the Physical Properties of Snow and of the Atmospheric Process in a Snow Cover AVAILABLE: Library of Congress

MARKOV, K.K., red.; POPOV, A.I., red.; ASTROV, A.V., red.; YERMAKOV,
M.S., tekhn.red.

[Ice age in European U.S.S.R. and Siberia] Lednikovyi period
na territorii Evropeiskoi chasti SSSR i Sibiri. Pod red.
K.K.Markova, A.I.Popova. Moskva, 1959. 559 p. (MIRA 12:6)

1. Moscow. Universitet.
(Glacial epoch)

POPOV, A.I., inzh.

Calculation of the plan for making up trains on the railroads
of the Bulgarian People's Republic. Trudy MITT no.203:30-43
'65. (MIRA 18:6)

L 3178-66 EPA/EWP(f)/EPF(n)-2/T-2/ETC(m) WW

ACCESSION NR: AP5011575

UR/0143/65/000/004/0045/0051

621.311.22

AUTHOR: Andryushchenko, A. I. (Doctor of technical sciences, Professor);
Lapshov, V. N. (Candidate of technical sciences); Popov, A. I. (Engineer);
Saprykin, G. S. (Engineer)

TITLE: Efficiency of using superhigh temperatures in steam-gas plants with cooled gas turbines

SOURCE: IVUZ. Energetika, no. 4, 1965, 45-51

TOPIC TAGS: power plant, steam gas power plant, gas turbine

ABSTRACT: The effects of the air pressure, initial temperature of working gas, and cooling intensity upon the net electrical efficiency of a high-pressure-steam-generator plant and a waste-heat-boiler-type plant are determined. The calculations show that, with the compressor pressure ratios attainable today, a two-stage heat supply to high-temperature gas turbines is rather inefficient. It is

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ACCESSION NR: AP5011575

3

found that: (1) The steam-gas plants with high-temperature gas turbines having initial gas temperatures of 1200-1400C and 1600C permit attaining net electrical efficiencies of 50-52% and 55-56%, respectively; (2) Such plants should have a simplest scheme which would make for their reliability and low cost; (3) The high electrical efficiency and low cost per kw of such plants make them most promising in the future development of power engineering. Orig. art. has: 7 figures and 1 formula.

ASSOCIATION: Saratovskiy politekhnicheskij institute (Saratov Polytechnic Institute)

SUBMITTED: 07Sep64

ENCL: 00

SUB CODE: PR

NO REF SOV: 003

OTHER: 002

PC

Card 2/2

POLYAKOVA, G.N.; POPOV, A.I.; FOCEL', Ya.M.

Study of amplitude pulse distributors at the output of a photo-
electric multiplier. Radiotekh. i elektron. 10 no.5:929-935 My
'65. (MIRA 18:5)

POLYAKOVA, G.N.; POPOV, A.I.; FOGEL', Ya.M.

Characteristics of photomultipliers for measuring weak
luminous fluxes. Prib. i tekhn. eksp. 10 no.5:198-201
S-0 '65. (MIRA 19:1)

1. Fiziko-tekhnicheskii institut AN UkrSSR, Khar'kov.
Submitted Sept.7, 1964.

ACC NR: APS019615 (A, V) SOURCE CODE: UR/0048/66/030/002/0249/0254

AUTHOR: Storizhko, V.Ye.; Yekhichev, O.I.; Popov, A.I.; Slabospitskiy, R.P.

