

DOLGOKER, Yu.P.; PASHUTIN, N.V.; ZHIGULIN, V.I., inzh.; BEDA, N.I., inzh.;  
RYZHKOV, P.Yu., inzh.; GAVRILOV, A.I., inzh.; CHEKHRANOV, V.D.,  
kand. tekhn. nauk

New developments in research. Stal' 23 no.10:928-929 0 '63.  
(MIRA 16:11)

DOLGO\_SABUROV, B.A.

DECEASED  
c1960

1961/2

SEE LLC

MEDICINE

DOLGO-SABUROV, V.B.

Change in the DNA content in cells of an irradiated organism.  
Dokl. AN SSSR 164 no.6:1407-1408 0 '65.

(MIRA 18:10)

1. Voenno-meditsinskaya akademiya im. S.M.Kirova. Submitted  
January 7, 1965.

DOLGO-SABUROV, Ye.D.

Dolgo-Saburov, Ye.D. "Experimental-morphological investigation of the collateral blood supply of rabbit ovaries", Trudy Voen.-mor. med. akad., Vol. XI, 1948, p. 131-59, - Bibliog: 43 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

~~DOLGOBORODOV, Ivan Vasil'yevich, zaslushannyy zootekhnik RSFSR; YAKOVLEV,~~  
~~Fedor Arsent'yevich; KAZANSKIY, M.M., redaktor; VOROB'YEV, F.I.,~~  
redaktor; VODOLAGINA, S.D., tekhnicheskiy redaktor

[Work practice of the Yelizavetino machine-tractor station in  
stockbreeding] Opyt raboty Elizavetinskoi MTS po shivotnovodstvu.  
Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 98 p. (MLBA 9:9)

1. Glavnyy zootekhnik Leningradskogo oblastnogo upravleniya  
sel'skogo khozyaystva (for Yakovlev)  
(Leningrad Province--Stock and stockbreeding)

DOLGOBRODOV, K. P.

Uchet na zhivotnovodchivskoi ferme *Accounting on an animal breeding farm*.  
Moskva, Sel'khozgiz, 1953. 100 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 9 December 1953

Author: Shalina, A. D., Zhukova, L. I., ~~and others~~ (1956) 20  
 Danilepov, B. G., ~~and others~~ (1956)

Subject: Investigation of the  $\gamma$ -radiation distribution of  $\gamma$ -quanta in the  
 annihilation of positrons in liquid hydrogen and helium  
 (Issledovaniye uglovoogo raspredeleniya  $\gamma$ -kvantov pri  
 annigilyatsii pozitronov v zhidkikh volodnykh i gelye)

ABSTRACT: Izvestiya Akademii nauk SSSR, Seriya Khimicheskaya, 1956,  
 Vol. 22, Nr 9, pp. 1707-1712 (10)

ABSTRACT: On the basis of the experimental results, it is impossible to  
 clarify completely the mechanism of positron annihilation in  
 condensed media. It was found that the annihilation mechanism  
 is different, at least to a certain extent, in liquids and in  
 amorphous media. As a rule, in metals, the annihilation pro-  
 cess of positrons takes place only on free atoms. The  
 number of positrons is related experimentally with the  
 average time (in all metals) is  $1.5 \times 10^{-10}$  sec. In amorphous  
 substances, however, the annihilation process is varied. In the  
 decay curves which correspond to the long annihilation  
 component with long period,  $\tau \sim 10^{-9}$  sec.

see 1/4





Investigation of the Angular Distribution

SOV/48-22-8-11/20

of  $\gamma$ -quanta in the Annihilation of Positrons in Liquid Hydrogen and Helium

observed. The smaller number of such cases observed in aluminium appears to be of a somewhat peculiar significance. The curve of the angular distribution for helium is wider than that for hydrogen, which fact is connected with the higher velocity of the electrons in helium. The experimental curves of angular distribution of  $\gamma$ -quanta differ from those computed by Chzhan Li (Ref 5), (Figs 5,6). The spectrum of the center-of-mass energy of the annihilating pairs can be constructed from the curve of the angular distribution of the  $\gamma$ -quanta. As a result of the computations energy spectra of the positron annihilation in liquid hydrogen and helium were obtained (Figure 7). As regards the spectrum for aluminium, which is also given in figure 7, no judgment can be passed on it, as the curve was constructed from six points only. The authors express their gratitude to the Director of the Institute of Physical Problems, S. S. Vavilov, P. L. Kapitsa and A. I. Shal'nikov. There are 7 figures, 1 table, and 11 references, of which are Soviet.

