

WONZYCKI, Gustaw Andrzej

WONZYCKI, Gustaw Andrzej

Elementarz lotniczy. [Warszawa] Czytelnik, 1947. v. (1-2) (Biblioteka Inż.  
Lotniczej) [Aeronautical Primer. Pts. 1-2. Aerodynamics and Mechanics of  
Flight. Illus.]

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10,  
October 1953. Unclassified.

Production of fodder yeast in pine-wood hydrolyzates prepared according to Starczanov's (sulfuric acid) method. J. Jakubowska, J. Mokrzycki, K. Niemyski, and Z. Bednarski (Univ. Lodz, Poland). *Acta Microbiol. Polon.* 2, 177-200 (1953) (English summary).—Pine-wood is hydrolyzed by 6 parts of  $H_2SO_4$  (0.25–0.32%) at temps. increasing from 90° to 120° or 130° in 70–120 min. The yield of glucose varies, but generally is higher the higher the temp. of hydrolysis. Treatment of the soln. with  $NH_3$  and (or)  $Ca(OH)_2$  removes furfural, formal,  $HCO_2H$ , and  $AcOH$ . Max. glucose is produced at pH 9. The amts. of the pentoses are also influenced. After 30 min., sufficient superphosphate is added to make 12–14 g.  $P_2O_5$  per 100 g. glucose; also 2.85 g.  $K_2SO_4$  and 1.25 g.  $MgSO_4 \cdot 7H_2O$  were added. The pH then was brought to 4.5 by addn. of  $H_2SO_4$ . Among *Saccharomyces cerevisiae*, several *Torula* strains, and *Torulopsis utilis*, the last was the most promising yeast. Fermentation was conducted under different conditions of time, temp., concn., and addns.; the results are presented in a table. On the average, about 1% of the glucose present remained unfermented. Wernig Jacobson

MOHRZICKI, Julian, mgr inz.; ZAWADZKI, Jerzy, mgr

Main trends of technical progress in the water management of  
light industry. Gosp wodna 23 no.5:199-201 My '63.

*MOKRZYCKI, M.*

ZIERSKI, M.; MOKRZYCKI, M.

Antibiotics in preventive therapy of pulmonary tuberculosis.  
Gruzlica, Warsz. 19 no. 4:459-478 July-Aug. 1951 (CINL 21:3)

I. Of Municipal Lung Diseases Hospital No. 10 (Director—Marian  
Zierski, M. D.), Lodz.

*MOKRZYCKI, Mikołaj*

MOKRZYCKI, Mikołaj (Łódź, ul. Sienkiewicza 63.)

Case of malignant granuloma treated with sanamycin. Polski tygod. lek.  
12 no.41:1581-1584 14 Oct 57.

1. Z Zakładu Ftyzjatrii I.D.S.K.L. i ze Szpitala Specjalistycznego im.  
dr A. Sokolowskiego w Łodzi: kierownik: doc. dr med. Marian Zieraki.  
(HODGKIN'S DISEASE, therapy,  
actinomycin C (Pol))  
(ANTIBIOTICS, therapeutic use,  
actinomycin C in Hodgkin's dis. (Pol))

ZIERSKI, Marian, MOKRZYCKI, Mikołaj, SIWINSKA, Irena

Results of treatment of pulmonary tuberculosis in adults with antimicrobial drugs together with ACTH and cortisone. Gruzlica 25 no.5:269-286  
May 1958

I. Z Kliniki Petyzjatrycznej w Łodzi Instytutu Doskonalenia i Specjalizacji Kadr Lekarskich. Kierownik: doc dr med. M. Zierski. Adres: Łódź, ul. Narutowicza 37.

(TUBERCULOSIS, PULMONARY, ther.

ACTH & cortisone with antituberc. drugs, results (Pol))

(ACTH, ther. use.

tuberc., pulm., with antituberc. drugs (Pol))

(CORTISONE, ther. use

same (Pol))

MOKRZYCKI, Mikołaj; PAŁCZEWSKA, Jadwiga

Cases of staphylococcal pneumonia in adults. Gruzlica 27 no.3:247-253 Mar 59.

1. Z Zakładu Tryzjatrii Studium Doskonalenia Lekarzy w Łodzi i Szpitala Specjalistycznego im. dr A. Sokolowskiego w Łodzi  
Kierownik Zakładu i dyrektor Szpitala doc. or M. Zierski Ordynator  
Oddziału: dr M. Mokrzycki. Adres: Łódź, ul. Kosynierów Gdynskich 26.

(MICROCOCCAL INFECTIONS, case reports,  
pneumonia (Pol))

(PNEUMONIA, case reports,  
micrococcal (Pol))

KRZYSZKOWSKA, Anna; BIALOKOZ, Michał; CYGANCZUK, Janusz; DUWINSKA-SLIMINSKA,  
Bożena; FIRKO-STEPNIEWSKA, Otylia; GURTAT, Bronisław; KANZIŁORA,  
Stanisław; KUBIT, Stanisław; HOKRZYCKI, Mikołaj; POLKOSEK, Miec-  
zysław; ROMANOWSKA, Izabella; WASOWSKA, Janina; WESTRYCH, Feliks;  
WISNIEWSKI, Henryk.

Tuberculin reaction in recruits. Gruzlica 32 no.2:131-139 F\*64

I. Z Zakładu Epidemiologii Instytutu Gruźlicy; Kierownik: doc.  
dr. med. O. Buraczewski.

\*



MOKRZYCKI, S.

"Popularization and Improvement of Intrafactory Planning." P. 285.  
(PRZEMYSŁ CHEMICZNY, Vol. 10, No. 6, June, 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,  
No. 1, Jan. 1955 Uncl.

MOKRZYCKI, Wieslaw, (Warszawa)

Unloading frozen loose materials from railway cars. Przegł  
budowl i bud mieszk 34 no.12:715-720 D '62.

MOKRZYCKI, Wiesław (Warszawa)

New freight cars for transporting loose building materials. Przegl  
budowl i bud mieszk 36 no.3:155-156 Mr '64.

LOPUKHOV, N.D., kand. tekhn. nauk; MOKS, E.V., inzh.; TOLKACHEV, P.I., inzh.

Technology of preparing soil cement and laying pile foundations  
made of it and foundations without earthwork. Trudy Zap.-Sib. fil.  
ASIA no.7:145-156 '62. (MIRA 18:2)

MOKS, E.V., inzh.

Method of determining the operation cycle of the working elements  
of machinery intended for the preparation of soil cement pilings.  
Trudy Zap.-Sib. fil. ASiA no.7:161-164 '62.

(MIRA 18:2)

MOKS, M.B.; ZALEVSKIY, A.A.

Economic efficiency of the use of natural gas in the nitrogen  
industry. Gaz. delo no.5:39-41 '65. (MIRA 18:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
azotnoy promyshlennosti i produktov organicheskogo sinteza.

USSR / Human and Animal Physiology (Normal and Pathological).  
Digestion.

T

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60467

Author : Moksh, K. P.

Inst : Ivanovo Medical Institute

Title : Effect of Painful Stimuli Upon Intestinal Secretion

Orig Pub : Sb. nauchn. tr. Ivanovsk. med. in-ta, 1957, Vyp. 12,  
87-94

Abstract : In dogs with an isolated upper part of the jejunum loop, according to the method of Tiri-Volla, a single irritation of the skin of the shin inhibited the intestinal secretion, caused by wetting of the mucosa by a 0.3% solution of HCl or by drainage. The C.N.S. action was affected simultaneously. The return to normal of the latter occurred earlier than the normalization of the intestinal secretion, in which there was phasic fluctuation

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USSR / Human and Animal Physiology (Normal and Pathological).  
Digestion.

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Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60467

within several days of observation. With a second stimulus, the time of secretion inhibition and the period of phasic fluctuation were shorter.