ORG: Physicotechnical Institute, Academy of Sciences, UkrSSR (Fiziko-tekhnicheskiy institut Akademii nauk UkrSSR)

TITLE: Inelastic scattering of protons by Ne-21. Spin and parity of the first excited state of Ne-21. /Report, Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 January to 2 February 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 249-254

TOPIC TAGS: proton scattering, inelastic scattering, gamma ray, nuclear energy level, neon,

ABSTRACT: The inelastic scattering of 1 to 3 MeV protons on Ne²¹ was investigated in order to obtain information concerning the excited states of the Na²² compound nucleus and to determine the spin and parity of the 350 keV first excited state of Ne²¹. An enriched (30% Ne²¹ and 70% Ne²⁰ and Ne²²) target of neon embedded in a 0.1 mm thick tantalum substrate was employed. The 90° yield of 350 keV gamma rays was determined as a function of incident proton energy. Some 60 resonances were observed, and the energies, widths, and relative intensities of 24 of them are tabulated. The resonances at proton energies below 2.3 MeV were mostly well separated, and their energies

Card 1/2

L 41292-66

ACC NR: AP6019615

were determined with an accuracy of 5 keV; the resonances at higher proton energies were not well separated and they were not investigated further. Angular distributions of the 350 keV gamma rays associated with the different resonances were measured and the coefficients A_2 and A_4 in the expression $1 + A_2 P_2(\cos \theta) + A_4 P_4(\cos \theta)$ for the angular distribution are tabulated for 19 of the resonances. For all but 7 of the resonances the value obtained for A_4 was less than its probable error, and for only one of the resonances did A_4 exceed its probable error by as much as a factor 2. From that it is concluded that the spin of the 350 keV level does not exceed 5/2. Theoretical angular distributions were calculated with different assumptions concerning the spin and parity of the 350 keV Ne^{21} level and the characteristics of the Na^{22} states and are discussed at length in connection both with the present measurements and with data in the literature. It is concluded that the spin and parity of the 350 keV Ne^{21} level are $5/2^+$. The authors thank M.I. Guseva for providing the Ne^{21} target. Orig. art. has: 2 formulas, 2 figures and 4 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 003 OTH REF: 009

Card 2/2 LC

L 27453-66 EWT(1)/EWA(h)

SOURCE CODE: UR/0120/65/000/005/0198/0201

ACC NR: AP5027033

AUTHOR: Polyakova, G. N.; Popov, A. I.; Fogel', Ya. M.

34

ORG: Physics-Engineering Institute, AN UkrSSR, Khar'kov (Fiziko-tehnicheskii institut AN UkrSSR)

B

TITLE: Characteristics of ²⁵photomultipliers for weak light flux measurements

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1965, 198-201

TOPIC TAGS: photomultiplier, temperature dependence, visible light

ABSTRACT: The sensitivity of photomultipliers can be significantly increased by their cooling. The authors studied the effect cooling has on FEU-64, -51, -27, -15a, 6094BEMI, and FEU-46 photomultiplier sensitivity and the number of dark pulses. Results are presented in the form of diagrams giving, as a function of wave length of incident light, 1) the ratio of the low temperature to room temperature sensitivity; 2) the signal-to-background ratio at room temperature; and 3) signal-to-background ratio at low (-70 or -180C, depending on the type of photocathode) temperature. On the basis of these results, the authors estimate the threshold flux for better samples of the photomultipliers. Orig. art. has: 4 figures and 2 tables.

SUB CODE: OP / SUBM DATE: 07Sep64 / ORIG REF: 003 / OTH REF: 005

Card

1/1

UDC: 621.383.292

MIKELADZE, G.Sh.; NADIRADZE, Ye.M.; PKHAKADZE, Sh.S.; GOGORISHVILI, B.P.;
DGEBAUDZE, G.A.; SOLOSHENKO, P.S.; SEMENOV, V.Ye.; BARASHKIN, I.I.;
SHIRYAYEV, Yu.S.; POSPELOV, Yu.P.; KATSEVICH, L.S.; ROZENBERG, V.L.;
Prinimali uchastiye: LORDKIPANIDZE, I.S.; TSKHVEDIANI, R.N.;
DZODZUASHVILI, A.G.; DUNIAVA, A.G.; PENARSKIY, L.F.; GRITSPNYUK, Yu.V.;
ZHELTOV, D.D.; LUZANOV, I.I.; GLADKOVSKIY, V.P.; PODMOGIL'NIY, V.P.;
VOROPAYEV, I.P.; BRIKOVA, O.V.; VRUBLEVSKIY, Yu.P.; KLYUYEV, V.I.;
BAYCHER, M.Yu.; LOGINOV, G.A.; SHILIN, V.K.; POPOV, A.I.; ZASLONKO, S.I.