Card 3/1

Investigation of the Angular Distribution of  $\gamma$ -Quanta in the Annihilation of Positrons in Liquid Hydrogen and Helium

SCV/48-22-8.11/20

ASSOCIATION: Nauchno-issledovatel'skiy Fizicheskiy Institut Leningradskogo gos. universiteta im. A. A. Zhdanova (Scientific Research Institute of Physics at the Leningrad State University named A. A. Zhdanov)

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S/048/60/024/03/09/019

B006/B014

24.6810

AUTHORS: Dzhelepov, B. S., Dolgoborodova, M. A.

TITLE: Resonance Scattering of  $\text{La}^{140}$  Gamma Rays  
19 19 19

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,  
Vol. 24, No. 3, pp. 304 - 310

TEXT: The article under review was read at the Tenth All-Union Conference on Nuclear Spectroscopy (Moscow, January 19 - 27, 1960). The authors studied the scattering of gamma rays of  $\text{La}^{140}$  by  $\text{Ce}^{140}$ . The  $\text{La}^{140}$  preparation was used as gamma source in the form of a nitric acid  $\text{La}(\text{NO}_3)_3$  solution. The experimental arrangement is schematically shown in Fig. 1.  $\text{CeO}_2$ - and  $\text{La}_2\text{O}_3$  cylinders weighing about 3 kg served as scatterers. The mean scattering angle was  $81^\circ$ . A cylindrical  $\text{NaI}(\text{Tl})$  crystal with an FEU-24 photomultiplier was used as detector. The half-width of the total absorption peak of the 1,597-kev line was 13 per cent. The counter system was prevented from being charged by a 12 mm thick lead shield which was inserted between the crystal and the scatterer. Eleven series of

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Resonance Scattering of  $\text{La}^{140}$  Gamma Rays

S/048/60/024/03/09/019  
B006/B014

measurements were carried out, in which  $\text{CeO}_2$  and  $\text{La}_2\text{O}_3$  were alternately used as scatterers. Fig. 2 shows some scattering curves as measured in one series. The peaks at 1,597 kev (the first excited level of  $\text{Ce}^{140}$ ) are distinctly marked. The resonance scattering curves of all eleven series of measurements are shown in Fig. 3. The width of the level which was excited in the scattering could be determined by measuring the intensity of resonance scattering. For this purpose the formula

$$\bar{\sigma} = \frac{(2I^*+1)\lambda^2}{(2I_0+1)4} m\Gamma_\gamma \quad \text{was used } (\bar{\sigma} - \text{resonance scattering cross section})$$

averaged over the microspectrum,  $I_0$  and  $I^*$  - spins of the ground- and excited level,  $\lambda$  - wavelength of the scattered ray,  $m$  - fraction of the microspectrum corresponding to a 1 ev broad band in the resonance range,  $\Gamma_\gamma$  - desired radiation width of the level). For the case under consideration it holds that  $I_0 = 0$ ,  $I^* = 2$ ,  $\lambda = 7.8 \cdot 10^{-11} \text{ cm}$ . For determining  $\Gamma_\gamma$  it is necessary to know  $\bar{\sigma}$  and  $m$ . The determination of  $\bar{\sigma}$ , which is described in great detail, yielded  $\bar{\sigma} = (8.4 \pm 1.0) \text{ mb}$ . In the following, the determination of  $m$  from the microspectrum (Fig. 7) of gamma rays

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Resonance Scattering of  $\text{La}^{140}$  Gamma Rays

S/048/60/024/03/09/019  
B006/B014

is described. The authors obtained  $m = 0.008 \pm 0.003$ , wherefrom it followed that  $\Gamma_\gamma = 1.4 \cdot 10^{-4} \text{ ev}$  and  $T_{1/2}(1,597 \text{ kev}) = (3.3 \pm 1.3) \cdot 10^{-12} \text{ sec}$ . The data obtained are finally discussed and compared with the results furnished by other authors. Mention is made of A. A. Tkachenko, who calculated the shape of the microspectrum. The decay scheme of  $\text{La}^{140}$  is shown in Fig. 6. There are 7 figures, 1 table, and 3 non-Soviet references.

