L 12931-63 EWT(l)/EWT(m)/BDS ASD/AFFTC AR/K

ACCESSION NR: AP3003937 S/0205/63/003/004/0587/0594

AUTHOR: Sondak, V. A.; Gracheva, Ye. P.; Glady*shev, B. N.; Suslikov, V. I.

TITLE: Effect of phytolipopolysaccharides and preparation VB-2 on the hemogenesis of irradiated animals

SOURCE: Radiobiologiya, v. 3, no. 4, 1963, 587-594

TOPIC TAGS: radiation sickness, antiradiation preparation, polysaccharide, phytolipopolysaccharide, VB-2, hemogenesis, vinylbutyl ether polymer

ABSTRACT: Lipopolysaccharides from the leaves of Vitis vinifera and Thea sinensis have been tested on white male rats for their antiradiation qualities. The phytolipopolysaccharides used did not have the ability to stimulate fibrinolysis. To protect the intestinal mucosa from radiation damage, a VB-2 preparation (polymer of vinylbutyl ether) was applied. An M-2 computer was employed to tabulate statistical results. It was concluded that 1) phytolipopolysaccharides applied before irradiation possess definite prophylactic properties and when used in conjunction with a VB-2 preparation exert some protective function after irradiation; 2) a positive influence from these preparations was also manifested in the

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L 12931-63
ACCESSION NR: AP3003937

2

blood — dynamic changes of erythrocytes, reticulocytes, and thrombocytes after irradiation were more favorable in the animals treated with phytolipopolysaccharides and VB-2; 3) phytolipopolysaccharides, unlike bacterial lipopolysaccharides, exert a protective influence on hemogenesis against penetrating radiation, stimulating erythro-thrombocytopoiesis without any persistent and pronounced change in cells of the leucocytic order. Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR (Institute of Biological Physics, AN SSSR); Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR, Moscow (Institute of Organic Chemistry, AN SSSR)

SUBMITTED: 11Jan63 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: AM NO REF SOV: 005 OTHER: 007

Card 2/2

ANDREYENKO, G.V.; GLADYSHEV, B.N.; PANTYUSHINA, N.N.

Effect of lipopolysaccharides of higher plants (phytolipopoly-saccharides) on the fibrinogen content and fibrinolytic activity of albino rat blood. Nauch. dokl. vys. shkoly; biol. nauki no.1:84-88 '64. (MIRA 17:4)

1. Rekomendovana laboratoriyey fiziologii i biokhimii svertyvaniya krovi Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova i Institutom biokhimii AN SSSR.

L 22554-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5000467 S/0166/64/000/004/0032/0036

AUTHOR: Begzhanov, R. B.; Gladyshev, D. A.; Staxodubtsev, S. V.; Khaydarov, T.

TITLE: Measurements of the total neutron cross sections of In and Sm

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1964, 32-36

TOPIC TAGS: neutron cross section, resonant cross section, indium, samarium, neutron spectrometer

ABSTRACT: Measurements of the total cross sections for neutrons interacting with the In and Sm nuclei were carried out on a neutron spectrometer described earlier (Atomnaya energiya, vol. 14, no. 5, 1963). The width of the channel was 8 μ sec. [illegible] resolution for Sm. The In

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L 22554-65
ACCESSION NR: AP5000467

1 of the Enclosure. "Yu. G. Gafurov helped with the measurements." Orig. art. has: 18 formulas, 2 figures and 1 table.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSR)

SUBMITTED: 27Oct63 ENCL: 02 SUB CODE: NP

NO REF SOV: 004 OTHER: 003

Card 2/4

L 17316-63 EPR/EPF(c)/EPF(n)-2/ENT(m)/BDS AFFTC/ASD/ESD-3/SSD Ps-4/
Pr-4/Pu-4 WW

ACCESSION NR: AP3005532 S/0166/63/000/003/0023/0028

AUTHORS: Begzhanov, R. B.; Gladyzshev, D. A.; Starodubtsev, S. V.; Khaydarov, T.

TITLE: Investigation of slow neutron spectra 19 77

SOURCE: AN ArmSSR. Izv. Ser. tekhn. nauk, no. 3, 1963, 23-28

TOPIC TAGS: slow neutron, chopper, reactor, pulsed neutron source

ABSTRACT: Experiments were conducted to determine the neutron energy spectrum of slow neutrons emerging from a horizontal channel of a water-moderated reactor. To determine neutron cross sections in the 10-KeV energy range a mechanical neutron velocity selector of 8.5 μ sec/m resolution was used with a pulsed neutron source of 1200 pulses per minute. The slow neutron energy spectrum obtained at various reactor loads and various channel widths (64 and 32.0 μ sec), gave a Maxwellian distribution in the wave length region 0.75 to 1.5 Å. The effective neutron temperature was estimated at 375K with a moderator temperature of 308K. Orig. art. has: 4 formulas and 2 figures.

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics Academy of Sciences, Uzbek SSR)

Card 1/1

L 11052-63 EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/AFWL/SSD--Pu-4--DM

ACCESSION NR: AP3001182 S/0089/63/014/005/0490/0491

AUTHOR: Begzhanov, R. B.; Gladyshev, D. A.; Starodubtsev, S. V.; Khaydarov, T.

TITLE: Slow neutron spectrum in horizontal channel of VVR-S reactor

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 490-491

TOPIC TAGS: slow neutron spectrum, VVR-S reactor, Maxwell distribution

ABSTRACT: The neutron energy distribution in the VVR-S reactor being used by the Institute for nuclear physics of the AN, UzSSR was measured. The mechanical interrupter of 150 mm diameter had 13 plane-parallel slits of 1 mm width. The flight path of neutrons to detector was 7.6 meters, being mostly in a 300 mm diameter vacuum tube. A 35 mm diameter boron counter served as the detector. A multichannel, matrix-type time analyzer was used for recording. The width of the time channel could be varied from 1 to 128 microseconds. The dead time was 10 microseconds. Measurements of the neutron spectrum in a horizontal channel starting from the active zone of the reactor were made at 1200 rpm's and 32 to 64 microsecond channel width. The experimentally found distribution curve is given: energy of neutrons, in relative units, vs. wavelength up to about 4 angstroms. It follows the Maxwellian distribution only around the maximum between 0.75 to 1.5

Card 1/2

[illegible], I.P.; [illegible], L.A.; STAROBINETS, P.I.; [illegible]

Measurement of total neutron cross sections [illegible]. Izv. AN SSSR. Ser. fiz.-mat. nauk 9 no. 4:[illegible]. (MIRA 18:3)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.

BELEZENKO, G.V., MIKHAYLOVICHAYEV, M.Kh., GLADYSHEV, D.A.

Portable device for measuring the biopotentials of plants under field conditions. Uzb. biol. zhur. 8 no.6:66-69 '64. (MIRA 18:3)

1. Institut yadernoy fiziki AN UzSSR.

ACCESSION NR: AP4041452 S/0089/64/016/006/0523/0524

AUTHORS: Begzhanov, R. B.; Glady*shev, D. A.; Starodubtsev, S. V.; Khaydarov, T.

TITLE: Cross section for the interaction between neutrons and Sm-149 and In-115 nuclei

SOURCE: Atomnaya energiya, v. 16, no. 6, 1964, 523-524

TOPIC TAGS: neutron interaction, neutron spectroscopy, indium, samarium, resonance scattering

ABSTRACT: The total effective cross sections were measured with the neutron spectroscope previously described (Atomnaya energiya v. 14, no. 5, 1963, Izv. AN UzSSR. Ser. fiz. matem., nauk, no. 3, 1963) at a channel width of 8 μsec and resolution 2.23 and 2.5 μsec/m in the case of indium and samarium, respectively. The resonance parameters were calculated by a method described by G. I. Marchuk

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ACCESSION NR: AP4041452

(Teoriya i metody* rascheta yaderny'kh reaktorov [Theory and Design Methods of Nuclear Reactors], Gosatomizdat, 1962, p. 240). Some factors affecting the accuracy of the results are mentioned. Orig. art. has: 2 figures, 3 formulas, and 1 table.

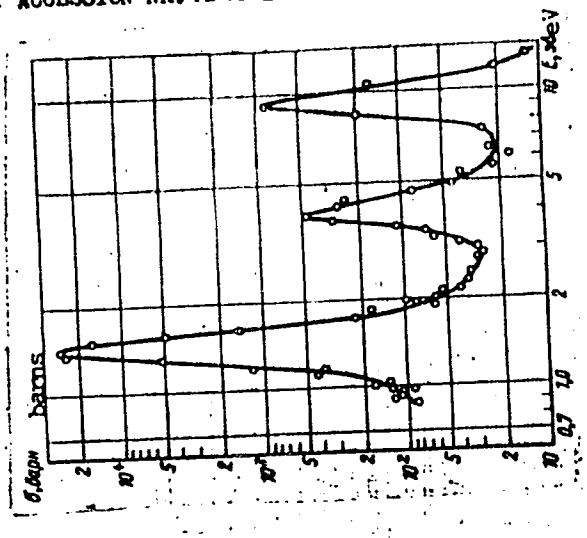
ASSOCIATION: None

SUBMITTED: 19Sep63 ENCL: 02

SUB CODE: NP NR REF SOV: 004 OTHER: 000

ACCESSION NR: AP4041452

ENCLOSURE: 01

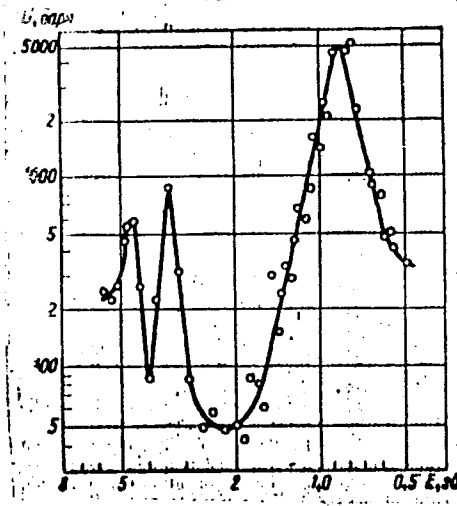


Total neutron cross section of In^{115}

Card 3/4

ACCESSION NR:AP4041452

ENCLOSURE: 02



Total neutron cross section of Sm^{149}

Card 4/4

L 30254-66

ACC NR: AP6024520 SOURCE CODE: UR/0056/66/004/002/0071/0074

AUTHOR: Begzhanov, R. B.; Gladyshev, D. N.; Sadykov, Kh. M.; Tashmetov, B.

