L 17078-63   EWP(j)/EPF(c)/EWP(q)/EWT(m)/BDS   ASD   Pc-4/Pr-4   RM/WW/JD
S/020/63/149/006/018/027

AUTHOR: Minsker, K. S., Fedoseyeva, G. T., Vorob'yeva, N. A., and Corresponding
Member of the Academy of Sciences USSR G. A. Razuvayev

SOURCE: ANSSSR, Doklady, v. 149, n. 6   p. 1351, 1963

TITLE: Polymerization of ethylene on a chlorinated mixture of titanium and
aluminum

TEXT: By polymerizing ethylene at low pressure in the presence of a chlorinated
mixture of titanium and aluminum the authors obtained a high yield of solid poly-
ethylene with a pour point of 120-135°C. The titanium-aluminum mixtures used for
this purpose were prepared from α-TiCl$_3$ + AlCl$_3$ + Al, α-TiCl$_3$ (Al + HCl), and
treated with chlorine before being used as catalysts in the polymerization. The authors
conclude that in the process of the treatment of the mixture of metals Al + Ti with
hydrogen chloride or chlorine in benzene there forms a new type of an active ethylene-
polymerization catalyst whose structure most closely approaches the formula
[Ti^{2+}Al$_2$Cl$_8$] · C$_6$H$_6$. In this connection the formation of phenol is occasioned not
by the oxidation of the aryl-metal Me-Ph by oxygen but by the oxidation of benzene
in the presence of AlCl$_3$ and titanium chlorides.

SUBMITTED: June 25, 1962

Card 1/1

RAZUVAYEV, G.A.; MINSKER, K.S.; FILAGEYEVA, G.T.

Catalytic systems for the polymerization of ethylene. Neftekhimia
4 no.4:572-575 Jl-Ag '64.   (MIRA 17:10)

L 05435-67   EWT(m)/EWP(j)   IJP(c)   WW/EM

ACC NR: AP6030857   (A,N)   SOURCE CODE: UR/0191/66/000/009/0056/0059

AUTHOR: Minsker, K. S.; Zavarova, T. B.; Bubis, L. D.; Fedoseyeva, G. T.; Burlakova, G. I.; Pakhomova, I. K.

ORG: none

TITLE: Evaluation of the thermal stability of polyvinyl chloride

SOURCE: Plasticheskiye massy, no. 9, 1966, 56-59

TOPIC TAGS: polyvinyl chloride, polymer stability, antioxidant additive, chemical stabilizer

ABSTRACT: A study of the thermal stability of polyvinyl chloride (PVC) containing various antioxidant stabilizers (HCl acceptors) showed that the rate of decomposition of PVC and the time θ required for a first-order dehydrochlorination reaction to be established can be used for characterizing PVC, and that θ can serve as a criterion for the effectiveness of stabilizer action. A correct and unambiguous estimate of the stabilizer additives introduced into PVC requires that the initial polymer be characterized by a value of θ close to zero. It was noted that an increase in the content of antioxidant stabilizers caused a change in the rate constant of the dehydrochlorination reaction. The effectiveness of the stabilizer action can in this case be determined from the change in the rate constant of HCl evolution. Another criterion of stabilizer action is τ, the duration of the induction period up to the start of

Card 1/2   UDC: 673.743.22.01:536.495

L 08135-67

ACC NR: AP6030857

liboration of HCl, also called thermal stability; τ is described by the Arrhenius equation $1/\tau = A \exp(E/RT)$. It was found that A and E characterize the chemical nature of PVC. The use of this equation for estimating PVC compositions should aid in obtaining a definite picture of the action of stabilizers introduced into PVC. Another equation which also applies to the PVC - stabilizer systems studied expresses the dependence of the thermal stability on the concentration of stabilizers introduced, $\tau = B \cdot C^{1/n}$, where C is the concentration of the stabilizer and B and n are constants for a given series of experiments. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 011/ OTH REF: 006

Card 2/2   ln

L 01045-67   EWT(m)/EWP(j)/T   IJP(c)   WW/RM

ACC NR: AP6019541   (A)   SOURCE CODE: UR/0190/66/008/006/1028/1034

AUTHOR: Minsker, K. S.; Zavarova, T. B.; Bubis, L. D.; Fedoseyeva, G. T.; Burlakova,
G. I.; Pakhomova, I. K.

ORG: All-Union Scientific-Research Institute of Chloroorganic Products and Acrylates
(Vsesoyuznyy nauchno-issledovatel'skiy institut khlororganicheskikh productov i akri-
latov)

TITLE: Assessment of the thermal stability of polyvinyl chloride and the efficiency
of thermostabilizers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 6, 1966, 1028-1034

TOPIC TAGS: polyvinyl chloride, solid mechanical property, chemical stabilizer,
THERMAL STABILITY

ABSTRACT: A critical evaluation of the methods of assessment of the thermal- and therm-
al-oxidative stability of PVC is given and the efficiency of the thermostabilizing ad-
ditives to PVC are discussed. The thermal stability of polyvinyl chlorides containing
such stabilizers as $3PbO \cdot PbSO_4$, dibutyl lead maleinate, disbutyl lead laureate, cal-
cium stearate, diphenylolpropane, bis-(2-methyl-4-oxy-5-teriary-butylphenyl)-sulfide,
bis-3-(methyl-4-oxy-5-teriary-butylphenyl)methane, dibutyl-4,5-epoxyhexahydrophtha-
late, lead stearinate, and 2-oxy-4-methoxy benzophenone was examined by means of mea-
suring HCl liberation during the heating of various stabilized PVC samples at 170°C

UDC: 678.01:54+678.743

Cord 1/2

L 01045-67
ACC NR: AP6019541
$\mathcal{O}$

for 0-300 minutes. It was found that for the evaluation of the thermal stability of
the stabilized PVC, the commonly used indices such as "integral rate of HCl libera-
tion for 180 min heating at standard conditions" and "thermostability" are inapplic-
able. The following indices are recommended as a basis for evaluating the thermal-
and thermal-oxidative stability of the PVC stabilizers: (1) the time from the begin-
ning of the decomposition reaction to the point at which the reaction rate becomes
constant; (2) the rate constant of the dehydrochlorination reaction; and (3) the tem-
perature dependence of the time of initiation of the PVC thermal decomposition at
170°C. Orig. art. has: 4 figures, 1 table.

SUB CODE: 07/   SUBM DATE: 31May65/   ORIG REF: 012/   OTH REF: 007

awm

Card 2/2

ACCESSION NR: AP4038004   S/0170/64/000/005/0096/0099

AUTHOR: Salamandra, G. D.; Fedoseyeva, I. K.; By*kova, N. M.

TITLE: Measuring gas velocity behind a shock wave

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 5, 1964, 96-99

TOPIC TAGS: gas flow velocity, shock wave, subsonic gas flow, shock wave propagation, flow velocity measurement, gas flow

ABSTRACT: A method has been developed for measuring subsonic gas velocities behind a shock wave in a shock tube. The gas velocity was measured by two independent methods: by measuring the velocity of thermal inhomogeneities formed by spark discharge in the gas moving behind a shock wave, and by determining the velocity of sound waves generated by spark discharge in the gas flow behind the wave. The high-pressure chamber of the shock tube was filled with a stoichiometric hydrogen-oxygen mixture at a pressure of 61318 n/m^2, and the low-pressure chamber, with nitrogen at 78647 n/m^2.

Card   1/2

ACCESSION NR: AP4038004

The distance between the contacts for spark discharge was selected
in such a way that the "traces" would appear in the medium already
brought in motion by the shock wave. By processing of time-resolved
photographs, the motion of the gas and sound waves propagating
co- or countercurrently to the flow can be determined, and the gas
velocity calculated. The experiments have shown that gas velocities
determined by the two methods differ by 2—3%. Gas velocities in
the range from 173 to 286 m/sec were measured by the methods behind
a shock wave propagating at M = 1.72. Orig. art. has: 3 figures
and 1 table.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo,
Moscow (Power Engineering Institute)

SUBMITTED: 16Feb63   DATE ACQ: 09Jun64   ENCL: 00

SUB CODE: ME   NO REF SOV: 005   OTHER: 006

Card 2/2

ACCESSION NR: AP4041871   S/0170/64/000/007/0047/0052

AUTHOR: Salamandra, G. D.; Fedoseyeva, I. K.

TITLE: The measurement of gas velocity in a combustible medium

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 7, 1964, 47-52

TOPIC TAGS: gas velocity, gas velocity measurement, combustible medium, optical nonuniformity, shock wave, Toepler photography, hydrogen, oxygen

ABSTRACT: A new method is described for measuring gas velocities in combustible media. It is based on the initiation of optical non-uniformities ("marks") in a stationary gas by heating small sections of the gas with thin Cr-Ni wire through which a small capacitor is discharged. The gas was set in motion by a shock wave and registered by Toepler photography, using both motion-picture and high-speed single-frame techniques. The experiments were carried out in a tube 36 x 36 mm consisting of several sections, one of which had lenses. The tube is connected to a shock tube and to the photographic equip-ment. The explosion (in a high-pressure chamber connected to the

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ACCESSION NR: AP4041871

shock tube), the discharge of the capacitors to form the "marks," and
the picture taking are synchronized. The method was used to measure
the gas velocity in a stoichiometric hydrogen-oxygen mixture in front of
and behind the shock wave. The gas velocity in front of the flame
exceeded the speed of sound. The speed of motion of the marks was
lower than the speed of the flame. The method is applicable only to
capacitors with discharge energies below 10 joules; at higher dis-
charge energies, the marks become indistinct. Orig. art. has: 2
formulas and 4 figures.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo,
Moscow (Power Engineering Institute)

SUBMITTED: 16Feb63   ATD PRESS: 3073   ENCL: 00

SUB CODE: ME, PR   NO REF SOV: 002   OTHER: 003

Card 2/2

SALAMANDRA, G.D.; FEDOSEYEVA, I.K.; BYKOVA, N.M.