Card 2/2



MOKSHAKOVA, V. Ye.

Evidences of oil in the Bavli sediments of the Asyul' area in Perm Province. Geol. i geofiz. no.5:13-16 '64. (MIRA 17:9)

1. Kamskiy filial Vsesoyuznogo nauchno-issledovatel'skogo geologorazvedochnogo neftyanogo instituta.

KOKSHANOV, G. A.

Mokshanov, G. A.

"The pathomorphology of experimental plague in sensitized guinea pigs."  
Min Health USSR. State Sci Res Inst of Microbiology and Epidemiology of the  
southeast of the USSR "Mikrob". Saratov, 1956. (Dissertation for the  
Degree of Doctor in Medical Science.

Knizhnaya letopis  
No. 15, 1956. Moscow

MOKSHANOV, M.V., inzhener.

~~On improving construction organizations.~~ Gor.khoz.Mosk. 25 no.2:30-31 F '51.  
(MLRA 6:11)  
(Construction industry)

MOKSHANOVA, G. A.

23634.

K PATOLOGICHESKOY GISTOLOGII NADPOCHECHNIKOV PRI SYPNOM TIFE. TRUDY SARAT. GOS.  
MED. IN-TA, T. VIII, 1949, c. 265-70.

SO: LETOPIS' NO. 31, 1949

MOKSHANOVA, G.A.

23602

K PATOLOGICHESKOY GISTOLOGII OLEGRANULEM. TRUDY SARAT. GOS.  
MED. IN-FA, T. VIII, 1949, G. 271-80.--BIBLIOGR: 11 NAZV.

SO: LETOPIS' NO. 31, 1949.

~~МОТШАУСЬВ, I.P.~~

Survey of foreign books and periodicals. Sel'khoz Mashina no.4:  
Ap '57. (MLHA 10:4)  
(Agricultural engineering)

KOVRIGIN, V.D.; LEVIKOV, G.A.; ~~MOKSHANTSEV, F.P.~~; TREPENENKOV, I.I.,  
kand. tekhn. nauk, ~~retsensent~~; BODIKO, V.A., inzh., red.;  
TIKHANOV, A.Ya., tekhn.

[Tractors of capitalist countries] Traktory kapitalisticheskikh stran; spravochnik. Moskva, Mashgiz, 1963. 421 p.  
(MIRA 16:9)

(Tractors)

BULANOV, V.Ya.; GRUSHERKO, V.K.; IRIMUTSA, G.I.; MOKSHANTSEV, G.F.;  
PLUZHNIKOV, V.A.; SINYUKHIN, A.V.; TENYAKOV, P.T.

Preparing iron powder from alloyed scale reduced by converted  
natural gas. Porosh. met. 5 no.10:2-4 0 '65.

(MIRA 18:11)

1. Orenburgskiy filial Kaybyshevskogo politekhnicheskogo  
instituta.



MOKSHANTSEV, G. K.

An outline on the development of the Soviet cotton growing Moskva, Sel'khozgiz, Gos.  
izd-vo sel'khoz. lit-ry, 1947. 63 p.

VRSIL'YEV, Viktor Grigor'yevich; VOLKRONIN, Vladimir Stepanovich;  
GRISHIN, Grigoriy Leont'yevich; IVANOV, Andrey Khrisanfovich;  
MARINOV, Nikolay Aleksandrovich; MOKSHANTSEV, Konstantin Borisov-  
vich; SHIPULIN, F.K., doktor geologo-minralog.nauk, red.;  
BEKMAN, Yu.K., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Geological structure of the Mongolian People's Republic;  
stratigraphic and tectonic] Geologicheskoe stroenie Mongol'skoi  
Narodnoi Respubliki; stratigrafiya i tektonika. Pod red. F.K.  
Shipulina. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gornic-  
toplivnoi lit-ry, 1959. 493 p. (MIRA 12:3)  
(Mongolia--Geology)

MOKSHANTSSEV, K.B.; AYZENBERG, M.A.

Physical properties of rocks in the Perm and Bashkir area of  
the Ural Mountain region. Razved.i prom.geofiz. no.32:56-79  
'59. (MIRA 13:4)

(Perm Province--Prospecting--Geophysical methods)  
(Bashkiria--Prospecting--Geophysical methods)

LUTTS, B.G.; MOKSHANTSEV, K.B.; NIKOLAYEVSKIY, A.A.

Composition and structure of the basement of the eastern  
Siberian Platform. Geol. i geofiz. no.8:41-50 '62. (MIRA 15:10)

1. Institut geologii Yakutskogo filiala Sibirskogo otdeleniya  
AN SSSR.  
(Siberian Platform—Rocks, Crystalline and metamorphic)

GORNISHEYN, D.K.; GUDKOV, A.A.; KOSOLAPOV, A.I.; LEYPTSIG, A.V.;  
MEL'NIKOV, V.M.; MOKSHANTSEV, K.B.; FRADKIN, G.S.; CHERSKIY,  
N.V.; TROFIMUK, A.A., akademik, nauchn. red. vyp.; ROZHKOV,  
I.S., glav. red.; KOBELYATSKIY, I.A., zam. glav. red.;  
SHATALOV, Ye.G., zam. glav. red.; BONDARENKO, V.I., red.;  
GRINBERG, G.A., red.; YELOVSKIKH, V.V., red.; RUSANOV, B.S.,  
red.; SEMENOV, G.T., red.; TKACHENKO, B.V., red.; KALANTAROV,  
A.P., red.izd-va; GUSEVA, A.P., tekhn. red.

[Basic stages of the geological development and prospects for  
finding oil and gas in the Yakut A.S.S.R.] Osnovnye etapy geo-  
logicheskogo razvitiia i perspektivy neftegazonosnosti Iakut-  
skoi ASSR. [By] D.K.Gornshtein i dr. Moskva, Izd-vo AN SSSR  
1963. 238 p. (MIRA 16:12)

(Yakutia--Petroleum geology)  
(Yakutia--Gas, Natural--Geology)

PRITULA, Yu. A.; GRIGOR'YEV, V. M.; MANDEL'BAUM, M. M.; MIKUTSKIY, S. P.;  
MOKSHANTSEV, K. B.; SOKOLOV, D. S.

"Oil and gas deposits of the Siberian Platform."

report submitted for 22nd Sess, Intl Geological Cong, New Delhi, 14-22 Dec  
1964.

L 24872-660 EWT(1) GS/CW

ACC NR: A25028973

SOURCE CODE: UR/0000/64/000/000/0260/0272

AUTHOR: Pritula, Yu. A.; Grigor'yev, V. M.; Mandel'baum, M. M.; Mikutskiy, S. F.; Mokshantsev, K. B.; Sorokov, D. B.

ORG: none

32  
B

TITLE: Oil and gas deposits of the Siberian platform

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologiya nefti (Petroleum geology). Moscow, Izd-vo "Nauka," 1964, 260-272

TOPIC TAGS: geology, natural gas, petroleum fuel, physical geology, geologic exploration

ABSTRACT: The old Siberian Platform occupies a large territory in Central Siberia. Late Pre-Cambrian (Sinian) and Lower Paleozoic sedimentary marine formations are extensively developed on the platform, overlain by Middle Paleozoic and Mesozoic deposits over large areas. Characteristic features are the presence of rock salt in Lower Cambrian and of traps in Carboniferous-Triassic series. The main structures of the platform are: Anabar, Aldan, Patom, Yenisei, and Turukhan-Norilsk anteklises, and Angara (Irkutsk amphitheater), Tunguska, and Vilyui synclises. In the north the platform borders on the Pre-Taimyr, Anabar-Lena and Pre-Verkhoyansk fore-deeps. These major first order structures are complicated by numerous gentle swells and local uplifts. Oil and gas shows are extensively developed all over the Siberian Platform.

