

L 28040-66

ACC NR: AP5027003

2

slits of two diaphragms. The device was shown in a photo and its action was explained. A MF-4 microphotometer was used for determining the density distribution recorded by the film. Then, the experimental data were analyzed and the results calculated. An example of the beam density distribution in a transverse phase space was mapped out in a diagram. The results obtained under different conditions and at the currents varying from 350 to 480 ma were summarized in a table. The current characteristics were plotted for four- and two-dimensional phase spaces and for seven various operating conditions. The analysis of curves showed that, in accordance with Liouville's Theorem, the focussing voltage produced no effect upon the phase space. The dependence of the current on the two-dimensional phase space was more expressive. The highest current density obtained at 400 ma was equal to 120 ma/cmmrad. The thanks were expressed to I. M. Kapchinsky and V. A. Batalin for the discussion of the results obtained in the experiments. Orig. art. has: 5 figures and 9 formulas.

SUB CODE: 18 / SUBM DATE: 11Aug64 / ORIG REF: 002 / OTH REF: 004

Card 2/2 CC

L 01242-67 EWT(1) AT/GD

ACC NR: AT6031241

SOURCE CODE: UR/0000/66/000/000/0001/0014

AUTHOR: Sivkov, Yu. P.

ORG: none

TITLE: Characteristics of ^{2/}ion beam focusing by stationary linear fields

43
42
B+1

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Doklady, 1966. Nekotoryye osobennosti fokusirovki ionnykh puchkov lineynymi statsionarnymi polyami, 1-14

TOPIC TAGS: ion beam, ion beam focusing, stationary linear field, phase space, phase space transformation, simplex transformation, simplex coordinate transformation, invariant, invariant system, integral invariant, four dimension ellipsoid

ABSTRACT: Focusing of ion beams by time-independent fields is regarded as a transformation of four-dimensional phase spaces containing representative particle points. A system of invariants has been erected which is the consequence of integral invariants in dynamic equations connecting the coefficients of four-dimensional ellipsoids in the phase space associated with linear simplex transformation of

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L 01242-67

ACC NR: AT6031241

coordinates. In particular, a set of ellipsoids has been subdivided into classes within whose limits a simplex transformation of one ellipsoid into another is possible. The author is greatly indebted to Prof. D. S. Gorshkov for his valuable advice and contributions to the study. Orig. art. has: 29 formulas. [SP]

SUB CODE: 12, 20/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 003/

hs

Card 2/2

177-07 EWL(1)/EWT(2) LJP(2) AF

ACC NR: AT6031752

SOURCE CODE: UR/3092/66/000/004/0003/0022

AUTHOR: Ivanov, N. F.; Sivkov, Yu. P.; Solnyshkov, A. I.

ORG: none

TITLE: Characteristics of the ion beam produced by the injector of a linear accelerator

48
44
B+1

SOURCE: ¹⁹ Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura, no. 4, 1966, 3-22

TOPIC TAGS: ion beam, linear accelerator, plasmatron, preinjector

ABSTRACT: The structure of a ²beam of ions with an energy of 500-700 keV obtained at the output of the proton-synchrocyclotron preinjector was investigated. The beam is designed for injection into a linear accelerator and for this reason the density distribution of ions over the phase space is the most important characteristic of the beam. Essentially, it determines the value of the current which can be captured by the linear accelerator. The transverse phase volume and the magnitude of the current were determined at a distance of approximately 1 meter from the output end of the focusing arrangement used in the linear accelerator. A proton source of the duoplasmatron type and the injector optics make it possible to obtain the crossover of the beam at this point when the maximum current is 500 ma, thereby providing for the op-

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ACC NR: AT6031752

SOURCE CODE: UR/3092/66/000/004/0023/0029

AUTHOR: Sivkov, Yu. P.

ORG: None

TITLE: Particle grouping upon injection into a circular accelerator in the constant frequency condition

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura, no. 4, 1966, 23-29

TOPIC TAGS: circular accelerator, proton accelerator, GEV accelerator, particle accelerator, particle distribution

ABSTRACT: A grouping variation in which particles are injected into the separatrix right from the beginning of injection, but the shape of which changes in accordance with change in accelerator operating condition is reviewed. Characteristics of phase motion when $f = \text{constant}$ and the grouping when $f = \text{constant}$ are analyzed. The parameters characterizing the grouping for the condition $f = \text{constant}$ for the proton accelerator ITEP at 7 GeV are cited by way of an example. Orig. art. has: 16 formulas and 4 figures.

SUB CODE: 20/SUBM DATE: None/ORIG REF: 001/OTH REF: 003

Card 1/1

KUDRIN, L.N.; SIVKOVA, A.S.; MARTYNOVA, S.S.

Fluorine, phosphorus, and trace element concentration in bone
remains of fossil fishes and dolphins. Dokl. AN SSSR 142
no.4:930-932 F '62. (MIRA 15:2)

1. L'vovskiy gosudarstvennyy universitet im. I.Franko.
Predstavleno akademikom N.M.Strakhovym.
(Geochemistry)
(Bones, Fossil)

KUDRIN, L.N.; SIVKOVA, A.S.; MARTYNOVA, S.S.

Chemistry, composition, and minor elements of mollusk shells.
Min. sbor. no.15:362-367 '61. (MIRA 15:6)

1. Gosudarstvennyy universitet imeni Ivana Franko, L'vov.
(Shells)

SKULACHEV, V.P.; Primali uchastiye: BRAYNES, A.S.; DZHUNEDA, Kh.;
SIVKOVA, B.G.

ATP and ADP as possible hydrogen carriers in the respiratory
chain. Vop. med. khim. 9 no.1:99-102 Ja-F '63.

(MIRA 17:6)

1. Kafedra biokhimii zhivotnykh Moskovskogo gosudarstvennogo
universiteta imeni M.V. Lomonosova, Moskva.

СЕРИЯ, N. N.

Experience in the use of the VAB-6 bottling apparatus. Form. 1 spirit.
prod. 11.01.1965. (MIRA 18:9)

1. Buzkiy lian-vodochinyy zavod.

SAVEL'YEVA, L.A., kand.med.nauk; SIVKOVA, N.H.

Pulseless disease (Takayasu's disease) in children. *Pediat-*
riia 42. no.1:68-70 Ja'63. (MIRA 16:10)

1. Iz pediatricheskoy kliniki (rukovoditel' - prof. M.I.
Olevskiy) Moskovskogo nauchno-issledovatel'skogo klinicheskogo
instituta imeni M.F.Vladimirskogo (dir. - kand.med. nauk
P.M.Leonenko).

(ARTERIES—DISEASES) (PULSE)

1. AUTHOR: Letsova, I. N., Vukova, Z. I. 07/1984-10/80

2. TITLE: **Preparation of monomercurized ketones from alcohols**
(Polucheniya monomerkurirovannykh ketonov iz spirtov)

3. PERIODICAL: Zhurnal obshchey khimii, 1984, Vol. 6, No. 7,
pp 1102-1103 (USSR)

4. SUMMARY: The methods of synthesizing monomercurized aldehydes and ketones (Refs 1-8) devised in the last years **has made these** compounds **accessible** and permitted the investigation of their properties. The addition of minute quantities of alkali liquor to the solution of organo-mercury aldehyde or -ketone leads to the irreversible formation of an amorphous, insoluble product. This explains why I. Mand and C. Gensler (Ref 3) were not able to separate the mercurized acetone, the oxidation product of the mercurized isopropyl alcohol. The synthesis of monomercurized ketones by oxidation with permanganate of the easily accessible products of the affiliation of mercury salts onto the olefin bond was methodically devised. For the purpose of neutralizing the resulting alkali some acetic acid was added in advance. By the method suggested the following monomercurized ketones were

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Preparation of Monomercurized Ketones From Alkenes

507/79-29-4-30/77

obtained deriving from propylene, pentene-1, hexene-1, heptene-1, octene-1, and styrene: acetone, methyl-propyl ketone, methyl-butyl ketone, methyl-amyl ketone, methyl-hexyl ketone and acetophenone (yields 50-60 %, Table). Monomercurized alcohols were obtained by the affiliation of mercury salts on to the alkenes and not specially separated from the reaction mass. The melting points are lower by 1-2° than those described in publications, which can be explained by the minute impurity of the mercurized alcohol that was not completely oxidized. There are 1 table and 3 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: March 17, 1958

Card 2/2

SKULACHEV, V.P.; LZHONED, Kh.; BRAYNES, A.S.; Primali uchastiye:
SIVKOVA, V.; PRONINA, T.; YEVTODIYENKO, Yu.; MUKHIN, V.; GOL'DMAN, A.

Oxidation and phosphorylation in mitochondria fo the embryonic
muscle. Biokhimiia 29 no.4:653-661 J1-Ag '64.

(MIRA 18:6)

1. Kafedra biokhimii zhivotnykh Moskovskogo gosudarstvennogo
universiteta imeni Lomonosova.

SMOL'NIKOV, Nikolay Ivanovich; SIVKOVA, Valeriya Aleksandrevna; SMOLYARENKO, D.A., redaktor; DENISOVA, I.S., redaktor; KIRSANOVA, N.A., tekhnicheskiiy redaktor.