Measuring gas velocity behind a shock wave. Inzh.-fiz. zhur. 7 no.5:
96-99 My '64.   (MIRA 17:6)

1. Energeticheskiy institut imeni G.M. Krzhizhanovskogo, Moskva.

SALAMANDRA, G.D.; FEDOSEYEVA, I.K.

Gas velocity measurement in a flammable medium. Inzh.- fiz. zhur. no.7:
47-52 Jl '64.   (MIRA 17:10)

1. Energeticheskiy institut im. G.M. Krzhizhanovskogo, Moskva.

FEDOSEYEVA, K.

Boron fluoride as catalyst in organic chemistry. V. Condensation of phenol with amylene. S. Zavgorodnii and K. Fedoseyeva (Voronezh State Univ.). *J. Gen. Chem.* (U.S.S.R.) 16, 2006-10(1946)(in Russian); cf. *C.A.* 41, 5477c.—Amylene (essentially 2-pentene), a by-product of Lebedev synthetic rubber production, was studied as a source of alkylphenols. The 36-46° fraction from butadiene production was fractionated to yield a fraction, b. 36-7°, contg. 40% amylene, and a fraction, b. 38-40°, contg. 79% piperylene. The former (350 g.) in 2 vols. CHCl₃ was treated with 416 cc. Br in CHCl₃, at −15° and allowed to stand overnight, when the pptd. piperylene tetrabromide was filtered off and the washed and dried amylene bromide was distd., giving 200 g., b. 61-2°. This was slowly added to a boiling suspension of 108 g. Zn filings in air. to yield the amylene (I), b. 34.5°, d₄⁰ 0.6472, n⁰ 1.3778. PhOH (23.5 g.), 5 cc. BF₃.Et₂O, and 30.5 g. I, mixed in the cold, stoppered, shaken until homogeneous and allowed to stand 72 hrs. until the reaction was complete, yielded a sec-Am Ph ether fraction, b. 213-43°, 67.9%, d₄⁰·⁵ 0.9333-0.9360, n⁰·⁴ 1.4953-1.5012 (bromination in CCl₄ gave dibromides, b. 130-8°, d₄⁰·⁴ 1.4122-1.4832, n⁰·⁴ 1.5460-1.5548), and traces of sec-Am sec-amylphenyl ether (II); the phenolic products (mixt. of PhOH and sec-amylphenol), b. 180-204°, comprised 11%. Repetition of the above with heating to 52-3° 36 hrs. gave 40% ether-type products, principally II, b. 271-88°, d₄⁰ 0.9862-0.9278, n⁰ 1.5062-1.5037 (bromination of which gave dibromides, b. 180-60°,

d₄⁰ 1.3962-1.3932, n⁰ 1.542 phenolic fraction, characterised:

ALB.SLA METALLURGICAL LITERATURE CLASSIFICATION

VINOGRADOV, V.I.; FEDOSEYEVA, K.I.

Using the universal decimal classification. NTI no.1:18-23
'63.   (MIRA 16:8)

9,4120 (1003, 1105, 1140, 1049)

S/057/61/031/003/015/019
B125/B209

AUTHORS: Fedoseyeva, L. A.,   Granovskiy, V. L.

TITLE: Cooling of an electron gas in a decaying mercury plasma

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 3, 1961, 357-366

TEXT: The present paper deals with the decrease of the electron tempera-
ture T_e in the initial stages of cooling (in a period 0 - 400 μ sec after
disconnection of the electric discharge field). In addition, a second
problem has been solved: The authors determined the decrease in concen-
tration n_e of the free electrons and compared it with the decrease in
concentration of the positive ions. Thus, both methods of studying
the de-ionization of a gas were intercompared. The investigations
were carried out in the plasma of a low-pressure arc in mercury vapor
under the following conditions: Vapor pressure 10^{-3} - $5.8 \cdot 10^{-2}$ mm Hg,
amplitude of the discharge current 1.3 a, tube diameter 65 mm. De-ioniza-
tion was studied by oscillographic observation of the current through
a probe inserted into the plasma. When the instant t_1 is properly chosen,
Card 1/8

Cooling of an electron gas in ...   S/057/61/031/003/015/019
                                                 B125/B209

the values of the probe current at $t = t_1$ may be determined from all
oscillograms taken at different U_{probe}. The same characteristics were
plotted also for other t values. From these characteristics, the authors
determined T_e and n_e at various times t, and thus $T_e(t)$ and $n_e(t)$. The
simplified circuit diagram of the arrangement is shown in Fig. 1. Fig. 2
shows four probe oscillograms taken at the same p_0 and the same current
in the tube, but at different U_{probe} (probe potential):

a) For $U_{probe} = -25$ v (with respect to the other probe) an ion current
which is constant until the current in the tube breaks, flows to the
probe, after which it decreases on account of de-ionization.

b) For $U_{probe} = -8.2$ v the same holds, but the current flowing to the
probe is weaker than in case a). c) For $U_{probe} = -5.9$ v, the current
flowing to the probe is predominant in the arc stage. After breaking
of the arc, the ion current flowing to the probe vanishes gradually, and
a decreasing ion current is left. d) For $U = -1.3$ v, an ion current

Card 2/8

Cooling of an electron gas in ...   S/057/61/031/003/015/019
                                           B125/B209

is continuously flowing to the probe. At the vapor pressures
$p_0 = 1.10^{-3}$ (20°C), ~5.10^{-3} (40°C), 17.10^{-3} (60°C), ~ 58.10^{-3} (80°C),
15 to 18 oscillograms each were taken at least, and from these the probe
characteristics with a spacing of 20 μ sec were drawn (Fig. 4). T_e de-
creases quickly and then slowly, and from the curvature of the probe
characteristics one may ascertain the absolute electron concentration n_e
at different times t. Tables 1 and 2 show the initial constants of time
t_0 of the concentration drop as determined by both methods. The agreement
of these results proves the measurements during de-ionization to be
correct. An investigation of the time dependence of T_e and n_e during
de-ionization of the discharge plasma in the pressure range of from 1
to 58.10^{-3} mm Hg at a discharge current of 1.3 a in a 65 mm thick tube
showed the following: 1) The simple method of determining τ_0 from an
oscillogram of the ion current impinging upon the probe at constant probe
potential is reliable. 2) In the initial stage of ionization, T_e decreases
the faster, the higher the pressure. 3) The difference $T_e - T_g$ in the
Card 3/8

Cooling of an electron gas in...   S/057/61/031/003/015/019
                                                B125/B209

process of de-ionization decreases gradually, but even after 400 μ sec of
thermal equilibrium a mercury discharge does not occur in the plasma. The
final temperature of the electrons attained during this time is the
lower, the higher the pressure. In the initial stage of the process, in-
elastic collisions of first kind play the principal part in gas cooling
at all pressures examined and at $1 - 5.10^{-3}$ mm Hg during the whole time
$(0 - 400 \mu$ sec). Elastic collisions are predominant at $p > 10.10^{-3}$ mm Hg
in all later stages of the process. 5) The metastable atoms as the only
energy reservoir of the electrons in the decaying plasma play an important
part in the initial and final stages of the process. There are 5 figures,
4 tables, and 12 references: 6 Soviet-bloc and 6 non-Soviet-bloc. The
two most recent references to English-language publications read as
follows: F. Mohler, Journ. Res. Bur. Stand. 19, 447, 1937; J. H. Simons,
R. P. Seward, Journ. Chem. Phys., 6, 790, 1938.

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. V. I. Lenina
              Moskva (All-Union Institute of Electrical Engineering
              imeni V. I. Lenin, Moscow)

SUBMITTED: June 6, 1960
Card 4/8

FEDOSEYEVA, L. I.

USSR/Biology - Bruchophagus infestations   FD-682

Card 1/1   : Pub. 129 - 17/25

Author   : Fedoseyeva, L. I.

Title   : Bruchophagi living in bean seeds

Periodical   : Vest. Mosk. un., Ser. fizikomat, i yest, nauk, Vol. 9, No. 3,
                   113-118, May 1954

Abstract   : Describes works conducted in the Tinguta steppe forest (leskhoz)
                   and in certain valleys of the Stalingrad Oblast, in which more
                   than 20 species of wild leguminous plants were investigated from
                   the viewpoint of infesting them with bruchophagi.

Institution   : Chair of Entomology

Submitted   : August 28, 1953

FEDOSEYEVA L. I.

USSR / General and Specialized Zoology. Insects.   P

Abs Jour: Ref Zhur-Biol., No 2, 1958, 6640.

Author : Fedoseyeva, L. I.
Inst   : AS USSR.
Title   : New Species of Bruchophagus Ashm. (Hymenoptera,
          Chalcidoidea), Developing on Leguminous Plants.

Orig Pub: Doklady AN SSSR, 1956, 111, No 2, 491-493.

Abstract: Bruchophagus kolobovae, obtained from the seeds
          of Lotus corniculatus (Podmoskov'ye, Poltava,
          Pyatigorsk); B. coluteae, from the seeds of Col-
          utea media (Uzbekistan); B. hedysari, from the
          seeds of Hedysarum sibircum (Western Siberia);
          B. macronycis, from the seeds of Astragalus mac-
          ronyx (Alma-Ata) and A. sieversianus (Uzbekistan),
          are described. -- A. P. Adrianov.