Industrial experiments in the smelting of 45 o/o ferrosilicon in
a heavy-duty closed electric furnace. Stal' 25 no.5:426-429 My '65.
(MIRA 18:6)

1. Gruzinskiy institut metallurgii (for Lordkipanidze, Tskhvediani,
Dzodzuashvili, Guniava). 2. Nauchno-issledovatel'skiy i projektnyy
institut metallurgicheskoy promyshlennosti (for Brikova, Vrublevskiy,
Klyuyev). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut elektro-
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POPOV, A.I., prof.; TATARINOVA, Ye.I., red.

[Underground ice; for the 7th Congress of the International Association on Quaternary Research (INQUA) in the U.S.A., 1965] Podzemnyi led; k VII Mezhdunarodnomu kongressu asotsiatsii po izucheniiu chetvertichnogo perioda (INKVA) v SShA, 1965. g. Moskva, Izd-vo Mosk. univ., 1965. 214 p. (MIRA 18:8)

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Effectiveness of using ultrahigh temperatures in steam and gas
power systems with cooled gas turbines. Izv.vys.ucheb.zav.; energ.
8 no.4:45-51 Ap '65. (MIRA 18:4)

1. Saratovskiy politekhnicheskii institut. Predstavlena kafedroy
teploenergetiki.

L 52609-65 EWT(1)/EEC(b)-2/EWA(h) Pub

ACCESSION NR: AP5013346

UR/0109/65/010/005/0929/0935

AUTHOR: Polyakova, G. N.; Popov, A. I.; Fogel', Ya. M.

18
B

TITLE: Study of the height distribution of pulses at the output of a multiplier phototube

SOURCE: Radiotekhnika i elektronika, v. 10, no. 5, 1965, 929-935

TOPIC TAGS: multiplier phototube, photomultiplier, pulse height distribution

ABSTRACT: The results of an experimental investigation of the pulse-height distribution in FEU-64, FEU-51, FEU-27, FEU-46, 6094B EMI, and 9502B EMI photomultipliers at +20C and -70C are reported. It was found that, in photomultipliers having a small photocathode area and activated dynodes, the dark-current pulses are largely generated by the dynode system. The height distribution of light-generated pulses agrees well with the Poisson law for FEU-64, under red and blue light, at +20C and -70C. This fact permits reliable selection of the

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ACCESSION NR: AP5013346

discrimination level when the luminous intensity is measured by a quantum-counting photomultiplier. The pulse-height distribution in a gamma-irradiated (Co^{60}) FEU-64 was also measured. Orig. art. has: 8 figures and 1 table. [03]

ASSOCIATION: none

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NO REF SOV: 004

OTHER: 000

ATD PRESS: 4010

sk
Card 2/2

POPOV, A.I., gornyy inzh.

Using the ZL-2B charging device for charging upward holes. Gor.zhur.
no.12:61 D '64. (MIRA 18:1)

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mills. Met. i gornorud. prom. no.2:67-68 Mr-Ap '64.

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"Elastic Scattering of Protons by Nuclei Ar^{36} ."

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POPOV, A.I., doktor geogr. nauk, red.; AFANAS'YEV, B.L., kand.
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[Cenozoic mantle of the Bol'shezemel'skaya Tundra] Kaino-
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SAVINOV, G.I., kand.fiz.-mat. nauk, dots. [deceased];
PIROGOV, I.Z.; Primalni uchastiye: BALAYEVA, I.A.; BALAKIN,
B.M.; BELYAYEVA, G.M.; BELYAKOV, V.I.; VELERSHTEYN, R.A.;
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skva, Izd-vo mosk. univ. 1963. 233 p. (MIRA 16:12)

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Stukalova, Chistyakov).