[Improvement of sanitary conditions for workers pouring metal in open-hearth mills] Osderevlenie uslevii truda pri razlivke metalla v martenevskikh tsakhakh, Moskva, Izd-vo VTsSPS Profizdat, 1955.
115 p. (Foundries--Sanitation) (MLRA 9:5)

GOFMAN, Yu.M., inzh.; SIVKOVA, V.G., inzh.

Carbide analysis of steel. Elek. sta. 30 no.3:31-33 Mr '59.
(MIRA 12:5)

(Steel--Analysis)

GOFMAN, Yu.M., inzh.; SIVKOVA, V.G., inzh.

Determination of vanadium carbide phase without the preparation of
a special sample. Energetik 9 no.10:13-14 0 '61. (MIRA 14:10)
(Vanadium) (Steampipes)

SEVERIN, S. Ye.; SKULACHEV, V. P.; SIVKOVA, V. G.; MASLOV, S. P.

Separation of oxidation and phosphorylation at the cessation
of the hypothermal state. Dokl. AN SSSR 147 no.6:1489-1492
D '62. (MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova.
2. Chlen-korrespondent AN SSSR (for Severin).

(Phosphorylation) (Oxidation) (Hypothermia)

GOFMAN, Yu.M.; SIVKOVA, V.G.

Determining of the carbide phase of vanadium using sulfonazo reagent. Trudy IREA no.25:343-346 '63.

(MIRA 18:6)

SKULACHEV, V.P.; MASLOV, S.P.; SIVKOVA, V.G.; KALINICHENKO, L.P.;
MASLOVA, G.M.

Cold uncoupling of oxidation and phosphorylation in the muscles
of albino mice. Biokhimiia 28 no.1:70-79 Ja-F '63.

(MIRA 16:4)

1. Chair of Animal Biochemistry, State University, Moscow.
(PHOSPHORYLATION) (OXIDATION, PHYSIOLOGICAL)
(COLD--PHYSIOLOGICAL EFFECT)

LEVACHEV, M.M.; MISHUKOVA, Ye.A.; SIVKOVA, V.G.; SKULACHEV, V.P.

Energy metabolism in a pigeon under self-heating after hypothermia.
Biokhimiia 30 no.4:864-874 J1-Ag '65. (MIRA 18:8)

1. Kafedra biokhimiï zhovitnykh Gosudarstvennogo universiteta
imeni M.V. Lomonosova, Moskva.

L 31096-00 EWI(d)

ACC NR: AP6022781

SOURCE CODE: UR/0301/66/012/002/0147/0150

AUTHOR: Kakushkina, M. L.; Kudryashov, Yu. B.; Sivkova, V. G.; Skulachev, V. P. 47
B

ORG: Biological-Soil Faculty, Moscow State University in. M. V. Lomonosov (Biologo-
pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Mechanism of disturbance of oxidative phosphorylation in irradiated animal
tissues 19

SOURCE: Voprosy meditsinskoj khimii, v. 12, no. 2, 1966, 147-150

TOPIC TAGS: radiation biologic effect, phosphorylation, rabbit, oxidation, fatty acid,
oxidation, kinetics, oleic acid, cell physiology, biologic respiration, reaction
mechanism

ABSTRACT: Experimental evidence previously presented indicated that the oxidation
products of fatty acids possess radiomimetic properties and are highly reactive
compounds which cause the development of pathologic processes in an irradiated
organism. It may be assumed that the formation of these active compound
have a definite effect on the energy mechanisms of the cells. The functional
activity of mitochondria in the presense of the oxidation products of fatty
acids and lipids isolated from the tissues of irradiated animals was studied.
The functional activity of the mitochondria was determined by measuring the
ratio of phosphorylated to free oxidation in them, the P/O ratio. Upon adding
oleic acid to mitochondria, the P/O ratio dropped with an increase in acid

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UDC: 617-001.28-008.921.8-092
095 0751

L 31096-66

ACC NR: AP6022781

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concentration. Analysis of the results of individual measurements of the rates of oxidation and phosphorylation indicated that when the oleic acid content in the reaction mixture is increased, the phosphorylation process is suppressed. The respiration rate of mitochondria remained constant in a wide range of concentrations but decreased with very high contents of oleic acid.

The inhibition of phosphorylation in conjunction with respiration was also observed in the acetone fraction of lipids from rabbit liver irradiated with a dose of 1,000 roentgens. Thus, in the tissues of the irradiated animals, compounds of the lipid nature are present which inhibit the oxidative phosphorylation process. The addition of serum albumin considerably activates oxidative phosphorylation. The conjugating effect of albumin confirms the fact that the disruption of phosphorylation caused by the lipids in the liver of irradiated animals depends on the presence of free unsaturated fatty acids. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 30Aug64 / ORIG REF: 008 / OTH REF: 006

Card 2/2 J J

S/196/62/000/021/002/007
E194/E135

AUTHOR: Sivkova, V.V.

TITLE: The flow of direct current over a cylinder in a space consisting of two conducting media

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.21, 1962, 8-9, abstract 21 A 44. (Tr. Tomskogo un-ta, 155, 1961, 96-107)

TEXT: In a space consisting of two uniform media of different electrical conductivity σ_1 and σ_2 , direct current flows in a direction parallel to the plane of separation of the media. The electrical field of this current is examined for the case when the second medium contains a foreign inclusion in the form of an infinite circular cylinder of radius a and constant electrical conductivity σ_3 located parallel to the plane of separation at a distance H from it in a direction perpendicular to the direction of the current flow. To determine the potentials $u_1(x, y)$, $u_2(x, y)$, $u_3(x, y)$ of the resultant plane-parallel field, a conformal conversion is made as a result of which the boundary of separation of the media and the sectional contour of the cylinder

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complete translation.]

TETERYATNIKOV, Mikhail Stepanovich; SIVKOVSKIY, N.I., retsenzent; OKHOTNIKOV, G.I., retsenzent; MAYORSKIY, G.I., redaktor; FOMKINSKIY, L.I., redaktor; MAKHUSHINA, A.N., redaktor izdatel'stva; BEGICHEVA, M.N., tekhnicheskii redaktor

[Organization of navigation and the work of harbors] Organizatsiia dvizheniia flota i raboty portov. Moskva, Izd-vo "Rechnoi transport," 1956. 355 p. (MLRA 9:11)
(Harbors)

SIVO, J., ZS. EDOS, S.

"Tasks and possibilities of the public health departments in the county councils and the chief county obstetrician in increasing the number of births. p. 84 (NEPEGESZSEGUGY, Vol. 38, no. 3, Mar. 1953, Budapest.)

SO: Monthly List of East European Accessions, Vol. 2 #8, Library of Congress, Aug. 1953, Uncl.

Olivo R. Gajdos Direct diazo reaction adsorbed bilirubin tartalmának
különválasztására A method for the separation of the bilirubin content of blood plasma,
giving direct diazoreaction Orvosok Lapja 1947, 3/34 (1328-1331)

A new method is described for the separate determination of the direct and indirect
bilirubin contents of blood serum, based on the fact that the first type of pigment
is adsorbable on animal charcoal while the second is not. The fractions are then
tested separately by means of the diazo-reaction. Gajdos-Paris

Soi Physiology, Biochemistry and Pharmacology, Section II, Vol. I, #1-6

KHRULEV, V.M.; GUBENKO, A.B., doktor tekhn. nauk, retsenzent;
FREYDIN, A.S., kand. tekhn. nauk, retsenzent; SKRIPOV,
B.S., kand. tekhn.nauk, retsenzent; SIVUCHKIN, F.P.,
dots., retsenzent; ZAYCHIKOVA, E.A., red.; KASIMOV, D.Ya.,
tekhn. red.

[Improving the durability of glued wooden structures and
building elements] Povyshenie dolgovechnosti kleenykh de-
reviannykh konstruksii i stroitel'nykh detalei. Moskva,
Gosstroizdat, 1963. 113 p. (MIRA 16:8)

(Plywood)

BERSENEV, V.S.; Primalni uchastiye: ZINEVICH, V.D.; MOROZOV, V.I.;
MIKHACHEV, V.S.; KAPRALOV, Ye.P.; KOLCHANOV, V.D.; BOGDANOV, A.V.;
OBUKHOVICH, I.I.; OSTROZHINSKIY, A.I.; KHROMOV, M.I.; SIVOCHUB, A.A.

Breaking a solid body with a high-pressure water jet. Zap. LGI
41 no.1:44-51 '59. (MIRA 16:5)

(Jets--Fluid dynamics)

S/181/61/003/009/023/039
B104/B102

189560

AUTHORS: Pines, B. Ya., and Sivochub, V. A.