Chair of Entomology, Moscow State Univ.

Card 1/1

1

FEDOSEYEVA, L.I.

A survey of herbivorous species of Bruchophagus Ashm. (Hymenoptera, Chalcidoidea) in the U.S.S.R. [with summary in English]. Zool. zhur. 37 no.9:1345-1351 S '58.   (MIRA 11:10)

1.Kafedra entomologii Moskovskogo gosudarstvennogo universiteta.
                        (Chalcid flies)

FEDOSEYEVA, L. I.

Materials on the ecology of some species of the genus Bruchopha-
gus Ashm. (Hymenoptera, Eurytomidae), seed pests of leguminous
plants. Nauch. dokl. vys. shkoly; biol. nauki no.3:14-18 '60.

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstven-
nogo universiteta im. M.V. Lomonosova.
                (Stalingrad Province--Chalcid flies)
                (Leguminosae--Diseases and pests)

FEDOSEYEVA, L.I.

Genus Meromyza Mg. (Diptera, Chloropidae) in the U.S.S.R. Nauch.dokl.
vys.shkoly: biol. nauki no.4:46-51 '60.   (MIRA 13:11)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstvennogo
universiteta im. M.V.Lomonosova.
       (FRIT FLIES)

FEDOSEYEVA, L.I.

Species of the genus Meromyza Meig. (Diptera, Chloropidae)
in the Moscow area. Ent. oboz. 39 no.2:450-461 '60.

(MIRA 13:9)

1. Kafedra entomologii Moskovskogo gosydarstvennogo universiteta,
Moskva.

(Moscow Province-- Frit flies)

FEDOSEYEVA, L.I., kand.biolog.nauk

New data on grain flies of the genus Meromyza. , Zashch. rast.
ot vred. i bol. 6 no.5:41-42 My '61.   (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet.
                    (Moscow Province--Meromyza)

FEDOSEYEVA, L.I.

New palearctic species of frit flies of the genus Memoryza Mg.
(Diptera, Chloropidae). Ent.oboz. 40 no.3:704-709 '61.
(MIRA 15:3)

1. Kafedra entomologii Moskovskogo gosudarstvennogo universiteta,
Moskva.

(Frit flies)

FEDOSEYEVA, L.I.

Ecology of frit flies of the genus Meromyza (Diptera,
Chloropidae) in Moscow Province. Zool. zhur.
40 no.8:1205-1213 Ag '61.   (MIRA 14:8)

1. Department of Entomology, State University of Moscow.
              (Moscow Province--Frit flies)

FEDOSEYEVA, L.I., kand.biolog.nauk

Two forms of frit flies of the genus Meromyza infesting grain..
Zashch. rast. ot vred. 1 bol. 7 no.8:47 Ag '62.   (MIRA 15:12)
                    (Frit flies)

FEDOSEYEVA, L.I.

Ecology and taxonomy of frit flies of the genus Meromyza Mg. Vop.
ekol. 7:191-192 '62.   (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet.
                         (Frit flies)

FEDOSEYEVA, L.I.

Studying European frit flies of the genus Meromyza Mg.
(Diptera, Chloropidae). Ent. oboz. 41 no.2:470-474
'62.   (MIRA 15:11)

1. Kafedra entomologii Moskovskogo gosudarstvennogo
universiteta.
                    (Frit flies)

SUKHAREV, Mikhail Ivanovich, kand. tekhn. nauk; FEDOSEYEVA, Larisa
Semenovna, inzh.; BYKASOVA, G.I., red.; FREGER, D.P., red.
izd-va; BELOGUROVA, I.A., tekhn. red.

[Use of nonwoven fabrics (fibrous paper type) in the
manufacture of men's jackets] Ispol'zovanie netkanykh materialov
(tipe voloknistoi bumagi) pri izgotovlenii muzhskogo pidzhaka.
Leningrad, 1961. 18 p. (Leningradskiy Dom nauchno-tekhnicheskoi
propagandy. Obmen peredovym opytom. Seriia: Shveinaia pro-
myshlennost', no.5)   (MIRA 15:3)
          (Tailoring)   (Nonwoven fabrics)

L 43729-66   EWT(m)/EWP(j)/T/EWP(v)   IJP(c)   RM /WW
ACC NR: AP6023402   (A)   SOURCE CODE: UR/0323/66/000/002/0051/0054

AUTHOR: Sukharev, M. I. (Candidate of technical sciences, Docent); Fedoseyeva, L. S.
(Engineer)

ORG: Leningrad Institute of the Textile and Light Industry im. S. M. Kirov (Leningradskiy
Institut tekstil'noy i legkoy promyshlennosti)

TITLE: General conditions for testing glued nonwoven materials

SOURCE: IVUZ. Tekhnologiya legkoy promyshlennosti, no. 2, 1966, 51-54

TOPIC TAGS: adhesive, textile, sorption

ABSTRACT: In recent years the Soviet industry has mastered the production of new textile
articles, including glued nonwoven materials. They consist of textile fibers glued together
by various latexes. The sorption properties of the latter are somewhat different from those
of textile fibers. Furthermore, it is known that all glued nonwoven materials lose up to
50—60% of their strength with an increase of their water content and when they become wet.
Therefore the purpose of this study was to investigate the sorption properties of glued non-
woven materials and to elicit the time required to reach an equilibrium water content of these
materials during absorption and loss of water. Glued nonwoven materials differing in fiber

Card   1/3

L 43729-66

ACC NR: AP6023402   3

composition and glued by different latexes were used in the investigation. The specimens used in the test contained 100% cotton or a mixture of cotton, dacron, nitron, and verel bonded with butadiene-acylonitrile synthetic rubber. The water loss of the glued nonwoven materials was investigated by placing the specimens in a desiccator with 100% relative humidity for 24 hr and then into an air-conditioned chamber with a relative humidity of 65% and temperature of 20C. To determine the water loss the specimens were weighed every 4, 6, 16, 24, 30 and 34 hr until an equilibrium state was reached. The absorption of water by the materials was determined by drying the specimens to a constant weight at 105—110C and then placing them in an air-conditioned chamber with a relative humidity of 65% and temperature of 20C. The water content of the materials was determined every 4, 6, 16, 24, and 30 hr before an equilibrium water content. The results obtained were analyzed statistically. It was found that the water content of glued nonwoven materials depends upon the nature of the fiber and the type of latex. The sorption properties of presently used latexes are lower than for textile fibers, which leads to comparatively low sorption properties of glued nonwoven materials. Sorption equilibrium of the glued nonwoven materials under conditions of 65% relative humidity and at 20C occurs with the absorption of moisture after 24 hr and with the loss of moisture after 30 hr. When testing glued nonwoven materials to determine strength, elongation, weight per square meter, wear resistance, and other mechanical and physical properties, these materials should be kept spread out at a relative humidity of 65 ± 5% and temperature of 20 ± 5C for at least 30 hr. When determining the water content, hygroscopicity, and water loss

Card 2/3

L 43729–66

ACC NR: AP6023402   O

of glued nonwoven materials, five strips (50 x 200 mm) should be cut out for each type of test. Orig. art. has: 3 tables.

SUB CODE: 11/ SUBM DATE: 04Nov65/ ORIG REF: 003

Card 3/3 hs

USSR/Virology - Viruses of Man and Animals. Measles Virus.   E

Abs Jour : Ref Zhur Biol., No 6, 1959, 23846

Author   : Fedoseyeva, L.V.
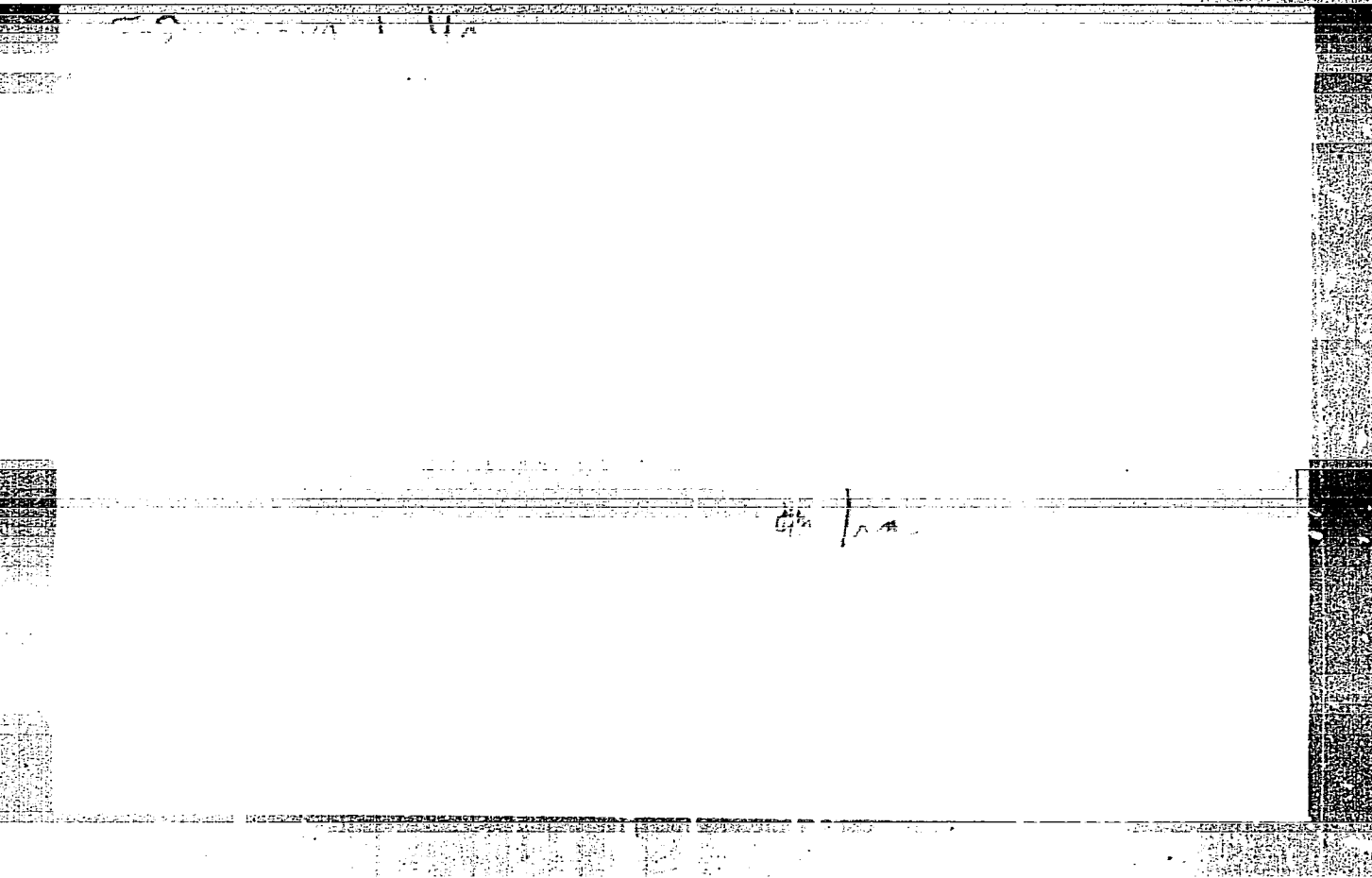
Inst   : Odessa Scientific Research Institute of Epidemiology
             and Microbiology