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FRANTSEV, Andrey Nikolayevich; ~~POPOV, A.I.~~, inzh., retsenzent;
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(Protons--Scattering) (Silicon--Isotopes)

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BEER, A. A.; ZAGORETS, P. A.; INOZEMTSEV, V. F.; POVKH, G. S.;
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khimia 2 no.4:617-623 J1-Ag '62. (MIRA 15:10)

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(Olefins) (Polymerization) (Radiation)

BAKHAREV, F.M.; DAVYDOVA, M.I.; ZARUBINA, I.L.; POPOV, A.I.; SKVORTSOV, G.
Ye.; SMIRNOV, V.A.

Microspectrophotometer for both the ultraviolet and the visible
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"Characteristics of relief development in distribution areas of frozen rocks in Northern Eurasia"

report to be submitted for the Intl. Conference on Permafrost, Purdue Univ., Lafayette Indiana, 11-15 Nov 63

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VAL' TER, A.K.; STORIZHKO, V.Ye.; POPOV, A.I.

Elastic proton scattering by Mg^{24} nuclei. Zhur. eksp. i teor. fiz.
44 no.1:57-62 Ja '63. (MIRA 16:5)

1. Khar'kovskiy gosudarstvennyy universitet i Fiziko-tekhnicheskiy
institut AN UkrSSR.
(Protons—Scattering) (Magnesium)

SOROKIN, P.V.; POPOV, A.I.; STORIZHKO, V.Ye.; TARANOV, A.Ya.

Elastic proton scattering by O^{18} nuclei. Izv. AN SSSR. Ser.
fiz. 26 no.8:1084-1088 Ag '62. (MIRA 15:11)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.
(Protons--Scattering) (Oxygen--Isotopes)

POPOV, A.I.; SOROKIN, P.V.; STORIZHKO, V.Ye.; TARANOV, A.Ya.

Elastic proton scattering by Mg^{25} and Mg^{26} nuclei. Izv. AN
SSSR. Ser. fiz. 26 no.3:1074-1079 AG '62. (MIRA 15:11)

1. Fiziko-tekhnicheskii institut AN UkrSSR.
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S/056/63/044/001/011/067
B108/B180

AUTHORS: Val'ter, A. K., Storizhko, V. Ye., Popov, A. I.

TITLE: Elastic scattering of protons by Mg²⁴ nucleiPERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 1, 1963, 57 - 62

TEXT: Protons with energies of 1450 - 4200 kev were extracted from an electrostatic accelerator and scattered by a target composed of 99%-pure Mg²⁴ on a spectroscopically pure graphite backing. The scattered protons were recorded on a magnetic spectrometer with a CsI(Tl) crystal and an ФЭУ-19 (FEU-19) photomultiplier. The error was less than 3%. Resonances were observed at proton energies of 1495, 1624, 1670, 2015, 2410, 2920, 3140, 3669, and 4022 kev. These correspond to the Al²⁵ levels with the excitation energies of 3.725, 3.850, 3.893, 4.224, 4.604, 5.093, 5.304, 5.812, and 6.151 Mev. According to the single-level approximation of dispersion theory, the broad resonance at E_p = 3140 kev is due to proton capture in a state with l = 0. The corresponding Al²⁵ level (excitation Card 1/2

POPOV, A.I., zasluzhennyy agronom Moldavskoy SSR

Mechanized station for the production of Bordeaux mixture.
Zashch. rast. ot vred. i bol. 6 no.5:15-16 My '61. (MIRA 15:6)

1. Predsedatel' kolchoza "Biruintsa", Strashenskiy rayon,
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KOROLEV, Aleksandr Nikiforovich; POPOV, Aleksandr Ivanovich; SIZOV, K.P., inzh., retsenzent; YAKOVLEV, I.N., inzh., retsenzent; SARANTSEV, Yu.S., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Economics, organization, and planning of railroad car operation] Ekonomika, organizatsiia i planirovanie vagonnogo khoziaistva. Moskva, Transzheldorizdat, 1962. 290 p.

(MIRA 15:12)

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