4

Card 3/3

AVLASENKO, Yu.G., inzh.; DOLGOCHIEV, F.M.

Hydraulic pressure conveying with pressure-suction coal pipes.  
Ugol' Ukr. 6 no.6:15-18 Je '62. (MIRA 15:7)  
(Hydraulic conveying)

FINKEL'SHTEYN, M.M., inzh.; Prinimali uchastiye: DOLQOKER, Yu. P.;  
PASHUTIN, N.V.; VOLOBUYEYEV, N.A.; DOLMAT, L.B.; ADAMKOVICH, V.K.;  
AKSENOV, I.N.

New steels for the automatic electric hard facing of rolls for  
continuous slabbing and blooming mills. Stal '21 no.6:535-538  
Je '61. (MIRA 14:5)

1. Makeyevskiy metallurgicheskiy zavod.  
(Rolls (Iron mills))  
(Hard facing)

ALFEROV, K.S.; GOLCOBER, Yu.P.

New developments in research. Stal' 25 no.10:967 0 '65.  
(MIRA 18:11)



DOLGOKER, Yu.P.; UTSIS, L.M.; BEDA, N.I.; BOGOMOLOV, L.A.; DEMIDOVICH,  
Ye.A.; PINDYURIN, N.I.

Adopting economically shaped light weight rolled products  
in U.S.S.R. plants. Met. i gornorud. prom. no.1:66-70  
Ja-F '64. (MIRA 17:10)

DOLGOKHVESTOV, I.A.

Hydrolyzate-receiving tanks of a new design. Gidroliz. i lesokhim.  
prom. 12 no.7:29 '59 (MIRA 13:3)

1. Khorskiy lesokombinat.  
(Khor--Wood-using industries--Equipment and supplies)  
(Hydrolysis)

KOROL'KOV, I.I.; STRIZHEVSKAYA, I.S.; LIKHOVID, R.D.; PARAMONOVA, G.D.;  
ZYBIN, S.Ye.; BATIKOV, L.S.; DOLGOKHVOSTOV, I.A.

Experiments in the production of hydrolysates for growing yeast  
at the Ivdel' Hydrolysis Plant. Gidroliz. i lesokhim. prom.  
16 no.5:3-7 '63. (MIRA 17:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy  
i sul'fitno-spirovoy promyshlennosti (for Korol'kov,  
Strizhevskaya, Likhovid, Paramonova). 2. Ivdel'skiy gidroliznyy  
zavod (for Zybin, Batikov, Dolgokhvostov).

DOLGOLENKO, A.

At the Yevsk commercial feed plant. Muk.-elev.prom. 23 no.3:  
18 Mr '57. (MLRA 10:5)

1. Direktor Yevskogo kombikormovogo zavoda.  
(Yevsk--Feeding and feeding stuffs)

~~BOGOLYUBOV, Anatoliy Aleksandrovich~~, doktor tekhnicheskikh nauk,  
professor; ~~RODINKO, B.F.~~, professor, doktor tekhnicheskikh nauk,  
retsensent; VAYNSON, A.A., dotsent, kandidat tekhnicheskikh nauk,  
retsensent; GOMOZOV, I.M., kandidat tekhnicheskikh nauk, retsensent;  
GOKHBERG, M.M., redaktor; VOLCHCK, K.M., tekhnicheskiy redaktor

[Hoisting and conveying machines] Pod'emno-transportnye mashiny.  
Izd. 3-e, perer. Leningrad, Izd-vo "Rechnoi transport," 1956.  
379 p. (MIRA 10:3)

(Hoisting machinery) (Conveying machinery)

DOLGOLENKO, Anatoliy Aleksandrovich, prof., doktor tekhn.nauk; GORYANSKIY,  
Yu.V., red.; VOLCHOV, K.M., tekhn.red.