ORG: Institute of Nuclear Physics, Academy of Sciences, Uzbek SSR (Institut yadernoy fizki Akademii nauk Uzbekskoy SSR)

TITLE: Lifetimes of the excited levels of Pm^{151} 19

SOURCE: Zh eksper i teor fiz. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 2, 1966, 71-74

TOPIC TAGS: promethium, nuclear energy level, neutron bombardment, gamma radiation, gamma transition

ABSTRACT: In view of the lack of thorough studies of the Pm^{151} nucleus, the authors present results of a detailed experimental investigation of the lifetimes of the excited levels, using a delayed-coincidence method. The source was obtained by irradiating a natural mixture of Nd isotopes in a thermal-neutron beam from the VVR-S reactor of IYaF AN UzSSR. The integral activity of the interfering components was reduced to 1% of the main effect or less. The lifetime of the 118-kev level was determined from the time coincidence spectrum of 118- and 1180-kev γ rays. An analysis of the pulse-height coincidence spectrum of the 1180-kev γ rays disclosed the presence of additional γ lines which did not agree with the decay scheme. In view of the shortcomings of the published decay scheme, the authors used a new procedure, in which an additional detector was used to obtain $\beta\gamma\gamma$ coincidences. They obtained the

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L 30225-66
ACC NR: AP6024520

pulse-height spectrum of the γ-ray cascade transitions. The lifetimes obtained were 8×10^{-11} and $(0.93 \pm 0.03) \times 10^{-9}$ sec for the 118-kev and 256-kev levels, $\leq 10^{-10}$ sec for the 1298, 1122, 855, and 425 kev levels, and $\leq 2 \times 10^{-10}$ sec for the 176 and 170 kev transitions from the 1298 and 425 kev levels respectively. The new spectrum showed an intense anomalous maximum near 90 kev, belonging apparently to the low-energy levels. Additional facts concerning the hindrance and delay factors of several levels are obtained. Orig. art. has: 1 figure and 4 formulas.

SUB CODE: 20/ SUBM DATE: 12May66/ OTH REF: 004

Card 2/2 111

BARANOV, E.N.; VERTEPOV, G.I.; GLADYSHEV, G.D.

Wall rock alternations of a uranium deposit. Geol.rud.mestorozh. no.6:33-45 N-D '62. (MIRA 15:12)
(Metamorphism (Geology))
(Uranium ores)

BASHUN, M.I.; VASIL'YEV, A.M.; GLADYSHEV, G.I.; RYCHKOV, B.V.; SMIRNOV, V.S.; FISHBEYN, P.A., inzh., red.; ARTYUKHIN, V.A., red. izd-va; UVAROVA, A.F., tekhn. red

[Catalog of spare parts for the ZIS-5, UralZIS-355, UralZIS-355B and UralZIS-355M motortrucks] Katalog zapasnykh chastei avtomobilei ZIS-5, UralZIS-355, UralZIS-355B i UralZIS-355M. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 354 p. (MIRA 14:8)

1. Ural'skiy avtomobil'nyy zavod imeni V.I.Stalina. 2. Rabotniki Otdela glavnogo konstruktora Ural'skogo avtomobil'nogo zavoda imeni V.I.Stalina (for all except Fishbeyn, Artyukhin, Uvarova)
(Motortrucks--Catalogs)

KUROV,S.A.; TITKOV,A.I.; VASIL'YEV,A.M.; GLADYSHEV,G.I.; SHAPSHAL,B.G.
BLYAKHMAN,D.S.; BOGACHEVA,N.M.; FOMIN,V.M.

Critical notes on a reference book ("Tractors and Automobiles."
IU.A.Domatovskii, I.I.Trepenenkov. Reviewed by S.A.Kurov). Avt.
trakt. prom. no.5:32 My '55. (MLRA 8:8)
(Tractors) (Automobiles) (Dolmatovskii, IU.A) (Trepenenkov,I.I.)

GLADYSHEV, G.I.

Experimental investigation of wave guides with diaphragms. Sbor. trud.Inst.elektrotekh.AN URSR no.8:119-124 '52. (MLRA 10:2)
(Wave guides)

TETEL'BAUM, S.I.; GLADYSHEV, G.I.; RAPOPORT, G.N.

Methods of measuring the intensity of electric fields in resonators and wave guides at superhigh frequencies. Sbor.trud. Inst.elektrotekh.AN URSR no.12:108-114 '55. (MLRA 9:11)

(Electric fields--Measurement)
(Electric resonators)
(Wave guides)

GLADYSHEV, G.I.

Investigation of the operation of phase testers. Shor.trud. Inst. elektrotekh.AN URSR no.12:115-117 '55. (MLRA 9:11)
(Electric meters)

SOV/112-58-1-1533

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 226 (USSR)

AUTHOR: Gladyshev, G. I.

TITLE: A Method of SHF Electric-Field Measurement in Resonant Cavities and Waveguides (Ob odnom metode izmereniya elektricheskogo polya v rezonatorakh i volnovodakh na SVCh)

PERIODICAL: Izv. Kiyevsk. politekhn. in-ta, 1956, Vol 21, pp 203-207

ABSTRACT: A method is described for measuring electric field strength in resonant cavities and waveguides, which have no symmetry of revolution, by means of a dielectric bead that, unlike a metal body, does not disturb the magnetic field. A polysterene or plexiglas bead was passed through the resonant system by a capron filament. An error of 15-20% is involved in the method.

N.A.S.

AVAILABLE: Library of Congress

1. Waveguides--Electrical properties 2. Electric fields--Measurement
3. Cavity resonators--Electrical properties

Card 1/1

GLADYSHEV, G.I. [Hladyshev, Hladyshev, H.I.], kand. tekhn. nauk

A.S. Popov, the great Russian inventor of the radio. Visnyk AN URSR 30 no.4:38-44 Ap '59. (MIRA 12:6)
(Popov, Aleksandr Stepanovich, 1859-1906)

S/142/63/006/001/009/015
E192/E382

AUTHORS: Gladyshev, G.I., Kasatkin, L.V. and Shashurina, S.P.

TITLE: Propagation characteristics of electromagnetic waves in laminary periodic structures

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 6, no. 1, 1963, 77 - 82

TEXT: A multilayer dielectric system can be represented by the equivalent "circuit", shown in Fig. 1. The electromagnetic waves propagate in this system between two infinite ideally-conducting planes P and Q. The elements of the system of the same type as that of the region II (see the area CEDF) have parameters ε_2 and μ_2 and thickness Δ; the elements of the type shown in region I have parameters ε_1, μ_1 and a thickness d. The period of the system is $D = d + \Delta$. The quantities V_i and I_i in the figure represent the voltages and currents in the system at the cross-sections AB, CD, EF and GH. It is first necessary to evaluate the transfer function of a symmetrical T-type quadripole ABGH in order to determine the propagation

Propagation characteristics ....

characteristics in such a periodic structure. The transfer function is a product of the transfer functions of the quadripoles ABCD, CDEF and EFGH. It is shown that the characteristic equation defining the propagation function in the system is given by:

$$\operatorname{ch} \gamma_e(d+\Delta) = \operatorname{ch} \gamma_2 \Delta \operatorname{ch} \gamma_1 d + \left(\frac{Z_1}{Z_2} + \frac{Z_2}{Z_1} \right) \frac{\operatorname{sh} \gamma_2 \Delta}{2} \operatorname{sh} \gamma_1 d \qquad (6)$$

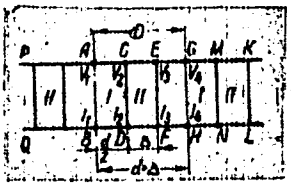
where γ_1 is the propagation coefficient for the region I, γ_2 is the propagation for the region II and Z_1, Z_2 are the wave impedances of the regions I and II, respectively. The wave impedance of the system is also evaluated. Eq. (6) is used to investigate some special cases - in particular, the propagation conditions in the absence of losses. It is found that in this case the passband of the system consists of several discrete bands. The effect of thin metallic films deposited on the surfaces EF, MN and so on, is also determined. Such layers are shown to

Propagation characteristics ....

introduce attenuation, which has a maximum at a certain frequency. This is explained by the shunting effect of the successive conductive layers. The frequency-dependence of the resistive and reactive components of the wave impedance of the system is also investigated. There are 4 figures.

ASSOCIATION: Institut radiotekhnicheskikh problem AN USSR (Institute of Radio-engineering Problems of the AS UkrSSR)

SUBMITTED: July 7, 1962 (initially)
October 10, 1962 (after revision)



Card 3/3

Fig. 1:

ACCESSION NR: AP4012360 S/0142/63/006/006/0639/0647

AUTHORS: Glady*shev, G. I.; Yegorshin, Yu. A.