TITLE: Structural changes during high-temperature creeping of copper single crystals

PERIODICAL: Fizika tverdogo tela, v. 3, no. 9, 1961, 2703 - 2711

TEXT: The authors tried to establish a difference in the deformation during creeping of copper just below its melting point and at lower temperatures. For this purpose, they made coarse-grained copper plates from rolled copper sheet of 0.15 x 20 x 200 mm by annealing them at 1050°C under a load of $\approx 7 \text{ g/mm}^2$ for about 30 minutes. From these plates monocrystalline samples of 20 x 60 mm were made by covering a large grain with paraffin and etching off the surrounding grains with nitric acid. The surfaces of the samples investigated coincided with the faces (100) or (111). The samples were loaded in the direction of the crystal axes [100] and [110]. The tests were made with a vacuum device described by B. Ya. Pines et al. in FMM, VII, no. 5, 766 - 776, 1959. The structural changes were examined under a microscope and by X-ray diffraction studies. Negative Laue patterns

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S/181/61/003/009/023/039
B104/B102

Structural changes during ...

were obtained with a fine-focus X-ray tube (40 kv, 1.5 ma) using copper radiation. Most of the pictures were taken with a 0.3-mm slit. In some cases a microbeam of 50 μ was used. The sample surfaces were studied with an MIM-6 (MIM-6) microscope, and the micro-hardness was measured with a ПМТ-3 (PMT-3) instrument. The extensive results are discussed in detail.

Summing up: a) At comparatively high stresses (200 - 300 g/mm²) one or two bands of glide planes were observed in samples elongated in the [100] direction (creep rate, 10² - 10³%/hr) and along the [110] direction (creep rate, 10%/hr). These samples had an indistinct and split spot in their Laue patterns. b) If the load applied did not exceed 50-70 g/mm², no essential structural change could be observed even after a comparatively strong deformation (ϵ ~ 10%). Gliding tracks were not obtained, and the spot in the Laue pattern was distinct. Only local indentations did occur. There is obviously a creeping free of dislocations under these conditions, which is a result of pure diffusion. It is not impossible that there is also a diffusion creeping at higher loads and lower temperatures, which is covered by structural changes. Ya. I. Frenkel' is mentioned. There are 7 figures,

Card 2/3

SIVODEDOV, V.T., starshiy elektromekhanik

How we service the SP-1 electric drives. Avtom., telem. i
sviaz' 6 no.6:30-32 Je '62. (MIRA 15:7)

1. Elektricheskaya tsentralizatsiya stantsii Losinoostrovskaya
Moskovskoy dorogi.

(Railroads--Electric equipment)
(Railroads--Switches)

SIVODEDOV, V.T., starshiy elektromekhanik

Preparation and installation of the SP-1 switch drive. Avtom.,
telem.i sviaz' 6 no.8:33-34 Ag '62. (MIRA 15:8)

1. Elektricheskaya tsentralizatsiya stantsii Losinoostrovskaya,
Moskovskoy dorogi.

(Railroads--Switches)

(Railroads--Electric equipment)

GOLUBEVA, A.V.; NEYMARK, O.M. [deceased]; USMANOVA, H.F.; SIVOGRKOVA, G.L.;
BEZBORODKO, G.L.; MEYERZON, A.A.

Syntheisis of acenaphthylene, and its polymers and copolymers
with other monomers. Plast.massy no.8:3-6 '60. (MIRA 13:10)
(Acenaphthylene)

GOLUBEVA, A.V.; SIVOGRAKOVA, K.A.; LYANDZBERG, G.Ya.; GORODETSKAYA, R.A.

The ~~MSN~~ ternary copolymers. Biul.tekh.-ekon.inform. no.12:12
'58. (MIRA 11:12)

(Plastics) (Polymers)

GOLUBEVA, A.V.; SIVOGRAKOVA, K.A.; LYANDZBERG, G.Ya.; DOYNIKOVA, S.N.

The SN-28 copolymer of styrole with acrilonitrile. Biul.
tekh.-ekon.inform. no.12:12-13 '58. (MIRA 11:12)
(Polymers) (Acrlonitrile) (Styrene)

SIVOGRKOVA, K.A.; BASOVA, Yu.M.; BUTYRINA, N.P.; LYANDZBERG, G.Ya.

Special transparent colorless plastics. Biul.tekh.-ekon.inform.no.2:
15-16 '59. (MIRA 12:3)

(Plastics)

S/191/60/000/002/010/012
B027/B058

AUTHORS: Koton, M. M., Sivograkova, K. A., Tolstikova, Z. D.,
Yeremina, E. N.

TITLE: Production of Large Scintillometers From Plastics

PERIODICAL: Plasticheskiye massy, 1960, No. 2, pp. 48-52

TEXT: The authors developed a method for the production of scintillometers on polystyrene basis with additions of active materials. The apparatus were made either as cylindrical blocks (10 kg weight, 220 mm diameter, 300 mm height) or as a film of a thickness of about 100 μ . After various experiments, the accelerated polymerization at 200°C, i.e., a temperature higher than the hardening temperature of the polymer, proved to be the best method for the manufacture of block-shaped scintillometers. The scintillating film was produced by means of rod presses and hot drawn. The material was composed according to the formula:
styrene(basis)
n-terphenyl (scintillating additions) 2% per weight related to styrene,

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Production of Large Scintillometers From
Plastics

S/191/60/000/002/010/012
B027/B058

1,4-di-2,5 phenyl oxazolyl benzene 0.02% per weight related to styrene. The polymerization of products of up to 1 kg was carried out in glass molds; steel molds provided with an inner coat of polytetrafluoro ethylene were used for larger devices. Siloxane liquid No. 5 which is stable was used as heat carrier and proved to be satisfactory. The basic condition for the process is a high purity of the styrene which is washed twice or three times with a 5% caustic soda solution after rectification in order to remove hydroquinone. The purification is controlled according to the styrene color. N. V. Fadeyeva, L. A. Klinkovskaya, L. M. Kirichenko, G. S. Smirnov, and A. V. Matveyev participated in the experiments. There are 3 figures and 12 references: 2 Soviet, 1 British, 1 German, 2 Canadian, and 6 US. ✓

Card 2/2

S/191/60/000/006/001/014
3004.3056

AUTHORS: Colubeva, A. V., Neymark, O. M. (Deceased), Usmanova, N.F.,
Sivograkova, K. A., Bezborodko, G. L., Meyerzon, A. A.

TITLE: Synthesis of Acenaphthylene, Its Polymers, and Its Copoly-
mers With Other Monomers

PERIODICAL: Plasticheskiye massy, 1960, No. 8, pp. 3-6

TEXT: In the introduction, the authors give a survey of published data on the synthesis, polymerization, and copolymerization of acenaphthylene which, with the exception of a paper by V. S. Titov (Ref. 2), is based upon western papers. The authors then give a report on their experiments. The synthesis proceeded from commercial acenaphthene of the type 4MTY No. 4850-54 (ChMTU No. 4850-54), and took place in the vaporous phase. As catalysts, styrene contact was used as well as the usual catalyst used for the dehydrogenation of butane. For the purpose of analyzing the reaction products, a new method developed by V. A. Balandina and Z. F. Davydova was employed: Iodination of the double bond in the presence of mercurous chloride and HCl in an alcoholic medium. This method gave the same results

Card 1/3

2

Synthesis of Acenaphthylene, Its Polymers,
and Its Copolymers With Other Monomers

S/191/60/000/008/001/014
B004/B056

as hydrogenation on palladium and platinum black according to G. L. Bezborodko. A maximum of concentration (up to 98.5%) and yield (up to 88%) was obtained between 640° and 650°C (Fig. 1). Fig. 2 gives the concentration of acenaphthylene as a function of the feeding rate of acenaphthene in g/l catalyst. At 125 g/l the concentration was 99%. Only a feeding rate from 320 to 330 g/l is considered to be profitable. An addition of water vapor offered no advantages. The block polymerization of acenaphthylene was carried out in the presence of benzoyl peroxide, the emulsion polymerization in the presence of potassium persulfate and sulfanol. Polymers with molecular weights of 119,000 and 160,000 were obtained, which, however, could not be processed because of their brittleness. The copolymerization of acenaphthylene with styrene was carried out under the same conditions as the polymerization. The acenaphthylene content was varied between 10 and 50%. The physical, mechanical, and electrical properties are given in Table 1. Fig. 3 shows that the thermal stability of the copolymer increased with an increasing content of acenaphthylene. In Fig. 4, the molecular weight and the intrinsic viscosity of the copolymer are represented as a function of the acenaphthylene content. The copolymer with a ratio between acenaphthylene : styrene = 20 : 80, which could be processed by pressing and casting under pressure was found to have

Card 2/3

Synthesis of Acenaphthylene, Its Polymers,
and Its Copolymers With Other Monomers

S/191/60/000/008/001/014
B004/B056

the best properties. Table 2 gives a comparison between the thermomechanical and electrical properties of the copolymer and those of the polystyrene. The dielectric propertiesⁿ are as good as those of polystyrene, and its thermal stability is higher by about 30°C. There are 4 figures, 2 tables, and 24 references: 2 Soviet, 9 US, 6 British, and 7 German.



