Helicopters

POL/2897

AVAILABLE: Library of Congress

Card 3/3

IB/os
1/29/60

ELSZTEIN, P.

"How about trying bamboo?"

p. 14 (Slrzudlata Polska) Vol. 14, no. 1, Jan. 1958
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
      April 1958

PHASE I BOOK EXPLOITATION   POL/4818

Elsztein, Pawel

Przegląd samolotów bombowych (Survey of Bomber Aircraft)
   Warsaw, Wyd-wa Komunikacyjne, 1959. 187 p. (Series: Biblioteczka
   skrzydlatej Polski) 5,160 copies printed. Erratum slip inserted following
   p. 182.

Book Ed.: Michał Goszczyński; Tech. Ed.: Leokadia Zwolakowska.

PURPOSE: This book is intended for the general reader. It may also be used in
   aircraft recognition courses sponsored by TOPL (Territorial Air Defense).

COVERAGE: The book reviews bombardment aviation and describes its development
   up to the present time. All well known bombers of World War I and II as well
   as some modern aircraft are listed. Photos and main characteristics of each
   are given. No personalities are mentioned. There are 20 references: 9 Soviet,
   6 English, 3 Polish, 1 German, and 1 Czech.

Card 1/5

ACCESSION NR: AP4034789   P/0007/64/000/016/0004/0005

AUTHOR: Elsztein, Pawel

TITLE: How I piloted the SMT ground effect machine

SOURCE: Skrzydlata Polska, no. 16, 1964, 4-5

TOPIC TAGS: GEM, ground effect machine, SMT ground effect machine

ABSTRACT: The author describes his impressions on piloting the SMT ground effect machine designed by engineer Andrzej Moldenhawer. The machine was constructed by members of the SMT - Stacja Mlodych Technikow (Young Engineers Station) in Warsaw. It is 3 m long, 1.5 m wide, and weighs about 120 kg; it is steered aerodynamically by two rudders located in the air stream flowing from the nozzle on the vertical rotor. Flying this machine requires keeping on course and regulating the speed of the two motors. The machine glides on an air cushion of about 2 cm above ground at the rate of about 5 to 10 km/h. After starting the engine (the takeoff run is effected by means of a rope wound around a flywheel as in ships), the pilot regulates the turns of the lever located at the right side of the seat, and the machine takes off at full engine power. If the "direction" motor is too fast, it can be throttled by the twin lever. The machine will undergo improvements after many tests. Orig. art. has: 12 figures.

Cord 1/2

ACCESSION NR: AP4034789

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: AC

DATE ACQ: 20May64

NO REF SOV: 000

ENCL: 00

OTHER: 000

Card 2/2

SHEVCHENKO, F.I.,prof.; AKHTAMOV, M.A.; ISHCHENKO, G.N.; KAZAKOVA, A.N.;
     EL'TEKOA, N.I.

Some results of a study of Escherichia coli in connection with
the etiology of diarrhea in small children. Pediatria 38. no.4:
17-23 Apr'60.   (MIRA 16:7)

            (ESCHERICHIA COLI)   (DIARRHEA)

EL'TEKOV, V.A.

Effect of the Pauli principle and of the short-range order of
nuclear forces on the absorption of photons by nuclei in an
oscillator model. Zhur.eksp.i teor.fiz. 37 no.4:1166-1168
O '59.   (MIRA 13:5)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo
universiteta.
            (Photons) (Nuclei, Atomic)

2/.1000

AUTHORS   El'tekov, V. A., Terent'yev, B. M., Golenko, D. I. (Moscow)

TITLE   Monte-Carlo calculations of the gamma-ray energy absorption
             in a reactor system

PERIODICAL   Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki,
             v. 1, no. 6, 1961, 1089-1096

TEXT: The authors calculate the trajectories of gamma-quanta in a reactor
(cf Fig. 1). The trajectory of a single quantum is represented by a
broken line. W_1, W_2, and W_3 are the probabilities of the trajectory
ending, of a new section beginning, and of two new sections beginning,
respectively ($W_1 + W_2 + W_3 = 1$). For the length 1 of a section, the equation

$$\int_0^1 \mu(\vec{r} + \vec{n}\beta, \alpha)d\beta = -\ln(1 - \xi)$$

$\times$

is valid, where ξ is a value within a homogeneous distribution of random
quantities in the interval $[0,1]$, and where the function μ indicates the

Card 1/

Monte-Carlo calculations of the...

31110

S/208/61/001/006/008/013
B112/B138

character of the medium Figure 2 shows the programming scheme for the calculation of a trajectory. The results of several numerical computations are given. A Kh Breger, Yu. S. Ryabukhin, and A. F. Akkerman are thanked for assistance. There are 5 figures and 6 references: 3 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: M. J. Berger. An application of the Monte-Carlo method to a problem in gamma-ray diffusion. Sympos. Monte-Carlo Methods. N. Y., John Wiley and Sons, Inc., 1956, 89-102; T. Hodberg. Monte-Carlo calculations of neutron thermalization in a heterogeneous system. Aktiesolaget atomenergi, Stokholm, 1959; J. von Neumann. Various techniques used in connection with random digits. NBS Appl. Math., Ser., 1951, 12, 36-38.

SUBMITTED·   June 9, 1961

Card 2/3 2

40264

S/089/62/013/003/003/007
B102/B104

AUTHORS: El'tekov, V. A., Ryabukhin, Yu. S.

TITLE: Absorption of neutrons from a fast-neutron source by
              cadmium and indium plates in water

PERIODICAL: Atomnaya energiya, v. 13, no. 3, 1962, 266-269

TEXT: More precise calculations are given in two-group approximation,
related to earlier estimates of the activation of the indium-gallium radia-
tion loop in the ИРТ(IRT) reactor, (Ref. 1: A. Kh. Breger et al,
International Conference on Powerful Radiation Sources, Warsaw, 1959;
Paper no. 80). The model considered is much simplified. Assume an
infinitely large plane isotropic fast-neutron source of uniform density
situated at $x = 0$ in an infinite uniform homogeneous medium. Parallel to
this at a distance f assume a plate which is penetrable to fast neutrons
but black to slow neutrons. The probability Q of a neutron being absorbed
in the plate is calculated. The formula obtained for Q was verified by
carrying out measurements in a trough containing an aqueous solution of
12% $MnSO_4$, using Ra-α-Be or Po-α-Be in a steel cylinder filled with .

Card 1/2

Absorption of neutrons from ...

S/089/62/013/003/003/007
B102/B104

paraffin as a neutron source and with absorbing plates made from 1 mm Cd. sheets, either alone or plus 0.15 mm In foil. Q was calculated from the saturation activity induced in the Mn as measured with and without the absorbing plates. The $Q(\xi)$ lines plotted experimentally were compared with those calculated. In both cases, these lines slope gradually downward; the theoretical lines rather less steeply than the experimental so that they intersect at $7 < \xi < 8$ cm. The principal parameters of the fast and slow neutron groups are given. The deviation of the two $Q(\xi)$ curves is due to the ideality of the model. The results are compared with those obtained by another method and the specific γ-dose rate of the irradiator of the PK-1 (RK-1) reactor loop is estimated numerically. The results coincide with the estimates in Ref. 1. There is 1 figure.

SUBMITTED: April 3, 1961

Card 2/2

TERENT'YEV, B.M.; EL'TEKOV, V.A.; RYABUKHIN, Yu.S.

Absorption of gamma rays in infinite lattice systems. Atom.
energ. 13 no.6:568-571 D '62.   (MIRA 15:12)
                (Gamma rays)   (Crystal lattices)

TERENT'YEV, B.M.; EL'TEKOV, V.A.; GOLENKO, D.I.

Calculating the absorption of gamma-radiation energy in heterogene-
ous macrosystems. Atom. energ. 15 no.5:382-386 N '63.   (MIRA 16:12)

L 12421-63   EWT(m)/EDS   AFFTC/ASD

ACCESSION NR: AP3001414   S/0020/63/150/004/0866/0869   63
                                                                                57

AUTHOR: Breger, A. Kh.; El*tekov, V. A.; Terent*yev, B. M.; Vaynshteyn, B. I.;
Cyrkus, N. P.; Krasnoshchekova, N. A.; Osipov, V. P.; Gol*din, V. A.

TITLE: Absorption of Gamma-radiation energy in macrosystems.

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 866-869

TOPIC TAGS: absorption of energy of Gamma-radiation, Type K-60000 apparatus

ABSTRACT: The energy coefficient of net efficiency of Gamma-radiation, and the
value of the cumulative factor of integral current capacity of Gamma-radiation
were determined for model apparatus of heat exchanger and tubular, still-type
pipe. These determinations were obtained by three non-related methods: statis-
tical method of investigation by an electronic computer, experimental method, and
calculation by a semiempirical method. The results based on 300 samples are
quire representative. The life span of a single quantum for the heat exchanger
was found to be 4 sec. and for the still-type pipe, it was 2 sec. Calculations
were also made for other values of energy coefficients of net efficiency. The
integral absorption capacity for the given models were determined experimentally
by ferrosulfate dosimetry method. The satisfactory agreement of the results

Card 1/2

L 12421-63

ACCESSION NR: AP3001414

with all three methods confirms the validity of the program and the methods of calculation. A possibility exists for a tangible method of solution of the problem for an optimum construction of an apparatus and the optimum number and activity of the radiation source. "The authors express their gratitude to Voropayev, Yu. V., Ratov, A. B., Kasatkin, V. M., Kalmy*kova, Ye. D., and Shalyapin, N. K. for their help in conducting the experiments on the type K-60000 unit, as well as to Golenko, D. I. for a number of useful hints in programming this work. Orig. art. has: 2 tables, 2 graphs and 1 figure.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-Chemical Institute)

SUBMITTED: 03May62   DATE ACQ: 01Jul63   ENCL: 00

SUB CODE: 00   NO REF SOV: 008   OTHER: 000

Card 2/2

S/0089/64/016/004/0291/0295

ACCESSION NR: AP4029688

AUTHORS: El'tekov, V.A.; Terent'yev, B.M.; Panchvidze, M.V.