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L 24872-66

ACC NO: AZ5025973

Geological conditions in sedimentary basins on the platform and in flanking fore-deeps are favorable for generation, accumulation, and preservation of oil and gas deposits. The total area of these sedimentary basins is over 3,000,000 km<sup>2</sup>. Exploration for oil and gas was conducted on a limited scale. Oil- and gas-bearing formations were found in Late Pre-Cambrian, Lower Cambrian, Ordovician, Devonian, Permian, Triassic, Jurassic and Cretaceous deposits. Gas condensate was discovered in Jurassic sandstones in the Vilyui syncline and Pre-Verkhoyansk fore-deep. Lower Cambrian rocks within the Siberian Platform are regionally oil- and gas-bearing. The large Markovo light oil field was discovered in these rocks in the south of the platform. Orig. art. has: 2 figures. [Author's abstract.]

SUB CODE: 08/ SUBM DATE: 21Nov64/

Card 2/2 *pla*



MOKSHANTSEV, K.B.; CORNSHTEYN, D.K.; GUSEV, G.S.; DEN'GIN, E.V.;  
~~SHTERN~~, G.I.; KOSYGIN, Yu.A., otv. red.

[Tectonic pattern of the Yakut A.S.S.R.] Tektonicheskoe  
stroenie IAKutskoi ASSR. [By] K.B.Mokshantsev i dr. Mo-  
skva, Nauka, 1964. 289 p. (MIRA 18:2)

1. Akademiya nauk SSSR. Yakutskiy filial, Yakutsk.
2. Chlen-korrespondent AN SSSR (for Kosygin).

SHTEKH, Gennadiy Leonidovich; BUKSHANTSEV, K.B., otv. red.

[Subsurface structure and the history of the tectonic  
development in the Vilyuy Lowland] Glubinnoe stroenie i  
istoria tektonicheskogo razvitiia Viliuiskoi vpadiny.  
Moskva, Nauka, 1965. 123 p. (MIRA 18:12)

VASIL'YEV, V.G.; GRISHIN, G.L.; ~~MOKSHANTSEV, N.D.~~

Mesozoic stratigraphy of the eastern part of Mongolia [with summary  
in English]. Sev. geol. 2 no.2:68-84 F '59.

(MIRA 12:5)

I.Glavnoy geologorazvedachnoye upravleniye,  
(Mongolia--Geology, Stratigraphic)

ORMAN, M.; CHERNOGOROVA, V.; MEKSHEV, B.

Pay more attention to competition among brigades and shock workers of communist labor. Zhil.-kom. khoz. ll no. 1:14 '61.

(MIRA 14:2)

1. Predsedatel' Latvinskogo respublikanskogo komiteta profsoyuzov rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva (for Orman).
  2. Predsedatel' Moskovskogo oblastnogo komiteta profsoyuzov rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva (for Chernogorova).
  3. Predsedatel' Vologodskogo oblastnogo komiteta profsoyuzov rabochikh mestnoy promyshlennosti i kommunal'nogo khozyaystva (for Mekshev).
- (Municipal services)

ZHIL'TSOV, S.P.; MOSESHEV, H.A.

Mechanised supply storage room, Biol. tekhn.-okaz. inform. (Kov.  
nauch.-issl. inst. nauch. i tekhn. inform. 18 m., 10:50-51  
0 '65. (MIRA 11:12)

*МОКШИН, А.С.*

AID P - 540

Subject : USSR/Engineering

Card 1/1 Pub. 78 - 6/29

Authors : Konstantinov, L. P. and Mokshin, A. S.

Title : Some deductions from analysis of the work of triple gear core drills

Periodical : Neft. Khoz., v. 32, #7, 23-27, J1 1954

Abstract : Analysis of the reports on a series of experiments on various types of core drills conducted during 1952 and 1953. Data on the drills are presented in 2 tables and the operational characteristics in 4 charts.

Institution: (Glavneftmash) Main Administration of Machine Building in the Petroleum Industry

Submitted : No date

MOKSHIN, A.S.; KASATKINA, M.I.

Results of checking depletion intervals of drill bits in the Mukhanovo oil fields. Neft. khoz. 35 no.4:6-II Ap '57. (MLBA 10:4)  
(Mukhanovo--Oil well drilling--Equipment and supplies)

IL'SKIY, A.L.,kand.tekhn.nauk; MINDLIN, M.G.,inzh.; MOKSHIN, A.S.,inzh.

New types and designs of bits. Trudy VNIIBT no.1:61-70 '58.  
(MIRA 11:12)

(Boring machinery)



MOKSHIN, A.S.

Means for increasing the stability of supporting shanks of  
standard bits. Neft. khoz. 38 no. 19:42-47 0 '60.

(MIRA 13:9)

(Boring machinery)

MOKSHIN, A.S.

Study of wear of bearings of standard bits. Trudy VNIET no.3:  
18-29 '61. (MIRA 15:1)  
(Boring machinery) (Mechanical wear)

MOKSHIN, A.S.; FEDOTOV, G.I.

Practice of using hydraulic giant bits. Trudy VNIIBT no. 6:53-63  
'62. (MIRA 16:6)  
(Hydraulic mining--Equipment and supplies)

KONSTANTINOV, L.P., inzh.; MOKSHIN, A.S., inzh.; PEREGUDOV, A.A., inzh.;  
ABRAMSON, M.G., kand. tekhn. nauk; ANDREYEV, A.V., inzh.; DYUKOV,  
N.G., inzh.; MIRONOV, A.L., inzh.; OSIPOV, G.M., inzh.

Studying the performance of pin roller bits in strip mining and  
ways of improving their design. Gor. zhur. no.9:42-46 S '65.  
(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki,  
Moskva.

Mokshin, F.A.

KUGUSHEV, I.D., kand. tekhn. nauk, dots.; MOKSHIN, F.A., slesar'-mekhanik;  
ROGOVSKIY, V.P.

Instrument for determining the transparency of tracing paper. Sum.  
prom. 32 no.10:11-12 0 '57. (MIRA 11:1)

1. Leningradskiy politekhnicheskiy institut im. M.I. Kalinina (for  
Kugushev). 2. Bumazhnaya fabrika "Kommunar" (for Mokshin). 3. Nachal'-  
nik laboratorii kontrol'no-izmeritel'nykh priborov bumazhnoy fabрики  
"Kommunar" (for Rogovskiy).  
(Photoelectric cells) (Paper--Testing)

VOKSHIN, I.N., inzh., red.; STRASHNIKH, V.P., red. izd-va; BOROVNEV, N.K.,  
tekh. red.

[Technical specifications SN 121-60 for carrying out, inspecting  
and approving airport construction work] Tekhnicheskie uslovia  
proizvodstva i priemki aerodromno-stroit. rabot SN 121-60. Mo-  
skva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam,  
1961. 295 p. (MIRA 14:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam  
stroitel'stva. (Airports)

MOKSHIN, L.S. (Syzran')

Locomotive runs with the new types of traction. Zhel. dor.  
transp. 40 no.9:79 S '58. (MIRA 11:10)

1. Nachal'nik otdeleniya Kybyshhevskoy dorogi.  
(Railroads--Management) (Locomotives)

AKSENOV, I.Ya., kand.tekhn.nauk; MOKSHIN, L.S.; SHESTAKOV, A.I.;  
TIKHONOV, K.K., kand.tekhn.nauk

Train traffic organization on lines with lengthened hauls. Zhel.  
dor. transp. 43 no. 1:21-28 Ja '61. (MIRA 14:4)

1. Nachal'nik sluzhby dvizheniya Kuybyshevskoy dorogi (for Mokshin).
2. Glavnyy inzhener Omskoy dorogi (for Shestakov).  
(Railroads--Traffic)



MOKSHIN, N. F.

