

CHAYVA, M. K.

Shlikhvoi analiz Analysis of ore slimes Leningrad. Glavnoie redakttsiie velesro-ras-vedochnoi i geodezicheskoi lit-ry, 1937. 65 p.

Cyr.4 QE19

CHIEVA, M. K.

Mineralogical analysis of ore slimes and ore concentrates. Moskva. Gos. izd-vo geol. lit-ry. 1950. 178 p. (51-21760)

QE367.G48

CHUYEVA, M.N.; SHMANENKOV, I.V., redaktor; BABINTSEV, N.I., redaktor
Izdatel'stva; POPOV, N.D., tekhnicheskiy redaktor.

[Practical manual on classing minerals by means of gravity solutions and salts] Prakticheskoe rukovodstvo po razdeleniu mineralov v tiashelykh zhidkostiakh i soliakh. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane neдр, 1954. 52 p.
(Mineralogy--Classification)

CHUYEVA, M.N., dotsent.

Method of determining minerals according to streak and chemical reactions. Zap.Len.gor.inst.30 no.2:221-233 '55. (MIRA 9:7)
(Mineralogy. Determinative)

15-1957-3-3022

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3,
p 82 (USSR)

AUTHOR: Chuyeva, M. N.

TITLE: The Color and Brightness of Minerals in Light from
a Mercury-Quartz Lamp (Okraska i svecheniye
mineralov v luchakh rtutno-kvartsevoy lampy)

PERIODICAL: V sb: Kristallografiya. Nr 5, Moscow, Metallurgizdat,
1956, pp 269-286

ABSTRACT: In order to develop a method of identifying
minerals under the light of a mercury-quartz
lamp (PRK-4), observations were made under a number
of physical conditions. The minerals were investi-
gated in unfiltered violet and in ultraviolet
light from a portable mercury-quartz lamp using
a PRK-4 source. Reflected, absorbed, and transmitted
rays were noted under the unfiltered light in

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The Color and Brightness of Minerals in Light from a Mercury-
Quartz Lamp

addition to the change in color. It was noted that fluorescent minerals were stained violet under the filtered ultraviolet light because the visible violet light passed through the filter along with the ultraviolet light. In unfiltered light, the most characteristic change in color occurred in those minerals that are red or dark blue in visible light. Thus cinnabar and realgar turned black and dark brown, and dark blue covellite became violet. A distinct change in color is characteristic of limonite; it turns a bright greenish yellow in the unfiltered light, reminiscent of native sulfur in color. The changes in color of the streak may be diagnostic. For example, the cherry-red streak of hematite becomes black in unfiltered light. Some minerals may be distinguished by the fact that they fluoresce clearly even in unfiltered light. Minerals with metallic, semimetallic, and adamantine luster shine more brilliantly in the unfiltered light

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The Color and Brightness of Minerals in Light from a Mercury-
Quartz Lamp

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from the mercury-quartz lamp than they do in ordinary light. Minerals of native metals and of sulfides, which have metallic luster and possess the metallic chemical bond, do not exhibit fluorescent effects. Sulfides of the sphalerite group, which contain Zn and Cd and lack Fe, do fluoresce. The only native element to fluoresce is diamond. Carbonate minerals that fluoresce are schroëckingerite, hydrozincite, aragonite, and calcite; of the phosphates, autunite and apatite fluoresce. Calcium tungstates and molybdates characteristically fluoresce clearly. Of the silicates with separate silica tetrahedrons, zircon and willemite show a characteristically intense fluorescence. Silicates with chain structures (pyroxenes and amphiboles) show practically no fluorescence. Silicates with skeletal structure fluoresce only weakly. Fluorescence is generally not present in the "halogenides" except for lead chloride (cotunnite) and fluorite.

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G.A.G.

CHUYEVA, S.A.

"DIRECT PRODUCTION OF ELECTRON POSITRON PAIRS BY HIGH ENERGY ELECTRONS"
S.A. Chuyeva, A.A. Varfolomeyev, R.I. Gerasimova, L.A. Makaryina, Ap.P. Miskakova,
A.S. Romantseva, G.S. Stolyarova, V.A. Eumanyan,

The cross-section of direct production of electron-positron pairs by high energy electrons was measured experimentally. For this purpose, a study was made of isolated electron-photon cascades and the photon component of high energy nuclear interactions in emulsion stacks exposed to radiation in the stratosphere. In order to exclude spurious cases of direct pair production, which constitute the main difficulty in experimental measurement of the cross-section of such pairs, the calculation was carried out by the Monte Carlo method.

The calculation was made for three values of primary electron energy: 10, 100 and 1,000 Bev, taking into consideration two possible variants of the Bremsstrahlung spectrum: Bethe-Heitler and Migdal variants (Landau-Pomeranchuk and Ter-Mikaelyan effects). A method for determining the energy of ultra-relativistic electrons from the lateral distribution of the apexes of electron-positron pairs is suggested.

During the experimental measurement of very high electron energies, certain possible sources of underestimation were eliminated.

The cross section of direct pair production by high energy electrons was found to be in agreement with Shabha's calculation within the limits of experimental error.

report presented at the International Cosmic Ray Conference, Moscow 6-11 July 1959

CHUYEVA, S. A.

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D299/D304

(2)

3.2410 (1105, 1705, 2805)

AUTHORS: Varfolomeyev, A. A., Gerasimova, R. I., Gurevich, I. I.,
Makar'ina, L. A., Romantseva, A. S., and Chuyeva, S. A.

TITLE: Electron-photon showers with energies of 11^{11} - 10^{13} ev.
in nuclear emulsions

SOURCE: International Conference on Cosmic Radiation. Moscow,
1959. Trudy. v. 2. Shirokiye atmosferynye livni i kas-
kadnyye protsessy, 299-306

TEXT: A detailed investigation was carried out of 15 electron-pho-
ton showers with energies $>10^{11}$ ev., at low depths. In contradis-
tinction to other works, the results are compared with those ob-
tained for cascades by the Monte Carlo method. Six emulsion stacks
were used, with total volume of about 10 liters. In 5 of the
stacks of emulsion Р-НИКФИ (R-NIKFI), the grain density of relati-
vistic electrons was 30 - 35 grains per 100 μ . The energy E_{γ} of
primary quanta which generate the shower, was determined from the

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Electron-photon showers ...

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number of cascade electrons of energy higher than $\mathcal{E}_0 = 300$ Mev, at a depth of 2.5 - 3.0 t_0 . A table lists (for comparison) the values of E_f , obtained by the Monte Carlo method and by formula

f

$$R = \frac{1}{16,1} \left\{ 45,0 + \ln \left[\left(\frac{2x}{E} \right)^2 (1 + 140 x) \right] \right\} \quad (1)$$

where x is the distance from the pair vertex in cm; this formula is semiempirical and represents the ratio of ionization losses of pairs to those of relativistic electrons; the ionization losses are due to mutual shielding of electron and positron fields. In the experiments, particular care was taken to detect the vertices of the electron-positron pairs, formed at depths $\leq 1.5 t_0$. - After determining the lateral shower distribution, the energy of the electrons of the pairs was measured by means of multiple scattering (to an accu-

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Electron-photon showers ...

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racy of 20 - 30%) for energies of up to $(5-7) \cdot 10^8$ ev. The total number of pairs formed at depths $\leq 1.0 t_0$ and $\leq 1.5 t_0$ with energies higher than (1-2) Mev, is plotted in two figures, from which it is evident that the experimental points fit better the curve which takes into consideration the influence of the medium on the bremsstrahlung (the curve obtained by Migdal's formula); the curve obtained by Bethe-Heitler's formula does not fit the experimental results. The figures also show that not one of the 15 showers under consideration is anomalous. Apparently, the majority of so-called "anomalous" showers, described in literature, can be explained by statistical fluctuations in the cascades or by improper determination of the energy of primary electron-positron pairs. Another figure exhibits the experimental curves of longitudinal shower development; here, too, no appreciable deviations from the corresponding theoretical curves are observed. A table lists data on the number of pairs formed at small distances $r < 0.5 \mu$ from the nearest electron track; these data might be useful in analyzing the cross-section for pair formation by high-energy electrons. There are 4

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Electron-photon showers ...

figures, 3 tables and 21 references: 10 Soviet-bloc and 11 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: K. Pinkau. Nuovo Cim., 3, 1285, 1956; H. Fay. Nuovo Cim., 5, 293, 1957; J. Iwadare. Phil. Mag., 3, 680, 1958; S. K. Srinivasan, J. S. Butcher, B. A. Chartres, H. Messel. Nuovo Cim., 9, 77, 1958.

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Card 4/4

Chudakov, S. A.