TITLE: The gamma-radiation spectrum and partial magnitudes of absorbed energy in an arbitrary homogeneous mixture.

SOURCE: Atomnaya energiya, v.16, no.4, 1964, 291-295

TOPIC TAGS: gamma quanta density, spectral density, radiation spectrum, homogeneous mixture, age equation, dimensionless wave, Compton collision, quantum degradation

ABSTRACT: This report discusses the approximate methods of changing from an accurate integral equation of the spectral density of gamma-quanta to a differential equation of the first order. The gamma-radiation spectrum in a homogeneous medium with evenly distributed radiation sources can be calculated by the age-theory approximation method. Although a number of numerical methods produce a more accurate solution, the advantage of the age approximation method is that it facilitates a solution in the form of quadratures in connection with any substance or mixture of substances as well as arbitrary source spectrum.

Card 1/2

ACCESSION NR: AP4029688

A method involving the use of Compton collisions is offered whereby an
age equation can be obtained from an accurate integral equation for
the spectral density of gamma-quanta. An infinite homogeneous system
with evenly distributed sources can be used as a design model for cer-
tain special cases involving radiochemical apparatuses whose overall
dimensions are so large that the edge effect may be disregarded, while
the thickness of the sources and the distances between them are so
small that the system may be considered as a quasi-homogeneous mixture
of sources and irradiated components. It is possible that a better
selection of the assigned functions would make the deviations of the
individual approximate values of spectral density much smaller than in
the above-discussed cases. "The authors express their gratitide to
A.Kh. Breger for his interest in and attention to the project." Orig.
art. has: 1 figure, 16 formulas and 2 tables.

ASSOCIATION: None

SUBMITTED: 20Jun63   DATE ACQ: 01May64   ENCL: 00

SUB CODE: PH, NS   NR REF SOV: 004   OTHER: 004

Card 2/2

L 1553-66   FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d)/EWA(h)   TT/GS/GW

ACCESSION NR: AT5023610   UR/0000/65/000/000/0394/0405

AUTHOR: Vernov, S. N.; Chudakov, A. Ye.; Vakulov, P. V.; Gorchakov, Ye. V.;
Kuznetsov, S. N.; Logachev, Yu. I.; Nikolayev, A. G.; Sosnovets, E. N.;
Rubinshteyn, I. A.; Stolpovskiy, V. G.; El'tekov, V. A.

TITLE: Geometric position and particle composition of the earth's radiation belts

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow,
1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii.
Moscow, Izd-vo Nauka, 1965, 394-405

TOPIC TAGS: cosmic radiation, earth radiation belt, cosmic ray, Elektron 1, Elek-
tron 2

ABSTRACT: An exhaustive study is made of data recorded by the Elektron-1 and -2
satellites, which were launched on 30 January 1964. Orbital data are given in
Table 1 of the Enclosure. The first orbits were positioned so that the satellites
passed their apogee at about 3 o'clock a.m. local time. The outer boundary of the
radiation belt was thus crossed at about midnight and again at about 7—8 p.m. on the
return branch of the orbit. The subsequent orbits were shifted toward the sunset:
Elektron-1, by 8 min, and Elektron-2, by about 4 min in the 24-hr period. Elek-on

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L 1553-66

ACCESSION NR: AT5023610

tron-1 and -2 were equipped with similar instrumentation. In some cases, however, there were differences in energy thresholds. A chart summarizing all data shows the electron and proton fluxes of different energies in the equatorial plane and for comparison gives IMP-1 data. The following conclusions can be made from the chart: 1) A belt of artifically injected electrons exists at distances closest to the Earth's center. The maximum of the belt in February 1964 was at $L = 1.35$. The flux of electrons with energy above 2 Mev at the maximum was about 1×10^7 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$. 2) The average directed flux of protons with an energy of 45—70 Mev at the maximum of the inner belt ($L = 1.45$) was about 1.5×10^3 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$. A change in the integral spectrum at proton energies above 50 Mev was observed at $L = 2.2$; the spectrum of their energies is in the process of hardening, which could be explained by the theory of albedo neutrons. 3) The spatial distribution of protons with an energy of one to several Mev differs from that of the electrons. There is a definite regularity in the distribution of protons according to their energies. The average directed flux of protons with an energy above 2 Mev was about 4.5×10^5 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$ in the equatorial plane at $L = 2.8$. It appears that the majority of the protons in this energy range are created by transverse drift with respect to the magnetic field lines. 4) A belt of high-energy electrons was observed at $L = 2.75$. Its width at the equator was about 0.4 earth radii. The average directed flux of electrons above 6 Mev was about 10^2 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$. 5) A minimum of distribution

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L 1553-66

ACCESSION NR: AT5023610

of electrons of above 150 kev energy was observed in the region between L = 3 and L = 4. The altitude intensity shift is subject to large fluctuations in time and may drop at times to negligible magnitudes. 6) The maximum of the outer belt is positioned, on the average, at L = 4.8. The maximum altitude intensity shift indicator m = 0.5 +0.3/-0.2 within a wide range of L. There is a sharp intensity jump on the night side at L = 7 + 0.5. On the morning side, a slow monotonic drop of intensity was observed. The average directed flux of electrons with an energy of over 70 kev at the maximum of the outer belt is about 5×10^6 $cm^{-2} \cdot sec^{-1} \cdot ster^{-1}$ and can change by more than an order of magnitude. The electron energy spectrum observed within the 70 to 600 kev range is in agreement with the data of other researchers. The electron energy spectrum in the energy range above 1 Mev appears to be softening, in comparison with measurements of earlier years. Orig. art. has: 11 figures. [FP]

ASSOCIATION: none
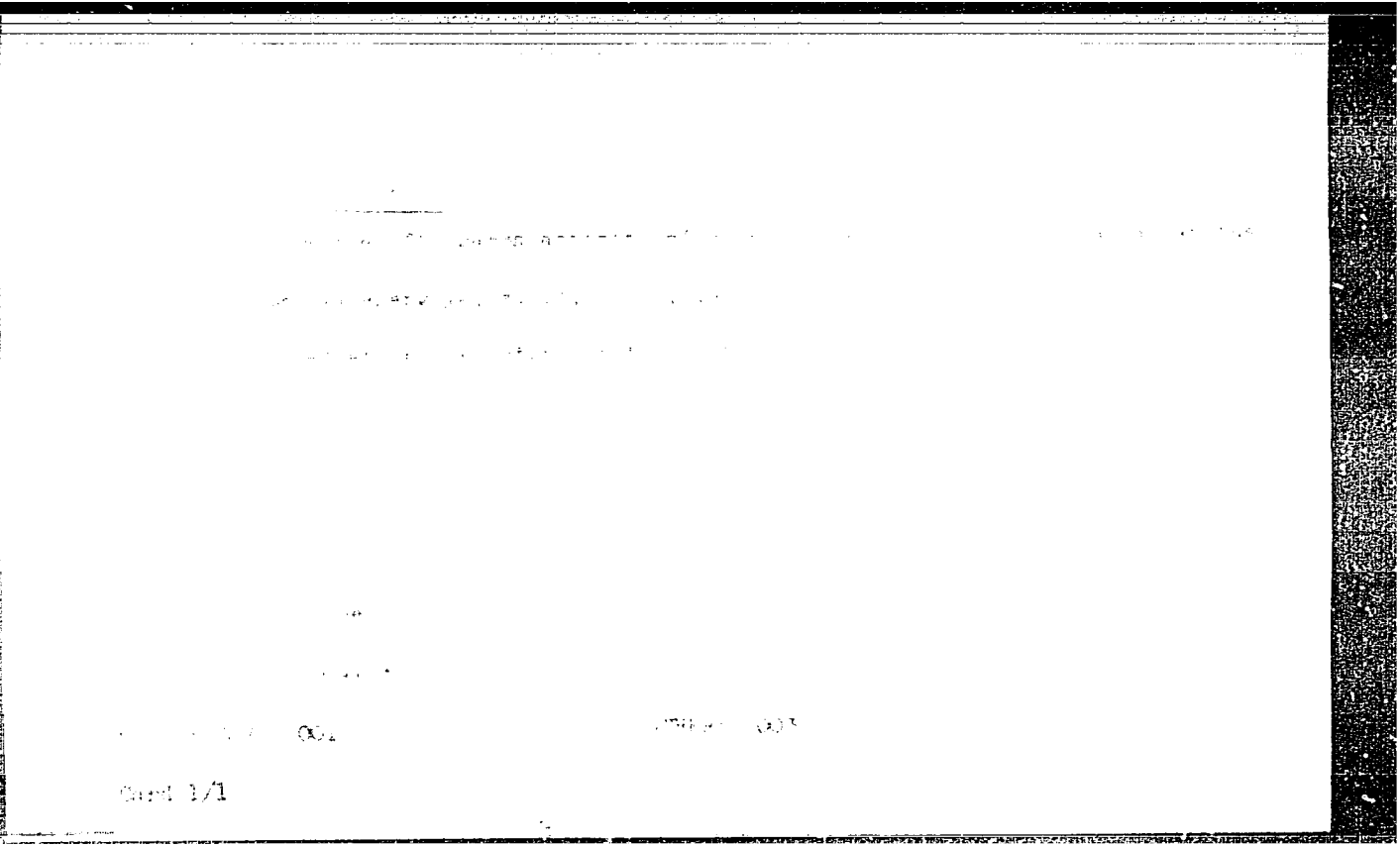
SUBMITTED: 02Sep65   ENCL: 01   SUB CODE: AA, SV

NO REF SOV: 007   OTHER: 004   ATD PRESS: 4094

Card 3/X 5

Card 1/1

TERENT'YEV, B.M.; BITMAN, V.A.; bat'ko, A.Kh.