[Machines for continuous transportation] Mashiny nepreryvnogo  
transports. Leningrad, Izd-vo "Tekhnol transport," Leningr. otd-nie,  
1959. 404 p. (MIRA 12:12)  
(Conveying machinery) (Hoisting machinery)

DMITRIYEV, Valentin Aleksandrovich, doktor tekhn.nauk, prof.;  
DOLGOLENKO, Anatoliy Aleksandrovich, doktor tekhn.nauk,  
prof.; MARKOV, Vladimir Georgiyevich, kand.tekhn.nauk, dotsent;  
SMIRNOV, Sergey Aleksandrovich, kand.tekhn.nauk, dotsent;  
SIROTSKIY, V.P., doktor tekhn.nauk, prof., retsenzent;  
MAL'TSEV, V.N., kand.tekhn.nauk, dotsent, retsenzent;  
VORONKOVSEYAYA, A.P., red.; VOLCHOK, K.M., tekhn. red.

[Theory of mechanisms and machines, machine parts and hoisting-  
conveying machinery] Teoriia mekhanizmov i mashin, detali mashin  
i pod'emno-transportnye mashiny. Leningrad, Izd-vo "Rechnoi tran-  
sport," 1963. 580 p. (MIRA 16:6)

(Mechanical engineering) (Hoisting machinery)  
(Conveying machinery)

ACCESSION NR: AP4009109

S/0056/63/045/005/1879/1890

AUTHORS: Barmin, V. V.; Dolgolenko, A. G.; Krestnikov, Yu. S.;  
Meshkovskiy, A. G.; Nikitin, Yu. P.; Shebanov, V. A.

TITLE: Observation of the decay

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963,  
1879-1890

TOPIC TAGS: Omega meson decay, Omega meson charge parity, radiative  
decay, Omega meson width, Omega neutral particle decay, pion proton  
interaction, negative pion proton interaction

ABSTRACT: The reaction  $\pi^- + p \rightarrow n + \omega \rightarrow n + \pi^0 + \gamma$  was investigated  
for negative-pion momenta of 1.25, 1.55, and 2.8 BeV/c in a 17-  
liter propane-xenon bubble chamber. The purpose of the investiga-  
tion was to detect the decay  $\omega \rightarrow \pi^0 + \gamma \rightarrow 3\gamma$ , the existence of  
which was established on the basis of the excess of number of events

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ACCESSION NR: AP4009109

with three  $\gamma$ -rays as compared with the number of background events from the reactions  $\pi^- + p \rightarrow n + m\pi^0$  ( $m \geq 2$ ), and was further confirmed by a statistical method based on the kinematics of the  $\omega \rightarrow \pi^0 + \gamma$  decay. The cross sections for the reaction under study were estimated in the indicated momentum interval. "In conclusion, we express our deep gratitude to A. I. Alikhanov for constant interest and valuable advice. We thank the ITEP (Institute of Theoretical and Experimental Physics) proton synchrotron crew who enabled us to obtain the large number of photographs in a short time. We thank I. Ya. Pomeranchuk, L. B. Okun', I. Yu. Kobzarev, B. L. Ioffe, Yu. A. Simonov, and A. S. Zhizhin for fruitful theoretical discussions. We are very indebted to A. S. Kronrod, R. S. Guter, and Ye. M. Landis for valuable advice and for organizing and carrying out the calculations on the ITEP electronic computer. We thank the scanning staff under the direction of V. P. Romyantseva for scanning the pictures, Yu. I. Makarov, N. S. Khropov, and B. I. Chistyakov for operating the bubble chamber, Yu. V. Trebukhov-

Card 2/3

ACCESSION NR: AP4009109

skiy for aid in the work and V. V. Vladimirskiy for helpful discussion of the results. Orig. art. has: 8 figures, 27 formulas, and 2 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
(Institute of Theoretical and Experimental Physics)

SUBMITTED: 03Jul63

DATE ACQ: 02Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 010

Card 3/3

ACCESSION NR: AP4009142

S/0056/63/045/006/2082/2084

AUTHORS: Barmin, V. V.; Dolgolenko, A. G.; Krestnikov, Yu. S.;  
Meshkovskiy, A. G.; Shebanov, V. A.