TITLE: Accuracy of determination of the magnetic permeability and dielectric constant by the two-position method

SOURCE: IVUZ. Radiotekhnika, v. 6, no. 6, 1963, 639-647

TOPIC TAGS: magnetic permeability, permeability, dielectric constant, permittivity, permeability measurement, permittivity measurement, permeability measurement accuracy, permittivity measurement accuracy, transmission line measurement method, coaxial transmission line, waveguide transmission line

ABSTRACT: The accuracy with which the magnetic permeability and dielectric constant of the material are determined by means of a microwave line (the open-circuit and short-circuit method) is determined as functions of the errors in the determination of the input impedance, the characteristic resistance, and the propagation constants of the medium, with particular emphasis on the effect of random measurement errors. Formulas and plots are developed from which

ACCESSION NR: AP4012360

to determine the errors in the determination of the propagation constant, the characteristic resistance, and the magnetic and dielectric constants. The effect of the geometrical configuration of the sample is discussed and a method is presented for first estimating the approximate values of the magnetic and dielectric parameters, from which it becomes possible to select the optimal thickness of the sample for the measurements. Both rectangular waveguides and coaxial microwave lines are considered. Expressions are also presented for the calculation of the extremal errors. Orig. art. has: 7 figures and 47 formulas.

ASSOCIATION: Institut radiotekhnicheskikh problem AN UkrSSR (Institute of Radio Problems, AN UkrSSR)

SUBMITTED: 14Apr62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: GE NO REF SOV: 004 OTHER: 003

Card 2/2

RAPOPORT, G.N.; BONDARENKO, R.N.; GLADYSHEV, G.I.

Clarification of a formula for determining the specific inductive capacitance of samples using a resonance frequency shifting technique. Radiotekh. i elektron. 9 no.7:1319-1320 Jl '64
(MIRA 17:8)

GLADYSHEV, G.I.; YEGORSHIN, Yu.A.

Accuracy of the determination of permeability and specific inductive capacitance using the method of two places. Izv. vys. ucheb. zav.; radiotekh. 8 no.1:122-123 Ja-F '65.
(MIRA 18:5)

L 45525-66 EWT(d)/EWT(l)/EEC(k)-2/EWA(h)
ACC NR: AP5025587 SOURCE CODE: UR/0115/65/000/009/0047/0049

AUTHOR: Gladyshev, G. I.; Chemeris, V. M.

ORG: none

TITLE: Automatic wide-band wavemeter for the microwave region

SOURCE: Izmeritel'naya tekhnika, no. 9, 1965, 47-49

TOPIC TAGS: frequency meter, centimeter wave, microwave detector, wideband detection

ABSTRACT: A description is given of a wavemeter developed both for continuous visual observation of the frequency spectrum of a generator of up to 200 Mc at λ = 2.9 cm and up to 900 Mc at λ = 3.8 cm and for the measurement of preliminary power distribution with respect to the spectrum of generated frequencies. It can also be used as a sensitive detector for the adjustment and testing of shf instruments. The operation of the device is based on the method of successive analysis by a passive filter in the form of a torroidal resonator. The electrical portion of the instrument is a two-stage amplifier using one 6N9S tube and a trigger using one 6N8S tube for shaping negative quenching pulses. Separate shifters are provided for controlling the scanning voltage and the quenching pulses. The sensitivity of the instrument is no lower than 100 μv, and its resolution, which is determined by the Q of the resonator, is no higher than 40 Mc. Orig. art. has: 3 figures. [JR]

SUB CODE: EC/ SUBM DATE: none/ ATD PRESS: 4136

Card 1/1 UDC: 621.317.763.029.64

ACC NR: AP5025693 SOURCE CODE: UR/0286/65/000/018/0040/0040

INVENTOR: Gladyshev, G. I.; Shuranov, V. A.; Antonov, A. V.

ORG: none

TITLE: Instrument for measuring the parameters of dielectrics at low temperatures in the centimeter wavelength range. Class 21, No. 174677

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 40

TOPIC TAGS: cavity resonator, measuring instrument, dielectric property, electronic measurement, dielectric material

ABSTRACT: The proposed instrument for measuring the parameters of dielectrics at low temperatures consists of a tunable measuring resonator, a waveguide connected to the resonator, a hermetically sealed body, and a dewar. Provision is made to maintain controlled low temperatures in the working space of the resonator. The cavity of the resonator is ringed with a coiled heat exchanger linked with the dewar. Temperature stabilization and control are effected by application of a controlled voltage to the end of the tubing passing into the dewar. Orig. art. has: 1 figure. [DW]

SUB CODE: EC,EM/SUBM DATE: 11Jul63/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4129

Card 1/1 bnd

UDC: 621.317.335.3

[redacted], D.M.; GLADKIY, G.I.

Measurement of the dielectric [illegible] of liquids in a cavity resonator. Radiotekh. i elektron. 11 no.1:149-150 Ja '66.
(MIRA 19:1)

1. Submitted March 26, 1965.

L 20752-66 EWA(h)/EWT(l) JM

ACC NR: AP6010737 SOURCE CODE: UR/0142/66/009/001/0146/0148

AUTHOR: Bondarenko, R. N.; Gladyshev, G. I.

ORG: none

TITLE: Frequency shift in a TWT

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 1, 1966, 146-148

TOPIC TAGS: traveling wave tube, traveling wave amplifier, frequency shift

ABSTRACT: The possibility of controlled frequency shifting of a TWT output is investigated. The author analyzes a shifter based on sawtooth modulation of the accelerating voltage, v_0. Equations for optimum slope and amplitude of a modulating sawtooth are developed under the assumption of a small accelerating voltage deviation ($\Delta v/v_0 \ll 1$). A block diagram and output waveforms from a 3-cm experimental setup are given. Over a shift range of 1 to 200 kc, shift losses were less than 1 db, indicating the feasibility of the method. With no correction, output amplitude is also modulated up to 25% with the proposed method, but by proper feedback and choice of anode current, this figure was substantially reduced. Orig. art. has: 10 formulas and 4 figures. [SH]

SUB CODE: 09/ SUBM DATE: 21May63/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 4224

Card 1/1 UDC: 621.376.326

L 21672-66

ACC NR: AP6003562 SOURCE CODE: UR/0109/66/011/001/0149/0150

AUTHOR: Bondarenko, R. N.; Gladyshev, G. I.

31
2B

ORG: none

TITLE: Measuring dielectric constants of liquids in a resonator

SOURCE: Radiotekhnika i elektronika, v. 11, no. 1, 1966, 149-150

TOPIC TAGS: dielectric constant, electric measurement

ABSTRACT: A modification of the well-known method of measurement of complex dielectric constant (G. Birnbaum et al., J. Appl. Phys., 1949, v. 20, no. 8, p. 817) is suggested. The test capsule is half-filled with the test liquid and is inserted into a rectangular resonator. The capsule can be moved in the resonator by a screw. First, the measurements are made with the empty part of the capsule and then, with the filled part. Hence, the effect of the capsule material is excluded from the final results. Odd TE_{0in}-modes are used. Orig. art. has: 1 figure and 2 formulas.

SUB CODE: 09 / SUBM DATE: 27Mar65 / ORIG REF: 002 / OTH REF: 001

Card 1/1

UDC: 621.317.374:537

GLADYSHEV, G.N.

Lock for wedge-shaped belts. Stan.i instr. 24 no.11:34 N '53.
(MLRA 6:12)
(Belts and belting)

GLADYSHEV, G.N., inzhener.

Attachment for shaping strips and bands on lathes. Vest. mash.
35 no.10:73 O '55. (MLRA 9:1)
(Lathes) (Metalworking machinery)

AUTHOR: Gladyshev, G.N., Engineer SOV/117-58-11-21/26

TITLE: The Milling of Thread on a Cross-Planing Machine (Nakatyvaniye rez'by na poperechno-strogal'nom stanke)

PERIODICAL: Mashinostroitel', 1958, Nr 11, p 25 (USSR)

ABSTRACT: The use of automatic thread-cutting machines is expedient in the manufacture of large series. For small series, a special device has been developed (Figure 1) which is installed on a cross-planing machine. The lower part of the device is fastened to the operation table of the machine (Figure 2), the upper part to the cutter holder. The thread-cutting device is used for details made of alloys with sufficient plastic properties. The thread diameters range from 3-24 mm. There are 2 diagrams.

1. Screw threads--Machining 2. Machine tools--Performance

Card 1/1

GRAVSHEV, G.I.

Some more precise definitions. Mashinostroitel' no.7:47 S '61. (MIRA 15:9)

(Machinery--Design)

GLADYSHEV, G.P., inzh.

Assembling a boiler drum weighing 90 tons with a bridge crane having a lifting capacity of 50 tons. Mont. i spets. rab. v stroi. 26 no.8:8-10 Ag '64.

(MIRA 17:11)

1. Montazhnyy uchastok No.4 tresta Mosenergomontazh.

15.8620
11.2217

2209

25266

AUTHORS: Rafikov, S. R., Gladyshev, G. P.