Absorption of gamma radiation from a point source in macrosystems.
Atom. energ. 19 no.2:196-199 Ag '65.   (MIRA 18:9)

L. 05614-67   EWT(1)/EWT(m)/T/EWP(t)/ETI   IJP(c)   JD/AT

ACC NR: AP6024485   SOURCE CODE: UR/0181/66/008/007/2173/2181

76
B

AUTHOR: Karpuzov, D. S.; El'tekov, V. A.; Yurasova, V. Ye.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Angular and energy distribution of ions reflected from single crystals of copper

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2173-2181

TOPIC TAGS: copper, argon, ion bombardment, ion distribution, angular distribution, ion energy

ABSTRACT: This is a continuation of earlier work (Izv. AN SSSR ser. fiz. v. 28, 1470, 1964) where the angular distribution of ions reflected from the face of a single-crystal cube of copper was calculated by graphically plotting the trajectories of the ions under certain simplifying assumptions. The present article describes electronic-computer calculations of the angular and energy distributions of the reflected ions without these simplifications. The calculations pertain to the reflection of 3-kev copper ions and 2.2-kev argon ions from single crystals of copper, the bombarding ions being normally incident on the (100) face. It is shown that the maxima in the angular and the energy distributions are produced by ions reflected as a result of a definite number of collisions with the lattice atoms. The angular distribution of the ions reflected from the face of the single crystal is found to be anisotropic, the anisotropy

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L 05614-67

ACC NR: AP6024485

being larger for Cu^+-Cu than for Ar^+-Cu collisions. For ions reflected in a fixed solid angle, the energy spectrum consists of several distinct peaks corresponding to the collisions of definite multiplicity. The form of the spectrum depends on the direction of emission of the reflected ions. The authors thank O. B. Firsov, G. V. Spivak, Yu. V. Martynenko, and B. V. Panin for a discussion and remarks, and V. I. Shul'ga for help with the processing of the results. Orig. art. has: 5 figures.

SUB CODE: 20/   SUBM DATE: 17Jun65/   ORIG REF: 004/   OTH REF: 003

EL'TEKOV, YU. A.

USSR/Chemistry - Adsorption   11 Sep 52

"The Relationship Between the adsorption of Isopentane Vapor and the Pore
Size of Silica Gels," V. P. Dreving, A. V. Kiselev,Yu. A. El'tekov, Moscow
State U imeni M. V. Lomonosov

"Dck Ak Nauk SSSR" Vol 86, No 2, pp 349-352

Adsorption isotherms of siopentane oh the following silica gels were con-
structed: Ye. VKhK, TS-200, and S-200, A quant relationship was established be-
tween the work of adsorption and the size of the pores. Presented by Acad M. M.
Dubinin 27 Jun 52.

235T31

VII and VIII the initial values of $dx, dy, \ldots$ are the are
a, a is greater than 0.1 values of dx, dy

EL'TEKOV, YU. A.

USSR/Chemistry - Physical chemistry

Card 1/1   Pub. 22 - 28/50

Authors   :   Kiselev, A. V., and El'tekov, Yu. A.

Title   :   Adsorption of benzene from solutions in heptane over silica gel of different structure

Periodical   :   Dok. AN SSSR 100/1. 107-110, Jan. 1, 1955

Abstract   :   The study of benzene adsorption from solutions showed that the narrowing of pores of silica gels of the third structural type (uniformly finely porous) sharply increases the upward curvature of absolute adsorption isotherms of such hydrocarbons as heptane and isopentane. The adsorption potential of silican gels increases during the reduction of pore diameters to less than 50 A° The results obtained by studying the absolute adsorption isotherms of benzene from vapors and liquid solution in heptane over two porous silica gels that are identical in structure are listed. Thirteen USSR references (1947-1954). Graphs.

Institution: The M. V. Lomonosov State University, Moscow

Presented by: Academician M. M. Dubinin, May 5, 1954

EL'TEKOV, YU.A.

KISELEV, A.V.; EL'TEKOV, Yu.A.

Absolute adsorption isotherms of normal iso-and cyclo-
pentane vapors on quartz and silica gels. Zhur.fiz.khim.
31 no.1:250-262 Ja '57.   (MLRA 10:5)

1.Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
             (Adsorption) (Vapors) (Pentane)

AUTHORS:

Kiselev, A. V., Khopina, V. V., El'tekov, Yu. A. (With the SOV/62-58-6-2/37
Participation of Klyachko-Gurvich, A. I)

TITLE:

The Adsorption of the Toluene- and Heptane Mixture on Silica-
-Gels and Carbon Blacks (Adsorbtsiya smesi toluola i geptana
na silikagelyakh i sazhakh)

PERIODICAL:

Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk,
1958, Nr 6, pp. 664-672 (USSR)

ABSTRACT:

The present paper is a continuation of several earlier ones
(Refs 9, 11, 12) and deals with the investigation of the
adsorption of toluene from solutions in heptane on silica
gels of various structures. Numerous authors (Refs 4, 6, 13,
14) recommend this system(for the purpose of determining
the specific surface of catalysts and adsorbents). A defini-
tion was given of the isothermal lines for the adsorption
of toluene from solutions in n-heptane on silica-gels having
various degrees of porosity. The thickness of the monomole-
cular adsorption layer of toluene amounts to 3.7 Å, the
molecules of toluene are oriented flat on the surface of the
silica-gel. The narrowing of pores on silica-gel from 104 to

Card 1/3

The Adsorption of the Toluene- and Heptane Mixture on Silica-Gels and Carbon Blacks   SOV/62-58-6-2/37

30 Å (by which the adsorption potential is increased) increases the adsorption of toluene within the range of low concentra- tbns and causes a shifting of the isothermal maximum for thin-pored samples in the direction of lower concentrations. The prevailing adsorption of aromatic hydrocarbons and ole- fines on silica-gel is connected with two factors: with the intensity of the interaction between aromatic nuclei and the hydroxylene of the silicon acid, and the influence exer- cised by substituents. In this way the surface occupied by a molecule on the silica-gel surface is increased. On carbon- -black with an acid surface (from heptane solutions) toluene is adsorbed throughout the entire area of concentration (but not to the same extent as on silica-gel). Carbon-black graphit- ing reduces the adsorption of toluene considerably. There are 8 figures, 1 table, and 26 references, 18 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova i Institut fizicheskoy khimii Akademii nauk SSSR (Moscow State University imeni M. V. Lomonosov and Institute of Physical Chemistry, AS USSR)

Card 2/3

The Adsorption of the Toluene- and Heptane Mixture on Silica-Gels and Carbon Blacks

SOV/ 62-58-6-2/37

SUBMITTED: February 22, 1957

1. Toluene--Adsorption   2. Silicon dioxide--Adsorptive properties
3. Carbon black--Adsorptive properties   4. Heptane solutions
--Properties

Card 3/3

AUTHORS:

Rubinshteyn, A. M., 'El'tekov, Yu. A.,   SOV/20-122-1-23/44
Slovetskaya, K. I.