21(8)
 AUTHORS: Verfolomeev, A. A., Gerasimov, R. I., Miskarina, L. A.,
 Romantseva, A. S., Chuyeva, E. A. SOV/56-56-3-7/1

TITLE: Ionisation Along the Tracks of Electron-Positron Pairs of
 High Energy (Ionizatsiya vol' sledov elektronno-positronnykh
 par vysokoy energii)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
 Vol 36, No 3, pp 707-716 (USSR)

ABSTRACT: In the introduction the authors discuss the problem and the
 results of several already published works dealing with
 this subject. Table 1 contains for the 5 investigated showers
 (No. 5, 6-204, 2-84, 2-44 and 1-109) the data of the emission
 spectra which they were recorded (see previous paper by the
 same authors "Soviet Phys. JETP" 1958, No 7) Table 2 contains a list of the
 β -values according to Janssen (Vanomali) (Refs 10, 12) and
 according to Chudakov (Ref 1). (Today it is possible to ob-
 tain more exact β -values from curves by the Monte Carlo
 method by taking the influence exercised by matter on brems-
 strahlung into account. The publication of respective results
 has been delayed). A very detailed chapter of this paper
 deals with gauging of the emissions (Type R-11E2). The follow-

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Ionisation Along the Tracks of Electron-Positron Pairs of High Energy

ing experimental data concern the track densities of five
 high-energy electron-positron pairs in these emulsions. Measure-
 ments were carried out on the first pairs of electron-photon
 showers. Pair energy was determined from the energy spectrum
 of the cascade electrons at a distance of 0.5 radiation
 lengths from the vertex of the first pair. In three cases
 pair energy was nearly 10^{12} ev and in two cases it was
 approximately $5 \cdot 10^{11}$ ev. Track density was determined by two
 methods: from the grain density in the track and from the gap
 length distribution coefficient. Compared with a particle
 for which the specific energy loss is twice as great as the
 ionisation loss of the electron, the track density of the
 pair near the vertex was found to be smaller. This decrease
 of the pair track density can be explained by the mutual
 screening of the electron and positron during ionisation. The
 results obtained are compared with the theoretical ionisation
 curves for pairs calculated by A. Ye. Chudakov (Ref 1). The
 authors finally thank Professor L. I. Gurevich for his inter-
 est and discussions, A. A. Kondrashina for his help in

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Ionisation Along the Tracks of Electron-Positron Pairs of High Energy
 SOV/56-56-3-7/1

evaluating measuring results, and D. M. Smolyovich and his
 group for developing the film of the ionisation plates. There
 are 2 figures, 2 tables, and 21 references, 3 of which are
 Soviet.

SUBMITTED: August 16, 1959

Card 3/3

VARFOLOMEYEV, A.A.; GERASIMOVA, R.I.; GUREVICH, I.I.; MAKAR'INA, L.A.;
ROMANTSEVA, A.S.; CHUYEVA, S.A.

Effect of the density of the medium on bremsstrahlung in electron-
photon showers involving energies from 10^{11} to 10^{13} ev. Zhur.
eksp. i teor. fiz. 38 no.1:33-45 Jan '60. (MIRA 14:9)
(Bremsstrahlung) (Cosmic rays)

CHUYEVA, S. A.

S/056/62/043/001/047/056
B102/B104

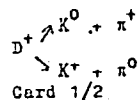
5

AUTHORS: Barkov, L. M., Mukhin, K. N., Ogurtsov, V. V.,
Romantseva, A. S., Svetloolobov, I. A., Chuyeva, S. A.,
Shlyapnikov, R. S., Likhachov, M. F., Stavinskiy, V. S.,
Strunov, L. N.

TITLE: The problem of the D^+ -meson

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 1(7), 1962, 335-337

TEXT: The authors have searched for a D^+ -meson production or a decay
among 14,000 pairs of photographs. A propane bubble chamber with pulsed
magnetic field was irradiated with a beam of positively charged particles
(momentum ≈ 1.8 Bev/c) containing up to 9% K^+ mesons. The processes
looked for were $K^+ + p \rightarrow D^+ + \Sigma^+$ and



The problem of the D^+ -meson

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B102/B104

The first branch of the decay reaction is the more possible. Neither a process $K^+ + p \rightarrow D^+ + \Sigma^+$ nor one of the type $K^+ + n \rightarrow D^+ + \Sigma^0$ could be found. It is inferred that the D^+ meson production cross section in K^+N reactions will be smaller than $1.2 \cdot 10^{-29} \text{cm}^2$.

ASSOCIATION: Institut atomnoy energii (Institute of Atomic Energy)
(R. S. Shlyapnikov); Ob"yedinennyy institut yadernykh
issledovaniy (Joint Institute of Nuclear Research)
(L. N. Strunov)

SUBMITTED: April 25, 1962

Card 2/2

BARKOV, L.M.; MUKHIN, K.N.; OGURTSOV, V.V.; ROMANTSEVA, A.S.; SVETLOLOBOV,
I.A.; CHUYEVA, S.A.; SHLYAPNIKOV, R.S.; LUKHACHEV, M.F.; STAVINSKIY,
V.S.; STRUNOV, L.N.

The problem of the D^+ -meson. Zhur. eksp. i teor. fiz. 43 no.1:335-
337 J1 '62. (MIRA 15:9)

1. Ob'yedinsennyy institut yadernykh issledovaniy (for Strunov).
(Moscow)

L 98337-65 EWI(m) Feb DIAAP
ACCESSION NO: AT301045

UN/5136/64/000/700/0001/0015

AUTHOR: Kruchinin, S. P.; Iutkin, K. N.; Remontseva, A. B.; Svetlilobov, I. A.;
Bulkovskaya, R. N.; Gulyeva, G. A.; Balyapnikov, R. B.

TITLE: Elastic p-p scattering at 1.45 BeV

SOURCE: Moscow. Institut ~~energii~~ ^{energii}. Doklady, no. 700, 1964. Uprugoye
(p-p)-rasscyaniye pri 1,45 BeV, 1-15

TOPIC TAGS: elastic scattering, proton proton scattering, pion scattering, differential cross section

ABSTRACT: A propane bubble chamber was used to investigate the angular dependence of elastic scattering of protons by protons at an incident-proton momentum of 2.2 BeV/c, which is higher than the energies used in earlier investigations. The protons came from the 10 BeV accelerator of the Joint Institute of Nuclear Research. A total of 17,000 pairs of stereophotographs was scanned, ~ 900 cases of elastic $p-p$ and pp scattering cases were analyzed, and the reduction of these data made it possible to determine the differential cross section of elastic pp scattering at 1.45 BeV over the entire angle interval of 0--90° (c.m.s.). Calculations based on

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L 58337-55

ACCESSION NR: AT5010445

the optical model with a small region of phase shift gave best agreement with the experimental data with parameter values $R_1 = 0.45 F$, $R_2 = 0.95 F$, $a = 0.344$, and $\varphi = 1.77$ rad. (R --interaction radius, φ --phase shift, a --amplitude of transmitted wave for a unit amplitude of incident wave). In the energy region from 0.38 to 30.9 BeV, the differential cross section is proportional to $A \exp(-F_{c.m.s.}/F_0)$,

with $A = 115$ mb/sr and $F_0 = 143$ MeV/c. "The authors thank I. I. Gurevich for valuable advice, A. P. Benediktov, V. I. Baranov, and A. V. Tel'nov for help in operating the equipment, and V. B. Balova, L. S. Baturina, and A. A. Kondrashina for participating in the measurements." Orig. art. has: 5 figures, 9 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

EXCL: 00

SUB CODE: NP

NR REF SOV: 001

OTHER: 012

RR
Cofd 2/2

CHUYEVA, S.V.

EXCERPTA MEDICA Sec 17 Vol 5/6 Public Health June 59

1582. ON THE EPIDEMIOLOGY OF SPRING-SUMMER ENCEPHALITIS IN THE TATAR ASSR (Russian text) - Chueva S. V. - MED. PARAZIT. I PARAZIT. BOL. 1958, 27/3 (308-313) Graphs 1 Tables 3 Illus. 1

Cases of spring-summer encephalitis in the south-eastern districts of the Tatar ASSR are registered. The maximal incidence is in June, and in persons living or working in the forest. Persons between 16 and 49 yr. old (77.5% of cases) are most susceptible. Clinically, the meningeal and abortive forms devoid of complications predominate.

CHUYEVA, S. V.

"The incidence of tick-borne encephalitis in the Tatar republic over a 10-year period (1949-1958)." Page 95

Desyatoye soveshchaniye po parazitologicheskim problemam i prirodnoochagovym bolezniam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leninrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

Republic Sanitary-Epidemiological Station Kazan'

CHUYEVA, S.V.

Spring-summer tick-borne encephalitis in the Tatar A.S.S.R. Kaz.
med.zhur. no.3:3-5 My-Je '62. (MIRA 15:9)

1. Respublikanskaya sanitarno-epidemiologicheskaya stantsiya
(glavnyy vrach - I.Z.Mukhutdinov) Ministerstva zdravookhraneniya
Tatarskoy ASSR.
(TATAR A.S.S.R.--ENCEPHALITIS) (TICKS AS CARRIERS OF DISEASES)

L 31991-65 EWI(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM/GS
ACCESSION NR: AT4048198

S/0000/64/000/000/0465/046

AUTHOR: Pokrovskaya, L. A.; Frolova, G. S.; Chuyevskaya, A. I.

TITLE: Development and application of gas-liquid chromatography for production control at the Krasnoyarsk synthetic rubber plant

SOURCE: Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po gazovoy khromatografii, Moscow, 1962. Gazovaya khromatografiya (Gas chromatography); trudy konferentsii, Moscow, Izd-vo Nauka, 1964, 465-469

TOPIC TAGS: synthetic rubber production, gas liquid chromatography, diethyl ether chromatography, divinyl chromatography

ABSTRACT: In view of the drawbacks inherent in the physical chemical methods of divinyl and diethyl ether determination in synthetic rubber production, chromatographic procedures were developed at the Krasnoyarsk synthetic rubber plant. The solid carrier consisted of diatomaceous brick, granulated to 0.25-0.5 mm; the moving carrier was air and a thermochemical detector was used. The sample was introduced by a syringe. Stearic acid, dibutylphthalate, triethylene glycol, polyethylene glycol, repellent RP-122 (N-formyl-1, 2, 3, 4, -tetrahydroquinoline) acetophenone and diglycerol (on alumina) were tested as the stationary phase. Optimum results were obtained with 2 and 3 m columns

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ACCESSION NR: AT4048198

(4-5 mm in diam.) at different speeds of carrier gas and temperatures; for diatomaceous earth and 20% acetophenone, T = 20C, air velocity 50 ml/min, sample size 0.02 - 0.03. Representative chromatograms are shown. In the determination of ether or divinyl, diglycerol is the best stationary base, determination time 15-30 minutes (depending on adsorbent), relative error 1-10%. Graphic methods of calculation were used, thus dispensing with calibration coefficients for each component of the mixture. The method worked out by VNISK has been verified and applied to production. For the analysis of divinyl-butylene mixtures and production control, the NIMSK liquid-gas chromatograph procedure was used; the adsorbent is triethylene glycol butyrate on diatomaceous brick; the detector is a catharometer and the carrier is hydrogen. A thermochemical detector and air as the carrier can also be used. Results are tabulated. Orig. art. has: 4 figs and 3 tables.