Title   : An Experiment of Obtaining Dry Anti-Measles Scrum.

Orig Pub : Tr. Odessk. n.-i. in-ta epidemiol. i mikrobiol., 1957,
             3, 141-145

Abstract : No abstract.

Card 1/1

- 23 -

FEDOSEYEVA, M.A. (Dnepropetrovsk 59, prospekt Kirova,d.106,kv.22)

Abstracts. Ortop., travm. i protez. 25 no.11:65-66 N '64.
(MIRA 18:11)
1. Iz Kazanskogo instituta travmatologii i ortopedii (dir. -
starshiy nauchnyy sotrudnik U.Ya. Bogdanovich). Submitted
December 2, 1963.

FEDOSEYEVA, M. D.

USSR/Farm Animals – General Problems.   G-1

Abs Jour   :   Ref Zhur – Biol., No 13, 1958, 03307

Author   :   Klimova, V.N., Lavrova, O.D., Ryzhkova, A.T., Fedoseyeva, M.D.

Inst   :   Moscow Technological Institute of Meat and Dairy Industries.

Title   :   The Carotene Content in Feeds of the Barybino Sovkhoz.

Orig Pub   :   Sb. stud. rabot. Mosk. tekhnol. in-t myasn. i moloch.
               prom-sti, 1958, vyp. 5, 113-119.

Abstract   :   No abstract.

Card 1/1

POPOVA, Ye.M.; DAYTER, A.B.; FEDOSEYEVA, M.F.

Leptospirosis infection in Pskov Province. Trudy Len.inst.epid.
i mikrobiol. 23:243-250 '61.   (MIRA 16:3)

1. Iz laboratorii osobo opasnykh infektsiy Leningradskogo insti-
tuta epidemiologii i mikrobiologii imeni pastera i otdela osobo
opasnykh infektsiy Pskovskoy oblastnoy sanitarno-epidemiologi-
cheskoy stantsii.
                        (PSKOV PROVINCE—LEPTOSPIROSIS)

FEDOSEYEVA, M.P.

M.

USSR/Cultivated Plants - General Problems.

Abs Jour   : Ref Zhur - Biol., No 4, 1958, 15467

Author   : V.Ya. Kompaneyets, M.P. Fedoseyeva

Inst   : Leningrad Agricultural Institute.

Title   : The Effect of Subjecting Crop Seeds to Electrical
              Discharge Before Sowing.
              (Vliyaniye predposevnykh vozdeystviy elektricheskim
              razryadom na semena sel'skokhozyaystvennykh kul'tur).

Orig Pub   : Zap. Leningr. s.-kh. in-ta, 1956, 12, 222-225

Abstract   : Research in the nature of a preliminary survey of the
              effect of electrical discharge on wheat and corn seed
              quality after harvesting was performed at the Leningrad
              Agricultural Institute in 1954-1955. Holding the seeds
              in an electrical field with 50 kw voltage for 40 seconds
              to $1\frac{1}{2}$ minutes increased germination by 15-20% and the
              wheat grain yield by 10-40%.

Card 1/1

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ZAYEV, Petr Petrovich, kand.sel'skokhozyaystvennykh nauk; ZHEZHEL', Nikolay
Grigor'eyvich, doktor sel'skokhozyaystvennykh nauk; YEUOSEYEVA,
Marianna Petrovna, kand.sel'skokhozyaystvennykh nauk; PETROV, N.P.,
red.; CHUMAYEVA, Z.V., tekhn.red.

[General agriculture] Obshchee zemledelie. Moskva, Gos.izd-vo
sel'khoz. lit-ry, 1957. 343 p.   (MIRA 11:3)
     (Agriculture)

ZAYEV, Petr Petrovich, kand.sel'skokhoz.nauk; ZHEZHEL', Nikolay Gri-
gor'yevich, doktor sel'skokhoz.nauk; FEDOSEYEVA, Marianna
Petrovna, kand.sel'skokhoz.nauk; IVASHKINA, L.A., red.;
CHUMAYEVA, Z.V., tekhn.red.

[General agriculture] Obshchee zemledelie. Izd.2., perer. i
dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 367 p.

(MIRA 13:11)

(Agriculture)

MAL'TSEV, Aleksandr Ivanovich, akademik; ZAYEV, P.P., prof.;
FEDOSEYEVA, M.P., dots.; KUSOVNIKOV, Ya.N., red.; BARANOVA,
L.G., tekhn. red.

[Weeds of the U.S.S.R. and their control] Sornaia rastitel'-
nost' SSSR i mery bor'by s nei. Izd.4., perer. i dop. P.P.
Zaevym i M.P.Fedoseevoi. Leningrad, Sel'khozizdat, 1962. 268 p.
(MIRA 16:6)

(Weed control)

EFROS, A.M.; FEDOSEYEVA, M.P.

Effect of benzimidazole derivatives on the growth and development
of cereal crops. Dokl. AN SSSR 146 no.1:236-237 S '62.

(MIRA 15:9)

1. Leningradskiy sel'skokhozyaystvennyy institut. Predstavleno
akademikom A.L. Kursanovym.

(Benzimidazole) (Grain) (Growth promoting substances)

ZAYEV, Petr Petrovich, prof.; ZHEZHEL', Aleksandr Aleksandrovich,
prof.; KOROTKOV, Aleksandr Aleksandrovich, dots.;
FEDOSEYEVA, Marianna Petrovna, dots.; BELOVA, Zoya
Vasil'yevna, prepodavatel'; GOKHNER, L.M., red.;
BARANOVA, L.G., tekhn. red.

[General agriculture and soil science] Obshchee zemledelie
s pochvovedeniem. [By] P.P.Zaev i dr. Moskva, Sel'khoziz-
dat, 1963. 620 p.   (MIRA 17:1)

1. Anapskiy sel'skokhozyaystvennyy tekhnikum (for Belova).

FEDOSEYEVA, N.N., red.; IGNAT'YEV, P.I., tekhn. red.

[Materials of the 15th Conference on Electric Current
Sources] Materialy Konferentsii po istochnikam toka.
Moskva, TSentr. in-t nauchno-tekhn. informatsii priboro-
stroeniia, elektrotekhn.promyshl. i sredstv avtomatizatsii
Pt.3. [Storage batteries] Akkumuliatory. 1962. 76 p.
                                        (MIRA 17:4)

1. Konferentsiya po istochnikam toka, 15th.

FEDOSEYEVA, N.N., red.

[Technology of the manufacture of electric transformers]
Nekotorye voprosy tekhnologii izgotovleniia transformatorov.
Moskva, 1963. 18 p.   (MIRA 16:8)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy in-
formatsii priborostroyeniya, elektrotekhnicheskoy pro-
myshlennosti i sredstv avtomatizatsii.
                (Electric transformers)

ABAZA, S.A.; FEDOSEYEVA, N.N., red.

[Design of automatic welding machines; abstracts] Kon-
struirovanie avtomaticheskikh svarochnykh mashin; re-
ferativnaia informatsiia. Moskva, 1963. 19 p.
                                        (MIRA 16:9)
1. TSentral'nyy institut nauchno-tekhnicheskoy informa-
tsii i priborostroyeniya, elektrotekhnicheskoy promyshlen-
nosti i sredstv avtomatizatsii.
        (Electric welding—Equipment and supplies)

ABAZA, S.A.; FEDOSEYEVA, N.N., red.