Card 3/3

87643

S/191/60/000/012/002/016
B020/B066

11. 2210 also 2209
AUTHORS: Golubeva, A. V., Usmanova, N. F., Sivograkova, K. A.
TITLE: Copolymers of α -Methyl Styrene
PERIODICAL: Plasticheskiye massy, 1960, No. 12, pp. 4 - 6

TEXT: The present paper studies the possibility of copolymerizing α -methyl styrene with other polar and nonpolar vinyl compounds according to a radical mechanism. The properties of the copolymers obtained were investigated. For the copolymerization with α -methyl styrene, styrene, 2,5-dichloro styrene, methyl methacrylate, and acrylonitrile were used. Copolymerization was carried out by means of the emulsion method in the presence of an initiator (potassium persulfate) and of an emulsifier (Sulfanole). The monomer concentration ranged between 99.5 and 99.8%, the ratio of the hydrocarbon phase to the aqueous phase varied between 1:3 and 1:5, the pH of the medium was 7.8 - 8. The reaction was carried out in the stream of an inert gas (nitrogen) at 75 - 80°C. The composition of α -methyl styrene - styrene copolymers was determined by means of the infrared spectroscopic method devised by T. A. Speranskaya, that of the

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Copolymers of α -Methyl StyreneS/191/60/000/012/002/016
B020/B066

remaining copolymers chemically. When increasing the α -methyl styrene content in the initial monomer mixture, copolymerization is retarded, and the finite conversion degree drops (Fig.1). In this connection, also the intrinsic viscosity of copolymers decreases (Fig.2). The heat resistance of copolymers drops with increasing α -methyl styrene content (Fig.3). In the copolymerization of three monomers - α -methyl styrene, methyl methacrylate and acrylonitrile - in the ratio of 35.70:50.65:13.65 mole%, the heat resistance increases considerably as compared with that of the ternary MCH(MSN) copolymer which contains styrene instead of α -methyl styrene. The copolymers of α -methyl styrene with styrene or methyl methacrylate (ratio 1:2.5 moles) exhibited satisfactory mechanical properties and higher heat resistance than polystyrene and polymethyl methacrylate. The dielectric properties were similar to those of polystyrene. The authors also studied the conditions of copolymerization of α -methyl styrene with styrene, methyl methacrylate and acrylonitrile by the suspension method. Polyvinyl alcohol and Solvar (partly acetylated polyvinyl alcohol) were used as stabilizers for the suspension in quantities of 0.1 - 1%, and benzoyl peroxide, diisobutyric acid azodinitrile and benzoyl peroxide mixed with tert.-butyl peroxide (in a

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Copolymers of α -Methyl Styrene

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B020/B066

ratio of 1:1) in quantities of 0.5 - 1% as initiators. The experiments were carried out in the stream of an inert gas at 70 - 90°C. Under these conditions, copolymerization of α -methyl styrene with styrene, as well as with acrylonitrile, proceeded slowly. Previously, a bulk polymerization of the monomers had to be carried out at 80°C up to a conversion of 35%, and a suspension polymerization of the pre-polymer obtained. Even when using this combined block-suspension polymerization, the degree of conversion of the monomers was only 96 - 97%. The dimensional stability under heat of the copolymers according to Vicat was only 115°C, and they were very brittle. Nor was the above stability of the ternary copolymers obtained under the same conditions any higher. The bulk copolymerization of α -methyl styrene with styrene, acrylonitrile and methyl methacrylate at different ratios of the monomers (from 0.25 to 1 mole of α -methyl styrene in the initial monomer mixture), with benzoyl peroxide, diisobutyric acid azo-dinitrile and cobalt naphthenate, possibly with a mixture of benzoyl peroxide with tert.-butyl peroxide (at a ratio of 1:1) as initiators, at 70 - 200°C for 200 hours in glass ampuls which had been previously deaerated, yielded hard, transparent, colorless or - in the case of copolymerization with acrylonitrile - yellow polymers with a heat

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Copolymers of α -Methyl Styrene

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B020/B066

resistance according to Vicat of about 120°C. There are 3 figures,
1 table, and 7 references: 1 Soviet, 4 US, 1 Canadian, and 1 British.

X

Card 4/4

LYANDZBERG, German Yakovlevich; BAZLOVA, Tamara Petrovna; BUTYRINA, Natal'ya Petrovna; GOLUBEVA, Anna Vasil'yevna; PECHENKIN, Aleksandr Leont'yevich; SIVOGRAKOVA, Klavdiya Andreyevna; AL'PERIN, G.R., red.; FREGER, D.F., red. izd-va; GVIRTS, V.L., tekhn. red.

[New L-PT acrylic plastics for pressure molding and extrusion]
Novyi akriloplast L-PT dlia lit'ia pod davleniem i ekstruzii.
Leningrad, 1961. 21 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen poredovym opytom. Seriya: Sinteticheskie materialy, no.9) (MIRA 14:12)

(Plastics)

СИВЦЕВ-АНКОВА, К. А.

8934L
S/191/61/000/001/015
B101/B205

15.8104
AUTHORS: Golubeva, A. V., Kozayev, G. A., Usanova, M. F.,
Yermina, I. N., Sivtsova, K. A.

TITLE: A suspension method for obtaining high-molecular polystyrene

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 3-7

ABSTRACT: In view of the great commercial advantages of suspension polymerization, the authors studied the most favorable conditions for obtaining high-molecular polystyrene with good physical, mechanical, and dielectric properties. In doing so, they applied the method of suspension polymerization. A study has been made of the influence of initiators and their mixtures, as well as of stabilizers and reaction temperature. The various initiators were synthesized by alkylation or acylation of H₂O₂ or H₂O₂. First, polymerization was done in a nitrogen atmosphere at 20-95°C with a monomer-to-water ratio of 1:3 or 1:6, and with 0.5-2% initiator referred to styrene. The authors aimed at obtaining a granulated polymer. Results are summarized in Table 1:

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Initiator	polymerization temperature, °C	time, hr	form of product	molecular weight
tert-butyl hydroperoxide	80-90	12-18	emulsion	55,000
cyclohexanone peroxide	80-90	10-16	flocks	
tert-butyl peroxide	80	12-18	emulsion	
acetone peroxide	80	18	emulsion	55,000
methyl-ethyl ketone peroxide	20-90	2-24	powder	
dimethyl peroxydicarbonate	90	2-24	emulsion	110,000
tert-butyl perbenzoate	90	8-10	granules	100,000
tert-butyl peracetate	90	12	flocks	
tert-butyl permethacrylate	70-90	8-17	granules	48,000
caprylyl peroxide	90	9	granules	45,000
lauryl peroxide	90	6-14	emulsion	
acetyl peroxide	90	7	granules	40,000
p-chlorobenzoyl peroxide	90	6	trimer	
cinnaoyl peroxide	90	8	emulsion	55,000
peracetic acid	90	7	granules	55,000
acetylacrylo acid dinitrile	90	7	granules	55,000

The effect of various compositions of the initiators at 90°C in nitrogen, with solvent serving as a stabilizer, is illustrated in Table 2:

Composition of initiators	ratio	polymerization time, hr	form	molecular weight
benzoyl peroxide + isopropyl acetone peroxide	1:1	7	granules	33,500
benzoyl peroxide + cinnaoyl peroxide	4:1	5	granules insoluble	
benzoyl peroxide + di-tert-butyl perterephthalate	1:1	10	granules	41,000
benzoyl peroxide + propyl di-perbenzoate	1:1	10	granules	84,700
benzoyl peroxide + propyl di-tert-butyl perbenzoyl peroxide	1:1	6	granules	53,800
tert-butyl peroxide + propane di-tert-butyl peroxide	1:1	12	granules	90,000
tert-butyl peroxide + cinnaoyl peroxide	4:1	12	emulsion	

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A suspension method for...

Continuation of Table 2:

tert-butyl perbenzoate + lauryl peroxide	1:1	8	granules	86,700
tert-butyl perbenzoate + cumylperoxide	2:1:1	8	powder	116,000
tert-butyl perbenzoate + lauryl peroxide	4:1	7	granules	132,000
tert-butyl perbenzoate + tert-butyl peroxide	4:1	9	granules	80,900
tert-butyl perbenzoate + 4:1-tert-butyl peroxide	1:1	7	granules	91,900
tert-butyl perbenzoate + dimethyl peroxydicarbonate	1:1	12	emulsion	
tert-butyl perbenzoate + caprylyl peroxide	4:1	8	granules	90,000
tert-butyl hydroperoxide + propane-di-tert-butyl peroxide	1:1	12	emulsion	

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Experiments with benzoyl peroxide (I), tert-butyl peroxide (II), and tert-butyl perbenzoate (III) were made in autoclaves (50,200,000 l capacity), using Solvar as a stabilizer (partly anhydrous polyvinyl acetate with 12-15% acetate groups). Monomer-to-water ratio - 1:1.2; temperature: 80-95°C or 80-110°C. These experiments confirmed the results of laboratory tests. Granulated polystyrenes with a molecular weight of 100,000-120,000 were obtained. At 130°C the reaction took place within 9-10 hr, the polymer containing only 0.5% of the initial monomer. A comparison between these styrenes and those obtained by block polymerization is presented in Table 3.