ASSOCIATION: None

SUBMITTED: 16Jul64

NO REF SOV: 000

ENCL: 00

SUB CODE: MT, GC

OTHER: 000

Card 1/2

IA 172774

USSR/Nuclear Physics - Electrons, Internal Conversion 21 Oct 49

"Study of the Angular Correlation of Internal Conversion Electrons," L. I. Rusinov, Ye. I. Chuykin, Leningrad Physicotech Inst, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol IXVIII, No 6, pp 1029-1032

Exptl study of angular correlation of Br-80* conversion electrons. Describes instr used. Number of int electrons registered by instr counters detd by absorption method. Some results: (1) Lifetime of intermediate nucleus Br-80* is less than 10-12 sec. (2) Mechanical moment of Br-80 nucleus, having excitation energy of

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USSR/Nuclear Physics - Electrons, Internal Conversion (Contd) 21 Oct 49

37 keV, is not equal to zero. (3) Coeff of int conversion show Br-80* nucleus emits dipole radiation in transition to ground state. (4) Exptl value for angular correlation of int conversion can be used to det angular moment of metastable nucleus Br-80*. Submitted by Acad A. F. Toffe 25 Aug 49.

172774

CHUYKIN YE. I.

CHUYKIN, Ye. I.

USSR/Physics - Ultrasounds' speed

FD-1017

Card 1/1 : Pub. 154 - 21/24

Author : Chuykin, Ye. I.

Title : Application of the impulse method to measure the velocity of ultrasounds

Periodical : Zhur. tekhn. fiz., 24, 1124-1135, Jun 1954

Abstract : Attempts to explain the character of the distortions of an acoustic impulse during passage through boundary of media with different acoustic impedance. Attempts to explain also the influence of the distortions upon accuracy of measurement of velocity of ultrasound. Results of computations show distortion of the form of impulse can lead to considerable errors in measurement of velocity in absorbing substances. This conclusion is confirmed by experiments. Thanks Prof. B. P. Konstantinov, Corr.-Mem. Acad. Sci USSR, for proposing this subject. Six references (e.g. Ye. I. Chuykin, Dissertation, Leningrad Polytechnic Institute imeni Kalinin, 1952.)

Institution : -

Submitted : January 30, 1954

CHUYKIN, Ye.I.; BOBROVA, A.M.; BOCHKAREV, V.M.; BALUKOVA, Ye.V.;
RYBAKOV, Ye.I.; SARAPUL'TSEV, I.A.; SOKOLOVA, L.A.

Use of radioactive indicators in studying the movement regularities
of technological solutions in the production of titanium dioxide.
Lakokras.mat.i ikh prim. no.5:64-70 '62. (MIRA 16:1)
(Radioactive tracers) (Titanium oxides)

ACC NR: AP7000526 SOURCE CODE: UR/0048/66/030/011/1791/1793

AUTHOR: Chuykin, Ye. I.; Romanov, A. M.; Lenin, A. S.

ORG: Physico-technical Institute im. A. F. Ioffe, SSSR Academy of Sciences (Fiziko-tekhnicheskiy institut, Akademii nauk SSSR)

TITLE: Measuring the vertical intensity of hard γ -quanta at various atmospheric depths [Paper presented at the All-Union Meeting on Physics of Cosmic Radiation held in Moscow from 15-20 November 1965]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 11, 1966, 1791-1793

TOPIC TAGS: gamma radiation, upper atmospheric radiation, radiation measurement, telescope, gamma quantum

ABSTRACT: A special γ -telescope shown in Fig. 1 was designed for measuring the vertical intensity of γ -quanta with $E > 70$ Mev at various atmospheric heights. It consists of a scintillation detector with a 12-mm thick CsI(Tl) crystal and a total-absorption Cherenkov counter, both of which are connected in a coincidence circuit. The CaI(Tl) crystal simultaneously serves to convert γ -quanta into electron-positron pairs. A plastic scintillator, connected in an anticoincidence circuit, shields the telescope from charged particles. Electron discrimination is employed to exclude possible noise from neutron "stars". The

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ACC NR: AP7000526

coincidence circuit is protected from signals resulting from bursts in CsI which exceed the value of a burst caused by a μ -meson during its

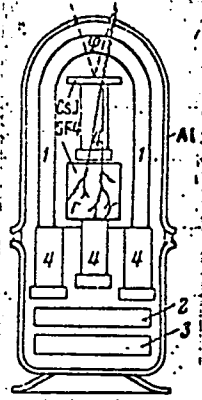


Fig. 1. Schematic drawing of the telescope

1 - Plastic scintillator; 2 - power supply block; 3 - electric circuits; 4 - photoamplifier (FEU-13)

passage through the CsI crystal perpendicularly to the plane of the plate. Geometrical factor Γ of the telescope is determined by the radiation pattern and the effective area of the system. The average value of Γ is $2 \pm 0.15 \text{ cm}^2 \text{ sterad}$. The lower energy threshold of recorded γ -quanta is determined by a discriminator in the channel of the

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ACC NR: AP7000526

Cherenkov radiator. The threshold value was determined by the calibration of the radiator on a synchrotron and a meson telescope. The threshold was established from the ratio of signals from γ -quanta and

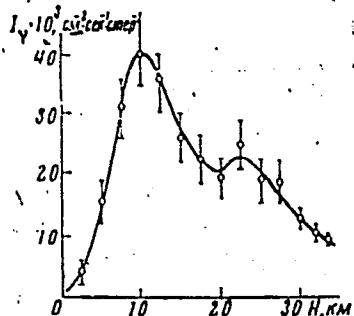


Fig. 2. Vertical intensity of γ -quanta with $E > 100$ Mev versus altitude

μ -mesons. The efficiency of recording γ -quanta by the telescope depends on the efficiency of pair formation in CsI and on the threshold of a differential discriminator in the CsI channel. For $E_\gamma = 100$ Mev this efficiency was 0.25 ± 0.08 . Transistors and tunnel diodes are used in all the components. The averaged results of balloon measurements conducted at a geomagnetic latitude of 40° and atmospheric depths of

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ACC NR: AP7000526

7, 8, and 12 mbar are illustrated in Fig. 2. The maximum of the curve is observed at latitudes of 10-20 km and corresponds to $I_{max} = 40 \times 10^{-3} \text{ cm}^{-2} \cdot \text{sec}^{-1} \cdot \text{sterad}^{-1}$. Orig. art. has: 3 figures and 2 tables.

[WA-75]

[JR]

SUB CODE: 18,20/SUBM DATE: none/ OTH REF: 004

Card: 4/4

CHUYKINA, K.-I.

"Characteristic of the Multiplicities of Values for Additive Vector Functions."
Thesis for degree of Cand. Physicomathematical Sci. Sub 20 Jun 49, Moscow City
Pedagogical Inst imeni V. P. Potemkin.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering
in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

CHUYKINA, K. I.

Chuykina, K. I. On additive vector-functions. Doklady Akad. Nauk SSSR (N.S.) 76, 801-804 (1951). (Russian)

If f is a function from a Boolean algebra S of subsets of a set X to a Hilbert space R , the variation of f on a subset E of X (in symbols $\text{var}(f, E)$) is the supremum of $\sum \|f(E_i)\|$ extended over all finite partitions $\{E_i\}$ of E (where E_i , all E_i , and all sets named below are assumed to be in S). The function f is called continuous if, for every set E and every positive number ϵ , there is a partition $\{E_i\}$ of E such that $\max_i \text{var}(f, E_i) < \epsilon$.

If $\{x_i; i=1, \dots, r\}$ is a finite set of vectors in R spanning an n -dimensional subspace of R , the set of all vectors of the form $\sum_{i=1}^r \theta_i x_i$ where $0 \leq \theta_i \leq 1, i=1, \dots, r$, is called the n -dimensional parallelepiped determined by $\{x_i\}$. If P and Q are parallelepipeds, and if there is a single-valued mapping from the vectors y , determining Q onto the vectors x_i , determining P , such that the sum of the y 's in the inverse image of each x_i is x_i , then Q is said to be an extension of P .

If $\{P_n\}$ is a sequence of parallelepipeds which is monotone in the sense that P_{n+1} extends P_n for every n , then the closure of the union of all P_n is called the limiting body of the sequence. The author's main theorem is that if f is additive and continuous, then the closure of the range of f is the limiting body of a monotone sequence of parallelepipeds. If S is a Boolean σ -algebra and R is finite-dimensional, then the range itself is such a limiting body and, conversely, every such limiting body is the range of a suitable f .

P. R. Halmos (Chicago, Ill.).

Source: Mathematical Reviews,

Vol 12 No. 7

Handwritten initials/signature

CHUYKINA, K.I.

USSR/Mathematics - Vector functions

FD-827

Card 1/1 : Pub. 64 - 2/10

Author : Glivenko, Ye. V. (Moscow)

Title : Sets of values of additive vector-functions

Periodical : Mat. sbor., 34(76), 407-416, May/Jun 1954

Abstract : Considers the problem concerning the sets of values of additive vector-functions given on sets of a certain Borel body and taking values in an n-dimensional Euclidean space E^n . Refers to K. I. Chuykina article "Additive vector-functions," Doklady Akademii Nauk SSSR, 76, No 6 (1951), 801-804.

Institution : --

Submitted : November 13, 1952

CHUYKINA, N. I.

URAZOV, G. G., akademik; TULINOVA, V. B.; PLYUSHCHEV, V. Ye.; CHUYKINA, N. I.