"Otrazheniye matriarkhata i perioda raspada pervoby gnoobshchinnogo stroya v religiyakh nekotorykh narodov Fovolzh'ya [Mordva, mariytsy]."

report submitted for 7th Intl Cong, Anthropological & Ethnolcical Sciences, Moscow, 3-10 Aug 64.

MOKSHIN, P. N.

MOKSHIN, P. N. -- "Investigation of the Technological Process of the Operation of a Disk Seed Separator." Sub 26 May 52, VBI and VLESKh. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

MOKSHIN, P.

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Farm Mechanization

Contributions of farm mechanization to collective farms. MTS, 12, No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

MOKSHIN, P. inzh.

Batteryless electric fences for pastures. Nauka i pered. op.  
v sel'khoz. 9 no.6:36 Ja '59. (HIRA 12:9)

L.Altayskiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.  
(Electric fences)

MOKSHIN, P.N.; SIL'CHENKO, N.F.

Mechanized harvesting of peas in the Altai. Zemledelie  
24 no.7:35-40 J1 '62. (MIRA 15:12)

1. Altayskiy nauchno-issledovatel'skiy institut sel'skogo  
khozyaystva.

(Altai Territory—Peas—Harvesting)

SKACHKOV, I.A.; YELAGIN, I.N.; KOCHERGIN, F.V.; POLESHCHUK,  
Yu.M.; BOLDYREV, M.D.; MOKSHIN, P.N.; GOMENYUK, L.I.,  
red.

[Millet production on leading farms] Proizvodstvo prosa  
y peredovykh khoziaistvakh. Moskva, Kolos, 1965. 134 p.  
(MIRA 18:7)

1. Direktor Nauchno-issledovatel'skogo instituta sel'skogo  
khozyaystva tsentral'no-chernozemnoy polosy im. V.V.Doku-  
chayeva (for Skachkov). 2. Glavnyy spetsialist po zerno-  
bobovym i krupyanyam kul'turam Ministerstva sel'skogo  
khozyaystva SSSR (for Yelagin). 3. Nauchno-issledovatel'-  
skiy institut sel'skogo khozyaystva tsentral'no-  
chernozemnoy polosy im. V.V.Dokuchayeva (for Kochergin,  
Poleshchuk, Boldyrev, Mokshin).

MOKSHIN, S.

Workbench of varying height. Prof.-tekh.obr. 19 no.10:26 0  
'62. (MIRA 15:11)  
(Workshops--Equipment and supplies)

FROLOV, Ivan Mikhaylovich; MOKSHIN, Stepan Ivanovich; BELYAKOV, V.,  
red.; DANILINA, A., tekhn.red.

[Flying among stars] Letiashchie sredi zvezd.... Moskva,  
Gospolitizdat, 1963. 47 p.

(MIRA 16:6)

(Bykovskii, Valerii Fedorovich)  
(Tereshkova, Valentina Vladimirovna)



FROLOV, Ivan Mikhaylovich; MOKSHIN, Stepan Ivanovich; NOVOKHATKO, V.,  
red.

[Three on the stellar route; story of the world's first  
team flight on the Soviet multiseat space vehicle  
"Voskhod."] Troe na zvezdnoi trasse; rasskaz o pervom v  
mire ekipazhe sovetskogo mnogomestnogo kosmicheskogo ko-  
rablia "Voskhod." Moskva, Politizdat, 1964. 30 p.  
(MIRA 17:12)

MOKSHIN, V.N., inzh.; KLEMENT'YEV, A.V.

Controlling explosions in crankcases of internal combustion engines.  
Sudostroenie 26 no. 3 (209):70-71 Mr '60. (MIRA 14:11)  
(Gas and oil engines)

MOKSHINA, O. M.

BARANOV, V.I.; MOKSHINA, O.M.

New species of the Paleocene flora of Kamyshin. Uch.zap.Kaz.un.  
116 no.1:183-185 '55. (MLRA 10:5)

1. Kafedra sistematiki rasteniy.  
(Kamyshin district--Trees, Fossil)

МОКШИНА, О.М.

Materials on fossil flora of the Kamyshin sandstone. Nauch.dokl.  
vys.shkoly; biol.nauki no.2:132-137 '59. (MIRA 12:6)

1. Rekomendovana kafedroy sistematiki Kazanskogo gosudarstvennogo  
universiteta im. V.I.Ul'yanova-Lenina.  
(Usha, Mount--Paleobotany)

MOKSHINA, Ye. P.  
KOSHUNOV, M.A.; ~~MOKSHINA, Ye. P.~~

Effect of grassland rotations of the fertility of Turf-Podzolic  
soils of light mechanical composition. Izv. Kazan. fil. AN SSSR.  
Ser. biol. nauk no. 4:3-14 '53. (MLRA 10:6)  
(Podzol) (Grasses) (Soil fertility)

KOVALEV, Ye.N.; MOKSHINOVA, A.P.

Treatment with Sapozhok mud of subacute forms of radiculitis. Vop.  
kur., fizioter. i lech. fiz. kul't. 26 no.4:309-311 J1-Ag '61.  
(MLRA 15:1)

1. Iz kliniki nervnykh bolezney (zav. - dotsent Ye.N.Kovalev)  
Ryazanskogo meditsinskogo instituta i Ryazanskoy oblastnoy bol'nitsy  
(glavnyy vrach B.N.Shirokov).

(SAPOZHOK BATHS, MOOR AND MUD)  
(NERVES, SPINAL DISEASES)

SHUTSKAYA, Ye.K.; BOYARINOVA, L.A.; KOROVINA, G.M.; MOKSYAKOVA, A.M.

Stratigraphic diagram of the Danian stage, the Palaeogene,  
and the Lower Miocene of the western part of Central Asia.  
Geol. nefti i gaza 7 no.12:44-47 D '63. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy  
neftyanoy institut, Moskva.

DIKENSHTSEYN, G.Kh., doktor geol-min.nauk; LEVINA, L.M.; LIYEPIN'SH,  
P.P.; MOKSYAKOVA, A.M.; PISTRAK, R.M.; SHEBUYEVA, I.N.;  
GERNAD'YEVA, I.M., tekhn.red.

[Geology, and oil and gas potentials of White Russia and  
the Baltic region] Geologicheskoe stroenie i perspektivy  
neftegazonosnosti Pribaltiki i Belorussii. Leningrad, Gos.  
nauchn.-tekhn.izd-vo neft.i gorno-toplivnoi lit-ry.  
Leningr.otd-nie, 1959. 178 p. (Moscow: Vsesoyuznyi nauchno-  
issledovatel'skii geologorazvedochnyi neftianoi institut.  
Trudy, no.18) (MIRA 13:2)

(White Russia--Petroleum geology)

(White Russia--Gas, Natural--Geology)

(Baltic Sea region--Petroleum geology)

(Baltic Sea region--Gas, Natural--Geology)



MOKSYAKOVA, A.M.

Radiolaria of the Kuma horizon of the Upper Eocene in western  
Turkmenia. Trudy VNIGNI no.35:231-250 '61. (MIRA 16:7)  
(Turkmenistan--Radiolaria, Fossil)

MOKUL'SKAYA, T.D.; STOLYAROVA, G.S.; MOKUL'SKIY, M.A.

Study of the structure of actinophage DNA by X-ray diffraction method.  
Dokl. AN SSSR 163 no. 3, 750-751 II 1964. (MIRA 18x7)

1. Submitted September 29, 1964.

L. 23210-66 EWT(1)/ETG(m)-6 WW

ACC NR: AP6006049

SOURCE CODE: UR/0020/66/166/004/0836/0838

AUTHOR: Mokul'skaya, T. D.; Mokul'skiy, M. A.