TITLE: Search for the  $\omega \rightarrow e^+ + e^-$  decay

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963,  
2082-2084

TOPIC TAGS: Omega meson, Omega meson decay, negative pion proton  
interaction, bubble chamber, proton synchrotron, three pion decay

ABSTRACT: An attempt is made to observe the decay  $\omega \rightarrow e^+ + e^-$  ex-  
perimentally by the authors earlier (ZhETF v. 45, 1878, 1963) in a  
17-liter xenon-propane bubble chamber exposed to 1.55 and 2.8 BeV/c  
negative pion beams from the proton synchrotron at the Institut  
teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical  
and Experimental Physics). The chamber was operated without a mag-

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ACCESSION NR: AP4009142

netic field, with 20,000 pictures at 1.55 BeV/c and 40,000 pictures at 2.8 BeV/c scanned independently. Four two-prong stars were found to satisfy completely all the selection criteria, along with three doubtful cases. Reasons are advanced for assuming that all seven two-prong stars are cases of the reaction  $\pi^- + p \rightarrow n + \omega$  with the subsequent  $\omega \rightarrow e^+ + e^-$  decay of the  $\omega$  meson. The sources of background reactions are analyzed. The value obtained for the ratio of the probability of this decay to the three-pion decay is found to be  $(0.40^{+0.15}_{-0.30}) \times 10^{-2}$ , which agrees well with the theoretical predictions. "We are deeply grateful to A. I. Alikhanov for his constant interest in the work and for valuable advice, to the scanning department of the Institute of Theoretical and Experimental Physics for scanning the photographs, to Ya. S. Yelenskiy for an experimental determination of the scanning efficiency for electrons in a chamber, and to I. Yu. Kobzarev and Yu. P. Nikitin for discussions. Orig. art. has: 2 figures and 2 formulas.

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ACCESSION NR: AP4009142

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
(Institute of Theoretical and Experimental Physics)

SUBMITTED: 09Oct63

DATE ACQ: 02Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 002

OTHER: 004

Card 3/3

ACCESSION NR: AP4012534

S/0056/64/046/001/0142/0147

AUTHORS: Barmin, V. V.; Dolgolenko, A. G.; Krestnikov, Yu. S.;  
Meshkovskiy, A. G.; Shebanov, V. A.

TITLE: An investigation of the charge exchange  $\pi^- + p \rightarrow n + \pi^0$  and  
 $\pi^- + p \rightarrow n + \eta$  ( $\eta \rightarrow 2\gamma$ ) reaction in the 1.55--4.5 BeV/c region

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 142-147

TOPIC TAGS: pion proton interaction, negative pion proton interaction, pion proton charge exchange, Eta meson production, neutral pion angular distribution, pion angular distribution, backward scattering, backward charge exchange, backward exchange scattering

ABSTRACT: The reactions were investigated with a 17-liter propane-xenon bubble chamber with an aim at checking on the theoretical prediction by L. B. Okun' and I. Ya. Pomeranchuk (ZhETF, v. 30, 424, 1956) that a considerable decrease takes place in the exchange scat-

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ACCESSION NR: AP4012534

tering with increasing  $\pi^-$  meson energy. The number of pictures scanned were 20,000, 60,000 and 20,000 at momenta 1.55, 2.8, and 4.5 BeV/c. The charge exchange reaction cross sections were found to be 3.0,  $1.54 \pm 0.37$ ,  $0.36 \pm 0.09$ , and  $0.19 \pm 0.12$  mb for 1.14, 1.55, 2.80, and 4.50 BeV/c. The  $\eta$ -meson production cross sections for the same momenta are 0.5,  $0.32 \pm 0.22$ ,  $0.08 \pm 0.07$ , and  $0.05 \pm 0.07$ , respectively. From these values, and from the angular distribution of the  $\pi^0$  meson in the charge-exchange reaction, it was found that the differential cross section for backward exchange scattering is  $0.04 \pm 0.02$  mb/sr for 1.5 BeV/c and  $0.008 \pm 0.005$  mb/sr for 2.8 BeV/c.

"In conclusion we are deeply grateful to A. I. Alikhanov for continuous interest and for valuable advice, and to I. Ya. Pomeranchuk and V. V. Vladimirovskiy for a discussion of the results. We are grateful to the ITEP proton synchrotron crew for providing a large number of photographs within a short time. We are very indebted to L. M. Voronina, V. N. Dez, and N. A. Ivanova for carrying out the computations with the ITEP electronic computer. Orig. art. has: 3

Card 2/3

ACCESSION NR: AP4012534

figures, 4 formulas and 3 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
(Institute of Theoretical and Experimental Physics)

SUBMITTED: 30Jul63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 006

OTHER: 004

Card 3/3



L 01319-67 ENT(1)

ACC NR: AT6031149

SOURCE CODE: UR/3138/65/000/401/0005/0016

AUTHOR: Barmin, V. V.; Dolgolenko, A. G.; Meshkovskiy, A. G.; Shebanov,  
V. A.