Study of conditions for the formation of double sulfates of
lanthanum and ammonium from solutions. Dokl. AN SSSR 103 no. 4:
635-638 Ag'55. (MLRA 8:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M. V.
Lomonosova

(Lanthanum sulfate) (Ammonium sulfate)

CHUYKINA, N.I.

USSR/ Physical Chemistry - Thermodynamics. Thermochemistry. Equilibrium.
Physicochemical analysis. Phase transitions

B-8

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11187

Author : Urazov G.G., Tulinova V.B., Plyushchev V.Ye., Chuykina N.I.

Inst : Academy of Sciences USSR

Title : Correction in the Paper "Study of the Conditions of Formation of Double Sulfates of Lanthanum and Ammonium from Solutions"

Orig Pub : Dokl. AN SSSR, 1955, 105, No 5, 884

Abstract : Concerning RZhKhim, 1956, 50191

Card 1/1

1. CHUYKO, A. T.
2. USSR (600)
4. Poultry - Feeding and Feeding Stuffs
7. On the "Vernyi Put' "Collective Poultry Farm. Ptitsovodstvo no. 3, 1952.

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

Chuykina, N.I.

URAZOV, G.G.; TULINOVA, V.B.; PLYUSHCHEV, V.E.; CHUYKINA, N.I.

Solubility in the system lanthanum sulfate -- ammonium sulfate --
water at 50°. *Khim.redk.elem. no.3:14-27 '57.* (MLRA 10:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
M.V. Lomonosova.

(Ammonium sulfate)
(Lanthanum sulfate)

BORISENKO, I.V.; NISELEV, A.V.; PETROVA, R.S.; CHUYKINA, V.K.; SHCHERBAKOVA, K.D.

Chemical modification of silica gel surface by methylchloro-
silanes for gas chromatography. Zhur.fiz.khim. 39 no.11:2685-
2690 N '65. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova,
khimicheskiy fakul'tet.

AKSHINSKAYA, N.V.; KISELEV, A.V.; NIKITIN, Yu.S.; PETROVA, R.S.; CHUYKINA,
V.K.; SHCHERBAKOVA, K.D.

Geometric and chemical modification of silica gel for the
adsorption separation of hydrocarbons by gas chromatography.
Zhur.fiz.khim. 36 no.5:1121-1123 My '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Silica) (Hydrocarbons) (Gas chromatography)

CHUYKO, A.

CHUYKO, A., kand.tekhn.nauk.

~~Life of stones.~~ IUn.tekh. 2 no.11:10-14 N '57. (MIRA 10:11)
(Petrology)

CHUYKO, A., kand. tekhn. nauk; ROMODANOV, A.

Floors for meat combines made of "plastic" concrete. Mias ind
SSSR 34 no. 6:20-21 '63. (MIRA 17:5)

1. Rostovskiy inzhenerno-stroitel'nyy institut.

15.8210 also 2209

²²⁵⁶³
S/190761/003/005/006/014
B101/B218

AUTHORS: Neymark, I. Ye., Chuyko, A. A., Slinyakova, I. B.

TITLE: Olefine-substituted silicas as active fillers of polymers

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 5, 1961, 711-715

TEXT: The authors varied the properties of silica by substituting the OH groups of its surface, and studied the effectiveness of the modified silica as a filler of polymethylmethacrylate. Since the presence of double bounds on the surface of the filler promised an especially high activity, the authors modified coarse-pored silica gel, silipur (fine-disperse silica), and powdered silica gel by the following methods: 1) introduction of the allyl radical by reaction of an organomagnesium allyl compound and silica chlorinated on its surface; 2) treatment of chlorinated silica gel with allyl alcohol in the autoclave at 200°C for 2 hr; 3) treatment of silica gel with methylvinyl dichlorosilane vapor and subsequent removal of the nonreacted chlorosilane by heating in vacuo to 200°C; 4) esterification of the nonchlorinated silica by allyl alcohol at 200°C for 2 hr. The results are listed in a table. The quantity of the organic substance chemically sorbed on the sur-
Card 1/6

22563

S/190/61/003/005/006/014
B101/B218

Olefine-substituted ...

face of silica was determined by bromination of the double bond; it is termed "iodine number." In the samples 8-10, the methylvinyl dichlorosilane chemically sorbed was determined from the increase in weight. The sorption isotherms for methanol, benzene, and heptane showed that the adsorptive power decreases with increasing substitution of the OH groups by unsaturated organic radicals. Fig. 1 illustrates this phenomenon for silica gel modified by allyl radicals. The same behavior was exhibited by silica gel containing methylvinyl radicals. Samples of the modified silica gel were used as fillers of polymethylmethacrylate (PMMA). 0.1% benzoyl peroxide was added to methylmethacrylate, and polymerization was carried out (with varying quantities of fillers) in sealed ampoules at 60°C for 20 hr. Fig. 3 presents the thermomechanical curves of the polymers obtained. The samples 1, 2, 3 indicated in the Fig. were soluble in boiling dichloroethane after 7 hr, while samples 4, 5, and 6 were only swollen even after 50 hr. Compared to sample 1, the vitrification temperature of sample 5 increased by 12°C, and that of sample 6 by 19°C. The double bonds of olefine-substituted silica caused an intense cross linking of PMMA. Thus, the physico-chemical properties of polymers can be improved, and the cost of polymers can be reduced by the use of modified silica. There are 3 figures, 1 table, and

Card 2/6

Olefine-substituted ...

2256
S/190/61/003/005/006/014
B101/B218

15 references: 13 Soviet-bloc and 2 non-Soviet-bloc. The reference to English-language publication reads as follows: M. C. Brooks, F. W. BOGGS, R. H. Evart; Indian Rubber Bull., 1958, N 118, 15.

ASSOCIATION: . Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN USSR
(Institute of Physical Chemistry im. L. V. Pisarzhevskiy, AS UkrSSR)

SUBMITTED: July 20, 1960

Table: Content of radicals in modified silica gel.
Legend: 1) number of samples; 2) radical; 3) modification method; 4) number of radicals, mmole/g silica gel; 5) iodine number; 6) synthesis of allyl; 7) ditto; 8) methylvinyl; 9) organo-magnesium; 10) chlorinated silica gel treated with alcohol; 11) esterification; 12) treatment with organosilicon compounds.

Card 3/6

Olefine-substituted ...

22563

S/190/61/003/005/006/014

B101/B218

Образец № ①	Природа органического радикала ②	Метод модифицирования ③	Количество радикалов, ммоль/г связующего ④	Подное число ⑤
1	Аллильный	Магнийорганический синтез	0,25	3,18
2	То же	То же	0,05	8,80
3	» »	» »	0,75	9,53
4	» »	Обработка спиртом хлорированного силикагеля	1,03	13,25
5	» »	То же	1,35	14,0
6	» »	» »	1,57	19,6
7	» »	Этерификация	1,71	21,8
8	Метилвинильный	Обработка кремнийорганическими соединениями	0,78	—
9	То же	То же	1,23	—
10	» »	» »	2,23	—

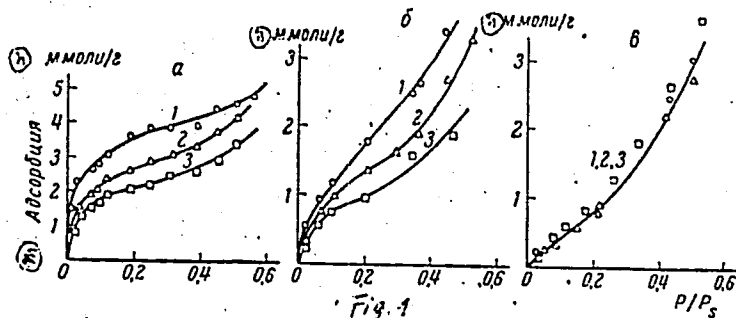
Card 4/6

Olefine-substituted ...

22503
S/190/61/003/005/006/014
B101/B218

Fig. 1: Sorption isotherms.

Legend: 1) methanol; δ) benzene; ε) heptane; 1) initial sample; 2) sample no. 4; 3) sample no. 7; m) adsorption; n) mmole/ε.



Card 5/6

S/153/61/004/003/005/008
E073/E535

AUTHORS: Uskov, I.A. and Chuyko, A.A.

TITLE: Bentonite sheet electrical insulation materials

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy SSSR.
Khimiya i khimicheskaya tekhnologiya, Vol.4, No.3,
1961, pp.458-462

TEXT: E. A. Hauser and D. S. Le-Blau (Ref.1: J.Phys.Chem.
42, 961, 1031 (1938); Colloid. Chemistry, 6, 1961 (1946);
E. A. Hauser. USA Patent 2 531 247; 2 531 812 (1950)) proposed
producing sheet electrical insulation material from montmorillonite
clay. However, they gave very little information on the methods
of producing this material. Earlier work of the authors and their
team deals with obtaining bentonite films from high-dispersion
sodium bentonite on a cellophane base. The produced films had
good electrical insulation properties but the method of production
was complex and expensive. In this paper information is given on
a new, more convenient, method of producing bentonite electrical
insulation films and means of improving their hydrophobic and
mechanical properties are described. The material was produced
Card 1/5

Bentonite sheet electrical ...

S/153/61/004/003/005/008
E073/E535

from Pyzha bentonite which mainly consists of calcium montmorillonite. It swells relatively little in water and in its original form it is not suitable for producing coherent films. The bentonite was soaked in distilled water for 24 hours, homogenized and passed through a sieve with 4900 holes per cm². Onto the precipitate a 1N solution of sodium chloride was poured in a weight ratio of 20:1 (the weight ratio refers to dry bentonite). After settling, the transparent liquid was decanted and a fresh solution of sodium chloride was poured onto it. This operation was repeated until traces of calcium could be detected in the decanted liquid. After washing off the electrolyte residues with distilled water, the bentonite commenced to peptize and the top layer of the suspension was syphoned off. The residue was then passed through a super-centrifuge and a paste containing 33% of high dispersion sodium bentonite was obtained. The best results were achieved by using suspensions with concentrations of the order of 2 to 4%. As a sub-layer only aluminium proved satisfactory, which was covered with a thin layer of the glue BQ-2 (BF-2) and heated for 4-6 hours at 120 to 140°C. These films were then dried

Card 2/5

Bentonite sheet electrical ...