TITLE: Studies in the field of the synthesis of polymers. II. Photo-oxidative activation of methyl methacrylate by ultraviolet light

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 7, 1962, 1034-1040

TEXT: The photopolymerization by means of UV light is made difficult by the fact that the exposure lasts long and special quartz vessels are needed. The aim of the present study was to utilize the post effect of methyl methacrylate (MMA) initiated by UV light and to effect the polymerization of MMA separated from its initiator. MMA distilled at 100-120 mm Hg was irradiated in a quartz cell by means of a PRK-4 (PRK-4) mercury lamp (capacity 375 w). The irradiation intensity was found to be $2.4 \cdot 10^{16}$ quantums/ml.sec by using uranyl oxalate. The amount of oxygen consumed for the formation of peroxides was determined volumetrically. Furthermore, the amount of peroxide formed was determined

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Studies in the field of the ... 25266

iodometrically. These operations were performed in pure argon. Results. 1) The consumption of O_2 does not differ from that measured on thermal oxidation of MMA. The oxidation rate with UV irradiation is, however, higher by at least one order of magnitude. The absorption of O_2 is not dependent on its partial pressure. 2) The curves of the oxygen absorption become steeper with increasing temperature. The apparent activation energy was calculated to be 14 kcal/mole. If MMA is irradiated immediately after distillation, i.e., if it does not contain any traces of peroxides, the formation of peroxide occurs more slowly under the effect of irradiation. 3) The quantity of peroxides formed is directly proportional to the dose of irradiation. 4) The titanium reagent gave negative reactions with H_2O_2, oxyalkyl hydrogen peroxides, and acyl peroxides. After irradiation, the MMA was liberated from oxygen in a dilatometer by repeated freezing and evacuation to $2 \cdot 10^{-3}$ mm Hg, the dilatometer filled with N_2, and the polymerization effected in the thermostat. Reproducible data were only obtained if the polymerization was effected immediately after irradiation, the MMA thus having no contact with air. The kinetics of the polymerization [illegible]

Card 2/3

Studies in the field of the ... 25266 B/190/61/003/007/011/021
B101/B214

temperature are shown in Fig. 1. The shape of the curves is similar to that obtained in normal polymerization by peroxides. The "gel effect" under UV irradiation is observed, however, only with higher degrees of conversion. This is explained by additional breakage of the chains, which has been proved, moreover, by the fact that the rate of polymerization decreases under very high doses of irradiation (Fig. 1), although the concentration of the peroxides increases. The reverse ideals react with inhibiting compounds. The infrared spectra taken in the laboratory molekulyarnoy spektroskopii Instituta khimicheskikh nauk AN KazSSR (Laboratory of Molecular Spectroscopy of the Institute of Chemical Sciences, AS Kazakhskaya SSR) proved the existence of secondary decomposition products of the peroxides: carbonyl, carboxyl, and hydroxyl groups. Such compounds are characteristic also for the thermal decomposition of peroxides. The total activation energy was found to be 11.8 kcal/mole. It is lower than on polymerization of MMA in the presence of benzoyl peroxide (14.4 kcal/mole) or other initiators. From $E = \frac{1}{2}E_{init} + (E_{iner} - \frac{1}{2}E_{break})$, where E means the total activation energy, E_{init} the activation energy of the initiation, E_{iner} the activation energy of

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Studies in the field of the ... 25266

the increase of the chains (6.3 kcal/mole). E_{break} the activation energy of the breaking of the chains (7.8 kcal/mole). E_{init} was found to be 12.6 kcal/mole, thus less than the activation energy during thermal oxidation of MMA in the presence of peroxides (20.1 kcal/mole). For degrees of conversion of 5-15% a break of the kinetic curves was observed, which is due to the acceleration of the polymerization at the interface monomer-mercury. The results show that the UV irradiation of MMA can be used for the subsequent polymerization at low temperatures. [illegible] is mentioned. There are 3 figures and 9 references: 7 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elemental-organic Compounds, AS USSR), Institut khimii AN KazSSR (Institute of Chemistry, AS Kazakhskaya SSR)

SUBMITTED: September 27, 1960

Card 4/5

GLADYSHEV, G.P.; RAFIKOV, S.R.

Synthesis of polymers. Part 3: Photooxidative activation of methyl methacrylate in the visible region of the spectrum. Vysokom.soed. 3 no.8:1187-1190 Ag '61. (MIRA 14:9)

1. Institut khimicheskikh nauk AN KazSSR i Institut elementoorganicheskikh soyedineniy AN SSSR.
(Methacrylic acid) (Radiation)

20324

53830 2209 1234, 1153 S/020/61/137/001/016/021
B101/B204

AUTHORS: Gladyshev, G. P. and Rafikov, S. R.

TITLE: Initiation of polymerization by means of electric charges formed on the interface

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 1, 1961, 113-115

TEXT: After giving a survey of published data concerning interface polymerization, the authors presume that here the potential drop of the interface might play an important part, which causes an orientation of the molecules. Proceeding from the Arrhenius equation for the reaction rate V: $V = A_1 \exp(-E_1/RT)$ (1), the following is written down for the reaction on the interface: $V = A_2 \exp(-E_2/RT)$ (2), where $A_2 > A_1$; $E_2 = E_1 - E_\varphi$; $E_\varphi = n23060(\varphi - Td\varphi/dT)$. The potential drop thus may increase the factor A, and decrease the activation energy. This assumption was checked by initiation of various polymerization processes on the interface at normal temperature and absence of the usual initiators and

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Initiation of polymerization...

S/020/61/137/001/016/021
B101/B204

catalysts, and the results were compared with control tests (polymerization in a homogeneous system with benzoyl peroxide). The following experiments are described: A 1 - 2 cm thick layer of acrylonitrile (AN) on glycerin, containing 1 - 2% water, after 10 to 12 hr, gave noticeable flakes of polymer at 20-22°C, whose molecular weight was found viscosimetrically to be equal to 100,000 - 200,000. The air oxygen inhibiting the radical polymerization of AN produced no effect upon this process. On the interface AN - H_2O, a noticeable polymerization rate was observed only in CO_2 atmosphere. Methylmethacrylate (MMA) formed a polymer film on the interface with water or mercury after 30-40 hr. On the interface MMA - paraffin or MMA - glycerin, polymerization occurred after 4-5 hr. This reaction is accelerated in a CO_2 atmosphere. As the admixture of some substances increases the potential drop on the interface, the effect of 0.01% CH_3COOH, $CH_2ClCOOH$, and HCl was tested. In the system AN - glycerin (with 1% H_2O), this addition at 20°C led to a polymerization of from 25-30% after 15-20 hr. In AN - H_2O (1:1) the additional acid in nitrogen

Initiation of polymerization... S/020/61/137/001/015/021
B101/B204

atmosphere after 100 hr gave 1.5% polymer with a molecular weight of 6,000,000. In the system AN - glycerin - acid, the polymerization rate was accelerated by water. Experiments, to electrify MMA by shaking (400-600 vibrations per minute), in the absence of all initiators led to an increase of viscosity and the forming of 5 - 10% polymer after 3 hr. The authors thus find their assumption concerning the effect of the potential drop on the interface to be confirmed. They assume that in this way also other non-saturated compounds may be polymerized. Although the data hitherto available permit no conclusion to be drawn as to the mechanism of the reaction, a radical mechanism is assumed to exist because of the reaction being inhibited by inhibitors. Mention is made of A. D. Abkin, V. A. Kargin, V. A. Kabanov, N. A. Plate, S. S. Medvedev, and N. N. Semenov. There are 14 references: 13 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut khimicheskikh nauk Akademii nauk KazSSR
(Institute of Chemical Sciences of the Academy of Sciences Kazakhskaya SSR)

PRESENTED: October 15, 1960, by N. N. Semenov, Academician

S/190/62/004/009/007/014
B101/B144

AUTHORS: Rafikov, S. R., Gladyshev, G. P.

TITLE: Study of polymer synthesis. VI. Polymerization of methyl methacrylate activated by photooxidation in the presence of sensitizers

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 9, 1962, 1345-1350

TEXT: The activation of methyl methacrylate (MMA) in the presence of diacetyl (I) or benzyl (II) by exposure to the light of the 4358 Å Hg line was studied, and also the polymerization of activated MMA in an Hg dilatometer. Results: (1) MMA becomes activated by irradiation in the presence of I or II in an argon atmosphere. In the presence of 0.18% of I, the molecular weight was 76,500 and the degree of polymerization 22.6% after a 4-hr irradiation at 20°C. In the presence of II, the values obtained under the same conditions were 331,000 and 1.54%, respectively. (2) Bulk polymerization of MMA is possible with I. After irradiation for 18 - 20 hrs, the degree of polymerization was 75 - 80%. The activation energy was 11.8 kcal. (3) When oxygen is bubbled through MMA in the

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presence of I or II, peroxide compounds are formed and the polymerization is accelerated. A polymerization of almost 100% was reached after 85 hrs at 40°C with a peroxide concentration of $5.1 \cdot 10^{-2}$ g-equ/l. The molecular weight of the polymer was 364,000 at $5.1 \cdot 10^{-2}$ g-equ/l and 1,030,000 at $1.3 \cdot 10^{-2}$ g-equ/l. Between 20 and 40°C it was independent of the temperature. (4) The linear function $v_o = f(\sqrt{c})$, where v_o is the initial polymerization rate, and c is the concentration of peroxide compounds, confirms the radical nature of the reaction. (5) The concentration of free radicals determined by diphenyl picryl hydrazyl was 10^{16} radicals per gram after 30 min in an argon atmosphere, and 10^{15} radicals per gram after 500 - 1000 min. (6) As the "gel effect" is diminished as compared with that during polymerization in the presence of benzoyl peroxide, large bulk polymer products can be got. There are 6 figures.

ASSOCIATION: Institut khimicheskikh nauk AN KazSSR (Institute of Chemical Sciences AS KazSSR)

SUBMITTED: May 24, 1961

S/190/62/004/009/008/014
B101/B144

AUTHORS: Gladyshev, G. P., Rafikov, S. R.

TITLE: Investigation into polymer synthesis. VII. Photooxidative activation of the polyacrylate ester oligomer by the visible spectral region

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 9, 1962, 1351-1353

TEXT: The oligomer of МДФ-2 (MDF-2) poly-(diethylene glycol)phthalate-dimethacrylate with the structure $H_2C=C(CH_3)-COOCH_2CH_2OCH_2CH_2O\left[OC-C_6H_4-COOCH_2CH_2OCH_2CH_2O\right]_2\cdot OC=C(CH_3)-CH_2$; n_D^{20} 1.5118 was irradiated with 4358 Å light in the presence of 0.084% by volume of diacetyl. Polymerization was then conducted in a dilatometer. Results: (1) Photopolymerization of MDF-2 activated in an inert atmosphere is very rapid. The apparent activation energy is 11.4 kcal. (2) When air is bubbled through the oligomer during irradiation peroxide compounds accumulate which initiate the polymerization after O_2 has been removed.