TITLE:

Chemosorption of Isopropyl Alcohol on Ferroaluminium
Gel Catalysts (Khemosorbtsiya izopropilovogo spirta
na katalizatorakh - ferroalyumogelyakh)

PERIODICAL:

ABSTRACT:

The reaction of decomposition of isopropyl alcohol
is often used as a standard of activity and selectivity
of oxide catalysts. It may take 2 directions: a)
Dehydration by means of Al_2O_3, e.g., b) dehydration(by
means of metals, oxides, Fe_2O_3 among them). In
the laboratory of the authors a detailed investigation
was carried out with the catalysts mentioned in the
title. The adsorption of isopropyl alcohol on $Fe_2O_3 \cdot Al_2O_3$
where both mentioned reactions take place, was in-
vestigated in the present paper. Table 1 shows the loss
of weight caused by removal of the structural water.
Figure 1 shows that the chemosorption of isopropyl

Card 1/4

Chemosorption of Isopropyl Alcohol on Ferroaluminium   SOV/20-122-1-23/44
Gel Catalysts

alcohol takes place at 30° on the surface of all
samples investigated. The composition of the catalyst
exccises little influence upon chemosorption. It depends,
however, much more on the extension of the specific
surface of the catalysts. This points out to the
fact that in the surface layer of the catalyst either
one or both components are present which sorb isopropyl
alcohol to the same extent. The assumption that both
components are present in the above mentioned layer
is confirmed by the results of phase analysis. The
latter showed that the components are mutually dissolved
and form two solid solution phases. Figure 1 shows
furthermore that the increase of annealing temperature
of each catalyst leads to both a reduced total ab-
sorption of isopropyl alcohol and the reduction of the
chemosorbed quantity. The problem on which surface
groups chemosorption takes place has to be discussed:
From references 1,2,5,6 it may be concluded that at
room temperature a chemical adsorption of isopropyl
alcohol takes place under the formation of surface

Card 2/4

Chemosorption of Isopropyl Alcohol on Ferroaluminium   SOV/20-122-1-23/44
. Gel Catalysts

alcoholates. Table 1 shows that the water content
in the catalyst decreases with increasing temperature
and Fe_2O_3 content. The water is removed quicker
than the specific surface (Tables 1 and 2). This
points to the fact that the concentration of OH-groups
decreases per surface unit of the catalyst in connection
with those modifications. From table 2 which shows
the values of the chemosorption share (a_x) and the
concentration values of OH-groups it may be seen that
the chemosorbed quantity of isopropanol remains
practically unchanged and amounts to 4μ mol/m^2
approximately. It is quite likely that on the surface
of the catalyst there are enough OH-groups for chemo-
sorption. There are 1 figure, 2 tables, and 7 refer-
ences, 7 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N.D.Zelinskogo Akademii
Card 3/4   nauk SSSR (Institute of Organic Chemistry imeni N.D.
                Zelinskiy, AS USSR)

5(4)   SOV/76-33-2-11/45
AUTHORS: Rubinshteyn, A. M., El'tekov, Yu. A., Slovetskaya, K. I.

TITLE: The Porous Structure and Specific Surface of NiO-Al$_2$O$_3$ Cata-
                lysts and the Variation of These Properties With Changes in
                Composition and Thermal Treatment (Poristaya struktura i
                udel'naya poverkhnost' NiO-Al$_2$O$_3$-katalizatorov i ikh izmeneniye
                pri variatsii sostava i usloviy termicheskoy obrabotki)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2,
                pp 310 - 317 (USSR)

ABSTRACT: The authors conducted thorough investigations on the NiO-Al$_2$O$_3$
                system using the adsorption method as well as parallel in-
                vestigations on the activity and selectivity of this system
                in its catalytic effect upon the iso-propanol decomposition
                (Ref 1), the phase composition, and X-ray structure of this
                system (Ref 2), and its magnetic properties (Ref 3). Extensive
                tests were carried out because this system is a mixed cata-
                lyst, since Al$_2$O$_3$ dehydrates and NiO dehydrogenates, and

Card 1/3   also because contradictory data on this system are given

The Porous Structure and Specific Surface of $NiO-Al_2O_3$ SOV/76-33-2-11/45
Catalysts and the Variation of These Properties With Changes in Composition
and Thermal Treatment

in the publications (Refs 1-7). The thermal treatment of
the catalyst took place at 400,600,750, and 900°C, while
the granulation varied between 1.1 and 1.3 mm. The adsorp-
tion experiments were carried out using a vacuum apparatus
containing balances with quartz spirals of the Mak-Ben
and Bakr type. The vapor pressure was determined using
a U-manometer and a MakLeod manometer, while the catalyst
was maintained at a definite temperature by using a Hepler
(Gepler) ultra-thermostat. The adsorption isotherms at
20° C(Figs 1-4) are S-shaped and possess a hysteresis loop.
The values of the specific surface (s) and the porous volume
(V_s) were calculated from the isotherms using the BET method.

The Kelvin equation was used to calculate the porous dia-
meter (d) and then the particle dimensions (D)(Table). The
experimental results obtained show that the strongest change
in the above mentioned properties is observed with a NiO-
content between 5 and 15-20 mol%. A definite relationship
was shown between the catalytic properties of the catalyst

Card 2/3

The Porous Structure and Specific Surface of $NiO-Al_2O_3$ SOV/76-33-2-11/45
Catalysts and the Variation of These Properties With Changes in Composition
and Thermal Treatment

and the characteristics determined by the adsorption method.
The maximal values for s, V_s, d, and D which were obtained
with NiO contents up to 20 mole% are explained by crystal
structure properties in terms of the effect of the NiO and
Al_2O_3 components upon one another. There are 4 figures, 2
tables, and 10 references, 7 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut organicheskoy khimii, Moskva
(Academy of Sciences, USSR, Institute of Organic Chemistry,
Moscow)

SUBMITTED: July 4, 1957

Card 3/3

EL'TEKOV, Yu.A.; SAMOYLOV, S.M.

Sorption of nitrogen and benzene vapors by a tungsten sulfide catalyst. Izv.AN SSSR Otd.khim.nauk no.5:794-800 My '60.
(MIRA 13:6)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR.
(Tungsten sulfide) (Nitrogen) (Benzene)

S/062/60/000/012/003/020
B013/B055

AUTHORS: Rubinshteyn, A. M., Elltekov, Yu. A., Bruyeva, T. R.

TITLE: Studies on Adsorption by Aluminum Oxide Monohydrate and
                γ-Aluminum Oxide

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
                1960, No. 12, pp.2107-2117

TEXT: The present paper is a complex study on the adsorptive properties
of aluminum oxide monohydrate (boehmite) and its dehydration products with
respect to Ar, N_2, $n-C_6H_{14}$, C_6H_6, and CH_3OH. The adsorption of argon and
nitrogen was studied at $-195^\circ C$ and that of n-hexane and benzene at $20^\circ C$
using the same samples (1 to 5). Aluminum hydroxide was used as initial
compound. It was precipitated from a 10% solution of $Al(NO_3)_3$ with a 10%
NH_4OH solution and then treated according to Ref. 1. The experiments were
performed in a soldered vacuum apparatus (Fig. 1), consisting of 3 main
parts: 1) the vacuum device, 2) a device containing a vacuum microburette
and 3) the gas-cleaning system. This apparatus made possible, firstly, the

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Studies on Adsorption by Aluminum Oxide   S/062/60/000/012/003/020
Monohydrate and γ-Aluminum Oxide   B013/B055

investigation of gas adsorption by the volumetric method and vapor adsorp-
tion by means of the vacuum microburette using one and the same catalyst
and, secondly, the simultaneous measurement of two samples. The experimental
adsorption isotherms of nitrogen vapors are shown in Fig. 2a and those of
argon in Fig. 2b. The specific surfaces of the samples investigated were
calculated by the simpler B-point method and the standard Brunauer-Emmett-
Teller method (Fig. 3, Table 1). The results are in satisfactory agreement.
The measurements carried out in this study, together with data published
in Ref. 1 show that sorbed argon (ω_0 = 15.4 A^2) and nitrogen (ω_0 = 16.2 A^2)

occupy corresponding surface areas. The experimental and calculated data ob-
tained in adsorption studies of n-hexane and benzene are shown in Figs.
4-7 and Tables 2 and 3. From these it can be seen that the calculated
specific surfaces of the samples investigated are somewhat fortuitous and
characterized by abnormally high values of S. This anomaly is due to the
increased sorptive energy of the developed texture of the system Al_2O_3-H_2O
and its dependence on the H_2O content. The effect of dehydration of

Al_2O_3 on the adsorption was studied and the absolute adsorption isotherms

of n-C_6H_{14} and C_6H_6 (Fig. 8), nitrogen (Fig. 9), and argon (Fig. 10) were

Card 2/3

Studies on Adsorption by Aluminum Oxide   S/062/60/000/012/003/020
Monohydrate and γ-Aluminum Oxide   B013/B055

calculated. The degree of dehydration inside a water content of 11.6 to 4.0% by weight had no influence on the adsorption of $n\text{-}C_6H_{14}$, whereas it noticeably increased the adsorption of C_6H_6, nitrogen, and even that of argon, in the initial monomolecular range. The increased adsorption of nitrogen in the initial range, as compared to argon, may be explained by an additional interaction energy of the nitrogen quadrupole with the electric field of $\gamma\text{-}Al_2O_3$. The quadrupole moment of argon is zero. The adsorbability of the investigated vapors on aluminum hydroxide (boehmite) is low because it has a looser lattice than $\gamma\text{-}Al_2O_3$. The crystal lattice of boehmite contains more excited hydroxyl groups owing to their close mutual neighborhood than $\gamma\text{-}Al_2O_3$ which is built up of closely packed and entirely or partly ionized oxygen- and aluminum atoms. There are 10 figures, 3 tables, and 20 references: 8 Soviet, 5 US, and 3 German.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: July 10, 1959

Card 3/3

EL'TEKOV, Yu.A.

Nature of the porosity of chromium hydroxide gels. Izv. AN SSSR.
Otd. khim. nauk no.12:2236-2237 D '60.   (MIRA 13:12)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
        (Chromium hydroxide)   (Argon)

EL'TEKOV, Yu.A.; KISELEV, A.V.

"Structure and properties of porous materials" edited by D. H.
Everett, F. Stone. Reviewed by IU. A. El'tekov, A. V. Kiselev.
Zhur. fiz. khi-. 34 no.2:478-480 F '60.   (MIRA 14:7)
          (Porous materials) (Everett, D. H.)
                      (Stone, F.)