S/153/61/004/003/005/008
E073/E535

(40 to 60°C proved satisfactory) and after drying they could be easily separated from the layer, yielding 30 to 50 μ thick films. In order to make the films hydrophobic, they were then treated with a solution of diethyl paraphenylene diaminosulphate and some of the specimens were additionally treated with dimethylchlorsilane vapours. Following that, the films were heat treated for one hour at 100 to 400°C. With increasing heat treatment temperature, the strength of the films increased but their elasticity decreased. The breakdown voltage, kV, of the produced films as a function of the heat treatment temperature, °C, is plotted in Fig.2 (curve 1 - film treated solely with diethyl paraphenylene diaminosulphate, curve 2 - film additionally treated with dimethylchlorsilane vapours). It can be seen that heat treatment temperatures over 200°C improved the breakdown voltage very considerably. Films additionally treated with dimethylchlorsilane vapours were strongly hydrophobic and oil-repellant and their electrical strength was higher than films treated only with diethyl paraphenylene diaminosulphate. For increasing the mechanical strength reinforcement with glass fabric was tried. This was

Card 3/5

Bentonite sheet electrical ... *

S/153/61/004/003/005/008
E073/E535

successful only if the glass fabric was preliminarily wetted with a 1% solution of gelatine. Thus, the obtained insulation material will be useful for applications at temperatures up to 250-300°C and, if the material is not subjected to high bending deformations, the operating temperature can be increased to 350 to 400°C. There are 2 figures and 6 references: 5 Soviet and 1 non-Soviet. The English-language reference is quoted in the text.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko
Kafedra fizicheskoy i kolloidnoy khimii (Kiyev State
University imeni T.G. Shevchenko, Department of Physics
and Colloidal Chemistry)

SUBMITTED: May 25, 1959

Card 4/5

NEYMARK, I.Ye., doktor khimicheskikh nauk, prof.; CHUYKO, A.A., inzh.;
BLOKH, G.A., doktor khimicheskikh nauk, prof.; GENDLER, T.R.,
inzh.; CHUGAY, A.D., inzh.

Use of organic silica as a rubber filler. Izv.vys.ucheb.zav.;
tekh.leg.prom. no.2:60-67 '62. (MIRA 15:5)

1. Institut fizicheskoy khimii AN USSR (for Neymark, Chuyko).
2. Dnepropetrovskiy khimiko-tehnologicheskoy institut imeni Dzerzhinskogo (for Blok, Gendler).
3. Kiyevskiy zavod "Krasnyy rezinshchik" (for Chugay). Rekomendovana kafedroy tekhnologii reziny Dnepropetrovskogo khimiko-tehnologicheskogo instituta.

(Rubber)

(Silica)

S/081/62/000/024/038/052
B106/B186

AUTHORS: Neymark, I. Ye., Chuyko, A. A., Blokh, G. A., Gendler, T. R.,
Chugay, A. D.

TITLE: Rubbers reinforced with organosilica

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24 (II), 1962, 929,
abstract 24P815 (Izv. vyssh. uchebn. zavedeniy. Tekhnol.
legk. prom-sti, no. 2, 1962, 60-67)

TEXT: This is a study of how organo-silicas whose surfaces contain chemically bound organic radicals (ether, propyl, allyl, vinyl) affect the physico-mechanical properties of KH-26 (SKN-26), KH-40 (SKN-40), and KC-30 (SKS-30) rubbers. Powdered silica gel containing organic radicals on the surface affects the physico-mechanical properties (tensile strength, moduli, etc. increase) of rubber considerably. The authors assume that the chemism of rubber solidification by organosilica is characterized by a reaction between the organosilica of organic radicals and the rubber molecules yielding complex vulcanization structures. The filler is chemically bound to the polymer either directly or via sulfide bonds.
[Abstracter's note: Complete translation.]

Card 1/1

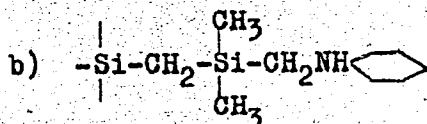
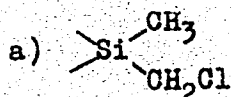
S/021/63/000/002/014/016
D405/D301

AUTHORS: Chuyko, A. A., Pavlyk, H. Ye. and Neymark, I. Ye.

TITLE: Synthesis and adsorptive properties of amino-organic silicas with Si-C bond

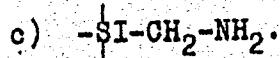
PERIODICAL: Akademiya nauk UkrRSR. Dopovidi. no. 2, 1963, 230-233

TEXT: The investigation had the purpose of obtaining amino-organic silicas with Si-C bond, and of studying their adsorptive and ion exchange properties. Modified silicas were obtained, having the following chemical compounds on their surface:



Card 1/3

Synthesis and adsorptive ...

S/021/63/000/002/014/016
D405/D301

On the original and modified silica specimens the sorption isotherms of vapors of methanol, benzene, heptane and dry gaseous hydrogen chloride were studied at 20°C in a vacuum adsorption device with quartz spring balances. It was found that substitution of part of the hydroxyl groups of the aerosol by organic radicals leads to a decrease in absorption of methanol and benzene, as well as of heptane. The obtained results are in agreement with the data available in the literature. The fact that methanol and benzene is much more adsorbed by aniline methyl aerosol than by chloromethyl aerosol can be explained by the possible formation of a hydrogen bond of these materials with the >NH-group of aminosilicas. It was found that the modification of the aerosol of the chloromethyl group leads to a sharp decrease in its adsorption as compared to the original specimen. It is established that amino-organic silicas are selective adsorbents of acidic substances. It is noted that the

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Synthesis and adsorptive ...

S/021/63/000/002/014/016
D405/D301

concentration of the amino-groups in the aminomethyl aerosol, obtained by ion exchange, is nearly equal to the amount of irreversibly chemisorbed hydrogen chloride; this is not the case with aniline methyl aerosol. There are 2 figures.

ASSOCIATION: Instytut fizychnoyi khimiyi AN URSR (Institute of Physical Chemistry of the AS UkrRSR)

PRESENTED: by Academician O. I. Brods'ky of the AS UkrRSR

SUBMITTED: July 19, 1962

Card 3/3

L 10757-63

EPR/EWP(j)/EPF(c)/E.T.(m)/BDS--AFFTC/ASD--Ps-l/Pc-l/Pr-l---

RM/WW

ACCESSION NR: AP3003291

S/0138/63/000/006/0031/0034 82
78AUTHOR: Chuyko, A. A.; Neymark, I. Ye.; Landau, I. M. (Deceased); Tsepenyuk, E.V.;
Chuyko, Ye. A.TITLE: Effect of the chemical nature of filler surface and ionizing radiation on
the properties of rubbers 15
19

SOURCE: Kauchuk i rezina, no. 6, 1963, 31-34

TOPIC TAGS: rubbers, SKS-30; SKN-40, SKB; fillers; silica; Belaks; modified silica;
vinyl-substituted silica; vulcanization; vulcanizate properties; tensile strength;
modulus; swelling; ionizing radiation, butadiene-styrene rubber; nitrile rubber,
sodium butadiene rubber; silica surface hydroxylsABSTRACT: The effect of the chemical nature of the filler surface on the physico-
mechanical properties of rubbers has been studied. Butadiene-styrene (SKS-30), 15
nitrile (SKN-40) and sodium butadiene (SKB) rubbers loaded with unmodified silica
and with silica whose surface hydroxyls had been substituted by allyloxy or vinyl
radicals were used. Use of modified silica in standard rubber mixes (containing
100 parts rubber and 50 to 60 parts filler) was shown to improve the physico-
mechanical properties of the vulcanizates. For example, the tensile strength of

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I. 10757-83

ACCESSION NR: AP3003291

2

SKN-40 rubber containing 60% filler increased from 126.3 kg/cm² with unmodified silica to 163.6-168 kg/cm² with vinyl-substituted silica (vinyl silica); the respective values of the modulus at 600% elongation and swelling at equilibrium in benzene were 55.2 and 134 kg/cm² and 30 and 15%. This improvement was attributed to greater compatibility of the filler and the rubber and to a reaction between the olefin radicals of the filler surface and the rubber with the possible formation of C-C and C-S-C linkages. The effect was studied of ionizing radiation from a Co⁶⁰ source at a dose rate of 77 r/sec on nonloaded SKS-30 rubber and on SKS-30 loaded (ratio 1/1) with unmodified and with modified silica (Belaks) containing 2.5% vinyl, methyl, or ethyl radicals. Irradiation did not affect the tensile strength and the modulus at 100% elongation of unloaded rubber but considerably improved these properties in loaded rubbers, particularly with vinyl silica. The maximum effect of irradiation is attained after 48 hr. These results were attributed to the participation of the filler in the formation of the three-dimensional network. In particular, the allyl or vinyl groups of the filler and the rubber macromolecules form radicals which link the two through the formation of covalent bonds. It is concluded that the structure and the physico-mechanical properties of vulcanizates can be controlled by modifying the nature of the organic radicals on the silica surface, the number of such radicals, the composition of the vulcanizates, and the method of vulcanization. Orig. art. has:

Card 2/3

L 10757-63
ACCESSION NR: AP3003291

2

1 figure and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarshevskogo AN SSSR
(Institute of Physical Chemistry, AN SSSR); Kiyevskiy regeneratorno-rezincvy*y zavod
(Kiev Reclaim Rubber Plant)

SUBMITTED: 00

DATE ACQ: 10Jul63

ENCL:00

SUB CODE: 00

NO REF SOV: 004

OTHER: 004

14/93
Card 3/3

L 25770-65 EWT(m)/EPF(c)/T/EWP(j)/EPR Pc-L/Pr-L/Pu-L WW/MLK/TM

37
26
BT1

ACCESSION NR: AT5002664

S/0000/64/000/000/0083/0098

AUTHOR: Chuyko, A. A.; Chuyko, Ye. A.