Card 1/2

L 10625-63 EPR/EPF(c)/EWP(j)/EWT(m)/BDS--ASD--Ps-4/Pr-4/Pc-4--RM/WW

ACCESSION NR: AP3000696 S/0190/63/005/005/0700/0702

AUTHOR: Glady*shev, G. P.; Rafikov, S. R.

TITLE: Investigations in the field of polymer synthesis. VIII. Methyl methacrylate polymerization in the presence of 2,3-butanedione under the influence of visible light

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 5, 1963, 700-702

TOPIC TAGS: photopolymerization, initiator, kinetics, methyl methacrylate

ABSTRACT: The photopolymerization kinetics of methyl methacrylate (MM) in the presence of 1,3-butanedione as initiator has been studied. Light of $\lambda = 436$ mμ and intensity 0.13×10^{17} quantum/min cm^2 from a mercury arc lamp was used. The reaction was conducted at 30, 0, and -50C in the presence of 0.03 to 0.01% of the dione in the absence of oxygen to a degree of conversion of 2 to 3%. The reaction rate (v) was determined dilatometrically. The mean free radical lifetime (τ) was determined by the rotating sector method to be 2.5 sec. From τ, v, and the MM concentration the k_p/k_t ratio, where k_p and k_t are rate constants of propagation and termination, respectively, was calculated to be 14×10^{-6} at 30C, 6.5×10^{-6} at 0C, and 1.3×10^{-6} at -50C. The value of $E_p - E_t$, where E_p and E_t are the

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appropriate activation energies, was calculated to be 4.3 kcal/mol in the 0 to 30C range. Determination of the intrinsic viscosity of the polymer in benzene indicated that, in agreement with Semenov's (N. N. Semenov, Khimiya i tekhnologiya polimerov, No. 7-8, 196, 1960) collective interaction concept, the mol. wt. of the polymer prepared at -50C exceeds that of the polymer synthesized at 0 or 30C. Orig. art. has: 3 formulas and 2 figures.

ASSOCIATION: Institut khimicheskikh nauk AN Kaz SSR (Institute of Chemical Sciences, AN Kaz SSR); Institut elementoorganicheskikh soyedeneniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 28Oct61 DATE ACQ: 17Jun63

SUB CODE: CH NO REF SOV: 005 ENCL: 00

OTHER: 001

L 10513-63 EPF(c)/EWP(j)/EWT(m)/BDS--ASD--Pc-4/Pr-4--RM/WW
ACCESSION NR: AP3000697 S/0190/63/005/005/0703/0705

AUTHOR: Rafikov, S. R.; Sechkovskaya, V. A.; Glady*shev, G. P. 67 64

TITLE: Investigation in the field of polymer synthesis. IX. Polymerization of acrylonitrile under the influence of the visible region of the spectrum in the presence of chlorine

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 5, no. 5, 1963, 703-705

TOPIC TAGS: photopolymerization, acrylonitrile, polyacrylonitrile, chlorine, initiator, wet spinning

ABSTRACT: Photopolymerization of acrylonitrile (AN) in the presence of chlorine as the initiator has been studied. The polymerization was carried out in a dimethylformamide (DMF) solution irradiated with the visible region of the spectrum from a mercury arc lamp. The intensity of the 436-m μ line was 0.4×10^{-17} quantum/min x cm^2. Prior to the addition of chlorine, argon was blown through the mixture. The reaction was also carried out in a $ZnCl_2$ or $CaCl_2$ aqueous solution. It was found that the polyacrylonitrile (PAN) yield increased linearly with AN concentration in DMF. The effect of irradiation time

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L 10513-63
ACCESSION NR: AP3000697

[Cl_2], and reaction temperature on PAN yield was studied in 10% AN solutions in DMF. It was found that with a proper selection of [Cl_2] and irradiation time considerable yields could be obtained. Thus, with 2.2 mol % Cl_2 on AN and ~ 7-hr irradiation, the yield was ~ 33% at 20C. The optimum conditions with regard to yield were 50C and 3 mol % Cl_2. PAN with the highest mol. wt. was also obtained at 50C. Solution polymerization can yield polymer solutions suitable for wet spinning. Orig. art. has: 1 figure and 4 formulas.

ASSOCIATION: Institut khimicheskikh nauk AN KazSSR (Institute of Chemical Sciences, AN KazakhSSR); Institut elementoorganicheskikh soyedeneniy AN SSSR; (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 28Oct61 DATE ACQ: 17Jun63 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 001

ls/
Card 2/2

L 17613-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 ASD(m)-3/AFETR MLK/RM
ACCESSION NR AM4046720 BOOK EXPLOITATION 8/

Glady'shev, Georgiy Pavlovich

Polymerization of vinyl monomers (Polimerizatsiya vnil'ny'kh monomerov).
Alma-Ata, Izd-vo AN KazSSR, 1964, 321 p. illus., biblio. Errata slip
inserted. 1,200 copies printed. (At head of title: Akademiya nauk
Kazakhskoy SSR. Institut khimicheskikh nauk).

TOPIC TAGS: vinyl monomer, polymerization

PURPOSE AND COVERAGE: This book cites the theory of radical and ion polymerization. The theory of copolymerization and the effect of structure on the reaction potential of monomers and radicals are examined. Some attention is given to stereospecific polymerization. In contrast to existing monographs

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L 17613-65
ACCESSION NR AM4046720

educational institutions, graduate and advanced students in the appropriate specialties. It can also be useful to polymerization researchers.

TABLE OF CONTENTS [abridged]:

SUB CODE: MT SUBMITTED: 24Mar64 NR REF SOV: 139

OTHER: 222

Card 2/2

GLADYSHEV, G.P.; KAFIKOV, S.R.

Mass polymerization of vinyl monomers at high degrees of conversion. Trudy Inst. khim. nauk AN Kazakh. SSR 11:5-15 '61. (MIRA 17:11)

RAFIKOV, S.R.; SOSHKOVSKAYA, V.A.; GLADYSHEV, G.P.

Photopolymerization of acrylonitrile in solutions of zinc chloride and calcium chloride. Trudy Inst. khim. nauk AN Kazakh. SSR 11:16-18 '64. (MIRA 17:11)

GLADYSHEV, G.P.

Nonsteady kinetics of styrene polymerization in the presence of diacetyl under the effect of visible light. Trudy Inst. khim. nauk AN Kazakh. SSR 11:25-29 '64. (MIRA 17:11)

KHAZANOVA, N.F.; CHURBAKOVA, N.V.; GLAZYRIN, G.I.

Polymerization of methyl methacrylate in the presence of dimethyl peroxydicarbonate. Trudy inst. khim. nauk AN Kazakh. SSR 11:30-35 '64. (MIRA 17:11)

GLADYSHEV, G.P.; MONAKHOV, V.P.; SAPCHENKOV, I.Ya.

Thermometric control of the "activity" of methyl methacrylate.
Trudy Inst. khim. nauk AN Kazakh. SSR 11:156-160 '64. (MIRA 17:11)

GLADCHEV, A.F.

(MIRA 18:5)

L 1158-66 EWT(d)/EWT(1)/EPF(c)/EEC(k)-2/T/ETC(m)/EPF(n)-2 IJP(c) WW

ACCESSION NR: AP5021892 UR/0020/65/163/006/1423/1425

AUTHORS: Gladyshev, G. P.; Khasanova, N. F.

TITLE: On the peculiarities of low-temperature photopolymerization of styrene

SOURCE: AN SSSR. Doklady, v. 163, no. 6, 1965, 1423-1425

TOPIC TAGS: polymerization, polymer, styrene, polystyrene, photopolymerization, diacetyl

ABSTRACT: The investigation was undertaken to show that the anomalous behavior of styrene during low-temperature sensitized photopolymerization, previously reported by G. P. Gladyshev (DAN, 163, 5, 1965), is also observed in the absence of sensitizer. The photopolymerization was carried out by irradiation with UV light $\lambda = 365$ mμ. Quinone was used as inhibiting agent. The experimental results are shown graphically in Fig. 1 on the Enclosure. The activation energy for photopolymerization of styrene in presence of diacetyl was determined, and its results are also shown graphically. In addition, the activation energy for viscous flow of styrene as a function of sensitizer concentration was determined. From the experimental results it is concluded that the apparent deviation from Arrhenius' law results from the change in the initiation and termination rates

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L 1158-66

ACCESSION NR: AP5021892

with a change in temperature. "The authors thank S. S. Medvedev, Academician of the AN KazSSR S. R. Rafikov, and Professor N. S. Yenikolopyan for their valuable discussions and advice." Orig. art. has: 4 graphs.