[Modern stamping methods and die sinking] Sovremennye metody
shtampovki i izgotovlenie shtampov. Moskva, TSentr. in-t
nauchno-tekhn. informatsii priborostroeniia, elektrotekhn.
promyshl. i sredstv avtomatizatsii, 1963. 19 p.
                                        (MIRA 17:4)
1. Russia 1923- U.S.S.R.) Gosudarstvennyi komitet po avtoma-
tizatsii i mashinostroeniiu.

BEREZINA, L.S.; BOLDIN, R.V.; FEDOSEYEVA, N.N., red.

[Survey of new patents on electric storage batteries]
Obzor novykh patentov na elektricheskie akkumuliatory.
Moskva, TSentr. in-t nauchno-tekhn. informatsii pribo-
rostroeniia, elektrotekhn. promyshl. i sredstv avtoma-
tizatsii, 1963. 43 p.   (MIRA 17:7)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po
avtomatizatsii i mashinostroyeniyu.

EWP(q)/EWT(m) BDS   APPT SI

ACCESSION NR: AP3003562   S/0020/63/151/002/0384/0387

AUTHORS: Pletenava, N. A.; Fedoseyeva, N. P.

TITLE: Effect of temperature on the diffusion of mercury in zinc

SOURCE: AN SSSR. Doklady, v. 151, no. 2, 1963, 384-387

TOPIC TAGS: mercury, zinc, diffusion coefficient

ABSTRACT: Direct methods were used to determine the dependence on temperature
of the coefficient of diffusion of mercury in zinc. The functional relation
between the temperature and the coefficient of exchange (surface) diffusion
is given by the figure in the enclosure. The paper was presented by Academician
P. A. Rebinder on 30 March 1963. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical
Chemistry, Academy of Sciences SSSR)

SUBMITTED: 28Mar63   DATE ACQ: 30Jul63   ENCL: 01

SUB CODE: PH, CH   NO REF SOV: 005   OTHER: 001

Card 1/2/

SILAEV; A.B. [Silayev, A.B.]; FEDOSEEVA, N.V. [Fedoseyeva, N.V.]; KATRUKHA, G.S.;
ANDREEVA, L.I. [Andreyeva, L.I.]; KOZLOV, L.V.

Preparation and properties of some L-α, γ-diaminobutyric acid
peptides. Coll Cz Chem 27 no.9:2240 S '62.

1. Moscow State University, U.S.S.R. (for Silaev and Fedoseeva).

FEDOSEYEVA, N.V.; SILAYEV, A.B.; ANDREYEVA, L.I.

Chemistry of polymyxin M. Part 6: Synthesis of peptides
of L-α,γ-diaminobutyric acid. Zhur.ob.khim. 33 no.3:1019-1023
Mr '63.   (MIRA 16:3)
        (Polymyxins)   (Peptides)
                        (Butyric acid)

FEDOSEYEVA, N.V.; TELESNINA, T.R.; SILAYEV, A.B.

Chemistry of polymyxin M. Part 7: Synthesis of peptides of
L-α, γ-diaminobutyric acid. Zht r. ob. khim. 33 no.8:2760-
2764 Ag '63.   (MIRA 16:11)

1. Moskovskiy gosudarstvennyy univ rsitet imeni M.V. Lomonosova.

FEDOSEYEVA, N. V.; SILAYEV, A. B.

"Synthesis and properties of α,γ-diaminobutyric acid peptides."

report submitted for 7th European Peptide Symp, Budapest, 3-8 Sep 64.

FEDOSEYEVA, N.V.; SILAYEV, A.B.

Separation of DL-threonine into optical antipodes. Vest. Mosk.
un. Ser. 2: Khim. 20 no.1:69-70 Ja-F '65.

1. Kafedra organicheskoy khimii Moskovskogo universiteta.　(MIRA 18:3)

FEDOSEYEVA, O.P., Cand Chem Sci — (diss) "Study of the kinetics of ion exchange in tars and membranes." Mos, 1959, 11 pp (State Committe of the Council of Ministers for Chemistry. Order of Labor Red Banner Sci Res Inst im L.Ya.Karpov) 110 copies (KL, 34-59, 112)

- 22 -

TELUSLYEVA, O. P.

5(2),(3)   PHASE I BOOK EXPLOITATION   SOV/2554

Akademiya nauk SSR. Otdeleniye khimicheskikh nauk. Komisiya po khromatografii

Issledovaniya v oblasti ionoobmennoy, raspredelitel'noy i osadochnoy khromatografii (Studies in the Field of Ion Exchange, Distribution and Precipitation Chromatography) Moscow, Izd-vo AN SSSR, 1959. 150 p. Errata slip inserted. 3,500 copies printed.

Ed. of Publishing House: M.G. Yegorov; Tech. Ed.: I.N. Guseva;
Editorial Board: K.V. Chmutov, Corresponding Member, USSR Academy
of Sciences (Resp. Ed.); F.M. Shemyakin, Professor; E.N. Gapon, Professor; E.N. Ol'shanova,
Professor; K.M. Saldadze, Docent, and M.M. Tunitskiy, Professor.

PURPOSE: This book is intended for chemists and chemical engineers.

COVERAGE: The book discusses studies in ion-exchange, distribution,
and precipitation chromatography. Various problems of the theory
of chromatography and its application are also considered. This
is the 4th collection of articles published by the Committee on
Chromatography. The first collection was published in 1952 under
the title: "Issledovaniya v oblasti khromatografii" (Studies
in the Field of Chromatography); the second was published in
1955 under the title "Teoriya i praktika primeneniya ionoobmennykh
materialov" (Theory and Practice of the Use of Ion-exchange Ma-
terials), and the third was published in 1957 under the title "Is-
sledovaniya v oblasti ionoobmennoy khromatografii" (Studies in the
Field of Ion-exchange Chromatography). No personalities are men-
tioned. References are given after most of the articles.

5(4)

AUTHORS: Fedoseyeva, O. P., Cherneva, Ye. P., Tunitskiy, N. N. $SOV/76-33-4-28/32$

TITLE: Investigation of the Kinetics of Ion Exchange Sorption
             (Issledovaniye kinetiki ionoobmennoy sorbtsii).II. Kinetics
             of Exchange With Participation of Hydrogen Ions (II. Kinetika
             obmena s uchastiyem vodorodnykh ionov)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 936-942
             (USSR)

ABSTRACT: The investigation under review deals with the process of the
             complete cation exchange and limiting cases of the exchange -
             the self-diffusion and diffusion of ions of microcomponents
             in the resin - of various cation forms. In the case of a com-
             plete exchange the investigation concerned the initial as
             well as the end stage at which one of the exchanging cations
             was present in a small quantity. The effective diffusion co-
             efficients (DC), that were computed for this case, were com-
             pared with the (DC) for the ions of the microcomponents. To
             simplify calculations the authors investigated along with
             the full exchange in the resin, the exchange of the cations
Card 1/4   in cation exchanger membranes (from sulphurized polystyrene

SOV/76-33-4-28/32

Investigation of the Kinetics of Ion Exchange Sorption. II. Kinetics
of Exchange With Participation of Hydrogen Ions

resin). In fact, when exchanging cations of different mobili-
ties through the membrane, an electric field is generated
(as in the case of the complete exchange in resin), which
can be measured. The kinetics of the cation exchange was in-
vestigated on polystyrene resins with various contents (high,
normal, low) of divinyl benzene. The kinetic experiments
took place at 19-20°. Under investigation were monovalent
cations in 0.165 n and bivalent cations in 0.25 n and 1 n
solutions. An adsorption or desorption method was applied,
with use of the isotopes Na^{24}, Rb^{86}, Sr^{89} and Ca^{45}. The
above mentioned membranes contained 70% of resin KU-2 and
30% divinylbenzene. It was observed (Fig 1) that the quickest
exchange is that of H^+-ions from the resin with Na^+-ions
of the solution, and the slowest is the diffusion of the
ions of the microcomponents of sodium in the resin (in the
H-form). Values are given of the effective (DC) for the

Card 2/4   exchange between the Na^+ and H^+ in the resin (with lower

SOV/76-33-4-28/32

Investigation of the Kinetics of Ion Exchange Sorption. II. Kinetics
of Exchange With Participation of Hydrogen Ions

divinylbenzene content) (Table 1), as well as the (DC) of
Na^+ being found in microamounts in the resin (Table 2), and
it proceeds therefrom that the complete exchange between
Na^+ and H^+ takes place with a higher effective (DC) than are
the (DC) of the ions of the microcomponents of sodium, which
diffuse in resin (in the H-form). The same also holds
for rubidium. The effective (DC) increase with a decrease in
the relative content of H-ions in the resin which is explain-
ed by an anomalously greater mobility of the H-ions in the
resin. The ions Na^+, Ca^{2+} and Ce^{3+} were investigated on the
cation exchanger membrane. It was observed that (Fig 4) the
effective (DC) increase with the decrease of the relative
content of H-ions in the solution. There are 6 figures,
2 tables, and 7 references, 1 of which is Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova, Moskva
Card 3/4   (Physico-chemical Institute imeni L. Ya. Karpov, Moscow)

5(4)

AUTHORS: Fedoseyeva, O. P., Tunitskiy, N. N. (Moscow)   SOV/76-33-5-28/33

TITLE: Investigation of the Kinetics of Ion Exchange Sorption (Issle-
dovaniye kinetiki ionoobmennoy sorbtsii). 3. Complete Ex-
change Between Univalent and Bivalent Ions in Resins (3.Polnyy
obmen mezhdu odnovalentnymi i dvukhvalentnymi ionami v smolakh)