15

TITLE: Olefinic, aminated and carboxylated silica fillers and their chemical interaction with polymers

SOURCE: AN UkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimeroy; sbornik statey po rezul'tatam nauchno-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 83-98

TOPIC TAGS: silica filler, filler polymer interaction, olefinic silica, aminated silica, carboxylated silica, synthetic rubber, organosilane, siloxane filler, silicon carbon bond, butadiene styrene rubber, butadiene acrylonitrile rubber, rubber mechanical property

ABSTRACT: Silica with olefinic, amine, or carboxyl functional terminal groups was prepared, tested for thermal stability by infrared analysis of thermally treated specimens, and used as fillers in synthetic rubbers whose properties were studied to determine the interaction between functional groups in fillers and rubbers. Colloidal silica was chlorinated with SiCl₄ and reacted with allyl alcohol or allylmagnesium bromide to introduce allyloxy or allyl groups, or treated directly

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L 25770-65

ACCESSION NR: AT5002664

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with organosilanes to prepare the specimen; e.g., vinyltrichlorosilane reacted by hydrolysis and formation of siloxane type bonds. Infrared analysis showed the presence of both double bonds and $-Si-C\equiv C-Si-$ bonds in this silica, and demonstrated the stability of silicon-carbon bonds up to nearly 500C. Allyloxysilica was shown to be formed by formation of Si-O-C bonds which were stable to 200C, the amount of hydroxyl groups increasing on heating to 300 and 500C. Propyloxy- and ethyl-modified silica was also prepared. Used as fillers in butadiene-styrene (SKS-30)¹⁵ rubber and the butadiene-acrylonitrile copolymers SKN-26¹⁵ and SKN-40, olefin-modified silica increased crosslinking and markedly improved the mechanical properties and particularly the tensile strength as compared with non-modified silica ("white carbon black") or alkyl-modified silica. Aminopropylsilica was obtained by reaction with γ -aminopropyltriethoxy-silane and used as a filler for SKS-30-1 carboxylated butadiene-styrene rubber; by interaction with rubber-carboxyls, the terminal amino-groups of the rubber gave an increase in crosslinking and mechanical strength with a slight decrease in relative elongation. Carboxylated silica filler was prepared from white carbon black U-333 via vinylated silica by reaction with vinyltrichlorosilane and copolymerization with methacrylic acid. With SKS MVP-15A¹⁵ (butadiene copolymer with 15% 2-methyl-5-vinylpyridine), the modified filler improved tensile strength and mechanical parameters as compared with non-modified silica. "The infrared analysis was carried out by A. N. Sidorov, and the carboxylated silica was studied in detail by

Card 2/3

L 25770-65

ACCESSION NR: AT5002664

B. A. Artemov. Orig. art. has: 6 figures, 4 tables and 11 formulas.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN UkrSSR
(Physical chemistry institute, AN Ukr SSR)

SUBMITTED: 22Jun64

ENCL: 00

SUB CODE: OC, MT

NO REF SOV: 008

OTHER: 003

Card 3/3

L 1970-66 EWT(m)/EFF(c)/EPF(n)-2/ENP(j)/EWA(h)/EWA(l) RPL GG/RM

ACCESSION NR: AP5020315

UR/0379/65/001/003/0394/0399

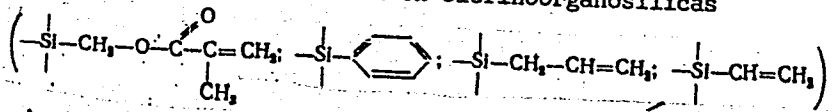
AUTHOR: Burushkina, T. N.; Chuyko, A. A.

TITLE: Free radicals in gamma-irradiated olefinoorganosilicas

SOURCE: Teoreticheskaya i eksperimental'naya khimiya, v. 1, no. 3, 1965; 394-399

TOPIC TAGS: aerosil, gamma radiation, electron spin resonance, silicon organic compound

ABSTRACT: The effect of gamma radiation on olefinoorganosilicas



which are chemically active fillers of polymeric materials, was studied. In order to determine the effect of surface on the properties and electron spin resonance (ESR) spectra of the chemically grafted free radicals formed, the ESR spectra of gamma-irradiated methyl methacrylate aerosil and phenyl, allyl, and vinyl aerosils were investigated. Each of the irradiated compounds displays a characteristic ESR

Card 1/2

L 1970-66

ACCESSION NR: AP5020315

3

spectrum with a hyperfine structure whose degree of resolution is somewhat reduced by the effect of the grafting of the free radicals onto the surface of the silica. The splitting between the components of the hyperfine structure in the ESR spectra, with the exception of the spectrum of the phenylsilica, amounts to 23-25 Oe, which is characteristic of alkyl radicals. A change in the temperature of the samples during the recording of the spectra from -196 to 20°C causes an improvement of the line resolution in the spectra. The high thermal stability of the radicals is due to their bonding to the surface. Contact of the irradiated samples with air at 20°C leads to the transformation of the alkyl radicals into peroxide radicals. In all spectra except that of the allyl aerosil $(-\text{Si}-\text{CH}_2-\text{CH}=\text{CH}_2)$ there is also ob-

served a hyperfine splitting in hydrogen atoms ($\Delta H_p \approx 500 \text{ Oe}$). Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pizarzhevskogo AN UkrSSR, Kiev (Institute of Physical Chemistry)

SUBMITTED: 20Dec64

JKS

ENCL: 00

SUB CODE: OG, PP

NO REF SOV: 011

OTHER: 006

Card 2/2 *DP*

BURUSHKINA, T.N.; CHUYKO, A.A.

Free radicals in gamma-irradiated organic silica olefins.
Teoret. i eksper. khim. 1 no.3:394-399 My-Je '65.

(MIRA 18:9)

1. Institut fizicheskoy khimii imeni L.V. Pissarzhevskogo AN
UkrSSR, Kiyev.

TFERTYKH, V.A.; CHUYKO, A.A.; NEYMARK, I.Ye.

Infrared spectroscopic method for studying the reaction of γ -aminopropyl and β -cyanoethyltriethoxysilanes with aerosil surface. Teoret. i eksper. khim. 1 no.3:400-405 My-Je '65.
(MIRA 18:9)

1. Institut fizicheskoy khimii imeni L.V. Pisarzhevskogo AN UkrSSR, Kiyev.

L 34420-66 EWT(m)/EWP(j) RM

ACC Nbr: AP6010549

SOURCE CODE: UR/0069/65/027/006/0903/0907

AUTHOR: Chuyko, A. A.; Tertykh, V. A.; Flavnik, G. Ye.; Neymark, I. Ye.ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskiy, AN USSR, Kiev (Institut fizicheskoy khimii AN USSR)TITLE: Aminoorganosilicas as chemically active adsorbents and fillers for polymeric materials. Part 1. Study of the interaction of gamma-aminopropyltriethoxysilane with SiO₂ surface and adsorptive properties of aminoorganosilicasSOURCE: Kolloidnyy zhurnal, v. 27, no. 6, 1965, 903-907TOPIC TAGS: silane, silica, IR spectrum, organic nitrogen compound, organosilicon compound, adsorption, hydroxyl group, heptane, methanolABSTRACT: The interaction of γ -aminopropyltriethoxysilane with the hydroxyl groups of aerosil (powdered silica) surface was investigated by means of IR absorption spectra. Aminoorganosilicas with various contents of amino groups on their surfaces were synthesized, and their adsorptive properties were determined. The decrease in the concentration of hydroxyl groups on the silica surface, the simultaneous increase in the concentration of aminoorganosilyl groups, and the irreversibility of the phenomena occurring during the modification process are accounted for by the following surface chemical reactions:

UDC: 541.18.02

Card 1/2

L 15332-66 EWT(m)/ETC(f)/EWG(m)/EWP(j) DS/RM

ACC NR: AP6000988

SOURCE CODE: UR/0286/65/000/022/0060/0060

37
B

AUTHORS: Chuyko, A. A.; Pavlik, G. Ye.; Artemov, V. A.; Neymark, I. Ye.