EL'TEKHOV, Yu.A.; BRUYEVA, T.R.; RUBINSHTEYN, A.M.

Texture and adsorption properties of chromium oxide and hydroxide.
Izv.AN SSSR Otd.khim.nauk no.4:560-565 Ap '61.   (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
         (Chromium oxide)   (Chromium hydroxide)

EL 'TEKOL, Yu. A.

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PHASE I BOOK EXPLOITATION   SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye
    (Synthetic Zeolites: Production, Investigation,and Use). Mos-
    cow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady)
    Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh
    nauk. Komisiya po tseolitam.

Resp. Eds.: M. M. Dubinin, Academician and V. V. Serpinskiy, Doctor
    of Chemical-Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P.
    Golub'.

PURPOSE: This book is intended for scientists and engineers engaged
    in the production of synthetic zeolites (molecular sieves), and
    for chemists in general.

Card 1/14 3

Synthetic Zeolites: (Cont.)

SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

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   Lulova, and A. T. Slepneva. Methods of Plant and Quality
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APPLICATION OF ZEOLITES

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   sorption of a Mixture of Thiophene and Heptane on
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   With Synthetic Zeolite CaA   225

Card 3/5

S/069/62/024/002/003/000
B110/B144

AUTHORS: Drogalev., .. V., Kiselev, A. V., Korolev, A. Ya., El'tekov, Yu. A.

TITLE: Production and properties of ethylene glycol aerosil

PERIODICAL: Kolloidnyy zhurnal, v. 24, no. 2, 1962, 152 - 158

TEXT: The surface of aerosil was modified with ethylene glycol to reduce the adsorption energy and preserve the hydrophilic character and selective action of functional groups. Etherification of silanol groups with ethylene glycol

$$-Si-OH + HOC_2H_4OH \longrightarrow -Si-O-C_2H_4OH + H_2O$$

causes coating of the aerosil surface with ethylene glycoxy groups, one hydroxyl group of which is located at the end. First the increase in the degree of modification is comparatively fast as the time of ethylene glycol action increases, then it slows down. The number of $-CH_2-CH_2-$ groups grafted onto the unit surface varies between 2 and 6 per 100$\AA^2$. When one hydroxyl group reacts with one

...ol molecule, the substitution degree of OH groups is:

Production and properties of ethylene...

$\theta_{-OH} \longrightarrow -OC_2H_4OH = \overset{\alpha}{}-CH_2-CH_2-\overset{\alpha}{}-OH \overset{\alpha}{}-CH_2-CH_2-/9.$ Only 2/3 of the OH

groups located on the surface of hydrated silica were substituted. The
adsorption isotherms of substituted aerosils showed that the adsorption
of nitrogen, n-hexane, and argon vapors was not affected but that of
benzene and methanol vapors rapidly reduced. This reduction is due to
chemical changes of the surface and their effect on adsorption since the
specific surface of aerosil is hardly changed by etherification. In a dense
monolayer, the area per molecule is $\omega_m = s_{N_2}/a_m N$, where a_m is the capacity

of the monolayer, s_{N_2} is the specific surface. Substitution of ethoxy for

silanol groups causes decrease in a_m for methanol and benzene. With nitro-
gen and methanol the equilibrium constant decreases with increasing substitu-
tion degree. Grafting may be applied to diol substitution: (1) to one or
two OH groups, (2) to -Si-O-Si- bridges, and (3) to bridges and OH groups.
More complex compounds may form on the surface since ethylene glycol forms
polymer chains in the presence of oxide catalysts. This causes a composite
mosaic structure of the modified layer. Screening of silica with ethylene
Card 2/4

Production and properties of ethylene...

S/069/62/024/002/003/008
B110/B144

glycol groups improves dispersion and disaggregation of aerosil particles
owing to a decrease in their interaction. Disaggregation is important for
the introduction of modified aerosil as filler into polyurethanes. The
gluing strengths of modified and initial quartz hardly differ. The hydroxyl
groups of the quartz surface react vigorously with the isocyanate groups of
the glue. The adhesive power is to be preserved, and wetting and complete
disaggregation of filler particles in the polymer are to be reached by
chemical modification aimed regulation of surface properties of highly
disperse fillers. Screening of the silica surface by a dense layer of un-
polar, chemically inert groups reduces adsorption and adhesion. Modification
with dimethyl dichloro silane thus forms a thick, continuous polymethyl
siloxane layer eliminating the polar glue-quartz adhesion. There are 2
figures, 4 tables, and 16 references.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR Gruppa khimii poverkhnosti
(Institute of Physical Chemistry AS USSR, Group of Surface
Chemistry). Moskovskiy universitet im. M. V. Lomonosova
Laboratoriya adsorbtsii Khimicheskiy fakul'tet (Moscow University
imeni M. V. Lomonosov, Adsorption Laboratory, Chemical Division)

Card 3/4

Production and properties of ethylene...   S/069/62/024/002/003/008
                                                  B110/B144
SUBMITTED: April 26, 1961

Card 4/4

AKTANOVA, S.; KISELEV, A.V.; EL'TEKOV, Yu.A.

Adsorption of aliphatic amines on alumina and silica. Izv.AN SSSR.
Otd.khim.nauk no.11:1936-1944 N '62.
(MIRA 15:12)

1. Institut fizicheskoy khimii AN SSSR i Moskovskiy gosudarst-
vennyy universitet im. M.V. Lomonosova.
         (Amines)   (Adsorption)

KISELEV, A.V.; SEMENOVA, V.N.; EL'TEKOV, Yu.A.

Adsorption of thiophene + n.heptane from solutions by silica
gel, aluminum oxide, and by the molecular sieves 5A and 13X.
Kin.i kat. 3 no.6:937-941 N-D '62.   (MIRA 15:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,
khimicheskiy fakul'tet i Institut fizicheskoy khimii AN SSSR.
    (Thiophene)   (Heptane)   (Adsorption)

AUTHORS: Kiselev, A.V., Korolev, A.Ya., El'tekov, Yu.A.

TITLE: On the adsorption on estersils

PERIODICAL: Kolloidnyy zhurnal, v. 25, no. 2, 1963, 165 - 168

TEXT: In continuation of earlier investigations the authors compare ad-
sorption isotherms of nitrogen and argon vapors at -195°C and methanol, benzene,
and n-hexane vapors at 20°C on aerosil with those obtained on estersils prepared
by a treatment of the aerosil surface with ethylene glycol or resorcinol. More
than half of the surface of the estersils was covered by ester groups. With re-
spect to adsorption capacity for argon, nitrogen and n-hexane, the adsorbents
arranged themselves in the order resorcinolestersil > glycolestersil, whereas
with respect to benzene and methanol the order was aerosil > resorcinolestersil>
>glycolestersil. There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy universitet, Khimicheskiy fakul'tet (Moscow University,
                Chemical Department); Insitut fizicheskoy khimii AN SSSR (Insti-
                tute of Physical Chemistry of the AS USSR)

SUBMITTED: May 31, 1962

Card 1/1

S/020/63/149/001/018/023
B101/B144

AUTHORS: Kiselev, A. V., Novikova, V. N., El'tekov, Yu. A.

TITLE: Adsorption of dissolved polydimethyl siloxane by aerosils

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 1, 1963, 131 - 134

TEXT: The adsorption of polydimethyl siloxane (PDMS) on Degussa aerosils was studied using an interferometer. The PDMS had a molecular weight of 350,000, its maximum concentration in n-hexane was 40 mg per g solution. Three samples of aerosil were used: (1) dried at 250°C; (2) dehydrated at 800°C; (3) impregnated at 180°C in vacuo with trimethyl chlorosilane. The adsorption isotherms rise sharply and the adsorption reaches its limiting value even at low concentrations. There was no difference between samples (1) and (2), but sample (3) adsorbed only half the PDMS as compared with samples (1) and (2). Based on the paper by R. Perkel, R. Ullman (J. Polym. Sci., 54, 127 (1961)) it was found that PDMS adsorption is almost identical on glass and aerosil. The calculated values are: α = 1800 molecules PDMS per μ^2 glass, α = 1400 molecules PDMS per μ^2 aerosil. The area ω = $1/\alpha$ occupied by one macromolecule is 50,000 $Å^2$ for glass and 60,000 $Å^2$ for aerosil. From the thickness τ of the adsorption

Card 1/2

Adsorption of dissolved ...

S/020/63/149/001/018/023
B101/B144

layer, $\tau = v_m/\omega$, where $v_m = 640,000$ Å^3 is the volume of one molecule, τ was calculated to be 10 Å whereas the value obtained from the Van der Waals model of the stretched PDMS molecule is 7 Å. Therefrom it is concluded that the coiled PDMS molecules decoil when they are adsorbed and form a dense monomolecular layer. PDMS adsorption tests with molecular sieve 13X yielded low adsorption values, although the diameter of the channels of the zeolite is 10 Å. Presumably, the PDMS molecules cover the outer surface of the molecular sieve and are no longer able to penetrate into the channels. There are 3 figures.

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

PRESENTED: November 16, 1962, by A. N. Frumkin, Academician

SUBMITTED: November 16, 1962

Card 2/2

macromolecular sieves for evaluating the

macromolecule, molecular sieve,

L 64543-65

...ethylsiloxane molecules...