ORG: none

53  
47  
6

TITLE: Electron-optical <sup>21</sup>recording of x-ray diffraction

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 836-838

TOPIC TAGS: x ray diffraction pattern, image converter, x ray photography, electron optics

ABSTRACT: The authors describe a practical image converter for recording x-ray diffraction patterns based on data in an article by Coetze and Taylor (G. W. Coetze, A. Taylor, Advances in Electronics and Electron Physics, 16, 1962). A diagram of the instrument is shown in the figure. A collimated beam of x-rays falls on the specimen 3. The diffracted rays fall on fluorescent screen 5. The image produced on this screen is projected by optical system 6 onto the photocathode of image converter 7. The amplified image of the diffraction pattern is photographed from the output screen of the image converter by conventional camera 8. This method reduces exposure time by a factor of 120-240 in comparison with conventional methods for identical negative density. However, the image converter photographs gave poor resolution (reflections separated by an angular distance of approximately 2° were not resolved). Geometric distortions in these photographs give an error of 12% in measurements of reflection

Card 1/2

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ACC NR: AP6008048

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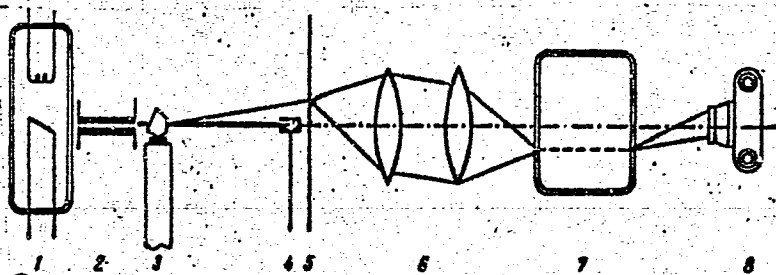


Diagram of the image converter installation for recording x-ray diffraction patterns: 1--x-ray tube; 2--capillary made from lead glass; 3--specimen on rotating base; 4--trap for primary triggering; 5--Fluorescent screen; 6--optical system for image transfer; 7--image converter; 8--camera.

coordinates. The photographs also show some reduction in contrast. While the new method needs considerable improvement for competition with conventional methods, it may be useful in certain special cases. In conclusion the authors are sincerely grateful to M. M. Butslov and Yu. V. Antipova for furnishing the image converter, to S. D. Fanchenko and B. A. Demidov for discussing this work and to A. N. Pavlov and K. K. Shcherbo for assistance in building the equipment. Orig. art. has: 4 figures.

SUB CODE: #,20/

SUBM DATE: 03Jun65/

ORIG REF: 003/

OTH REF: 001

Card 2/2 BK

MAKOV, S.M., M.A.

1000

Makov, S. M. A. The relation between the classical and quantum conditions of a constant field. Akad. Nauk SSSR, Ser. Fiz. Mat. Nauk, 1958, No. 1, p. 1-10.

In a paper on the vibrational properties of the classical electron gas Vlasov [same Zhurnal 6, 291-318 (1938)] derived an integral equation for the classical distribution function. This equation resembles Hartree's integral equation.

By letting the quarantine of action approach zero.  
B. Gora (Providence, R. I.)

*Small*  
*2/21*

Source: Mathematical Reviews,

Vol. 12 No. 6

MOKULSKIY, M. A., and LASURKIN, Y. S.

"Relaxation at low temperatures and mechanical losses in High Polymers,"  
a paper presented at the 9th Congress on The Chemistry and Physics of High  
Polymers, 28 Jan-2 Feb 57, Moscow,

B-3,084,395

21 (8), 15 (9).

## AUTHORS:

Mokul'skiy, E. A., Lazurkin, Yu. S., SOV/20-125-5-15/61  
Fiveyskiy, M. B., Kozin, V. I.

## TITLE:

The Reversible Radiation-mechanical Effects in Polymers  
(Obratimyye radiatsionno-mekhanicheskiye efekty v polimerakh)

## PERIODICAL:

Doklady Akademi nauk SSSR, 1959, Vol 125, Nr 5,  
pp 1007-1010 (USSR)

## ABSTRACT:

By the action of an ionizing radiation the mechanical properties of polymers may be changed to a considerable extent. The authors of the present paper investigated some mechanical properties of polymers during irradiation. The investigation was carried out in water-cooled vertical channels. The fluxes of the neutrons and  $\gamma$ -quanta, as well as the energy dose absorbed by the samples were measured on this occasion. Moreover, several simple devices for measuring the mechanical characteristics of polymers under irradiation were constructed, and, especially, a device for recording the extension curves ( $\sigma - \epsilon$ ) for use in a reactor were reconstructed. The authors investigated polymers of different radiation resistance and different character of the most important radio-chemical variations. By comparing the

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The Reversible Radiation-mechanical Effects in  
Polymers

SOV/20-125-5-15/61

mechanical properties of the samples located in the radiation field with the properties of original samples (and with samples which, though irradiated, were tested after irradiation) reversible radiation-mechanical effects were discovered. They are based upon a temporary reversible variation of the mechanical properties of the polymers. This variation occurs during irradiation and vanishes as soon as irradiation ceases. The authors observed the following reversible processes: 1) Decrease of the strength of polymethylmetacrylate. 2) Decrease of the limit of the enforced elasticity  $\sigma_B$  of polyvinyl chloride. 3) Increase of breaking elongations of polyvinylchloride. 4) Increase of relaxation rate of the tensions in the investigated substances. 5) Increase of the creep rate of polyvinylchloride, polystyrene, teflon, and rubber. Points 2-5 are then discussed in detail; thus it was found that  $\sigma_B$  decreases in the case of a dose rate of 46000 rad/sec by ~25 % and increases approximately linearly with an increase of the dose rate. After irradiation ceases, the reversible affect vanishes after less than 1 minute and only a remanent effect

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The Reversible Radiation-mechanical Effects in  
Polymers

80V/20-125-5-15/61

remains. A table contains the values of creep rate under various conditions. As a result of the irreversible destruction effect, the creep rate increases. Also this effect increases linearly with increasing dose rate. The diagrams 3-4 show the considerable reversible change of creep rate caused by the switching-on and -off of irradiation. The reversible radiation-mechanical effects may be of physical and also of chemical nature. The molecules excited by the ionizing particles during the dissipation of energy "pass through" states with weak excitations, which do not suffice for the stripping-off of the chemical bonds, but which correspond to local heating to high temperatures of short duration. This may accelerate the relaxation processes and change several properties of the substance. However, also a chemical mechanism must be taken into account. To what extent it is able to explain the reversible radiation-mechanical effects can be explained only after further investigations. There are 4 figures, 1 table, and 2 Soviet references.

Card 3/4

*Mokul'skiy, M. A.*

21,6200

S/190/60/002/01/13/021

B004/B061

82081

AUTHORS:

Mokul'skiy, M. A., Lazurkin, Yu. S., Fiveyskiy, M. B.,  
Kozin, V. I.

TITLE:

Study of the Mechanical Properties of Polymers During the  
Process of Irradiation. I. Strength and Ultimate Forced  
Elasticity of Solid Polymers During the Process of  
Irradiation in a Nuclear Reactor

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 1,  
pp. 103-109

TEXT: The authors exposed polyvinylchloride (PVC) and polymethyl-  
methacrylate (PMMA) to irradiation in a BBP(VVR) nuclear reactor. X  
Data on the neutron beam are given in Table 1. The irradiation was  
carried out with a dose of 46,000 - 56,000 rad/sec at 20 - 60°C in  
vertical channels cooled with water. During irradiation, the strength  
and ultimate forced elasticity  $\sigma_f$  were determined with the apparatus  
illustrated in Fig. 2, and the creep by that in Fig. 1. Fig. 3 shows the

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Study of the Mechanical Properties of Polymers S/190/60/002/01/15/021  
During the Process of Irradiation. I. Strength B004/B061  
and Ultimate Forced Elasticity of Solid Polymers 8208 1  
During the Process of Irradiation in a Nuclear  
Reactor

dependence of the strength of PMMA on the integral dose, Fig. 4, the dependence of  $\sigma_f$  with PVC on the integral dose. The decrease in  $\sigma_f$  is almost proportional to the radiation intensity (Fig. 5). The irradiation was interrupted by switching off the reactor, and it was seen that  $\sigma_f$  increase immediately about 25 - 30% (Fig. 6). The breaking length also increased after switching-off of the irradiation (Table 2, Fig. 7). As well as the known irreversible processes, based on interlacing and destruction, reversible processes also occur on irradiation. There are 7 figures, 2 tables, and 5 Soviet references.