Property	suspension polystyrene obtained with:	block poly-styrene
	0.5% I	1.5% III
molecular weight	55,000	90,000-100,000
thermal stability according to Vicat	99	100
resistance to Marfan 2	79	80
swelling at 100°C	750	85
tensile strength, kg/cm ² at 10°C	0.0003	0.0005
at 10°C	2.5	2.5
Card 5/6		

Suspension polymerization of styrene in the presence of polystyrene was studied in addition. Ordinary styrene and styrene thermally polymerized up to 50% were further polymerized in an aqueous suspension. Using I and II in a ratio of 1:1 as initiators, a polystyrene with a molecular weight of 140,000 was obtained. Polyvinyl alcohol, Solvar, sodium poly-methacrylate, copolymer from methyl methacrylate and methacrylic acid, gelatine, Ca₃(PO₄)₂, Mg(OH)₂, talc, etc. were tested for stabilization. 0.5% copolymer from methyl methacrylate and methacrylic acid, or 0.1% Solvar were found to be the most favorable stabilizers. The polystyrene fraction with a particle size of 0.5-0.1 μm amounted to 60-80% of the total amount of the polymer. There are 3 tables and 10 references, 2 Soviet-bloc and 8 non-Soviet-bloc.

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21141

S/191/61/000/004/002/009
B110/B208

158104

2209, 1372

AUTHORS: Usmanova, N. F., Golubeva, A. V., Vansheydt, A. A.,
Sivograkova, K. A.

TITLE: Synthesis and properties of α - and β -vinyl naphthalenes.
Report II. Polymers of vinyl naphthalenes and their
copolymers with styrene

PERIODICAL: Plasticheskiye massy, no. 4, 1961, 6-8

TEXT: Polymerization of monovinyl naphthalenes, and the properties of
polymers that are more resistant to heat than polystyrene are as yet little
known. P. P. Shorygin, I. V. Shorygina, Yu. S. Zal'kind, and S. A. Zonis
found that α -vinyl naphthalene forms transparent, brittle polymers softening
at 100-110°C with a molecular weight of approximately 5000. The poly- α -
vinyl naphthalene obtained by S. Loshaek was also brittle and low-molecular.
The α -vinyl naphthalene copolymerized by M. M. Koton with styrene and
acrylic esters had also a low mechanical strength. The copolymers of
 β -vinyl naphthalene with styrene, methyl methacrylate, and methyl acrylate,
studied by C. C. Price et al., had molecular weights of 10000-40000. The

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Synthesis and properties of...

authors had previously shown (Ref. 9: N. F. Ustanova et al. Plast massy no. 3 (1961)) that α - and β -vinyl naphthalenes may be prepared separately in good yields and simply from naphthalene. α - and β -vinyl naphthalenes (99.6-99.8 %) were polymerized by the block (I) and emulsion methods (II). In the case of (I), polymerization was performed in the presence of 0.5 % benzoyl peroxide for 100 hr in vacuo at temperatures gradually increasing from 60 to 130°C up to 98 % conversion. The polymers obtained in a yield of 97 % were reprecipitated from methanol dissolved in benzene in order to remove the monomers. In the case of (II), polymerization was carried out in the presence of potassium persulfate and sodium oleate in an N₂ atmosphere. The polymer was coagulated with 1 % formic acid and separated in the form of powder with a yield of 97-99 %. The α - and β -polymers thus prepared softened at 160°C, then formed a solid, transparent mass, and dissolved completely in benzene, toluene, and dichloro-ethane. The α -polymer, above all, is brittler than polystyrene, owing to a greater rigidity of its chains. To increase the mechanical strength, styrene links are to be incorporated into the molecule by copolymerization. This was also accomplished by block and emulsion polymerizations at different ratios of the monomers (10-90 %). Intrinsic viscosity, average molecular

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Synthesis and properties of...

weight, softening point, specific impact strength, and dielectric properties ($\tan \delta$ and ϵ at 10^6 cps and 20°C) were determined. ϵ had a constant value of 2.6, and $\tan \delta$ increased with increasing naphthalene content from $2 \cdot 10^{-4}$ to $5 \cdot 10^{-4}$. Intrinsic viscosity and molecular weight of the polymer of α -vinyl naphthalene (Figs. 1 and 2) decreased fivefold by substituting naphthalene links for 40 % of the benzene links. In the β -compound, the decrease takes place more slowly, as its copolymers are high-molecular. The molecular weight of β -vinyl naphthalene copolymers with 40 (I) to 80 % (II) naphthalene content was 108000 (I) - 96000 (II), while that of α -vinyl naphthalene copolymers was only 15000 (I) - 10000 (II). The mechanical strength of a β -copolymer with 40 % β -vinyl naphthalene is sufficient for practical application. The heat resistance of α - and β -copolymers linearly increases from 113 to 150°C on transition from polystyrene to polyvinyl naphthalene. The emulsion method is especially suited for the preparation of copolymers with 30 % β -vinyl naphthalene of optimum molecular weight and mechanical strength. I. A. Arbuzova is mentioned. There are 6 figures, 1 table, and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc. The 3 references to English-language publications read as follows: H. Mark, Chem. Eng. News, 27, 138 (1949); S. Loshaek,

Card 3/8

211141

S/191/61/000/004/002/009
B110/B208

Synthesis and properties of...

E. Broderick, J. Polymer Sci., 39, 223 (1959); C. C. Price et al.
J. Polymer Sci., 11, 575 (1953).

Legend to Table: Properties of polymers of α - and β -vinyl naphthalenes. 1) Indices; 2) molecular weight; 3) degree of polymerization; 4) specific impact strength, kg-cm/cm²; 5) heat resistance according to Vicat, °C; 6) tan δ at 10⁶ cps; 7) ϵ at 10⁶ cps; 8) method of polymerization; 9) block method; 10) emulsion method; 11) very brittle; 12) note: the study was performed with pressed samples.

① Показатели	② Способ полимеризации			
	③ блочный		④ эмульсионный	
	а	в	а	в
2 Молекулярный вес	9000	66000	25000	115000
3 Степень полимеризации	58	428	160	744
4 Удельная ударная вязкость, кг-см/см ²	17 Очень хрупкий	1,6	1	2,5
5 Теплостойкость по Вика, °C	—	160,5	160	162
6 $\tan \delta$ при 10 ⁶ герц	—	4-5 · 10 ⁻⁴	3 · 10 ⁻⁴	3-4 · 10 ⁻⁴
7 ϵ при 10 ⁶ герц	—	2,6	—	2,6

12) Примечание. Испытания проводились на прессованных образцах.

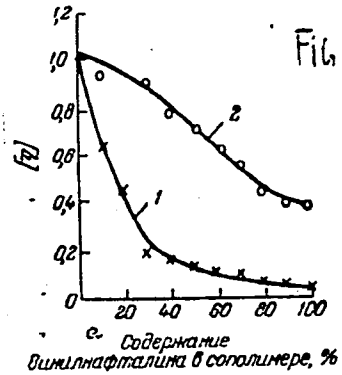
Card 4/8

Synthesis and properties of...

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B110/B208

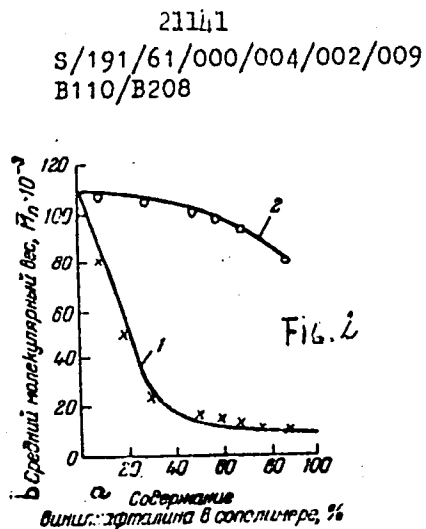
Legend to Fig. 1: Dependence of the intrinsic viscosity of block copolymers of α - and β -vinyl naphthalene with styrene on their composition.

- 1) copolymer with α -vinyl naphthalene;
- 2) copolymer with β -vinyl naphthalene;
- a) content of vinyl naphthalene in the copolymer, %.



Synthesis and properties of...

Legend to Fig. 2: Dependence of the molecular weight of block copolymers of α - and β -vinyl naphthalenes with styrene on their composition. Notations as in Fig. 1. a) Content of vinyl naphthalene in the copolymer, %; b) mean molecular weight, $M_n \cdot 10^{-3}$.



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Synthesis and properties of...

Legend to Fig. 5: Dependence of the molecular weight of emulsion copolymers of α - and β -vinyl naphthalenes on their composition. Notations as in Fig. 1. a) Content of vinyl naphthalene in the copolymer, %; b) mean molecular weight, $M_n \cdot 10^{-3}$.