ABSTRACT: The process mentioned in the title was investigated on the
cation exchanger KU-2. The limiting cases of self-diffusion
and the diffusion of the ion microcomponents with various
cation occupation of the exchanger were measured together
with the total exchange. Figure 1 shows the dependence of
the diffusion coefficient for strontium on the composition
of the resin containing Sr and H ions (upper curve) and Sr and
Na ions (lower curve). The diffusion coefficients of the Sr
ions show a linear dependence on the composition of the solution.
The diffusion proceeds faster in resin containing H and Na
ions than in resin containing Sr ions only. Table 1 shows the
results of the experimental series carried out in order to

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Investigation of the Kinetics of Ion Exchange Sorption. SOV/76-33-5-28/33
3. Complete Exchange Between Univalent and Bivalent Ions in Resins

determine the diffusion coefficients of the ion microcompo-
nents and the coefficients of self-diffusion. Hence it
appears that univalent and bivalent ions diffuse faster in a
resin containing univalent ions than in a resin containing
bivalent ions. This dependence can be explained to some degree
by the different swelling capability of the resin containing
univalent and bivalent ions (Table 2). The swelling capa-
bility depends more on the cation occupation of the resin
than on the concentration of the swelling solution. Figures
2-4 show the results of the investigation of the exchange
between univalent ions (Na^+ and H^+) and bivalent ions
(Ca^{2+} and Sr^{2+}) as well as the curves of the total exchange,
the self-diffusion and the diffusion of the ion microcompo-
nents. In all cases, the self-diffusion of the sodium ions
was the fastest, that of the strontium ions the slowest
process. Figures 5 and 6 compare the kinetics of the ex-
change of Sr ions from the resin for H ions from the solution
with the exchange for Na ions from the solution. There are

Card 2/3   6 figures, 2 tables, and 4 references, 2 of which are Soviet.

Investigation of the Kinetics of Ion Exchange Sorption. SOV/76-33-5-28/33
3. Complete Exchange Between Univalent and Bivalent Ions in Resins

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova, Moskva
(Physico-chemical Institute imeni L. Ya. Karpov, Moscow)

SUBMITTED: November 16, 1957

Card 3/3

38027 R
S/181/60/002/C10/037/051
B104/B205

AUTHORS: Gliberman, A. Ya., and Fedoseyeva, O. P.

TITLE: Study of the effect of the crystallographic orientation of
                silicon upon the properties of photo-converters

PERIODICAL: Fizika tverdogo tela, v. 2, no. 10, 1960, 2585 - 2588

TEXT: The use of polycrystalline silicon as a starting material for the
production of ordinary photo-converters and of monocrystalline photo-con-
verters with large areas calls for a study of the effect of crystal ori-
entation upon the quality of photo-converters. Silicon crystals were cut
in plates parallel to the three principal crystallographic axes (111),
(110), and (100). Nickel coatings applied to the contact faces made the
contact resistance of 0.1 ohm independent of the crystal orientation.
Photocells made of silicon plates of different orientation were all made
as follows: Phosphorus was allowed to diffuse from the gaseous phase in
p-type silicon and, at the same time, boron from the solid phase into
n-type silicon plates. The depth of the position of the p-n junction in
plates of different orientation was determined through coloration of a .

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Study of the effect...

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B104/B205

diagonal cut, and was found to be equal for all silicon plates, irrespec-
tive of their orientation (error in measurement, ± 10 %). All grains of
polycrystalline plates showed equal depth for all p-n junctions. The
volt-ampere characteristics of photocurrent and dark current were deter-
mined for the photocells. The volt-ampere characteristics obtained for
both n-type and p-type silicon photocells were found to be in good agree-
ment for all three directions ('111', '110', '100'). The data presented
further indicate that maximum power, series resistance, short-circuit
current, and open-circuit voltage are nearly equal for photocells of dif-
ferent orientation. This is evidence to the fact that the quality of
photo-converters does not depend on the crystallographic orientation. The
curves shown in Fig. 3 resulted from measurements of a large number of
photocells. In this figure, the relative numbers of photocells are re-
presented as a function of the specific power for photocells with the (111)
plane (curve 1) and for photocells of any orientations (curve 2). The
good agreement between the curves, obtained for different numbers of photo-
cells, prove that the quality of photo-converters is independent of the
crystallographic orientation. T. M. Golovner is thanked for making the
X-ray diffraction measurements. There are 3 figures, 1 table, and 3 ref-
erences: 1 Soviet-bloc and 2 non-Soviet-bloc. The two references to
Card 2/4

Study of the effect...

S/181/60/002/010/037/051
B104/B205

English-language publications read as follows: C. W. Mueller,
N. H. Ditrik, RCA Rev., no. 1, 1957; M. V. Sillivan, J. H. Eigler, J.
Electrochem. Soc., 104, no. 4, 226, 1957.
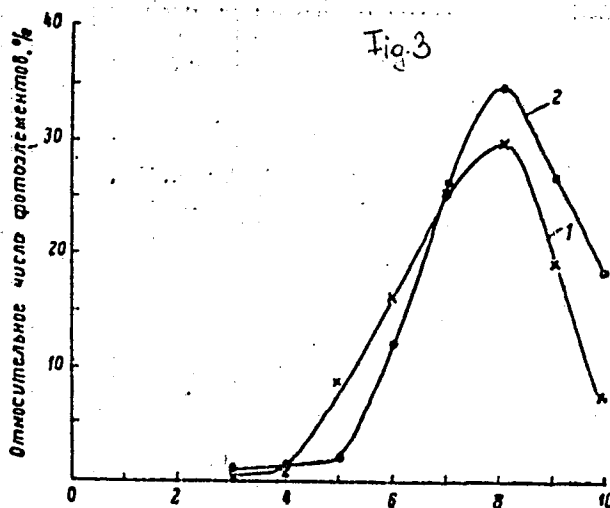
SUBMITTED: February 8, 1960

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Study of the effect...

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B104/B205

Fig. 3: Distribution curves of maximum specific power.

Legend: Relative number of photocells as a function of maximum specific power.
1 for photocells with (111) plane; 2 for photocells of any orientations.

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Fig. 3

33946
S/665/61/000/003/010/018
E194/E420

26. 1512

AUTHORS: Zaytseva, A.K., Fedoseyeva, O.P.

TITLE: An investigation of the possibility of using silicon photo-energy convertors with double sided working surfaces

SOURCE: Akademiya nauk SSSR. Energeticheskiy institut. Teploenergetika. no.3, 1961. Poluprovodnikovyye preobrazovateli solnechnoy energii. 87-90

TEXT: The silicon used in photo-energy convertors is expensive so it is desirable to obtain the maximum power per unit weight of silicon. Within the limits this may be achieved by reducing the thickness but another approach is to use both sides of the material, one illuminated by direct sunlight and the other by reflection. There is no special difficulty in making double sided photo-elements; they differ from the normal ones only in that after the silicon has been coated, one side is ground leaving a narrow strip on one edge, on which the rear contact is deposited. The remaining unground part of the plate is thus a working surface which forms a unit with the working surface of the opposite side.

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S/665/61/000/003/010/018

An investigation of the possibility ...   E194/E420

For the present work, photo-elements were made of silicon with
various values of specific resistance ranging from 0.1 to
1 ohm/cm.   The photo elements were illuminated on one side by a
lamp and on the other side by light reflected from the lamp by a
plane mirror.   Data obtained on illuminating double sided
elements from both sides were compared with the controlled results
for single sided elements.   As the specific resistance of the
initial silicon was increased the efficiency of the double sided
elements fell from 5.2 to 2% whereas the efficiency of the single
sided cells was about 6 to 8%, irrespective of
the resistivity of the silicon.   The reduction in efficiency of
the double sided element results from reduction in the short-
circuit current density and in the no-load voltage because of a
considerable increase in the series resistance of the double sided
element.   This is about 1 ohm in the case of a single sided
element whereas with the double sided elements it ranges from
4 ohms with the silicon of lowest resistance to 15 - 22 ohms f
high resistance silicon.   This series resistance is high in the
double sided cells because of the length of the path of curr
Card 2/3

An investigation of the possibility ...

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S/665/61/000/003/010/018
E194/E420

carriers in the lower layer of the silicon base to the rear contact and because of the reduction in the cross-section available to current carriers. When the double sided elements were illuminated from one side they were not so good as the single sided elements. However, when they were illuminated from both sides the power per unit area of silicon plate was greater than that of the single sided elements by a factor of 1.2 to 1.3, provided that the specific resistance of the silicon was not greater than 0.1 to 0.2 ohms cm. Double sided elements of silicon with resistance of 0.5 to 1 ohm cm are always worse than the corresponding single sided elements. Consequently, double sided elements should only be made of low resistance silicon and of small dimensions. The increase in output is appreciable in large installations and it may be desirable to use double sided elements in particular cases; further study of the subject of rear reflectors is indicated. There are 1 figure, 1 table and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc. The reference to an English language publication reads as follows:
Ref.1: Prince M. J. Appl. Phys. No.26 (5), 1955, 534.

Card 3/3

41095

S/058/62/000/008/128/134
A160/A101

26 1421

AUTHORS: Zaytseva, A. K., Fedoseyeva, O. P.

TITLE: An investigation of the possibility of using silicon photoconver-
              ters with a double-sided effective area

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 43, abstract 8-3-86b
              (In collection: "Tepldenergetika", no. 3, Moscow, AN SSSR, 1961,
              87 - 90)

TEXT: In silicon photoconverters, which are now being produced, only one
effective side of the plate with a coated layer of p or n-type base silicon is
used. The non-effective side of this plate has a solid metal slip-ring rear-
wall contact. To obtain a greater power per weight unit of Si, an investigation
was carried out of the possibility of using silicon photoconverters with a
double-sided effective surface. In this case, after diffusing the impurity in
the base Si, one of the sides of the plate is ground-off, i.e. not completely,
but in the form of a narrow strip to which a rear-wall contact is applied.
The remaining unground part of the plate is also an effective area of the photo-

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An investigation of the...