ORG: none

TITLE: A method for obtaining cation exchangers¹ containing carboxyl groups. Class 39, No. 176414^b/announced by Institute for Physical Chemistry im. L. V. Pisarzhevskiy, AN UkrSSR (Institut fizhicheskoy khimii AN UkrSSR)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 60

TOPIC TAGS: ion exchange resin, polymer, copolymerization, copolymer, resin

ABSTRACT: This Author Certificate presents a method for obtaining cation exchangers containing carboxyl groups derived from methacrylic acid copolymers. To obtain thermostable and chemically stable products, methacrylic acid is copolymerized with a methacrylic acid-vinyl silicon dioxide copolymer. The synthesized products described above are used as active rubber fillers. 544,55

SUB CODE: 11/ SUBM DATE: 12Jul63

07/

Card 1/1 *BC*

UDC: 661.183.123.2:678.744.332.678.84

L 34420-66 EWT(m)/EWP(j) RM

ACC NR: AP6010549

SOURCE CODE: UR/0069/65/027/006/0903/0907

AUTHOR: Chuyko, A. A.; Tertykh, V. A.; Flavnik, G. Ye.; Neymark, I. Ye.ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskiy, AN USSR, Kiev (Institut fizicheskoy khimii AN USSR)TITLE: Aminoorganosilicas as chemically active adsorbents and fillers for polymeric materials. Part 1. Study of the interaction of gamma-aminopropyltriethoxysilane with SiO₂ surface and adsorptive properties of aminoorganosilicasSOURCE: Kolloidnyy zhurnal, v. 27, no. 6, 1965, 903-907TOPIC TAGS: silane, silica, IR spectrum, organic nitrogen compound, organosilicon compound, adsorption, hydroxyl group, heptane, methanol

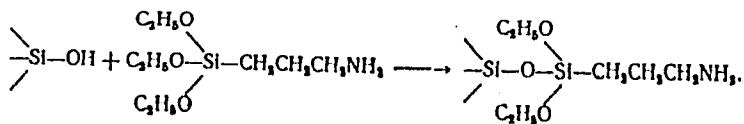
ABSTRACT: The interaction of γ -aminopropyltriethoxysilane with the hydroxyl groups of aerosil (powdered silica) surface was investigated by means of IR absorption spectra. Aminoorganosilicas with various contents of amino groups on their surfaces were synthesized, and their adsorptive properties were determined. The decrease in the concentration of hydroxyl groups on the silica surface, the simultaneous increase in the concentration of aminoorganosilyl groups, and the irreversibility of the phenomena occurring during the modification process are accounted for by the following surface chemical reaction:

UDC: 541.18.02

Card 1/2

I. 74420-36

ACC NR: AP6010549



The adsorption of heptane, benzene, and methanol vapors was studied on aminoorgano-aerosils in a vacuum adsorption apparatus. The replacement of a part of the hydroxyl groups of the aerosil surface by the aminoorganic radicals was found to decrease the adsorption of not only methanol and benzene, which are adsorbed owing to electrostatic forces, but also that of heptane, which is adsorbed by a dispersion mechanism. It is concluded that the interaction of an aminoethoxysilane with the aerosil surface involves the formation of an aminoorganosilica whose surface has a complex chemical character and should react with acidic substances, for example, polymers containing acidic functional groups. Authors thank Academician A. N. Terenin for interest in this work and A. N. Sidorov for assistance. Orig. art. has: 5 figures.

SUB CODE: 07/ SUBM DATE: 22Jul64/ ORIG REF: 007/ OTH REF: 003

Card 2/2

L 15332-66 ENI(m)/ETC(f)/EWG(m)/EWP(j) DS/RM

ACC NR: AP6000988

SOURCE CODE: UR/0286/E./000/022/0060/0060

AUTHORS: Chuyko, A. A.; Pavlik, G. Ye.; Artemov, V. A.; Neymark, I. Ye.

ORG: none

37
B

TITLE: A method for obtaining cation exchangers containing carboxyl groups. Class 39, No. 176414⁵ /announced by Institute for Physical Chemistry im. L. V. Pisarzhevskiy, AN UkrSSR (Institut fizhicheskoy khimii AN UkrSSR)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 60

TOPIC TAGS: ion exchange resin, polymer, copolymerization, copolymer, resin

ABSTRACT: This Author Certificate presents a method for obtaining cation exchangers containing carboxyl groups derived from methacrylic acid copolymers. To obtain thermostable and chemically stable products, methacrylic acid is copolymerized with a methacrylic acid-vinyl silicon dioxide copolymer. The synthesized products described above are used as active rubber fillers. 5 44,55

SUB CODE: 11/ SUBM DATE: 12Jul63

07/

Card 1/1 AC

UDC: 661.183.123.2:678.744.332.678.84

L 22597-66

ACC NR: AT6006249

EWT(m)/EWA(d)/EWP(j)/T/ETC(m)-6 IJP(o) WW/OS/1#1

SOURCE CODE: UR/0000/65/000/000/0085/0095

AUTHOR: Tertykh, V. A.; Burushkina, T. N.; Chuyko, A. A.

ORG: Physicochemical Institute, Academy of Sciences UkrSSR, Kiev (Institut fizicheskoy khimii Akademii nauk UkrSSR)

65
62
B41

TITLE: Study of the surface chemistry of functional silicoorganic fillers interacting chemically with polymers

SOURCE: AN UkrSSR. Modifikatsiya svoystv polimerov i polimernykh materialov (Modification of the properties of polymers and polymeric materials). Kiev, Naukova dumka, 1965, 85-95

TOPIC TAGS: organosilicon compound, polymer, silica gel, silicon plastic, synthetic material, IR spectroscopy, EPR spectrum, gamma irradiation

ABSTRACT: Several silicoorganic fillers containing functional groups were prepared by reacting γ -aminopropyl, methylmethacryl, and styryltriethoxy silanes with hydroxy groups of silica gel. These fillers were subsequently used for improving the thermal and mechanical properties of organic polymers. The formation of bonds between various functional reactants and the silica gel surface was followed by IR spectroscopy (absorption bands of OH groups and N-H or N-H₂ vibration bands). For IR investigation, the discs of silicoorganic fillers of 0.2 mm in thickness and 1 cm² surface area

Card 1/2

L 22597-66

ACC NR: AT6006249

were prepared by compressing at 250 atm/cm². In order to examine the filler's structure, the fillers were γ -irradiated from Co⁶⁰-source and the EPR spectra were taken at -196° to +20°C. The EPR spectra of fillers heated to 60°C indicated the strong chemical bonds between functional organic silanes and silica gel surface. It is concluded that the methacryl-type fillers can improve the mechanical properties of polymethacrylate resins. Orig. art. has: 4 figures, 2 tables, 3 formulas.

SUB CODE: 07/

SUBM DATE: 06Oct65/

ORIG REF: 004/

OTH REF: 002

Card 2/2 *W*

L 26688-66 EWT(1)/EWT(m)/EWP(j)/T WW/RO/JK/RM
ACC NR: AP6016900 SOURCE CODE: UR/0379/65/001/003/0400/0405

AUTHOR: Tertykh, V. A.; Chuzko, A. A.; Neymark, I. Ye.

ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskiy, AN UkrSSR, Kiev
(Institut fizicheskoy khimii AN UkrSSR)

TITLE: Reaction of gamma-aminopropyl- and beta-cyanethyl-triethoxysilanes with aerosol surface using infrared spectroscopy

SOURCE: Teoreticheskaya i eksperimental'naya khimiya, v. 1, no. 3, 1965, 400-405

TOPIC TAGS: aerosol chemistry, aerosol, IR spectroscopy, silica, organic nitrogen compound, hydrogen bonding, adsorption

ABSTRACT: Surface modification of aerosols⁶ by vapors of γ -aminopropyl- and β -cyanethyl-triethoxysilanes and their benzene solutions was investigated. Upon contact of alkoxysilanes with surface OH groups of the silica, an organosilyl layer is formed which is stable under vacuum conditions up to high temperatures. The condensation reaction evidently occurs first of all on surface hydroxyls that are not hydrogen bonded. The behavior of cyanorganosilyl groups as new possible sites of adsorption was discovered. It was shown that the CN-group band (2249 cm^{-1}) does not change its position upon the adsorption of different compounds. The authors thank A. N. Sidorov and Academician A. N. Terenin for their assistance in carrying out this work. Orig. art. has: 5 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 28Dec64 / ORIG REF: 015 / OTH REF: 002

Card 1/1 BLG

L 41266-66 EWT(m)/EWP(j)/I LJP(c) WW/JWD/RM

ACC NR AP6022447

(A)

SOURCE CODE: UR/0069/66/028/002/0278/0282

AUTHOR: Tertykh, V. A.; Chuyko, Ye. A. -- Chuiko, E. A.; Chuyko, A. A. -- Chuiko, A. A.; Neymark, I. Ye. -- Neimark, I. E.38
36
BORG: Institute of Physical Chemistry, AN UkrSSR, Kiev (Institut fizicheskoy khimii AN UkrSSR)TITLE: Amino-organo silicas as chemically active sorbents and fillers of polymer materials

SOURCE: Kolloidnyy zhurnal, v. 28, no. 2, 1966, 278-282

TOPIC TAGS: organosilicon compound, polymer physical chemistry, chemical absorption

ABSTRACT: Clarification of mechanisms by which acid substances react with an adsorbent surface was sought through an analysis of infrared absorption spectra for the adsorption of hydrogen chloride on amino organosilica and of methacrylic acid on an amino organo-aerosil. A supplementary analysis concerned adsorption of methacrylic acid on the named aerosil from an aqueous solution. Another aspect of the study involved reinforcement of the carboxyl-containing polymer SKS 30-1 by dispersion type amino organosilicic fillers. Results indicate that chemisorption occurs, with an accompanying formation of chemical compounds on the adsorbent surface. Amino and vinylamino derivatives of silica white A, used as fillers, reinforced the carboxyl-containing polymer through interaction of functional groups and the accompanying

Card 1/2

UDC: 541.183.23

L 41266-66

. ACC NR: AP6022447

2

crosslinking of polymer and filler. With great satisfaction, the authors express their gratitude to Candidate of Physical-Mathematical Sciences A. N. Sidorov and Academician A. N. Terenin for their advice and assistance in performing the work. Orig. art. has: 1 table and 3 figures.

SUB CODE: 07/ SUBM DATE: 22Jul64/ ORIG REF: 002/ OTH REF: 001

Card 2/2 LC

L 00733-67 EWI(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6024346

(A)

SOURCE CODE: UR/0073/66/032/004/0371/0377

AUTHOR: Chuyko, A. A.; Pavlik, G. Ye.; Tertykh, V. A.; Chuyko, Ye. A.; Artemov, V. A.; Neymark, I. Ye.; Tsipenyuk, E. V.