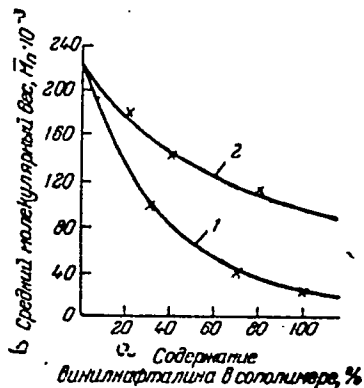
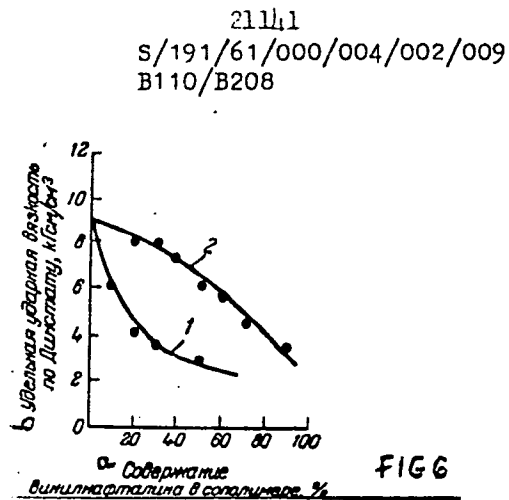


FIG 5

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Synthesis and properties of...

Legend to Fig. 6: Effect of emulsion copolymers of α - and β -vinyl naphthalenes with styrene on their specific impact strength. Notations as in Fig. 1. a) Content of vinyl naphthalene in the copolymer, %; b) specific impact strength, kg cm/cm^3 .



Card 8/8

USMANOVA, N.F.; GOLUBEVA, A.V.; VANSHEYDT, A.A.; SIVOGRKOVA, K.A.;
DOYNIKOVA, S.N.

Synthesis and properties of polymers and copolymers of α - and
 β -vinyl-naphthalenes. Report No.3: Copolymerization of β -vinyl-
naphthalene with styrene and plastics derived from them. Plast.
massy no.5:3-6 '61. (MIRA 14:4)
(Naphthalene) (Plastics)

L 13366-63 EPF(c)/EWP(j)/BDS/EWT(m)/ES(s)-2 AFFTC/ASD/ESD-3/
SSD Pr-4/Pc-4/Pt-4 RM/WW

ACCESSION NR: AP3003300

S/0191/63/000/ 007/0008/0009

AUTHORS: Golubeva, A. V. ; Tolstikova, Z. D. ; Sivograkova, K. A. ;
Bezborodko, G. L.

79
76

TITLE: The synthesis and polymerization of styrole derivatives. Synthesis and
polymerization of methylstyrole derivatives

SOURCE: Plasticheskiye massy*, no. 7, 1963, 8-9

TOPIC TAGS: methylstyrole, dimethylstyrole, synthesis, polymerization, bromo-
toluene, magnesium, methylphenol, paraxylene

ABSTRACT: o-methylstyrole and 2,5-dimethylstyrole were synthesized and studied
in detail. o-methylstyrole was synthesized from o-bromotoluene using organic
magnesium compound and a subsequent oxidation with ethylene oxide, followed by
hydrolysis of the obtained o-methylphenol alcohol over KOH 2,5-dimethylstyrole
was synthesized from paraxylene by the method of 2,5-dimethylacetophenon. The
polymers of o-methylstyrole and 2,5-dimethylstyrole were obtained by block and
emulsion methods. Their physico-mechanical and dielectric properties were studied.
It was determined that o-methylstyrole and 2,5-dimethylstyrole polymers possess

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ACCESSION NR: AP3003300

dielectric properties equal to those of polystyrole. However, they possess higher thermal stability (112-125C) and a high electric rigidity (34-37 kv/mm). These factors distinguish them not only from polystyrole, but also from the polymers of chloro-derivatives of styrole. The stability of dielectric properties of the polymers have been established for a wide temperature interval of 20 to 140C. The molecular weight was determined by the osmotic method. "The authors are grateful to L. N. Veselovskaya for her determination of molecular weights." Orig. art. has: 3 tables. 2

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 30Jul63

ENCL: 00

SUB CODE: MA

NO REF SOV: 008

OTHER: 006

Card 2/2

ACCESSION NR: AP4012182

S/0191/64/000/002/0008/0008

AUTHOR: Usmanova, N. F.; Golubeva, A. V.; Bulatova, V. M.;
Sivograkova, K. A.

TITLE: Styrene copolymer SAM

SOURCE: Plasticheskiye massy*, no. 2, 1964, 7-8

TOPIC TAGS: SAM styrene copolymer, physical mechanical property,
dielectric property, thermal stability, injection molding, compression
molding, styrene copolymer

ABSTRACT: A study of the physicomachanical properties of copolymer SAM shows that this plastic, in comparison with styrene, has better heat stability (by about 25°) and maintains the other physicomachanical properties of styrene. Copolymer SAM has high dielectric properties over an extended time and temperature interval. It may be processed by regular methods applicable to thermoplastics. The conditions for injection molding, extruding, and compression molding copolymer SAM are presented. "Investigation of the dielectric properties of the copolymer was conducted by Candidate of physical and

Card 1/2

Card 2/2

L 42047-65 EWT(m)/EPF(c)/EPR/EMP(j)/T Pc-l/Pr-l/Ps-l RPL RM/WW

UR/0286/65/000/007/0102/0102

ACCESSION NR: AP5010916

AUTHORS: Golubeva, A. V.; Sivograkova, K. A.; Butyrina, N. P.; Vlasova, L. D. ³⁴_B

TITLE: A method for obtaining a casting plastic, ¹³ Class 39, No. 169783, 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 102

TOPIC TAGS: plastic, casting, polymerization, methylmethacrylate, ethylacrylate, thermal stability, alpha methylstyrene, diisopropylxanthogen disulfide

ABSTRACT: This Author Certificate presents a method for obtaining a casting plastic by suspension polymerization of methylmethacrylate and ethylacrylate in the presence of regulators, initiators, and a suspension stabilizer. To improve the thermal stability of the plastic, copolymerization is conducted in the presence of 2-2.5% of α -methylstyrene and 0.05-0.1% of diisopropylxanthogen disulfide.

ASSOCIATION: none

SUBMITTED: 16Jul62

NO REF SOV: 000

Card 1/1 _{on}

ENCL: 00
OTHER: 000

SUB CODE: MT

I 8498-66 (A) EWT(m)/EWP(j)/EWP(t)/EWP(b) JD/RM
 ACC NR: AP5028478 SOURCE CODE: UR/0286/65/000/020/0064/0064

AUTHORS: Arlov, D. I.; ^{44.55}Kamenetskiy, I. Ya.; ^{44.55}Sainnova, A. P.; ^{44.55}Sergeyeva, A. A.;
^{44.55}Ponomareva, V. M.; ^{44.55}Golubeva, A. V.; ^{44.55}Luk'yanov, N. P.; ^{44.55}Yeremina, Ye. N.; ^{44.55}Sivograkova,
^{44.55}K. A.; ^{44.55}Kinter, I. P.; ^{44.55}Shalina, V. P.

ORG: none

TITLE: Surfacing for metallic and reinforced concrete decks. Class 39, No. 175643
 /announced by Organization of the State Committee on Ship Construction SSSR
 (Organizatsiya gosudarstvennogo komiteta po sudostroyeniyu SSSR) /

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 64

TOPIC TAGS: polymer, copolymer, rubber, mineral filler, pigment, metal surfacing,
 reinforced concrete, ship component, SYNTHETIC RUBBER

ABSTRACT: This Author Certificate presents a surfacing material for metallic and
 reinforced concrete decks. The surfacing material is based on a binding polymer
 and on mineral fillers and pigments. To increase its resistance to abrasion and
 corrosion and to reduce its slipperiness, a copolymer of styrole with nitrylacrylic
 acid and with butylacrylic rubber is used as the binding polymer.

SUB CODE: 11/ SUBM DATE: 12Mar64

UDC: 678.746.2-139.678.046.3 678.047

Card 1/1

ACC NO: 11-001001

SOURCE CODE: NI 0415.69/000/009/0072/0073

46
44
3

INVENTOR: Sivogorova, K. A. ; Butyrina, N. P. ; Lovyagina, L. D.