ASSOCIATION: Institut khimicheskikh nauk, Akademii nauk KazSSR (Institute for Chemical Science, Academy of Sciences KazSSR)

SUBMITTED: 10Feb65 ENCL: 01 SUB CODE: OC,GC

NO REF SOV: 002 OTHER: 002

Card 2/3

L 1158-66
ACCESSION NR: AP5021892

ENCLOSURE: 01

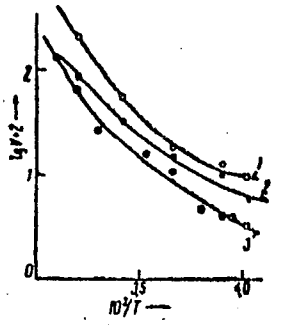

Fig. 1.
Dependence of the log V (%/hour) on 1/T for photopolymerization of styrene.
1- data G. P. Gladyshev, (DAN, 163, 5, 1965); 2- data for sensitized polymerization for 5% conversion of monomer to polymer. 3- initial polymerization rate under the influence of λ = 365 mμ light

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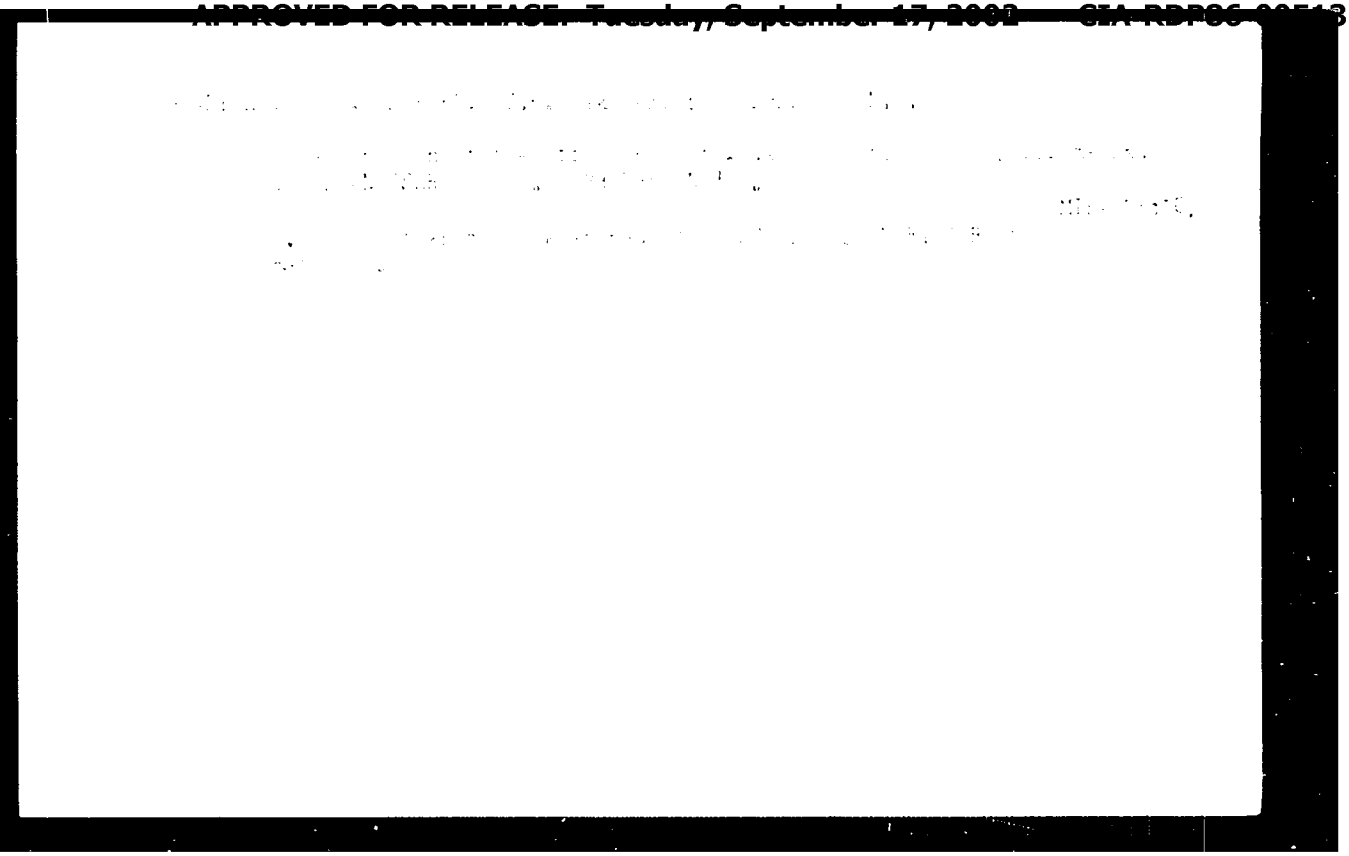


ACC NR: AP6014704 (A) SOURCE CODE: UR/0300/65/000/004/0064/0072

AUTHOR: Khasanova, N. F.; Skakun, A. I.; Gladyshev, G. P.

ORG: none

TITLE: Kinetics of photopolymerization of styrene at low temperature

SOURCE: AN KazSSR. Izvestiya. Seriya khimicheskikh nauk, no. 4, 1965, 64-72

TOPIC TAGS: styrene, polymerization kinetics, low temperature phenomenon, quinone, chemical reaction kinetics, photopolymerization

ABSTRACT: Purified and vacuum distilled styrene (b.p. 38C at 25 mm Hg) was photopolymerized with diacetyl (b.p. 84C at 700 mm Hg) in the range of +40 to -25C. Rate of initiation was controlled by a quinone retardant. A mercury lamp served as the light source. The results are plotted graphically and indicate significant deviations from the Arrhenius equation. Activation energy calculated from initial reaction rate values decreased from 12.5 kcal/mol at 30C to 3.8 kcal/mol at -25C. Molecular weights were derived from the synthesized polymers. Their decrease in the low temperature range proved abnormally severe. Activation energy of the initiation reaction was calculated for the entire temperature range and varied from 8.0 to

40100-66

ACC NR: AP6014704

-8.0 kcal/mol. The energy of activation for a viscous flow of styrene and solutions of the synthesized polymers proved to be a variable magnitude. Orig. art. has: 11 figures.

SUB CODE: 07/ SUBM DATE: 19May65/ ORIG REF: 008/ OTH REF: 003

Card 2/2

L 20341-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACCESSION NR: AP5021286 UR/0020/65/163/005/1191/1193

AUTHOR: Gladyshev, G. P.

TITLE: On the theory of radical polymerization

SOURCE: AN SSSR, Doklady, v. 163, no. 5, 1965, 1191-1193

TOPIC TAGS: radical polymerization, polymer, photopolymerization, methylmethacrylate, styrene

ABSTRACT: The object of the investigation was to test the applicability of the theory of "collective interaction" proposed by N. N. Semenov (Khimiya i tekhnologiya polimerov, No. 7-8, 196, 1960) to the photopolymerization of methylmethacrylate and styrene in the presence of diacetyl. The experimental results are shown in Fig. 1 on the Enclosure. It is concluded that the theory of collective interaction (TCI) is not applicable to the polymerization investigated. The deviations from Arrhenius' Law were found to be due to changes in the viscosity and optical absorption coefficient of the polymer with temperature. The author is grateful to Academicians S. S. Medvedev and S. R. Rafikov, Professor N. S. Yenikolopyan, and G. V. Korolev for valuable discussions and to N. F. Khasanova, N. V. Churbakova, and A. I. Skakun for performing several experiments.

Card 1/3

L 20341-66

ACCESSION NR: AP5021286

Orig. art. has: 3 graphs, and 2 equations.

ASSOCIATION: Institut khimicheskikh nauk, Akademii nauk KazSSR (Institute for Chemical Science, Academy of Sciences, KazSSR)

SUBMITTED: 10Feb65 ENCL: 01 SUB CODE: GC, OC

NO REF SOV: 007 OTHER: 003

Card 2/3 ULR

L 20341-66
ACCESSION NR: AP5021286

ENCLOSURE: 01

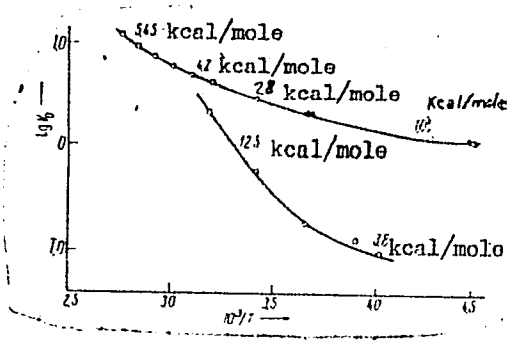
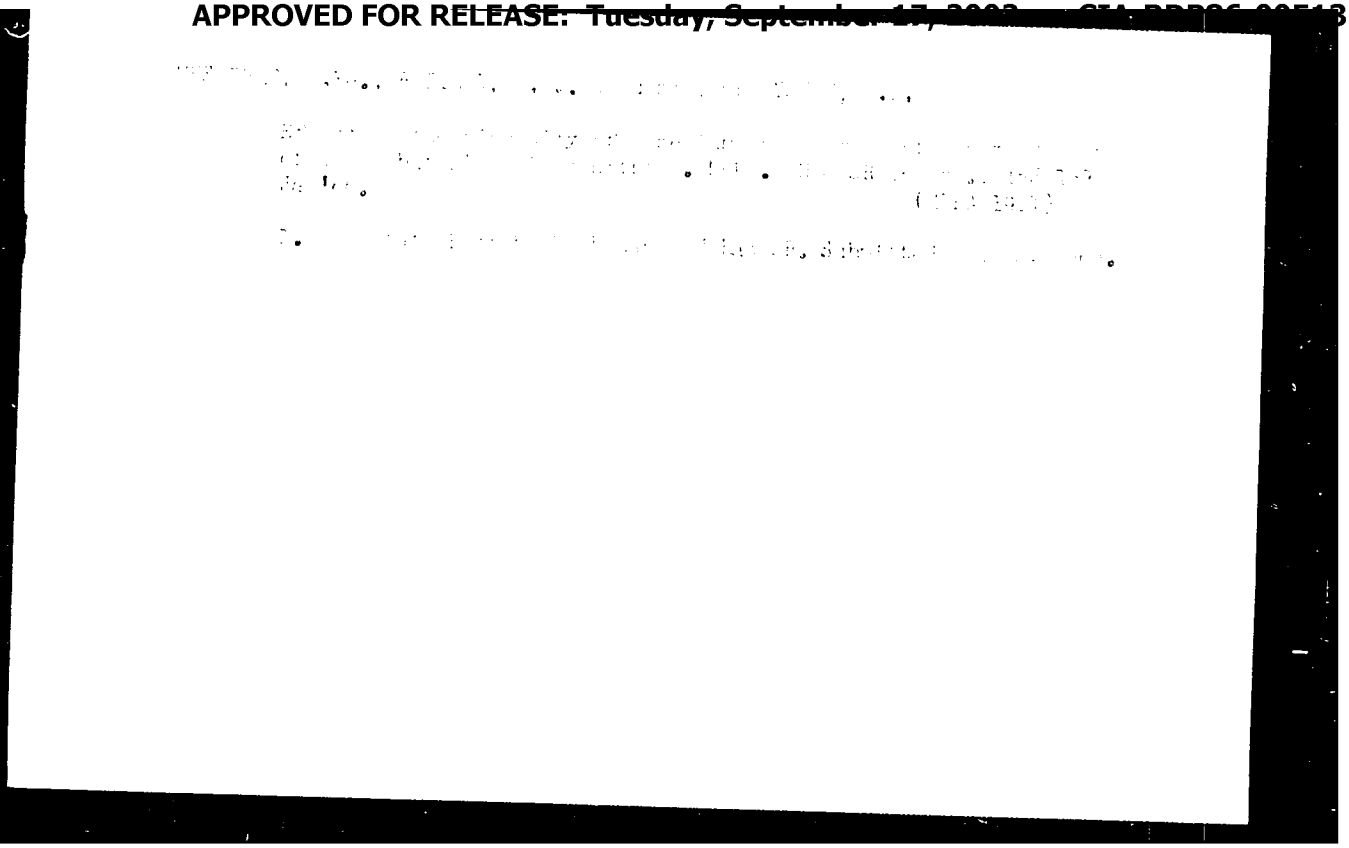