...coiled into rather dense balls, the diameter of which comprises approximately 100 A; they note that in the field of the adsorbent, the polydimethylsiloxane macromolecules might assume other conformations (ellipsoid), in view of which the dimensions determined by the adsorption method may be too low.

Orig. art. has: 6 formulas, 1 table.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AN SSSR)

... Jan64   ENCL: 00   SUB CODE: OC, OC

NR REF SOV: 002   OTHER: 002   JPRS

L 43930-65   EWT(m)/EPF(c)/EWP(j)/T   Pc-4/Pr-4   RM

ACCESSION NR: AT5008629   S/2933/64/007/000/0173/0179

AUTHORS: El'tekov, Yu. A.; Piguzova, L. I.; Novikova, V. N.

TITLE: Absorption of thiophene from liquid solutions by type X molecular sieves

      AN SSSR, Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy,
    содержащихся v neftyakh i nefteproduktakh, v. 7, 1964

TOPIC TAGS: molecular sieve, adsorption, thiophene, benzene

ABSTRACT: The adsorption of thiophene from solutions of low equilibrium concen-
tration in n-heptane and benzene was investigated. Nine samples of type X
were examined to shed light on the effect of structure and
    acting on the absorbing properties of the zeolites.
    the results show that the interaction
    with the maximum adsorption of thiophene
    Differences in the nature of binding clay can also affect
    the adsorption of thiophene. When the zeolite structure can take care
    of react with thiophene molecules but when binding clay is present, adsorption is
diminished 40-50%. Thiophene from n-heptane is positively adsorbed at all
concentrations, and even at concentrations of 0.1 it almost completely
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L 43930-65
ACCESSION NR: AT5008629

displaces molecules of n-heptane. Thiophene is positively adsorbed from benzene
solutions at equilibrium concentrations up to 0.05-0.1, and m... ...
... zeolite cavities along with th... ...
... ...ctive in separating thiophene ... ...
...conditions, to concentrate th... ...
... ...t has: 6 figures, 2 tables, and 2 formulas.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical
... AN SSSR); VNII NP

SUBMITTED: 00   ENCL: 00

                                                    SUB CODE: OC, GC

NO REF SOV: 006   OTHER: 006

Card 2/2

ACCESSION NR: AP4043128   S/0069/64/026/004/0458/0464

AUTHORS: Kiselev, A. V.; El'tekov, Yu. A.; Bogacheva, Ye. K.

TITLE: Effect of the nature of the filler surface on the adsorption
        of polymers. Adsorption of polyneopentylphthalate

SOURCE: Kolloidny*y zhurnal, v. 26, no. 4, 1964, 458-464

TOPIC TAGS: adsorption, polymer adsorption, filler surface property,
adsorption kinetics, adsorption equilibrium, adsorption mechanism,
porous silica gel, nonporous silica gel, hydroxylated silica gel,
dehydroxylated silica gel, trimethylsilated silica gel, alumina

ABSTRACT: The kinetics and equilibrium of adsorption of polyneo-
pentylphthalate (PNPP, M = 2000) from n-heptane solutions at 20C
on adsorbents having different chemical nature and porosities were
determined: on finely porous silica gel ShSM (mean pore diameter d =
40A), very wide porous silica gel S-41 (d = 750A, sp. surface area
s = 41 m^2/gm), nonporous silica gel (s = 170 m^2/gm) with hydroxy-
lated, partially dehydroxylated and 70% trimethylsilated surface,
porous alumina (d = 80A, s = 250 m^2/gm), rutile (s = 4 m^2/gm) and
oxidized and graphitized carbon blacks. Viscosity measurements of
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ACCESSION NR: AP4043128

the solutions showed the low molecular weight PNPP molecules were
mainly adsorbed in the beginning and these were then gradually
displaced by larger macromolecules. The finely porous silica gel
and the rutile practically did not adsorb the polymer. Adsorption
equilibrium was attained within 2 days with the aerosils, rutile
and wide porous silica gel, but alumina and finely porous silica
gel required several days. Comparison of the adsorption of PNPP
per unit surface area of adsorbent showed very close values for the
hydroxylated surface of wide porous silica gel and aerosil, and
considerable divergence from these values by modified silica surfaces,
rutile and carbon blacks. Comparison of the adsorption of PNPP
and polyneopentylsuccinide (PNPS, M = 4400) on glass, aerosil and
wide porous silica gel also indicates the similarity of the adsorp-
tion mechanism and the closeness of the properties of the adsorbents.
The solvent significantly affected the adsorption of the polyester.
The total weight of PNPP, PNPS or of polydimethylsiloxane PDMS
adsorbed per unit surface of silica is close and the relative amount
of PNPP and PDMS adsorbed is approximately proportional to the rela-
tive diameter of the macromolecules--16A for PNPP and 7A for PDMS.

Card 2/3

ACCESSION NR: AP4043128

"The authors thank Yu. S. Nikitina for supplying silica gel S-41 and S. V. Yakubovich for supplying polyneopentylphthalate." Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR,Moskva
             (Institute of Physical Chemistry, AN SSSR)

SUBMITTED: 02Jun63

SUB CODE: GC   ENCL: 00

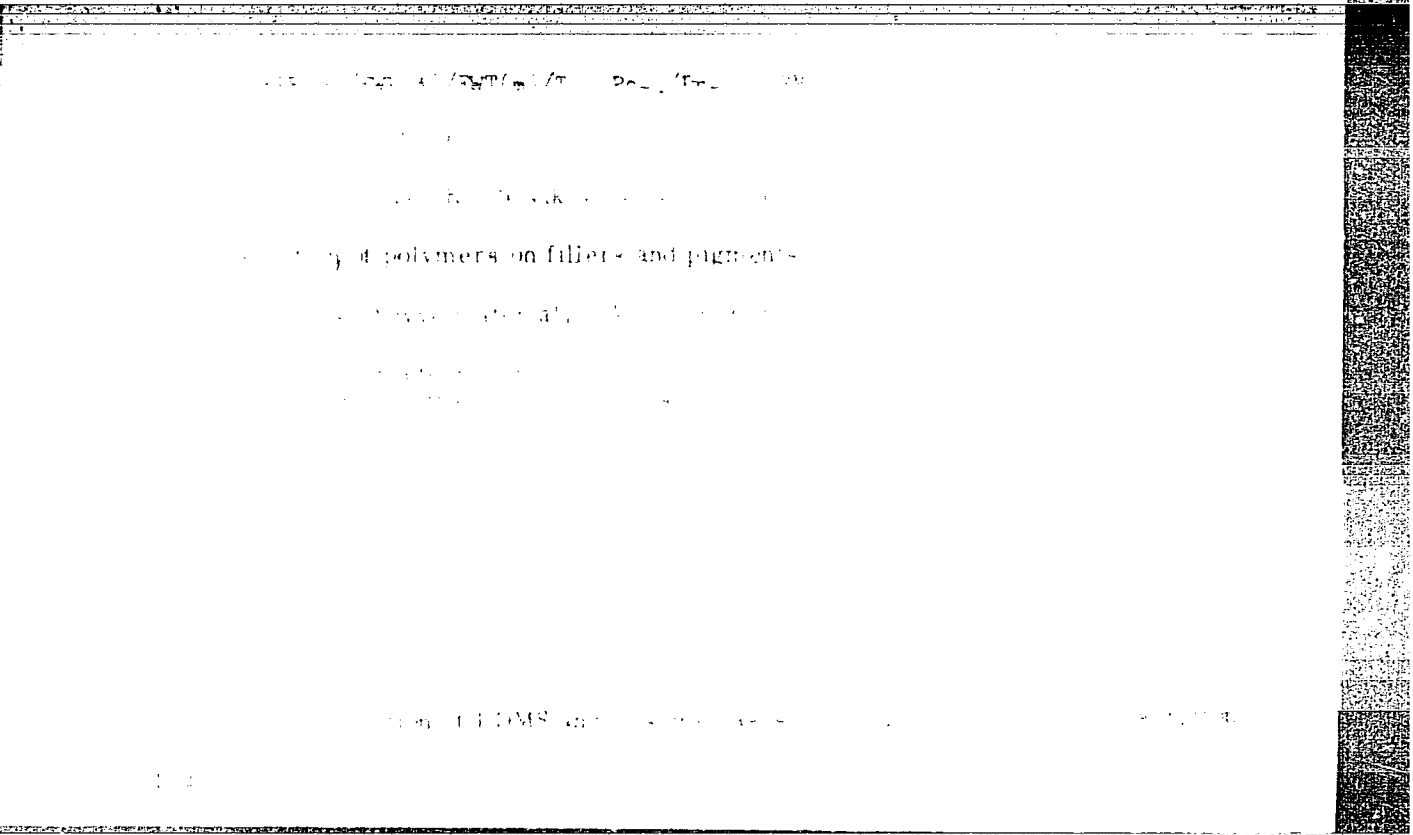   NR REF SOV: 011   OTHER: 005

Card 3/3

of polymers on fillers and pigments

DMS

SUBMITTED: 30 Jul 1959

Figures and 2 formulas

Card 2/2

BOGACHEVA, Ye.K.; KISELEV, A.V.; EL'TEKOV, Yu.A.

Effect of the graphitizing of channel black on the adsorption of polystyrene. Koll. zhur. 27 no.5:656-660 S-O '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

MARKEVICH, S.V.; EL'TEKOV, Yu.A.