SUBMITTED: October 15, 1959

X

Card 2/2

*Mokul'skiy, M.A.*S/190/60/002/01/14/021  
B004/B061  
82082

21.6200

AUTHORS: Mokul'skiy, M. A., Lazurkin, Yu. S., Fiveyskiy, M. B.

TITLE: Investigation of the Mechanical Properties of Polymers During the Process of Irradiation. II. Creep of Solid Polymers and Rubbers During the Process of Irradiation in a Nuclear Reactor

PERIODICAL: Vysokomolekulyarnyye sovedineniya, 1960, Vol. 2, No. 1, pp. 110 - 118

TEXT: The aim of this work was to establish changes in mechanical properties which re-form after cessation of the irradiation. The method of examination is described in Ref. 1. The authors examined the creep rate in dependence on the mechanical stress applied and the integral dose. Fig. 1 shows the change in creep for unplasticized polyvinyl-chloride at a radiation intensity of 46,000 rad/sec, a stress of 0.5 kp/mm<sup>2</sup>, and 52°C. For comparison, data are given, that were obtained from nonirradiated material, and material taken out of the radiation \*

Card 1/2

Investigation of the Mechanical Properties of  
Polymers During the Process of Irradiation.  
II. Creep of Solid Polymers and Rubbers During  
the Process of Irradiation in a Nuclear Reactor

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B004/B061  
82082

field. Fig. 2 shows the same data for a stress of 1 kp/mm<sup>2</sup>. The time dependence of creep is reproduced in Fig. 3. A Table gives the experimental data. The same experiments were carried out with unplasticized polystyrene, plasticized PVC (Fig. 4), vulcanized rubber from natural rubber of the type HK(NK) (Fig. 5), from CKH-18 (SKH-18) nitrile rubber (Fig. 6), and from polyisobutylene rubber (Fig. 7). In all the substances examined, the creep rate increased in bounds, and decreased again when the radiation was switched off. This effect increased with increasing irradiation intensity. A reversible change in the relaxation rate was observed. The authors mention a paper by Yu. S. Zuyev (Ref. 4), thank N. V. Zvonov for making the experiments on the reactor possible, and the mechanics I. P. Yermakov and K. K. Shcherbo for their collaboration. There are 7 figures, 1 table, and 6 Soviet references.

SUBMITTED: October 15, 1960

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Mokul'skiy, M. A.

S/190/60/002/01/15/021

B004/B061

62083

A.6200

AUTHOR:

Mokul'skiy, M. A.

TITLE:

Kinetic Processes in Irradiated Substances /9

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 1,  
pp. 119-129

TEXT: It was previously established (Refs. 1-3) that mechanical relaxation processes are accelerated in the radiation field. This acceleration increases with increasing radiation intensity, and declines after the radiation is switched off. The author terms such processes reversible radiation-mechanical effects. An attempt is made here to work out a physical theory for the acceleration of kinetic processes by irradiation. The author proceeds from the fact that the transition of a substance containing excited atoms or molecules to thermodynamic equilibrium can take place in three ways: 1) radiation of the excitation energy in the form of photons (luminescence), 2) use of the excitation energy for splitting chemical bonds and forming free

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## Kinetic Processes in Irradiated Substances

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B004/B061

radicals, 3) direct conversion of the excitation energy into heat. The concentration of excited molecules and the rate of kinetic processes were estimated, and equations (2) and (3) were derived for the probability that a particle has a higher energy than  $U$ . Fig. 1 shows the temperature dependence of kinetic processes. Equation (7) is derived for the concentration of "hot" molecules. The kinetic processes occurring under irradiation are outlined by the example of the relaxation of mechanical stresses (Figs. 2 and 3). It follows from the equations (11), (15), and (19) that the radiation field somehow changes the distribution function of the relaxation times, as it cannot be reached by heating the material. Equation (20) is derived for the durability of loaded material in the radiation field. The author refers to papers by I. M. Lifshits (Ref. 9), S. N. Zhurkov et al. (Ref. 10), Buben, Voyevodskiy et al. (Ref. 14), and thanks Yu. S. Lazurkin for his advice. There are 3 figures and 14 references: 12 Soviet, 1 Dutch, and 1 Swiss.

SUBMITTED: October 15, 1959

Card 2/2



S/190/60/002/011/014/027  
B004/B060

AUTHORS: Kiselev, A. G., Mokol'skiy, M. A., Lazurkin, Yu. S.

TITLE: Anisotropy of Hyperfine Splitting in Electron Paramagnetic Resonance Spectra of Irradiated Oriented Polymers 19

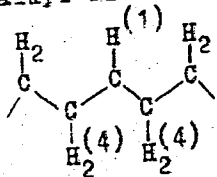
PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 11, pp. 1678 - 1687

TEXT: The authors wanted to identify the radicals forming on the irradiation of polymers by the hyperfine structure of the epr spectrum. Experiments were made by stretching oriented polymers. The epr spectra were taken at various angles between orientation of the polymer and the magnetic field at 9000 Mc/sec in the high-frequency modulated magnetic field. The investigation covered low-pressure polyethylene stretched in the cold state; polytetrafluoro ethylene (Teflon) stretched at 300°C; polyvinyl chloride stretched at 72°C; polymethyl methacrylate stretched at 140°C. Irradiation took place either in the reactor (in evacuated quartz ampuls at 40-50°C) or by beta radiation of a Au<sup>198</sup> needle (half life 64.6 h). As is shown by Fig. 1, the intensities of the lines and their number depend,

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Anisotropy of Hyperfine Splitting in Electron Paramagnetic Resonance Spectra of Irradiated Oriented Polymers S/190/60/002/011/014/027 B004/B060

in polyethylene, on the angle between elongation axis and magnetic field direction. This result is discussed on the basis of the formation of an alkyl radical:



The latter has four equivalent H<sup>(4)</sup> protons and a central H<sup>(1)</sup> proton. For the components shown in Fig. 1, equations are derived on the basis of the projection of H<sup>(1)</sup> and H<sup>(4)</sup> protons:

I)  $H_{ext} = H_0 - (1/2) \{ [1] + 4[4] \}$  (one possibility:  $m_{I_1} + 4m_{I_4}$ )

IIa)  $H_{ext} = H_0 - (1/2) \{ -[1] + 4[4] \}$  (one possibility:  $-m_{I_1} + 4m_{I_4}$ )

IIb)  $H_{ext} = H_0 - (1/2) \{ [1] + 2[4] \}$  (4 possibilities:  $m_{I_1} - m_{I_4} + 3m_{I_4}$ )

IIIa)  $H_{ext} = H_0 - (1/2) \{ -[1] + 2[4] \}$  (4 possibilities:  $-m_{I_1} - m_{I_4} + 3m_{I_4}$ )

IIIb)  $H_{ext} = H_0 - (1/2) [1]$  (6 possibilities:  $m_{I_1} - 2m_{I_4} + 2m_{I_4}$ )

Anisotropy of Hyperfine Splitting in Electron S/190/68/002/011/014/027  
 Paramagnetic Resonance Spectra of Irradiated B004/B060  
 Oriented Polymers