S/058/62/000/008/128/134
A160/A101

converters. A description is given of the designs, the diagrams of connecting the loads and of the commutation of one-sided and double-sided photoconverters. During the testing of one-sided and double-sided photoconverters, it was determined that the efficiency of the two-sided photoconverters decreases with increasing specific resistance ρ of the initial Si from 5.2% to 2%. The efficiency of one-sided photoconverters did not depend on ρ and amounted to $\sim 6 - 8\%$. A decrease in the efficiency of the double-sided photoconverters is caused by a sharp increase of their resistance in series effected by an increase of its rear-wall component. The power taken per area unit of double-sided photoconverters from Si with $\rho \leqslant 0.1 - 0.2$ ohm·cm during the illumination of both sides was 1.2 - 1.3 times higher than in one-sided photoconverters. There are 2 references.

V. Shch.

[Abstracter's note: Complete translation]

Card 2/2

33947

S/665/61/000/003/011/018
E039/E420

26. 15 b2

AUTHORS: Gliberman, A.Ya., Fedoseyeva, O.P.

TITLE: An investigation of the factors influencing the series
             resistance and other parameters of silicon photo-
             converters

SOURCE: Akademiya nauk SSSR. Energeticheskiy institut.
             Teploenergetika. no.3, 1961. Poluprovodnikovyye
             preobrazovateli solnechnoy energii. 91-99

TEXT: The maximum power yield from silcion photoconverters is
largely defined by the value of its series resistance R_Π,
which is the sum of the base resistance R_T and the alloy layer
resistance R_p

$$R_\Pi = R_T + R_p \tag{1}$$

The value of the layer resistance for a rectangular photo-converter
with a current carrying contact on one edge of the working surface
is given by

$$R_p = \frac{\rho W}{2tL} \tag{2}$$

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S/665/61/000/003/011/018

An investigation of the factors ...   E039/E420

where ρ - specific resistance of the alloyed layer;   W - distance
between the contact and the opposite side of the photoelement;
l - length of the photoelement; t - thickness of the alloy layer.
Both R_T and R_p are small - in the usual photo-converter.
The aim of the present work was to determine the two components of
the series resistance and to show the relationship between them as
a function of various factors.   It is assumed that the layer
resistance is defined by Eq.(2) and that the base resistance is
inversely proportional to the area of the element

$$R_T = \frac{R_T^{\gamma\beta}}{S} \qquad (3)$$

where $R_T^{\gamma\beta}$ is the base resistance for unit area of photoelement,
hence

$$R_\Pi S = \frac{\rho W^2}{2t} + R_T^{\gamma\beta} \qquad (5)$$

where $Wl = S$ - the area of the photoelement.

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An investigation of the factors ...   E039/E420

Experiments were carried out with rectangular photoelements of
area 10 to 16 cm^2.   The dependence of the series resistance on the
width W of a series of photoelements was obtained.   It is shown
that R_η does not change appreciably for values of W from 2 to
4 cm but it rises sharply when W is less than 1 cm.
As ρ, t, l, $R_T^{\gamma\beta}$ are independent of W , then the series resistance

$$R_\eta = AW + \frac{B}{W} \qquad (6)$$

where A $= \frac{\rho}{2t l}$ and   B $= \frac{R_T^{\gamma\beta}}{l}$

This indicates a linear dependence of the layer resistance R_p
on W , and that the base resistance R_T follows a hyperbolic law.
The experimental results confirm this.   The dependence of the
effeciency on the width W was also investigated for photo-
converters with different specific resistances.   The optimum
efficiency ($\sim 5\%$) occurred at W $= 0.5$ to 1.5 cm and decreased
steadily as W was increased further.   Data was obtained on the
Card 3/4

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S/665/61/000/003/011/018
An investigation of the factors ...   E039/E420

change in maximum power yield with W .   It was shown that the
yield rises to a maximum at W = 1 to 3 cm, after which it levels
off as W is increased.   In addition, the effect of changing the
length l while keeping W constant was investigated.   We have

$$R_m = \frac{C}{l} \qquad (7)$$

where.

$$C = \frac{\rho W}{2t} + \frac{RT^A}{W} = \text{const}$$

The experimental results confirm the hyperbolic form.   It is shown
that the efficiency is independent of the length while the power
yield is proportional to it.   There are 9 figures, 2 tables and
2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.   The reference
to an English language publication reads as follows:
Ref.1: Prince M. J. Appl. Phys. no.26 (5), 1955.

Card 4/4

... Izd vo Nauka, ... 5, 54-9.

TAGS: solar cell, silicon solar cell

ABSTRACT: The results of an experimental investigation of backing-alloyed converters (solar cell) with a ...

... and is independent of the ...

Card 1/2

ACCESSION NR: AT5015790

The efficiency of such cells is practically constant and their power increases
width, their behavior

2 Feb 65   ENCL 00

03   OTHER 4

A Ya. Fedoseyeva

USSR. Energetichaskiy

TAGS: solar cell, silicon solar cell

ABSTRACT: Some factors influencing the saturation reverse current and the
characteristics of silicon phot
experimentally invest gate

Card 2

L 63564-65   EWT(1)/EWT(m)/EWG(v)/EEC-4/EEC(t)/EWA(h)/FCC ·· Pe-5/Pq-4/Pae-2/
Peb/PI-4/Po-4   CW

ACCESSION NR: AP5015681

UR/0293/65/003/003/0499/0502
621.376.234:539.12

AUTHOR: Brykina, L. S.; Vasilev, V. S.; Golovin, B. M.; Landsman, A. P.; Osipenko,
B. P.; Fedoseyeva, O. P.

TITLE: The effect of high-energy protons on semiconductor detectors of nuclear
radiation. II. Diffusion-drift detectors

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 3, 1965, 499-502

TOPIC TAGS: semiconductor detector, nuclear radiation, diffusion drift detector,
silicon N I P detector, proton bombardment

ABSTRACT: Eighteen silicon N-I-P detectors with 0.3-mm sensitive films and four
with 2-mm layers were subjected to proton bombardment of 2×10^9—8×10^9
proton/cm^2-sec with a maximum dose of 5×10^{13} proton/cm^2. With the 0.3-mm type,
investigation was made of detector output pulse height, reverse current, energy
resolution, and detector capacitance as a function of the radiation dose. The results
show that the immunity of the diffusion-drift detectors is approximately equal to
that of the surface-barrier type; i.e., no substantial deterioration of parameters
was observed for doses as high as 10^{12} proton/cm^2. With the 2-mm type, the changes in

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L 63564-65

ACCESSION NR: AP5015681

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the electrical structure were determined by measuring the detector photoresponse before and after bombardment. It was found that after a dose of 8×10^{12} proton/cm². the sensitive area of the detector was reduced, becoming practically negligible after a dose of 5×10^{13} proton/cm². Orig. art. has: 4 figures.   [BD]

ASSOCIATION: none

SUBMITTED: 16Dec64   ENCL: 00   SUB CODE: NP, EC

NO REF SOV: 003   OTHER: 000   ATD PRESS: 4020

Card 2/2

L 27774-66   EWA(h)/EWT(1)/EWT(m)/EWP(t)/EII   IJP(c)   JD

ACC NR: AP6012445   SOURCE CODE: UR/0292/65/000/012/0044/0047

AUTHOR: Gliberman, A. Ya. (Candidate of technical sciences); Fedoseyeva, O. P. (Candidate of chemical sciences)

ORG: none

TITLE: Effect of the back-contact quality on the operating characteristics of silicon photoconverters

SOURCE: Elektrotekhnika, no. 12, 1965, 44-47

TOPIC TAGS: photoconverter, photocell

ABSTRACT: The results are reported of an experimental study of the effect of temperature (within -70 +80C) on the short-circuit current, no-load voltage, resistance, and efficienty of p-Si devices. All parameters were calculated from light 1-V characteristics. The characteristics were measured of photoconverters with two-types of back contact: (a) conventioanl, produced by chemical deposition of Ni and subsequent firing-on and (b) improved by boron-alloying of Si and then Ni plating and firing-on. With the improved back contact, the temperature coefficient of no-load voltage was 0.00236 v per 1C; the efficiency was higher than that of conventional devices and linearly increased with decreasing temperature; the short-circuit current linearly decreased with temperature (2.01×10^{-6} amp/cm^2 per 1C).

Card 1/2   UDC: 621.383.62-555.56/67/001/24

L 27774-66

ACC NR: AP6012445

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Explanations of the accompanying physical processes are offered. Also, the improved devices exhibited better power and resistance ratios at strong illuminations than those of the conventional devices (2 and 16 vs. 1.3 and 12, respectively). Orig. art. has: 7 figures, 1 formula, and 2 tables.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 004

Card 2/2

BRYKINA, L.S.; GOLOVIN, B.M.; LANDSMAN, A.P.; OSIPENKO, B.P.; FEDOSEYEVA, O.P.

Action of high-energy protons on semiconductor detectors of nuclear radiations. Kosm. issl. 2 no.4:623-627 Jl-Ag '64.