Fig. 1.
Dependence of log V_o on 1/T for photopolymerization of methylmethacrylate (upper curve) and styrene. Sensitizer—diacetyl, V - conversion in percent per hour

Card 3/3 U.R.



AGUSHEV, V.A., inzh.-konstruktor; GLADYSHEV, I.R., inzh.-konstruktor

New heavy-duty conveyers with flexible rollers for open-pit coal mining. Ugol' 34 no.4:30-32 Ap '59. (MIRA 12:7)

1. Spetsial'noye konstruktorskoye byuro Artemovskogo mashinostroitel'nogo zavoda.
(Conveying machinery) (Strip mining)

AGUSHEV, V.N., inzh.; GLAZYSHEV, I.R., inzh.

New designs for the central [illegible] of belt conveyors. Ugol' 35 no.3:5-7 Mr '60. (MIRA 13:6)

1. Artemovskaya mashinostroitel'naya zavod. (Conveying machinery)

AGUS[illegible], V.A., inzh.; GLADYSHEV, I.., inzh.

[illegible]. Ugol' 36 no.2:31-34 F '61. (MIRA 14:2)

[illegible] chinostroitel'nyy zavod.
(Coal [illegible] machinery)

AGUSHEV, V. A.; GLADYSHEV, I. R.

New designs for belt conveyors. Ugol' 38 no.4:44-45 Ap '63.
(MIRA 16:4)

1. Artemovskiy mashinostroitel'nyy zavod.

(Conveying machinery)

BUKHALO S.M., doktor ekon. nauk, prof.; VOLOBOY, P.V., kand. ekon. nauk, KUCHUKALO, I.A.[Kuhukalo, I.A.], kand. ekon. nauk; PALAMARCHUK, M.M., doktor ekon. nauk, prof.; SLYUSAR, V.D., kand. ekon. nauk, GLADYSHEV, I.S.[Hladyshev, I.S.], st. inzh.-ekonomist; TSYASHCHENKO, P.S., kand. ekon. nauk; PETRUNEVICH, E.G. [Petrunevych, IE.H.], st. inzh.-ekonomist; GRADOV, G.L.[Hradov, H.L.], kand. ekon. nauk; KHAZANET, S.M., red.

[The economic regions of the Ukrainian S.S.R.; a manual] Ekonomichni raiony URSR; dovidnyk. Kyiv, Naukova dumka, 1965. 190 p. (MIRA 18:5)

1. Sovet po izucheniyu produktivnykh sil Ukrainskoy RSR Gosudarstvennogo planovogo komiteta Ukr. RSR(for all except Khazanet).

BUKREYEV, V.I., inzh.; VASIL'YEV, O.F., doktor tekhn.nauk; GLADYSHEV, M.T.

Graphoanalytic calculation of pressure in a hydraulic system with an accumulator supply. Vest.mashinostr. 42 no.8:30-33 Ag '62. (MIRA 15:8)

(Hydraulic machinery)

GLADYSHEV, M.T., inzh.

Spreading of breaks in open beds. Izv. vys. ucheb. zav.; energ. 8 no.11:70-77 N '65. (MIRA 18:11)

1. Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR.

GLADYSHEV, N.G.; GYKS, G.N.; DRUZHININ, V.P.; FEICHUK, Ye.V.; GORLOV, S.M.

Mechanism of the formation of internal hot cracks in a continuous rectangular ingot. Izv. vys. ucheb. zav.; chern. met. 8 no.5:40-44 '65. (MIRA 18:5)

1. Novotul'skiy metallurgicheskiy zavod.

AL'TMAN, A.B.; GLADYSHEV, P.A.

Effect of zirconium and nitrogen on magnetic properties of permanent iron-nickel-aluminum magnets. Inzh.-fiz. zhur. no. 6:110-111 Je '58. (MIRA 11:7)

(Magnets)

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SOV/160-59-4-17/48

AUTHORS: Gladyshev, P.A. and Memelov, V.L. (Moscow)

TITLE: Production and Properties of Cermet Iron-Nickel-Aluminium Magnets

PERIODICAL: Izvestiya Akademii nauk SSSR Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959 Nr 4, pp 106-110 (USSR)

ABSTRACT: The authors survey briefly the advantages and disadvantages of powder metallurgy relative to casting for making iron nickel-aluminium magnets. They give a brief account of the mixing of the powder components, their properties, pressing and sintering (including the use of various protective atmospheres) and the heat treatment of the magnets. Fig 1 shows microstructures of alnico-alloy cermet and cast magnets, the greater porosity of the former being evident. Electron-microscopic and X ray investigations were carried out with the participation of F.B.Nikishova and A.A.Katsnel'son. The electron microscopic work showed the similarity of cermet and cast magnet structures and the effect of 2 hours tempering at 850°C on the grain size of the precipitating phase (Fig 2 shows structures before and after the tempering). No difficulties in preparing oxide replicas of the surfaces were encountered. X-ray analysis

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(with powder having particle diameters under 0.15 mm) showed that the cermet and cast magnets have the same compositions and lattice parameters. Fig 3 gives powder diagrams for the two types and for a mixture of the initial powders. Increasing titanium content to 1% in the cermet magnet caused an increase in the lattice constants; with 5% Ti, lines of two cubic body-centred phases appear. Similar changes were observed on specimens after thermo-magnetic treatment but the diffuse nature of the lines prevented exact determination of the changes. Tests at NIIEP showed that cermet magnets are as stable as cast ones. Fig 4 gives demagnetization and magnetic-energy curves for various cermet-alloy magnets; compared with cast magnets their coercive force is equal and their residual magnetic-energy induction is 10 to 20% less. The authors state that supply of cermet magnets is not keeping pace with demand and suggest that they are best used on the mass-production scale in electrical instruments and small machines and also in the construction of new instruments; cermet magnets are particularly advantageous for small magnets of complicated shape. Their comparative

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high-strength enables them to be used for rotors with speeds of revolution up to 15000 to 20000 rpm. There are 5 figures, 1 table and 8 references, 5 of which are Soviet, 2 English and 1 German.

SUBMITTED: April 1, 1959

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24,2200 (1137,1147,1158)

AUTHORS: Al'tman, A.B., Candidate of Technical Sciences, Gladyshev, P.A., Engineer and Lasis, G.I., Engineer

TITLE: The Magnetic Properties of Powder Type Permanent Magnets

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.2, pp.32-41

TEXT: Modern powder permanent magnets are classified into four groups. The first group includes metallo-ceramic metallic alloys which fundamentally have a structure typical of cast alloys but are sometimes of high porosity and small grain size. The second group of magnets, metallo-plastic, are pressed from powder of magnetically-hard material mixed with resin. The magnets consist of fine magnetically-hard particles bound together by the resin. The third group, of fine-powder magnets, are made up from pressed ferro-magnetic high-coercivity powders whose particle size approximates to the domain size. In structure they are conglomerates of high-coercivity particles separated by non-magnetic layers and inclusions. The fourth group of oxide magnets includes magnets of ceramic alloys which are pressed and sintered from powders of metal oxides. The main manufacturing processes of the different