$H_{\text{ext}}$  denotes the outer field,  $H_0 = \hbar\omega/g_e\beta_B$ ;  $g_e$  = g-factor of the free electron,  $\beta_B$  = Bohr magneton,  $m_{I_1}$  and  $m_{I_4}$  the projection of the proton spin of  $H^{(1)}$  and  $H^{(4)}$  protons on the magnetic field direction. The dependence, found experimentally, of the position of spectral lines fits theoretical notions.  $H^{(1)}$  and  $H^{(4)}$  protons are not equivalent to each other. The density of the unpaired electron is lower on  $H^{(1)}$  than on  $H^{(4)}$ . Data confirm the formation of an alkyl radical on irradiation at 77°K. Polyethylene irradiated at 40-50°C gave an epr spectrum with 7 components, each of which was a doublet. This spectrum corresponds to a uniform interaction of an unpaired electron with 6 protons. This is believed to point to the formation of an allyl radical  $\sim\text{CH}_2^{(4)}-\text{CH}^{(2)}-\dot{\text{C}}\text{H}^{(1)}-\text{CH}^{(2)}-\text{CH}_2^{(4)}\sim$ . Anisotropy was likewise observed in oriented Teflon; the spectra, however, were not analyzed. No anisotropy was observed with polyvinyl chloride and polyamide. The absence of anisotropy in polymethyl methacrylate and polystyrene is explained by the fact that there is no proton in the immediate vicinity of

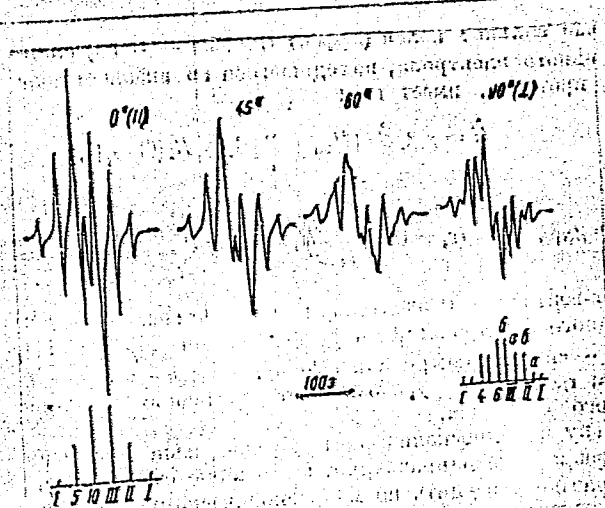
Card 3/5

Anisotropy of Hyperfine Splitting in Electron S/190/60/002/011/014/027  
Paramagnetic Resonance Spectra of Irradiated E004/E060  
Oriented Polymers

the unpaired electron, that might cause, as with polyethylene, an anisotropy of hyperfine splitting. The authors refer to investigations conducted by V. V. Voyevodskiy (Ref. 1) at the Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics of the AS USSR). There are 7 figures and 7 references: 3 Soviet, 2 US, and 2 British. ✓

SUBMITTED: May 10, 1960

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8/190/60/002/01/014/027  
B004/B060

Fig. 1: Spectra of oriented low-pressure polyethylene irradiated at 77°K. Measurement made at -30°C. 0°, 45°, 60°, 90° are the angles between orientation of sample and direction of magnetic field. For 0° and 90° the theoretical scheme of position of lines and their relative intensities is given.

Card 5/5

84236

S/089/60/009/004/016/020  
B006/B070

9.6/50  
21.8/100  
AUTHORS:

Fivevskiy, M. B., Lazurkin, Yu. S., Mokul'skiy, M. A.

TITLE: A Simple Calorimetric Method of Measuring the Absolute Energy Dose Received by Substances in Strong Fields of Ionizing Radiation

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 4, pp. 321 - 323

TEXT: A steady calorimetric method is used for measuring the radiation energy received by a sample if the dose rate is not too high and the effect of other energy-generating processes in the sample is negligible. For intense irradiation (high dose rate), this method is not applicable, particularly because the establishment of thermal equilibrium takes too long a time; in this case, the sample is so strongly heated that it either melts or disintegrates; at least the high absorbed integral dose changes the structure and properties of the sample significantly. For this reason, the authors of the present "Letter to the Editor" developed in 1957 a simple nonsteady calorimetric method which is suitable for studies on reactors and other sources of strong radiation. The method has been tested during the last few years. The principle of the method is as follows. A sample for dose-measuring is placed at time  $t=0$  in a radiation

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A Simple Calorimetric Method of Measuring the  
Absolute Energy Dose Received by Substances in  
Strong Fields of Ionizing Radiation

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B006/B070

field which is homogeneous and constant within the sample, under such conditions that the temperature at the center of the sample increases linearly for a time  $\tau$  independently of the surrounding temperature.  $\tau$  is proportional to the square of the characteristic sample dimension  $d$  and inversely proportional to the coefficient of thermal diffusivity  $\chi$ . Therefore,  $dT/dt$  is a function of the dose rate and heat capacity of the sample, and the dose rate can be calculated from the formula

$P = 0.417 c(dT/dt)_0$ .  $c$  is the specific heat of the sample material (cal/g.degree);  $(dT/dt)_0$  is measured in deg/hour, and  $P$  in Mrad/hour.

Polystyrene, polyethylene, silicone rubber, Teflon, molten quartz, etc. were used for the dosimeter. The sample had a cylindrical form (30 mm diameter and 50 mm height). This size has a  $\tau$  value of 2 - 3 minutes which is required for the measurement of  $dT/dt$  (Fig. 1). In this time interval, the mutual shielding of the parts of the sample may be neglected. Copper-constantan thermocouples were used for the measurement of temperature. The construction of the dosimeter is very simple (Fig. 2). All parts with the exception of the thermocouple consist of nonactivizable materials. The

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A Simple Calorimetric Method of Measuring the Absolute Energy Dose Received by Substances in Strong Fields of Ionizing Radiation

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whole instrument was inserted in a perpendicular hole in a reactor and checked in a radiation-free zone before measurements were carried out. In this manner, the dose rates for different substances were measured in the holes of the BBP (VVR) reactor. The error was 5 - 10%. Fig. 3 shows the distribution of the dose rate along a hole in this reactor for polyethylene and quartz glass. With this method the anomalies of the  $T(t)$  curves may also be found. Thus, for example, the  $T(t)$  curve of polytetrafluoroethylene shows a sharp bend which may be ascribed to a phase transformation due to irradiation (cf. Fig. 4). There are 4 figures and 4 references: 3 Soviet and 1 US.

SUBMITTED: April 14, 1960

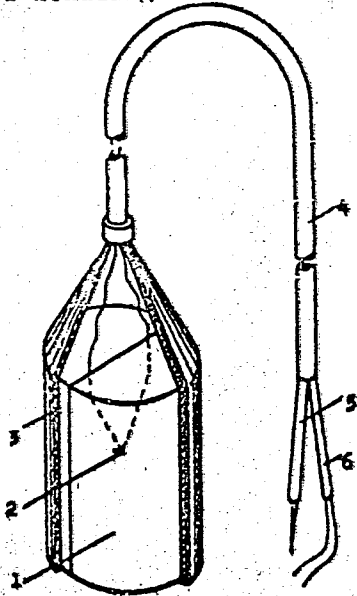
Card 3/4



A Simple Calorimetric Method of Measuring the Absolute Energy Dose Received by Substances in Strong Fields of Ionizing Radiation

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B006/B070



1 - specimen. 2 - thermocouple hot junction. 3 - aluminum foil. 4 - flexible suspender-insulator. 5 - thermocouple cold junction. 6 - terminals connected to a measuring instrument.

Card 4/4

MOKUL'SKIY, M.A.; LAZURKIN, Yu.S.