(MIRA 17:9)

S/137/62/000/012/004/085
A006/A101

AUTHORS: Larionova, D. S., Fedoseyeva, R. K.,

TITLE: Non-metallic inclusions in vacuum-remelted bearing steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 44 - 45,
              abstract 12V282 ("Tr. N.-i. i eksperim. in-ta podshipnik.
              prom-sti", 1960, 1 (21), 55 - 68)

TEXT: The authors investigated the quality of ШХ15 (ShKh15) grade steel,
grade ЭИ906 (EI906), ЭИ907 (EI907), ЭИ908 (EI908) stainless and grade
ЭИ347 (EI347) and ЭИ944 (EI944) scale-resistant steels, produced by vacuum
arc-remelting. It was established that vacuum ball-bearing steel ШХ15 (ShKh15)
is of higher purity in respect to non-metallic impurities than steel melted by
conventional methods. In vacuum arc-remelting of ShKh15 steel, the amount of ox-
ide and silicate inclusions is, in particular, considerably reduced. Sulfide and
globular inclusions in this steel decrease to a lesser degree. In vacuum arc re-
melting of stainless and scale-resistant steels their refining from Al-inclusions
proceeds more effectively than for ShKh15 steel. Vacuum arc remelting does not

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Non-metallic inclusions in...

S/137/62/000/012/004/085
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reduce the amount of nitridic inclusions in the steel. There are 13 references.

A. Savel'yeva

[Abstracter's note: Complete translation]

Card 2/2

S/277/63/000/001/006/017
A052/A126

AUTHORS: Larionova, D. S., Vlasova, R. A., Fedoseyeva, R. K.

TITLE: Some technological properties of vacuum bearing steel

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk, 48. Mashinostroitel'nyye
             materialy, konstruktsii i raschet detaley mashin, no. 1, 1963, 6,
             abstract 1.48.43 ("Tr. N.-i. i eksperim. in-ta podshipnik.
             prom-sti", v. 1(21), 1960, 69 - 79)

TEXT: The effect of the vacuum arc remelting of ШX 15 (ShKh15) steel on
its technological properties: annealability, hardenability, tendency to aus-
tenitic grain growth, the amount of residual austenite after hardening, and ma-
chinability was investigated. Further, the corrosion resistance of vacuum steel
was investigated. The annealability of steel after vacuum remelting depends
directly on the annealability of the initial metal. The degree of annealability
of ShKh15 vacuum steel compared with the initial metal, at a considerably lower
reduction of vacuum steel blanks, is a little lower than that of the initial
steel. The amount of residual austenite in vacuum steel at equal hardening tem-

Card 1/2

Some technological properties of vacuum bearing steel   S/277/63/000/001/006/017
A052/A126

peratures is a little lower than in the initial metal. In respect of machinabil-
ity the vacuum remolten steel does not differ essentially from the steel molten
by means of a conventional technology. When producing bearing elements from
vacuum steel, a 13 - 14 class working surface finish can be achieved which is
difficult to achieve when producing elements from conventionally molten steels.
The corrosion-resistance of ShKh15 vacuum remolten steel is higher than that of
a common steel.'

[Abstracter's note: Complete translation]

Card 2/2

FEDOSEYEVA, S.A.

Finds of neolithic implements in the Amga Valley. Nauch. soob.
IAFAN SSSR no.3:86-90 '60.   (MIRA 16:3)
                    (Amga Valley--Stone age)

ZAVGORODNIY, S.V.; FEDOSEYEVA, T.G.; SHUMAKHER, A.Ya.

Boron fluoride as a catalyst in organic chemistry. Part 14:
Alkylation of toluene and ethylbenzene by pseudobutylene.
Trudy VGU 57:107-116 '59.   (MIRA 13:5)
        (Butene) (Toluene) (Benzene)

MOTYLEV, Yu.L., kand. tekhn. nauk; ZALESSKIY, Ye.P., prof.; KALYUZHNYY,
I.S., kand. sel'khoz. nauk; AZIZOV, A.A., mlad. nauchnyy sotr.;
POLETAYEV, A.V., kand. khim. nauk; ABRUTSKAYA, Ye.G., mlad.
nauchnyy sotr. Prinimali uchastiye: BUTLITSKIY, Yu.V., mlad.
nauchnyy sotr.; FEDOSEYEVA, T.I., mlad. nauchnyy sotr.; BIRUL',A.K.,
prof., doktor tekhn. nauk, retsenzent; ZVERINSKIY, G.I., inzh.,
retsenzent; KOVALEV,T.G., inzh., retsenzent; BASIN,M.M.,inzh., re-
tsenzent; DEBERDEYEV, B.S., red.; DONSKAYA, G.D., tekhn. red.

[Stability of earth roadbed and road mats in regions with arti-
ficial irrigation] Ustoichivost' zemlianogo polotna i dorozhnykh
odezhd v raionakh iskusstvennogo orosheniia. [By] IU.L.Motylev i dr.
Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp.i shos. dorog
RSFSR, 1961. 178 p.   (MIRA 15:2)

(Uzbekistan—Road construction) (Uzbekistan—Irrigation)

MOTYLEV, Yu.L., kand. tekhn.nauk; BUTLITSKIY, Yu.V.,mlad. nauchn.
sotr.; STUPAKOVA, L.F., ml. nauchn. sotr.; FEDOSEYEVA,
T.I., ml. nauchn. sotr.; SHUL'GINA, V.P., kand. tekhn.nauk;
IVANOV, N.N., prof., doktor tekhn. nauk, retsenzent;
BEZRUK, V.M., doktor geol.-miner. nauk, retsenzent;
KOVRIZHNYKH, L.P., red.; BODANOVA, A.P., tekhn. red.

[Investigating the stability of a saline-soil roadbed] Is-
sledovaniia ustoichivosti zemlianogo polotna iz zasolennykh
gruntov. Moskva, Avtotransizdat, 1963. 115 p.
                                                (MIRA 16:8)
     (Road construction)   (Soil mechanics)

L 10628-65   EWT(m)/EWP(b)   Pad   RAEM(t)   JD/HW
ACCESSION NR: AP4047647   S/0189/64/000/005/0069/0073

AUTHORS: Panteleymonov, L. A.; Khanna, A. Yu.; Sokolova, I. G.;
Sirotina, T. I.

TITLE: The nature of the transitions in solid solution on a base of Ni_5Sb_2

SOURCE: Moscow. Universitet. Vestnik. Seriya 2. Khimiya, no. 5, 1964, 69-73

TOPIC TAGS: nickel alloy, antimony, solid solution, phase transition/ RKD 57 x ray
camera

ABSTRACT: The authors studied transitions in $Ni-Sb$ alloys by means of differential
thermal analysis, x-ray analysis, Vickers hardness, microstructure, density, and
specific volume. The alloys were prepared in a high-frequency furnace in an atmos-
phere of He with total impurity content below 0.016%. A polymorphous transition was
noted at 890°. At 525° with 27.25% Sb and at 540° with 32% Sb, the compound exhibits
eutectoid decomposition. The curve of Vickers hardness for Ni-Sb compounds has
three breaks, at 23.5, 28.25, and 29.25% Sb, and two minimums at the first two Sb
values. Ni_5Sb_2 corresponds to the segment of 26.25-29.25% Sb. Etching revealed
that the eutectoid with 27% Sb formed delta solid solution on the base of Ni_1Sb_4.

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L 10628-65
ACCESSION NR: AP4047647

and beta on Ni_5Sb_2. Ni_5Sb_2 corresponds to a well-defined law on the specific gravity curve and to a maximum on the specific volume curve. X-ray powder photographs, made with an RKD-57 camera using unfiltered copper radiation, indicate a single crystalline phase in annealed samples, with a tetragonal lattice having cell constants of a = 8.766 Å, c = 12.535 Å, and c/a = 1.43. Samples heated at 1050° have a hexagonal lattice with c = 9.3 Å, a = 3.55 Å, and c/a = 2.616. Orig. art. has: 6 figures.

ASSOCIATION: Moskovskiy universitet (Moscow University)

SUBMITTED: 03Mar64   ENCL: 00

SUB CODE: SS, MM   NO REF SOV: 005   OTHER: 001

Card   2/2

FEDOSEYEVA, T.P.; KHMELEVA, N.V.

Influence of natural conditions and the use of land for farming
on the erosional processes of the Orel-Samara interfluve. Vest.
Mosk. un. 3er. 5: Geog. 20 no.1:19-26 Ja-F '65.   (MIRA 18:3)

1. Kafedra geomorfologii i kafedra ekonomicheskoy geografii
SSSR Moskovskogo universiteta.

413.17

S/020/62/146/003/013/019
B101/B144

5.4600

AUTHORS: Kuz'minskiy, A. S., Neyman, M. B., Fedoseyeva, T. S.,
             Lebedev, Ya. S., Buchachenko, A. L., Chertkova, V. F.

TITLE: Conversions of free radicals in gamma-irradiated polyiso-
             prenes

PERIODIAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 611-614

TEXT: The initial stage of cis- and trans-polyisoprene structuration
caused by 10-50 Mrad Co^{60} irradiation was studied. The appearance and
disappearance of free radicals was ascertained by recording the epr
spectrum. An epr spectrum with a signal width of 14 oersteds was
observed on trans-polyisoprene after irradiation at room temperature in
vacuo. The structure of the radical causing this signal could not be
clarified; probably it was formed by separation of a hydrogen atom from
the α-methylene group. At $-196^{\circ}C$, irradiated trans-polyisoprene showed
a broad singlet due to superposition of various radical spectra. If air
was admitted to the ampoule at room temperature, the spectrum passed
over into a peroxide spectrum. No epr spectrum appeared in cis-poly-
Card 1/3