Effect of the chemical composition of aluminosilicates on deuterium-hydrogen exchange. Zhur. fiz. khim. 39 no.5:1055-1060 My '65.   (MIRA 18:8)

1. Institut fizicheskoy khimii AN SSSR i Institut fiziko-organicheskoy khimii AN BSSR.

ZHDANOV, S.P.; KISELEV, A.V.; NOVIKOVA, V.N.; EL'TEKOV, Yu.A.

Adsorption of thiophene from solutions by synthetic Na and Ca
faujasites. Zhur.fiz.khim. 39 no.7:1729-1732 Jl '65.
(MIRA 18:8)

1. Institut khimii silikatov i Institut fizicheskoy khimii AN
SSSR.

BOGACHEVA, Ye.K.; KISELEV, A.V.; NIKITIN, Yu.S.; EL'TEKOV, Yu.A.

Effect of the size of silica gel pores on polystyrene adsorption.
Zhur.fiz.khim. 39 no.7:1777-1780 Jl '65.

(MIRA 18:8)

1. Institut fizicheskoy khimii AN SSSR.

L 34419-66   EWT(m)/EWP(j)   RM

ACC NR: AP6010544   (N)   SOURCE CODE: UR/0069/65/027/006/0793/0796

AUTHOR: Bogacheva, Ye. K.; Kiselev, A. V.; El'tekov, Yu. A.

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

TITLE: Effect of surface chemistry on the adsorption of polymer solutions on fillers and pigments. Part 3. Adsorption of polystyrene by titanium dioxide

SOURCE: Kolloidnyy zhurnal, v. 27, no. 6, 1965, 793-796

TOPIC TAGS: adsorption, polystyrene, titanium oxide, toluene, carbon tetrachloride, pigment

ABSTRACT: The adsorption of polystyrene on various samples of pigment rutile from dilute solutions in CCl_4 and toluene was studied at 20 °C in order to determine the nature of the adsorption of these macromolecules and the extent to which it is affected by modification of the pigment surface. The specific viscosity of the CCl_4 solution of polystyrene in contact with rutile was found to decrease monotonically during the first ten days. The specific viscosity of the equilibrium solution indicates that the latter is depleted of the high-molecular polystyrene fraction, which is adsorbed preferentially. The values of polystyrene adsorption from CCl_4 solutions per unit surface were similar for rutile and graphitized carbon black samples. This is attributed to the presence of steric hindrance effects in specific

Card 1/2   UDC: 541.183.23

ACC NR: AP6010544

interactions of the benzene rings of polystyrene macromolecules with the rutile surface. Polystyrene is adsorbed negatively on rutile from toluene solutions because of a specific interaction of the pi-bonds of the aromatic ring with the surface OH groups of rutile. Modification of the rutile surface with aluminum phosphate had virtually no effect on the adsorption of polystyrene from toluene solutions, nor did thermal treatment of the rutile surface at 1000°C have any effect on adsorption from CCl_4 solutions. Orig. art. has: 2 fig., 2 tables and 1 formula.

SUB CODE: 07/ SUBM DATE: 18Jul64/ ORIG REF: 007

Card 2/2 BLG

ACC NR: AT6017560   (A)   SOURCE CODE: UR/0000/65/000/000/0323/0325

AUTHOR: El'tekov, Yu. A.; Bogacheva, Ye. K.

48

ORG: none

41

B+1

TITLE: Molecular sieves for polymers

SOURCE: Vsesoyuznoye soveshchaniye po tseolitam, 2d, Leningrad, 1964. Tseolity, ikh sintez, svoystva i primeneniye (Zeolites, thier synthesis, properties, and application); materialy soveshchaniva. Moscow, Izd-vo Nauka, 1965, 323-325

TOPIC TAGS: high polymer, molecular sieve, zeolite, adsorption, silica gel

ABSTRACT: Nonporous aerosil and porous silica gels (S41, d=75 Å; SG-6, d=280 Å; and ShSK, d=120 Å) were used to adsorb polystyrene and polydimethylsiloxane (PDMS) (M=290,000 and 350,000, respectively) from solutions (CCl_4 and n-hexane) to determine the accessibility of internal surfaces of porous adsorbents to macromolecules. Average dimensions of macromolecules were above 120 and below 280 Å for polystyrene, and 80 and 120 Å for PDMS. Adsorption efficiency is given in Table 1. It is concluded that uniformly porous silica gels can serve as molecular sieves for large polymer molecules. The authors thank Prof. A. V. Kiselev for constant interest in the work, Yu. S. Nikitin and L. I. Piguzova for making

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EL'TEKOVA, K.P.

Etiology of so-called toxicoseptic diseases in newborn infants;
dysenterial septicemia in newborn. Pedicatriia 39 no.5:51 S-O '56.
(DYSENTERY, BACILLARY, in infant and child,   (MLRA 10:1)
    newborn (Rus))
(INFANT, NEWBORN, diseases,
    dysentery, bacillary (Rus))

USSR / Microbiology. Medical and Veterinary Microbiology. F-5

Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 21974

Author : Eltekova, N.I.
Inst   :
Title : An Adsorption Method in Detection of the Antigen of Enteric
         Typhoid Bacilla in Excreta.

Orig Pub: Sb. nauch. tr. Samarkandsk. med. in-t, 1956, 9, 47-56

Abstract: Environments were studied in which the adsorption method of de-
         termining enteric typhoid antigen may bring optimal results. It
         was shown that performing an agglutination reaction by a speci-
         fic horse enteric typhoid serum of "loaded" erythrocites (adsor-
         bents of enteric typhoid bacilli) demands elimination of non-spe-
         cific agglutinins from the serum. The optimum depletion was ob-
         tained by introduction of rabbit erythrocites into the reaction
         (2 ml of blood). A total depletion was not obtained. For this
         work a serum is suitable in a dilution in which no non-specific
         agglutination is observable. It was shown that the more hapten

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Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 21974

there is in the tested matter, the smaller may be the titers of
serum employed. In titers of employed serum 1:1000 - 1:4000,
which are optimal, hapten may be detected in a concentration of
20 million microbial bodies per ml. The reaction's highest sen-
sitivity is observed in detecting hapten in a physiological solu-
tion, a lower one in excretions. After filtering off the weighed
excretion particles, treating with alkali and boiling, the sensi-
tivity of the method is markedly increased. The presence of foreign
microflora in the excreta lowers the possibility of antigen detect-
ion. The accumulation of a specific antigen by planting the exam-
ined matter on a meat-peptone-agar increased the sensitivity of the
method 5 to 10 times.

Card   : 2/2

                                -15-

EL' TEKOVA, N. I.

USSR/Microbiology - Medical and Veterinary.

P-4

Abs Jour   : Ref Zhur - Biologiya, No 7, 1957, 26375

Author   : Shevchenko, F.I., Kazakova, A.N., El'tekova, N.I.
Inst   : Samarkand Medical Institute
Title   : The Appearance of Indications of Pathogenic Properties
               in Coliform Bacilli in Relation to the Composition of
               the Nutrient Medium.

Orig Pub   : Sb. nauch. tr. Samarkandsk. med. in-t, 1956, 11, 91-97

Abst   : Cultures of coliform bacilli (CB) were sowed in cups
               containing blood (I), potato (II), carrot (III) and
               sugar (IV) agar and, for control purposes, the usual
               meat-peptone agar (MPA). The strains selected showed
               varying indications of being pathogenic (hemolysis,
               saccharose decomposition, negative trypaflavin reac-
               tion), while one lacked these indications. CB cultu-
               res with pathogenic features, upon segmentation and
               two regenerations over a period of 33 to 54 days,

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Abs Jour   : Ref Zhur - Biologiya, No 7, 1957, 26375

          produced descendants with pathogenic features in 87.1%
          of cases on MPA, 83.5% on II, 96.4% on III and 77.8%
          on IV. CB cultires lacking pathogenic features culti-
          vated under the same conditions produced descendants
          with pathogenic features in 35% of cases on MPA, 65.8%
          on II, 72.9% on III and 70.8% on IV. Apparently, media
          rich in carbohydrates favor the acquisition of pathoge-
          nic characteristics.

Card 2/2

SHEVCHENKO, F.I., prof.; AKHTAMOV, M.A.; ISHCHENKO, G.N.; KAZAKOVA, A.N.;
EL'TEKOVA, N.I.—

Biological characteristics of pathogenic serological types of
Escherichia coli. Med. zhur. Uzb. no.2:22-25 F '62.   (MIRA 15:4)

1. Iz kafedry mikrobiologii Samarkandskogo gosudarstvennogo meditsin-
skogo instituta imeni I.P.Pavlova.
                    (ESCHERICHIA COLI)

ISHCHENKO, G.N., kand.med.nauk; EL'TEKOVA, N.I.; SKOROBACHEVA, R.N.

Effect of some helminths on the properties of Escherichia coli
in the human intestine. Nauch. trudy SamMI 21:30-32 '62.
(MIRA 17:5)

1. Iz kafedry mikrobiologii Samarkandskogo meditsinskogo
instituta imeni Pavlova.

EL'TEKCVA, O. P.

Sysoyeva, A. F. and El'Tekova, O. P. "Speech disorders and schematic ways of understanding and treating them connected with the knowledge of the philogeny and ontogeny of the living organism", Sbornik trudov Leningr. nauch.-issled. in-ta po boleznyam ukha, nosa, gorla i rechi, Vol. 1X, 1948, p. 246-58.