Beta emitter based on Au<sup>198</sup> for use in studies of the physical  
properties of materials subjected to irradiation. Atom. energ.  
IO no.2:160-162 F '61. (MIRA 14:1)  
(Gold--Isotopes) (Beta rays)

ALEKSANDROV, A.A.; GAVRILOV, V.Yu.; KISELEV, A.G.; LAZURKIN, Yu.S.;  
MOKUL'SKIY, M.A.

Origin of broad electron paramagnetic resonance lines in nucleic acids and their complexes with proteins. Dokl. AN SSSR 141 no.6: 1483-1485 D '61. (MIRA 14:12)

1. Predstavleno akademikom A.P.Aleksandrovym.  
(Paramagnetic resonance and relaxation) (Nucleic acids)  
(Ferromagnetism)

43247

S/844/62/000/000/109/129  
D408/D307

215210

AUTHORS: Lazurkin, Yu. S., Mokul'skiy, M. A. and Fiveyskiy, M. B.

TITLE: Nature of the reversible acceleration of mechanical relaxation processes in polymers under irradiation

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 638-641

TEXT: By "acceleration of mechanical relaxation processes" is understood a wide range of phenomena, including acceleration of stress relaxation, acceleration of creep, and decrease of ultimate forced elasticity. In the present work the authors studied the acceleration of creep CKH-18 (SKN-18) nitrile rubber irradiated in a nuclear reactor, this being a continuation of previous investigations, with the difference that in the earlier work the effect of irradiating rigid polymers was studied. Samples of the test material were stretched under constant load for 45 hours to attain equilibrium deformation, almost all the deformation occurring during the first 10 - 20 minutes; other samples were stretched for 16 mins. The  
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stretched samples, still under load, were irradiated at intensity  $2 \times 10^4$  rad/sec, whereupon creep was initiated at the rate of  $4 \times 10^{-3}$  sec<sup>-1</sup> in both cases. The results indicated that the acceleration of creep and relaxation in resins was caused by rupture of lattice bonds, i.e. the so-called 'chemical' mechanism, and not by the "physical" mechanism (described in an earlier work) as is the case when rigid polymers are irradiated. Efficiency of the destruction process was evaluated by the method of Tobolskiy et al for the analysis of chemical relaxation. By means of the kinetic theory of resin elasticity an equation was derived relating the rate of creep under irradiation to the number of bonds rupturing per second in 1 cm<sup>3</sup> of material. Substituting into this equation the experimental data for SKN-18 rubber, natural rubber and polyisobutylene, the numbers of bonds rupturing per 100 ev of absorbed energy were estimated to be 3, 4, and 19 respectively. There is 1 figure.

ASSOCIATION: Institut atomnoy energii AN SSSR (Institute of Atomic Energy, AS USSR)

Card 2/2

FIVEYSKIY, M.B.; LAZURKAN, Yu.S.; MOKUL'SKIY, M.A.

[Simple calorimetric method for measuring the absolute energy dose received by substances situated in powerful fields of ionizing radiations] Prostoi kalorimetricheskiy metod izmereniya absolutnoi energeticheskoi dozy, polucheniye veshchestvami v moshchnykh pol'yakh ioniziruyushchikh izlucheniy. Moskva, In-t atomnoi energii, 1960. 10 p. (MIRA 17:1)

KISELEV, A.G.; MOKUL'SKIY, M.A.; LAZURKIN, Yu.S.

[Anisotropy of hyperfine splitting in electron paramagnetic resonance spectra of irradiated oriented polymers] Anizotropia sverkh-tonkogo rasshcheplenia v spektrakh elektron'nogo paramagnitnogo rezonansa oblu-chennykh orientirovannykh polimerov. Moskva, In-t atomnoi energii, 1960. 22 p. (MIRA 17:2)

ALEKSEYEV, V.G.; MOKUL'SKIY, M.A.; PERMOGOROV, V.I.

Study of biopolymers by using a new photoelectric spectropolarimeter of high sensitivity. Biofizika 10 no.2:347-349 '65. (MIRA 18:7)

1. Institut atomnoy energii imeni Kurchatova AN SSSR.



MOKUL'SKAYA, T.D.; STOLYAROVA, G.S.; MOKUL'SKIY, M.A.

Study of the structure of actinophage DNA by X-ray diffraction method.  
Dokl. AN SSSR 163 no. 1, 750-751 II 1964. (MIRA 18:7)

2. Submitted September 29, 1964.

L 23210-66 EPT(1)/ERC(m)-6 Wd

ACC NR: AP6008043

SOURCE CODE: UR/0020/66/166/004/0836/0828

AUTHOR: Mokul'skaya, T. D.; Mokul'skiy, M. A.

ORG: none

TITLE: Electron-optical recording of x-ray diffraction

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 836-838

TOPIC TAGS: x ray diffraction pattern, image converter, x ray photography, electron optics

ABSTRACT: The authors describe a practical image converter for recording x-ray diffraction patterns based on data in an article by Coetze and Taylor (G. W. Coetze, A. Taylor, Advances in Electronics and Electron Physics, 16, 1962). A diagram of the instrument is shown in the figure. A collimated beam of x-rays falls on the specimen 3. The diffracted rays fall on fluorescent screen 5. The image produced on this screen is projected by optical system 6 onto the photocathode of image converter 7. The amplified image of the diffraction pattern is photographed from the output screen of the image converter by conventional camera 8. This method reduces exposure time by a factor of 120-240 in comparison with conventional methods for identical negative density. However, the image converter photographs gave poor resolution (reflections separated by an angular distance of approximately 2° were not resolved). Geometric distortions in these photographs give an error of 12% in measurements of reflection

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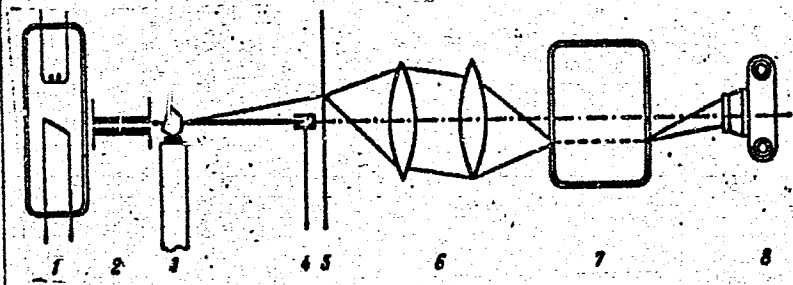


Diagram of the image converter installation for recording x-ray diffraction patterns: 1--x-ray tube; 2--capillary made from lead glass; 3--specimen on rotating base; 4--trap for primary triggering; 5--fluorescent screen; 6--optical system for image transfer; 7--image converter; 8--camera.

coordinates. The photographs also show some reduction in contrast. While the new method needs considerable improvement for competition with conventional methods, it may be useful in certain special cases. In conclusion the authors are sincerely grateful to M. M. Butslov and Yu. V. Antipova for furnishing the image converter, to S. D. Fanchenko and B. A. Demidov for discussing this work and to A. N. Pavlov and K. K. Shcherbo for assistance in building the equipment. Orig. art. has: 4 figures.

SUB CODE: 4,20/      SUBM DATE: 03Jun65/      ORIG REF: 003/      OTH REF: 001

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MOKUL'SKIY, M. S.

PA 165T112

USSR/Physics - Quantum Physics

Aug 50

"Relation Between the Classical Equation of the  
Self-Conformal Field and the Quantum Equation,"  
M. S. Mokul'skiy, Moscow State U

Zhur Eksper i Teoret Fiz" Vol XX, No 8, pp 688-692

Shows that quantum equation of subject field passes  
over to classical equation of same field of A. A.  
Vlasov when  $h$  approaches 0. Submitted 7 Jan 50.

165T112