ORG: Institute of Physical Chemistry, AN UkrSSR (Institut fizicheskoy khimii AN UkrSSR)

43

B

TITLE: Carboxylorganosilicas - chemically active fillers for polymers. Report No. 1. Synthesis and adsorption properties of carboxylorganosilicas, and their use in the reinforcement of vinylpyridine rubber

SOURCE: Ukrainskiy khimicheskii zhurnal, v. 32, no. 4, 1966, 371-377

TOPIC TAGS: silica, graft copolymer, synthetic rubber, filler

ABSTRACT: Carboxyl derivatives of SiO_2 were synthesized by copolymerization of methacrylic acid with vinyl silicas having various quantities of grafted vinyl groups on their surface. IR spectroscopic and ion exchange methods confirmed the grafting of methacrylic acid to the surface of vinyl silica. A study of the surface characteristics showed that methanol, diethylamine, and pyridine are chemisorbed on the acid functional groups of the carboxylorganosilicas, forming the corresponding surface compounds. Filling of a vinylpyridine polymer (SKMVP-15) with carboxylorganosilicas caused a reinforcement of the polymer system, probably because of a chemical interaction between the carboxyl groups of the filler and the basic pyridine groups of the rubber macromol-

Card 1/2

UDC: 541.182.23

L 00733-67

ACC NR: AP6024846

ecules, resulting in the formation of cross linkages. Orig. art. has: 3 figures and 1 table. 0

SUB CODE: 11/ SUBM DATE: 22Jul64/ ORIG REF: 006/ OTH REF: 006

Card 2/2 *LC*

CHUYKOV, A.I. (Nikolayev (obl.) ul. Sverdlova, 58-a, kv. 43)

Gastric resection with gastroduodenostomy. Vest. khir. 92 no.1:
11-14 Ja '64. (MIRA 17:11)

1. Iz khirurgicheskogo otdeleniya (zav. - I.F. Lizko) Nikolayevskoy
oblastnoy bol'nitsy (glavnyy vrach - S.N. Yagodin).

CHUYKO, A.M.

Redesigned Class 65 PMZ sewing machine. Leh. prom. no. 3: 52-53 J1-S
'64. (MIRA 17:10)

CHUYKO, A. V.

USSR/Chemistry, Colloid - Cement

Oct 51

"Hydrophobic Cement," A. Chuyko

"Mauka i Zhizn'" Vol XVIII, No 10, pp 39,40

M. I. Khigerevich, Docent of the Moscow Eng-
Constr. Inst Imeni V. V. Kuybyshev, and B. G.
Skramatayev, Dr Tech Sci, received a Stalin prize
for developing hydrophobic cement. //In making
this cement a water-repellent film is produced on
the cement grains by adding a small quantity of
a nonwetable substance (e.g soap-naphtha, oleic
acid, or acidol) during grinding. Such cement
does not lose any of its activity during storage

213725

or as a result of exposure to moisture. The
additive acts as a lubricant during grinding, so
that the cement is finer and more active to be-
gin with. During mixing before use, the
hydrophobic film is broken and does not interfere
with subsequent hardening. Adnl advantages of
the process are plastification; entrainment of air
by the hydrophobic substance, so that the con-
crete becomes less permeable to water; reduced use
of water with a resulting stronger concrete.

213725

1. CHUYKO, A. V.

2. USSR (600)

4. Concrete Construction

7. Vacuuming concrete.

Nauka i zhizn'. No. 10. 1952.

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

CHUYKO, A. [V.]

"Concrete Solids are Rising Under Water," Tekh. molod., 20, No.7, 1952

CHUYKO, A.V.; MEZENTSEV, V.A., redaktor.

[Unusual stone (concrete)] Neobyknovennyi kamen' (beton). Moskva,
Gos.izd-vo tekhniko-teoret. lit-ry, 1953. 62 p. (Nauchno-populiar-
naia biblioteka, vyp.64)
(MLRA 7:4)
(Concrete)

CHUYKO, A., inzhener.

Wonderful additives. Tekh. molod. 21 no.6:26-29 Je '53. (MLRA 6:6)
(Reinforced concrete construction)

CHUYKO, A. V.

"Effect of Small additions to Absorbing Substances on Certain Properties of Steamed Concrete.
Cand Tech Sci, Moscow Order of Labor Red Banner Construction Engineering Inst imeni V. V.
Kybyshev, 9 Mar 54. Dissertation (Vechernyaya Moskva Moscow, 26 Feb. 54)

SO: SUM 186, 19 Aug 1954

3355 CHUYKO, A. V.

Neobyknovennyye kamen' (Beton). Izd 2-e M. Gostekhizdat. 1954. 64 s
s ill 20sm (Nauch-Popu _ b-ka Vyp. 640) 100.000 ekz. 1 r (54-57148)

CHUYKO, A.

Stone cement. Znan.sila no.5:10-13 My '54. (MIRA 7:6)
(Cement)

Chuyko, A.V.

AID P - 3941

Subject : USSR/Hydr. Eng.
Card 1/2 Pub. 35 - 5/19
Authors : Popov, N. A., Prof. Active Member, Academy of
Architecture, **USSR**, Chuyko, A. V., Kand. Tech. Sci.
Title : Influence of hydration on basic properties of con-
crete facing slabs.
Periodical : Gidr. stroi., 7, 16-19, 1955
Abstract : Treatment of **ce**ment for impermeability and frost-
resistance is discussed and certain defects pointed
out. Cracks appearing in concrete facing slabs are
reportedly due to quick temperature changes during
the hydration process. The authors report on tests
conducted in the Moscow Civil Engineering Institute
on stresses in various types of cement with various
admixtures. Further research on vibration treatment
reportedly might exclude the necessity for using the
hydration process. Two tables, one diagram.

AID P - 3941

Gidr. stroi., 7, 16-19, 1955

Card 2/2 Pub. 35 - 5/19

Institution : None

Submitted : No date

С. ПУШКО, А. В.

Distr: LR2c

✓ Konarov, A. V. and Chulko, A. V. Noye stroitel'nye materialy (New Building Materials). Moscow: Trud-zerisdat. 1958. 108 pp. 15

3
1

jjj

CHUYKO, Aleksandr Vladimirovich, kandidat tekhnicheskikh nauk; ZHDANOV, V.S., dotsent, kandidat tekhnicheskikh nauk, inzhener-polkovnik, redaktor; POPOV, G.I., kandidat tekhnicheskikh nauk, mayer, redaktor; KADER, Ya.M., redaktor; LEVINSKAYA, N.Z., tekhnicheskiiy redaktor.

[Reinforced concrete]Zhelezobeton. Moskva, Voen.izd-vo Ministerstva obr. SSSR, 1956. 134 p. (MLRA 9:8)
(Reinforced concrete)

~~CHUYKO, Aleksandr Vladimirovich; ISLANKINA, T.F.,redaktor; ATROSHCHENKO, L.Ye.
tekhnicheskij redaktor~~

[Genuine protection; insulating materials in engineering]
Vernye zashchitniki; izoliatsionnye materialy v tekhnike. Moskva,
Izd-vo "Znanie," 1957. 38 p. (Vsesoiuznoe obshchestvo po
rasprostraneniu politicheskikh i nauchnykh znani. Ser. 4, no.9)
(MLRA 10:5)

(Insulating materials)

CHUYKO, Aleksandr Vladimirovich, kand.tekhn.nauk; RAZINKOV, P., red.;
YEGOROVA, I., tekhn.red.

[The story of concrete and reinforced concrete] Rasskaz of betone i
shelesobetone. [Moskva] Mosk.rabochii, 1957. 204 p. (MIRA 10:12)
(Concrete)

KONOROV, Aleksandr Vladimirovich; CHUYKO, Aleksandr Vladimirovich;
GRADISHCHEV, N.Ye., nauchnyy red.; NIKOLAYEVA, N.M., red.;
GOROKHOV, Yu.N., tekhn.red.

[Modern insulating materials in building and in engineering]
Sovremennyye izolyatsionnyye materialy v stroitel'stve i tekhnike.
Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervisdat, 1958.
158 p. (MIRA 12:7)

(Insulating materials)

CHUYKO, A. V.

25-2-4/43

AUTHOR: Chuyko, A.V., Dotsent, Candidate of Technical Sciences

TITLE: They Save the Heat (Oni sheregayut teplo)

PERIODICAL: Nauka i Zhizn', 1958, # 2, p 17-20 (USSR)

ABSTRACT: In this article the author deals with new heat-insulating building materials. Fillings consisting of diatomite, tripolite, tuffaceous sand, asbestos, pumice and various industrial wastes, mastics prepared out of thermite, asbomica, and asbozytit, as well as asbomagnesium materials do not yield satisfactory results. Tests carried out by the Moscow Institute for City Building Engineers (Moskovskiy institut inzhenerov gorodskovo stroitel'stva) proved that it is possible to obtain cellular concrete of high stability without steam-treating it in autoclaves. Walls made of this material are 25-35 % thinner than those of slag concrete. The low water- and frost-resisting properties of cellular concrete led to thermic production methods of cellular insulating materials without any mineral binding agent. This resulted in the creation of thermally insulated glass, which is not only a heat-isolator, but at the same time a sound-isolator, as shown by experiments conducted

Card 1/2

25-2-4/43

They Save the Heat

recently in the Moscow Chemical Technological Institute (Moskovskiy khimiko-tekhnologicheskii institut). Fibrous materials, such as rock-wool made of granite, gabbro or clay, possess excellent insulation properties as well.

There are 4 sketches.

AVAILABLE: Library of Congress

Card 2/2

BURLAKOV, German Sergeevich; LAKATOSH, Boris Konstantinovich; HEVSKIY, Vladimir Aleksandrovich; CHUYKO, Aleksandr Vladimirovich, kand. tekhn.nauk; SMELYANSKIY, V.A., red.; NATAPOV, M.I., tekhn.red.; KOZLOVSKAYA, M.D., tekhn.red.

[For the young builder; a textbook] IUnomu stroiteliu; posobie dlia uchashchikhsia. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 253 p. (MIRA 13:5)
(Building)