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kinds of magnets are briefly described. Magnetically-hard metallic alloys based on the system Fe-Ni-Al contain from 5 to 15% Al, from 10 to 35% Ni and from 30 to 65% Fe, with admixtures of cobalt, copper, titanium zirconium and silicon. They are hard and brittle. Alloys of Cu-Ni-Fe are easily worked by pressure and cutting at all stages of manufacture. The alloy commonly used for permanent magnet manufacture contains 60% Cu, 20% Ni and 20% Fe. The magnetic properties of the alloy may be improved by dispersion hardening and by producing crystalline and stress textures. These magnets have anisotropic properties, which are greatest in the direction of strain during treatment under pressure. Two magnetically-hard alloys of Cu-Ni-Co are commonly used: one with 48% Cu, 23% Ni, 29% Co and the second with 53% Cu, 24% Ni and 41% Co. The good magnetically-hard properties of cobalt-platinum alloy (77% Pt, 23% Co) are apparently due to the formation in a weakly-magnetic background of single-domain ferro-magnetic particles of CoPt. The alloy of Ag-Mn-Al (86.6% Ag, 8.0% Mn 4.4% Al) is a dispersion-hardening alloy. Metallo-ceramic magnets may be pressed in the final shape or cut from rod

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material; rolling improves the properties of the magnet. Metallo-ceramic alloy of Ag-Mn-Al is sintered in hydrogen or vacuum and then hardened and tempered. The material is rolled after hardening. Dispersion-hardening metallo-ceramic magnets of Fe-Co-Mo (12% Co, 17% Mo, 71% Fe) have also been used. The metallo-plastic method of manufacture is usually used for permanent magnets of powder alloys of Fe-Ni-Al. Investigations have been made on metallo-plastic magnets based on barium ferrite. They are of accurate dimensions and have few surface or internal defects. The manufacture of magnets from fine powders is based on the marked increase in coercive force of ferro-magnetics when pulverized down to single-domain size. Fine-powder magnets have been made of iron and iron-cobalt (particle size about 0 3 microns) and manganese bismuthide (of 8 microns). The method of making the latter type is briefly described. The oxide group includes magnets based on cobalt ($Co-O.Fe_2O_3$) and barium ($BaO.6Fe_2O_3$) ferrites. These magnets are of great coercive force low remanent induction, low density and high specific electrical resistance. Ferrite magnets have their best properties when in

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the anisotropic condition Samples used to study the magnetic properties were in the shape of rectangular parallelopipeds The magnetic measurements were made by the ballistic method in a closed circuit with electromagnets of field strength up to 15000 oersteds some details of the instrumentation are given. Curves were determined of magnetization, de-magnetization and magnetic energy. The magnetic properties of permanent magnets depends on their chemical analysis, structure, conditions of treatment, geometry and other factors. Metallo-ceramic magnets have similar magnetic properties to cast magnets of similar chemical composition. Any difference is usually due to the porosity of the metallo-ceramic magnets The influence of porosity is briefly discussed. Despite the disadvantages of pores it is quite possible to make metallo-ceramic magnets which are of as good properties as cast magnets The magnetic characteristics of metallo-plastic magnets depend mainly on the properties of the initial magnetically-hard material, the size of the magnetically-hard particles, the concentration of resin and the density of the product. Because of the high content (25 to 35% by volume) of non-ferro-magnetic additions, metallo-plastic magnets are not so good as cast or oxide

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magnets in respect of induction and energy. The coercive force of metallo-plastic iron-nickel-aluminium magnets is also somewhat less than that of cast magnets. The properties of fine-powder magnets depend upon the analysis, size, shape and density of packing of the particles. In the case of anisotropic magnets, an important part is played by the uniformity of orientation of the particles. Magnets of magnesium-bismuth powder have similar magnetic properties at 20°C to magnets of cobalt platinum. However, if manganese-bismuth magnets are cooled below room temperature, their properties rapidly fall off and they must be remagnetized when the temperature is restored. The properties of oxide magnets of barium ferrite depend very much on the grain size and density of the materials. The optimum grain size is about 1 micron; the theoretical density of barium ferrite is 5.3 g/cm^3. The article then gives the results of investigations on the stability of metallo-ceramic magnets of alloys based, firstly, on the system Fe-Ni-Al, secondly, Cu-Ni-Co and Co-Pt-Mn-Bi and thirdly, barium ferrite. Metallo-ceramic specimens of alni, alnico and magnico aged by 5% displayed no drop in magnetic flux after 550 days. The magnetic flux of unaged magnets of alni

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diminished by about 1% in 3 days and no further change was observed. In unaged magnets of alnico the flux was stabilized in 9 days after dropping 2.5%. In magnets of magnico the influence of porosity was studied and the magnets were compared with cast magnets of magnico without pores. Porosity diminishes the stability: in unaged magnets with porosities of 7 and 15%, the drop in magnetic flux in 550 days is about 1.5 and 3% respectively, the corresponding value for cast magnets being about 1%. Increasing the coercive force improves the stability of the magnets. Reduction of the remanent magnetic flux of metallo-ceramic magnets of magnico (unaged) with a coercive force of 550 oersteds was about 1.5%, and with a coercive force of 400 to 420 oersteds about 4%. The magnetic flux of unaged magnets of Cu-Ni-Co fell by 2% in 520 days and that of magnets of Co-Pt by about 1% in 490 days. The relationship between the magnetic characteristics of unaged metallo-ceramic magnets of alni, alnico and magnico and temperature was determined over the range -70 to +200 C. On heating above 20°C, the properties of the magnets usually deteriorate except in the case of magnico, where there is some increase in the coercive force up to 100°C. When magnets of Co-Pt o/7

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alni are cooled from +20 to -70°C, there is a small improvement of some 5 or 7% in the properties. On cooling magnets of alloys containing cobalt, the magnetic properties changed irregularly, the remanent induction increased by about 5%, while the coercive force and magnetic energy fell by 5 to 17%. In the case of barium ferrite isotropic magnets, there was a marked reduction in the remanant induction and coercive force of magnets of Mn-Bi on cooling below 20°C. It was found that the magnetic flux of metallo-ceramic magnets of Fe-Ni-Al did not change by more than 1% after vibration at 80 c/s, 6 g for two hours, or on impact (1000 g). There are 7 figures, 4 tables and 6 references: 5 Soviet and 1 German.

SUBMITTED: June 6, 1960

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S/137/62/000/001/041/237
A060/A101

AUTHOR: Gladyshev, P. A.

TITLE: Second International Conference on Powder Metallurgy, Eisenach, June 1961

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 35, abstract 1G255 ("Vestn. elektroprom-sti", 1961, no. 9, 79 - 80)

TEXT: In June 1961, in Eisenach (GDR) there was held the Second International Conference on Powder Metallurgy (on problems of the theory and practice of powder metallurgy, and also on plans for its further development), organized by the Society for Mining Metallurgy of the German Democratic Republic. The work of the conference was carried out in five sections: 1) theoretical, relating mainly to sintering processes; 2) materials for reactors; 3) electrotechnical materials; 4) refractory and hard alloys; 5) multi-purpose machine construction materials. A total of 60 lectures were delivered, 3 of them by delegates from the Soviet Union.

Z. Shubina

[Abstracter's note: Complete translation]

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-ESD(t)/RAEM(c)/BSD/AFWL/ASD(a)-5/ASD(m)-3/AS(mp)-2 JD/HW
ACCESSION NR: AR5000768 S/0058/64/000/010/A024/A024

SOURCE: Ref. zh. Fizika, Abs. 10A249

AUTHORS: Al'tman, A. B.; Gladyshev, P. A.; Mileshin, Yu. V.; Sorokina, V. N.

TITLE: Structure and properties of metal-ceramic and permanent magnets made of alloys based on the iron-nickel-aluminum system

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 16, 1963, 213-227

TOPIC TAGS: permanent magnet, iron alloy, metal ceramic material, magnetic field

TRANSLATION: Results of an investigation of macroscopic, microscopic, and electron-microscopic structure, phase composition, and magnetic and mechanical properties of some Fe-Ni-Al metal-ceramic alloys are discussed. The structure and the properties of the metal-ceramic and cast alloys are compared. The authors note that metal-ceramic magnets, especially those which are pre-aged, have a stability that is fully

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satisfactory for practical application. The magnetic characteristics of the metal-ceramic magnets heated above 20C are as a rule worse. The flux of aged magnets cyclically exposed to temperature remains constant. Under vibration and impact, the change in the magnetic flux of non-aged magnets made of alni, alnico, and magnico, did not exceed 1%. Owing to the fine grain structure of the metal-ceramic magnets, they are much superior in mechanical strength to cast magnets.

SUB CODE: MM, EM

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ACCESSION NR: AR5015188

dependence of magnetic properties (H_c, B_r), mechanical properties and density on the chemical composition (nickel, aluminum, cobalt, copper, titanium, and

ACCESSION NR: AP4029209 S/0226/64/000/002/0074/0079

AUTHOR: Al'tman, A. B.; Glady*shez, P. A.; Rastanayev, I. D.

TITLE: Investigation of magneto-soft metal powder alloys Fe-Al, Fe-Si, and Fe-Si--Al

SOURCE: Poroshkovaya metallurgiya, no. 2, 1964, 74-79

TOPIC TAGS: iron based alloy, aluminum containing alloy, silicon containing alloy, powder metal alloy, magneto-soft alloy

ABSTRACT: Magneto-soft metal powder materials are presently used on d-c installations and utilize whole-pressed metal powder magnetic circuits made from iron and iron alloys with silicon. The use of such magnetic circuits in a-c installations is difficult because of significant specific loss. The authors found that metal powder technology has evolved to the point that whole-pressed magnetic circuits can be prepared and used in a-c installations of 50 cps. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: VNIIElektromekhaniki

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Pf-4/Pz-4/Pad LUP(c) WW/JD/BB UR/0137/65/000/005/C033/0033

ACCESSION NR: AR5015159

SOURCE: Ref. zh. Metallurgiya, Abs. 5G195

AUTHOR: Al'tman, A. B.; Gladyshev, P. A.

TITLE: Investigation of vacuum sintering of magnetic hard alloys of the

did not exert a noticeable effect on the properties of the sintered alloys. Sintering in a vacuum permits obtaining a higher density of the samples of Magnico