ORC: none

TITLE: Method of obtaining a light-scattering organic glass. Class 39, No. 181276 [announced by State Scientific Research Institute of Polymerized Plastics and Experimental Plant (Gosudarstvennyy nauchno-issledovatel' skiy institut polimerizatsionnykh plastmass i eksperimental' nyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 72-73

TOPIC TAGS: organic glass, polymethylmethacrylate, light scattering, copolymer, ~~opacifier~~, ~~glass opacifier~~

ABSTRACT: An Author Certificate has been issued for a method of obtaining a light-scattering organic glass with a base of polymethylmethacrylate by blending it with an opacifier, followed by granulation. To increase the strength of the organic glass and to improve its casting and light-scattering properties, a mixture of trifluorochloro-

Card 1/2

UDC: 678.744.335-196.2:678.473.2

L 10399-66

2

ACC NR: AP6015657

ethylene copolymer with vinylidene fluoride and barium sulfate is used as the opacifier. [Translation]

[NT]

SUB CODE: 11/
07/ SUBM DATE: 09Nov64/

Card 012 1977

L 46259-66 EWT(m)/T/ENE(i) IJP(c) WW/RM/JWD
ACC NR: AP6030603 (A,N) SOURCE CODE: UR/0413/66/000/016/0092/0092

INVENTOR: Golubeva, A. V.; Yeremina, Ye. N.; Sivograkova, K. A.;
Bezborodko, G. L.; Kitner, I. P.; Shashina, V. P.

ORG: none

TITLE: Preparative method for styrene-acrylonitrile copolymers.
Class 39, No. 185055

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16,
1966, 92

TOPIC TAGS: styrene, acrylonitrile, copolymer, suspension copolymeriza-
tion, nitrile rubber, impact resistant material

ABSTRACT: An Author Certificate has been issued for a method for
preparing styrene-acrylonitrile copolymers. To impart impact resistance
to the plasticized product, the monomers are copolymerized in suspension
in the presence of 3-10% nitrile rubber. [B0]

SUB CODE: 11/ SUBM DATE: 13Apr62/

Card 1/1 mjs

UDC: 678.746.22-139

L 01804-67 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6030604 (AN) SOURCE CODE: UR/0413/66/000/016/0092/0093

3/
B

INVENTOR: Golubeva, A. V.; Yeremina, Ye. N.; Sivograkova, K. A.;
Bezborodko, G. L.; Kitner, I. P.; Shishina, V. P.

ORG: none

TITLE: Method of obtaining shock-resistant plasticized rubber. Class 39,
No. 185056

SOURCE: Izobreteniya, promyshlennyye obratzsy, tovarnyye znaki, no. 16, 1966,
92-93

TOPIC TAGS: butadiene styrene rubber, copolymerization, rubber, plasticized
rubber

ABSTRACT: An Author Certificate has been issued for a method of obtaining a
shock-resistant plasticized rubber from a styrene copolymer, acrylnitrile, and
butadieneacrylnitrile rubber by means of suspension copolymerization of the proper
monomers and rubber. To increase the light stability and heat resistance of
plasticized rubber, the process is carried out in the presence of butylacrylate
rubber, which is taken in amounts of 2-5%. [Translation] [NT]

Card 1/1 SUB CODE: 11/ SUBM DATE: 13Apr62/ UDC: 678.746.22-139

PETROV, Vladimir Arsent'yevich; KOLMAKOV, Nikolay Alekseyevich; EPEL'MAN, Gilel' Grigor'yevich. Primalni uchastiye: NIKITIN, V.V., MOROZOV, I.I.; SIVOKHA, N.V.; UTROBINA, N.I.; NIKITINA, N.N.; PANKOV, N.N.; BAUSHEV, N.P.; TATEVOSOV, K.G., dots.; LIPKIND, L.M.; LEBEDEVA, A.K., inzh.-ekon.; VIL'DAVSKIY, I.M., dots., retsenzent; VOLKOV, S.A., kand. ekon. nauk, dots., red.; CHFAS, M.A., red. izd-va; PETERSON, M.M., tekhn. red.

[Continuous conveyer methods used in the let production of composite machines] Potochno-konveiernye metody v seriino m proizvodstve slozhnykh mashin; iz opyta Leningradskogo zavoda poligraficheskikh mashin. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 130 p. (MIRA 14:9)

1. Rabotniki Leningradskogo zavoda poligraficheskikh mashin (for Nikitin, Morozov, Sivokha, Utrobina, Nikitina, Pankov, Baushev). 2. Leningradskiy inzhenerno-ekonomicheskii institut (for Tatevosov, Lipkind, Lebedeva).
(Leningrad--Printing machinery and supplies)
(Factory management)

SIVOKHIN, S.P.

Reactive properties of woodpulp. Bum.prom.31 no.2:6-9 P 156.
(MIRA 9:6)

1. Glavnyy inzhener Puksinskogo tsellyuloznogo zavoda.
(Wood-pulp)

SIVOKHIN, S.P.

Increasing the collected amount of selenium slime. Bum.prom.36
no.1:24-25 '61. (MIRA 14:3)

1. Arkhangel'skiy kombinat.
(Selenium) (Sulfur dioxide)

SIVOKHIN, S.P.; CHUYKO, V.A., inzh.

Using sulfate soap for the manufacture of paraffin emulsions.
Bum.prom. 37 no.9:25-26 S '62. (MIRA 15:9)

1. Arkhangel'skiy kombinat. 2. Glavnyy tekhnolog Arkhangel'skogo
kombinata (for Sivokhin).
(Emulsions (Chemistry)) (Hardboard)

SIVOKHIN, S.P.

Shops for the purification of sewage in the Archangel Combine. Bum.
prom. 38 no.2:28 F '63. (MIRA 16:2)

1. Glavnyy tekhnolog Arkhangel'skogo Kombinata.
(Archangel--Woodpulp industry) (Sewage--Purification)

DYBTSIN, A.A.; SIVOKHIN, S.P.

On the road toward quality improvement. Bum.prom. 38 no.9:5-8
S '63. (MIRA 16:11)

1. Arkhangel'skiy kombinat.

SIVOKHINA, N. B.

Dissertation: "Stereophotogrammetric Survey of Open-Cut Mining." Cand Tech Sci, Moscow Mining Inst imeni I. V. Stalin, 29 Jun 54. (Vechernyaya Moskva, Moscow, 18 Jun 54)

SO: SUM 318, 23 Dec 1954

SIVOKHINA, N. B.

"Problem of Application of Stereophotogrammetric Survey in Open-Cut Mines".
Nauch. tr. Mosk. gorn. in-ta, No. 12, pp 92-105, 1954.

Several aerial survey methods are discussed and the stereophotogrammetric method is found to be the best for open-cut mining. Its advantage consists in easy distance measure with up to 1/1,000 relative error; in the marking of a point on a map with an ± 0.23 m error. Its disadvantage is the dependence on the quality of the negative and on the visibility. (RZhAstr, No. 1, 1956)

SO: Sum No 884, 9 Apr 1956

SIVOKHINA, N.B.; FROLOV, Ye.F.

Determining the accuracy of well surveying measurements and calculating
errors. Trudy VNI no.11:321-339 '57. (MLBA 10411)
(Oil wells--Measurement)

HAFNER, J. D.; CAMON, Y. P.; and H. H. H. A. Y.

Method for determining the plastic position
of wall sections and their interaction at the expense of wall deflection.
Trans. VNIIE no. 1: 27-31, 1971. (MIR 12:7)
(Paradigm engineering)

VASIL'YEV, Yu.S.; SIVOKHINA, N.B.; FROLOV, Ye.F.; CHERNOGLAZOVA, T.Ya.

Permissible deflections of bottom holes from the planned
position; a topic for discussion. Neft. khoz. 39 no.4:14-20
Ap '61. (MIRA 14:6)

(Oil well drilling)

SIVOKHINA, N.B.; FROLOV, Ye.F.; CHERNOGLAZOVA, T.Ya.

Intersecting of the shafts of deflected wells. Trudy VNII no.36:
13-18 '62. (MIRA 15:11)

(Oil well drilling)

SIVOKHINA, N.B.; CHERNOGLAZOVA, T.Ya.

Evaluating the accuracy of determining the angle of the deflecting
unit in a well by the graphic and mechanical methods. Trudy VNII
no.36:27-32 '62. (MIRA 15:11)
(Oil well drilling)

SIVCKHINA, N.B.

Permissible curvature of shafts at the point of intersection of
deflected wells. Trudy VNII no.36:33-37 '62. (MIRA 15:11)
(Oil well drilling)

FROLOV, Ye.F.; SIVOKHINA, N.B.; DEMENT'YEV, L.F.; KOCHETOV, M.N.; MOLOTOV,
N.A.

Preliminary method of evaluating the accuracy of calculating
petroleum reserves by the volume method. Trudy VNII no.36:38-56
'62. (MIRA 15:11)

(Petroleum geology)

VASIL'YEV, Yu.S.; SIVOKHINA, N.B.; BRONZOV, A.S.

Permissible deflections of well holes. Neft. khoz. 40 no.8:8-13
Ag '62. (MIRA 17:2)

KALININ, Anatoliy Georgiyevich; VASIL'YEV, Yuriy Sergeevich; BRONZOV,
Anatoliy Samsonovich; SIVOKHINA, N.B., red.; LATUKHINA, Ye.I.,
ved. red.; POLOSINA, A.S., tekhn. red.