SO: U - 3042, 11 March 53, (Letopis "Zhurnal "nykh Statey, No. 7, 1949)

27906
S/079/61/031/010/006/010
D243/D304

5 5700

AUTHORS: Nazarova, L.M., Kharlamova, Ye. N., Aleksandrova,
             G. Ye., and El'tekova, Ye. B.

TITLE: Interaction of benzole with phenyl derivatives of
             elements in Group IV of the Periodic Table and of
             their molecular composition by methods using tagged
             atoms

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 10, 1961,
             3308-3311

TEXT: The report was to fill a gap in literature and investigate
further the 1:1 mclecular combination of triphenylmethane and
benzole described previously by Anschütz (Ref. 2: Lieb. Ann.,
235, 208 (1886)). The combustion of the molecular compounds and
benzole for activity analysis was effected by the method of moist
oxidation with a Van Slayk-Fol'kh mixture, the carbon monoxide
being absorbed by a saturated solution of barium hydrate which
was later filtered, washed and dried. Activity measurements were

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Interaction of benzole ...

taken over five minute periods, alternating with background mea-
surements: At least five readings were taken with each specimen.
Exchange experiments with benzole were done in glass ampoules.
$\beta(C_6H_5)_4$ (where β = Sn, Si, Pb) was placed in a dry ampoule and
benzole added in a molar ratio of 1:15. The ampoule was sealed
under nitrogen and heated at 150^0 until complete solution of
$\beta(C_6H_5)_4$. After cooling the ampoule was opened, and excess benzole
removed by a current of nitrogen. The dry remainder was left for
some days in a fume cupboard and then removed to a desiccator for
storage. Conclusions: 1) Tetraphenylsilicon, tetraphenyltin and
tetraphenylead form stable moleculat compounds with benzole which
have a general formula $(\beta (C_6H_5)_4)_7 . C_6H_6$, whilst triphenylme-
thane forms a highly unstable 1:2 molecular compound with benzole.
2) A method of determining the molecular compositions of these
compounds using tagged C^{14} atom was suggested. There are 3 tables
and 2 references: 1 Soviet-bloc and 1 non-Sviet-bloc.

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Interaction of benzole ...

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S/079/61/031/010/006/010
D243/D304

ASSOCIATION: Fiziko-khimicheskiy institut imeni L. Ya. Karpova
(Institute of Physical Chemistry imeni L. Ya.
Karpov)

SUBMITTED: September 24, 1960

Card 3/3

TOTH, Geza, a kemiai tudomanyok doktora; ELTER, Jozsef

       Data on the warming up of leathers. Bor cipo 10 no.6:167-170
       N '60.

       1. Pecsi Borgyar.

TOTH, Geza, a kemiai tudomanyok doktora (Pecs); ELTER, Jozsef (Pecs)

Influence of the production temperature on the tensile strength of leather. Bor cipo 11 no.6:175-176 N '61.

1. Pecsi Borgyar.

TOTH, Geza, a kemiai tudomanyok doktora; ELTER, Jozsef

Effect of production temperature on the tensile strength of leather. Bor cipo 15 no.1:6-8 Ja '65.

1. Pecs Factory Unit of the Leather Industry Enterprise.

STEPUKHOVICH, A.D.; EL'TERMAN, L.I.; BALAKHNIN, V.P.

Initiated cracking of propane-butane mixtures. Neftekhimiia
3 no.4:531-540 Jl-Ag '63.   (MIRA 16:11)

1. Saratovskiy gosudarstvennyy universitet imeni N.G.
Chernyshevskogo, kafedra khimicheskoy fiziki.

D'YACHKOVSKIY, F.S.; SHILOV, A.Ye.; EL'TERMAN, L.I.

Rate of reaction between ethyllithium and alkyl chlorides as
a function of C - Cl bond energy. Kin. i kat. 4 no.4:644-647
Jl-Ag '63.   (MIRA 16:11)

1. Institut khimicheskoy fiziki AN SSSR.

EL'TERMAN, L.I.; STEPUKHOVICH, A.D.; BAZHENOVA, L.K.

Kinetics and the mechanism of the initiated decomposition of a propane-butane mixture at low pressures. Neftekhimiia 4 no.5:767-771 S-O '64.
(MIRA 18:1)

1. Saratovskiy gosudarstvennyy universitet imeni N.G.Chernyshevskogo.

VARSHAVSKIY, A.M., kand. tekhn. nauk; EL'TERMAN, L.M.; LERNER, L.K.

Coupling of high-voltage cab-tire cables. Met. i gornorud.
prom. no.4:76-77 Jl-Ag '65.   (MIRA 18:10)

EL'TERMAN, M., kand.tekhn.nauk (Leningrad)

>   Air conditioning by means of a heat pump. Okhr. truda i
>   sots. strakh. 5 no.5:36-37 My '62.   (MIRA 15:5)
>   (Air conditioning)

PET'KO, N.; EL'TERMAN, S.

Relay forcing of the excitation of synchronous generators.
Zhil.-kom. khoz. 7 no.6:10-11 '57.   (MIRA 10:10)

1.Starshiy inzhener tresta "Orgkommunenergo." (for Pet'ko)
2.Nachal'nik laboratorii Smolenskoy gosudarstvennoy elektricheskoy
stantsii. (for El'terman)
                         (Electric relays)
                         (Electric generators)

DENISOVA, V., inzh.; RAYKHMAN, S., starshiy nauchnyy sotrudnik; GLAGOLEVA, T.,
    kand.tekhn.nauk; EL'TERMAN, V., kand.tekhn.nauk

    Technicalinformation. Okhr.truda i sots.strakh. 5 no.4:32-35
    Ap '62.
                                              (MIRA 15:4)

    1. Nauchno-issledovatel'skiy institut tekhnologii avtomobil'-
    noy promyshlennosti (for Denisova). 2. Vsesoyuznyy nauchno-
    issledovatel'skiy institut zheleznodorozhnogo transporta (for
    Raykhman).
                    (Technological innovations)

BATURIN, V.V.; EL'TERMAN, V.M.; TURKUS, V.A., redaktor.

[Ventilation of industrial buildings] Aeratsiia promyshlennykh zdanii.
[Nauch. redaktor V.A.Turkus] Moskva, Gos. izd-vo lit-ry po stroitel'stvu
i arkhitekture, 1953. 259 p.   (MIRA 6:10)

                              (Factories--Heating and ventilation)

RYABCHIKOV, Aleksandr Nikolayevich; EL'TERMAN, V.M., redaktor; NOVOSPASSKIY,
V.V., redaktor; KIRSANOVA, N.A., tekhnicheskiy redaktor.

[Automatic control of ventilation, humidity and heat in textile
factories] Avtomaticheskoe regulirovanie ventiliatsii uvlazheniia
i otopleniia na tekstil'nykh fabrikakh. [Moskva] Izd-vo VTsSPS
Profizdat, 1955. 91 p.   (MIRA 9:4)
          (Textile industry--Heating and ventilation)

IGNATOK, A.I., inzh.; BETEREV, M.M., kand.tekhn.nauk, red.; PODVOL'SKIY,
L.I., starshiy inzh., red.; EL'TERMAN, V.M., kand.tekhn.nauk, red.;
KUGINIS, B.L., red.; VASIL'YEV, Ye.V., starshiy inzh., red.;
NEVSKIY, A.I., inzh., red.; GLAGOLEVA, T.A., kand.tekhn.nauk, red.;
VROBLEVSKIY, R.V., red.

[Safety engineering regulations and industrial hygiene in electric
welding operations] Pravila tekhniki bezopasnosti i proizvod-
stvennoi sanitarii pri elektrosvarochnykh rabotakh. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 38 p.
(MIRA 14:6)
1. Profsoyuz rabochikh mashinostroyeniya. TSentral'nyy komitet.
2. Moskovskiy institut okhrany truda Vsesoyuznogo tsentral'nogo
soveta professional'nykh soyuzov (for Beterev, El'terman, Glagoleva).
3. Nauchno-issledovatel'skiy tekhnologicheskiy institut avtomobil'noy
promyshlennosti (for Podvol'skiy). 4. Glavnyy tekhnicheskiy inspektor
TSentral'nogo komiteta profsoyuza (for Kuginis). 5. Nauchno-issledo-
vatel'skiy institut tekhnologii traktornogo i sel'akokhozyaystvennogo
mashinostroyeniya (for Vasil'yev). 6. Nachal'nik podotdela energo-
oborudovaniya avtozavoda im. Likhacheva (for Nevskiy). 7. Vedushchiy
inzh. Vsesoyuznogo proyektno-tekhnologicheskogo instituta stroitel'-
nogo i dorozhnogo mashinostroyeniya (for Vroblevskiy).
(Electric welding--Safety measures)

SEROV, Vasiliy Nikolayevich; EL'TERMAN, V.M., kand. tekhn.nauk, retsenzent;
KUCHERUK, V.V., kand. tekhn. nauk, red.; BARYKOVA, G.I., red. izd-va;
SMIRNOVA, O.V., tekhn. red.

[Dust prevention in grinding] Obespylivanie pri rabote na abrazivnykh
stankakh. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry,
1961. 68 p.   (MIRA 14:9)
          (Grinding machines—Safety measures)