[Orienting deflecting drilling systems] Orientirovanie otklo-
niaiushchikh sistem v skvashinakh. Moskva, Gostoptekhizdat,
1963. 149 p. (MIRA 16:10)

(Boring)

VASIL'YEV, Yuriy Sergeevich; SIVOKHINA, Nataliya Borisovna;
BRONZOV, Anatoliy Samsonovich; KALININ, A.G., red.;
LATUKHINA, Ye.I., ved. red.; VCRONOVA, V.V., tekhn.red.

[Tolerable declination of boreholes from the design] Dopu-
stimye otkloneniia stvolov skvazhin ot proekta. Moskva,
Gostoptekhizdat, 1963. 152 p. (MIRA 16:10)
(Boring) (Tolerance (Engineering))

VASIL'YEV, Y.I.S.; BRONZAV, A.S.; SIVOKHINA, N.B.

Permissible change in the azimuth and angle of gradient in
the drilling of slant holes. Neft. khcz. 41 no. 12:6-11
D '63. (MIRA 17:6)

A. I. IZMIL'KOV, Ing.; GUL'DENBAL'K, A.F., kand. tekhn. nauk; SIVORIN, A.A.,
Inzh.

Electric device of an automatic machine for welding two wire
leads with metallized resistor caps. Svar. proizvod. no. 12033-34
D '64. (MIRA 1801)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrosvarochnogo
oborudovaniya.

SIVOKOBYLENKO, V.F., inzh.

Experience in the adjustment of a protection system against single-phase contacts to ground of the stator winding of an electric generator. Energetik 10 no.5:23-24 My '62. (MIRA 15:5)
(Electric generators)

SIVOKOBYL'SKIY, A.I., otv. za vyp.; PILIPENKO, T.P., red.; LUKASH,
W.N., tekhn. red.

[Uses of wood laminates compressed wood and textile chips in machinery manufacture] Primenenie drevesnykh sloistykh plastikov, pressovannoi drevesiny i tekstil'noi kroshki v mashinostroenii. Kiev, In-t tekhn. informatsii, 1962. 61 p.

(MIRA 16:4)

1. Ukraine. Gosudarstvennyy komitet po koordinatsii nauchno-issledovatel'skikh rabot.

(Wood, Compressed) (Laminated plastics)
(Machinery industry)

SIVOKOBYL'SKIY, A.I.; MATVEYEVA, V.M.

Diesel engines operating with natural gas. Mashinostroenie no.2:
124-125 Mr-Ap '62. (MIRA 15:4)
(Diesel engines)

SIVOKOBYL'SKIY, A. I.

Bending pipes by the spinning and stretching method. Mashino-
stroenie no.5:121-123 S-0 '62. (MIRA 16:1)

(Pipe bending)

SIVOKON', F.F.

Checking the state of measuring equipment and the maintenance of standards and technical conditions in industrial plants. *Izv.tekh.*
no.4:62-65 J1-Ag '56, (MLBA 9:11)
(Engineering laboratories)

SIVOKON', F.F.

Testing and inspecting weights, measures and instruments at the place
of their use. Izm.tekh.no.5:66-68 S-0 '56. (MLRA 10:2)
(Measuring instruments--Testing)

SOV/115-59-7-26/33

25(1), 28(2)

AUTHOR: Sivokon', F.F.

TITLE: The Inspection of Measuring Instruments in Rural Areas of Moldavia

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 7, pp 57-58 (USSR)

ABSTRACT: The author reviews the activity of the Moldavskaya gosudarstvennaya kontrol'naya laboratoriya po izmeritel'noy tekhnike (Moldavian State Control Laboratory for Measuring Instruments) after its reorganization which was performed during the past years. One large measuring instrument repair organization was created by combining the instrument repair department of the plant "Avtodetal" and two balance repair shops of "Moldavpotrebsoyuz" with "Vesomerpryor", which is the principal measuring instrument repair of the Moldavian SSR. The plant received a number of vehicles for performing repairs of balances and measuring instruments at kolkhozes and other agricultural enterprises. The author describes briefly the activity of the teams which travel for inspection and maintenance of measuring instruments to kolkhozes and

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SOV/115-59-7-26/33

The Inspection of Measuring Instruments in Rural Areas of Moldavia

sovkhozes. Dozens of letters submitted to the editorial board of this periodical prove the practicability of this measure: that the repair of measuring instruments should be performed directly at the user.

Card 2/2

SIVOKON, N. V.

Distr: 4E2c(m)/4E3b/4E3d

Investigation of the anodic process in the electrolysis of sodium chloride solutions. N. N. Nechiporenko, F. Kh. Voroshilov, N. V. Sivokon, and V. K. Beldin. *Zhur. Priklad. Khim.* 33, 1818-28 (1960). — The electrochem. processes occurring on graphite and C anodes were studied. To obtain a material balance of products formed in the anode space, the electrodes were sepd. by 2 glass diaphragms. The electrolyte flowed between these diaphragms and was sucked up into the anode space by a partial vacuum which also removed the Cl evolved. The current efficiency of the evolution of Cl, η_{Cl} , and that of O (consumed in the oxidn. of the anode), η_O , decreased, at 1st rapidly, as the concn. of NaCl in the soln., C, increased from 50 to 305 g./l. The break in the $d\eta/dC$ occurred at C = 150 g./l.: increasing C from 50 to 305 g./l. increased η_{Cl} from 82.0 to 90.14% and decreased η_O from 12.07 to 6.15%, whereas increasing C from 150 to 305 g./l. increased η_{Cl} to 92.53 and decreased η_O to 4.97% (the corresponding current efficiencies of free O and of NaClO, were 3.10, 2.21, 1.51% and 1.72, 0.4, 0.0%, resp.). η_{Cl} increased and η_O decreased as the c.d. increased from 250 to 4000 amp./sq. cm. Increasing the temp. from 30 to 70° (c.d. 1000 amp./sq. cm., C = 305 g./l.) lowered η_{Cl} from 99.4 to 97.6% and increased η_O from 0.35 to 1.47-2.8%. In a cell with diaphragms the current efficiency of NaOH was, within a wide range, independent of C and of the temp. The ratio of Cl⁻ to OH⁻ discharged on graphite and on C anodes was about the same. The deterioration of the anode decreased as the c.d. increased. This was ascribed to the increase in η_{Cl} and decrease in η_O as the c.d. increased. — ~~Beccowitz~~

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 1BW(BW)
 1JAS(JK)
 2MJC(JD)(JG)
 1JRT(JC)

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S/070/62/007/006/005/020
E132/E435AUTHORS: Matyushenko, N.N., Verkhorobin, L.F., Pugachev, N.S.,
Sivokon', N.V.TITLE: The crystal structures of the higher beryllides of
molybdenum, tungsten and rhenium

PERIODICAL: Kristallografiya, v.7, no.6, 1962, 862-864

TEXT: The highest beryllides of Mo, W and Re were made by allowing refined beryllium to diffuse at above 1100°C into these metals until saturation was reached. Sectioning a foil incompletely saturated showed distinct layers corresponding to Mo-MoBe₂-MoBe₁₂-MoBe₂₂. A foil of Mo, 0.2 mm thick, was completely saturated. X-ray powder photographs were taken (spacings tabulated) and corresponded to a cubic structure with $a = 11.63$ (Mo), 11.63 (W) and 11.54 \AA (Re). Chemical analysis gave a formula MoBe₂₂. A structure with the space group $O_h = Fd\bar{3}m$ was proposed having 8Mo in (b), 16Be in (c), 16Be in (d), 48Be in (f) and 96Be in (h) positions. Observed and calculated structure factors were compared for the assumed parameters x (Be in f) = 0.125 and x (Be in h) = 0. After

Card 1/2

SIVOKON', P.Ye.

The origin and significance of scientific experiments. Vest. Mosk.
un. Ser. ekon., filos., prava 12 no.4:43-67 '57. (MIRA 11:3)
(Science--Experiments)

SIVOKON, P. Ye.

25-2-19/43

AUTHOR: Sivokon, P. Ye., Candidate of Philosophical Sciences

TITLE: Irreconcilibility of Knowledge and Faith (Znaniye i vera - neprimirimy)

PERIODICAL: Nauka i Zhizn', 1958, # 2, pp 53 - 58 (USSR)

ABSTRACT: In this article the author states that science and religion are incompatible. He gives a historical review of attempts made by leading scientists and theologians to reconcile religious and scientific concepts - all these efforts were doomed to fail because of contradictions.
There are two sketches.

AVAILABLE: Library of Congress

Card 1/1

SOV-25-58-10-23/48

AUTHOR: .Sivokon', P. Ye.,- Candidate of Philosophical Sciences
TITLE: Reason Against Mysticism (Razum protiv mistiki)
PERIODICAL: Nauka i zhizn', 1958, Nr 10, p 51 (USSR)
ABSTRACT: The article contains a criticism of the book "Rationalism
in Theory and Practice" written by Archibald Robertson.

1. Physics--Theory

Card 1/1

SI'OKON', P.Ye., kand. filosof. nauk.

Science and religion are irreconcilable. Nauka i zhizn' 25 no.2:
53-58 F '58. (MIRA 11:3)

(Religion and science)