ORG: none

TITLE: Analysis of exchange scattering with momentum  $\pi^+p \rightarrow \pi^+n$  at 2.8 Bev/c

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady, no. 401, 1965. Issledovaniye obmennogo reaseyaniya otritsatel'nogo piona s protonom v rezul'tate kotorogo poluchayetsya neytral'niy pion i neytron pri impul'se 2,8 Gev/c, 5-16

TOPIC TAGS: exchange scattering, pi meson, proton, pion, pion proton interaction

ABSTRACT: An analysis is made of the  $\pi^+p \rightarrow \pi^+n$  reaction at  $P_{\pi^+} = 2.8$  Bev/c. The total cross section for this reaction is  $\sigma = 0.35 \pm 0.04$  mb. The angular distribution  $d\sigma/d\Omega$  has two maxima: one close to  $0^\circ$  and the other within the interval  $0.3 < \cos\theta < 0.45$ . This corresponds to the square of the transmitted momentum  $t \approx -1.4$  (Bev/c)<sup>2</sup>. The values of  $d\sigma/d\Omega$  at  $0^\circ$  and  $180^\circ$  are

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L 01319-67

ACC NR: AT60<sup>3</sup>1149

$220 \pm 30 \mu\text{b/sr}$  and  $5 \pm 5 \mu\text{b/sr}$ , respectively. The authors thank K. A. Ter-  
Martirosyan for his discussion of this work. Orig. art. has: 2 tables and 2 figures.  
[Authors' abstract] [SF]

SUB CODE: 20/ SUBM DATE: 01Dec65/ ORIG REF: 008/ OTH REF: 007/

*nd*  
Card 2/2

DOLGOLENKO, Pavel Valer'yanovich, kandidat tekhnicheskikh nauk, dotsent;  
RUSYKIN, Boris Petrovich, dotsent; OSIPOVICH, F.A., redaktor;  
URUSHEV, V.M., retsenzent; POKROVSKIY, D.D., retsenzent; SHLEP-  
NIKOVA, Z.V., redaktor; BMOICHEVA, M.N., tekhnicheskij redaktor

[Technology of marine engines construction] Tekhnologiya sudovogo mashinostroeniia. Moskva, Izd-vo "Rechnoi transport,"  
1955. 373 p. (MIRA 9:4)

(Marine engines)

DOIGOLENKO, Pavel Valerianovich, kand.tekhn.nauk, dotsent; OSIPOVICH, F.A.,  
retsensent; IOVLEV, V.M., retsensent; CHERTKOV, Kh.A., red.;  
SHLENNIKOV, Z.V., red.; TSVETKOVA, S.V., tekhn.red.

[Ways of increasing labor productivity in machine shops] Puti  
povysheniia proizvoditel'nosti truda v mekhanicheskikh tsakhakh.  
Moskva, Izd-vo "Rechnoi transport," 1957. 76 p. (MIRA 11:1)  
(Machine-shop practice)

**PHASE 1 BOOK DEPLETION** 807/3688

Ukrainskiy muzk 5338. Institut mashinovedeniya. Komissiya po tekhnologii  
sli mashinostroyeniya. Seminar po kachestvu poverkhnosti.

Inzhenernoye sovetskoye delo 17 mashin, obrabotki i. Tekhnologicheskaya  
 fabrika elektrotkhi. Metrologiya i pribory. Ekspluatatsionnyye svoystva  
 strova povzrozhdeniya (Surface Quality of Machine Parts, Col-  
 lection of Articles, No. 5. Processing Factors in Machining.  
 Metrology and Instruments. Operational Properties of the Surface  
 Layer). Moscow, Izd-vo AN SSSR, 1959. 291 p. (Series: Itogi nauki i  
 tekhn. 1. Seriya Inzh. Nauch. 1, 200 strok izdaniy).

**Researching Agency! Akademika nauk SSSR. Institut mashinostroyeniya.**

Resp: Ed.: P.Ye. D'yachenko, Professor; Ed. of Publishing House:  
V.B. Gerasimov; 1944. 92 p. Belomorsk  
Zash. 94. 92 p. Belomorsk

REMARKS: This collection of articles is intended for technical personnel concerned with the quality of surface finishes of machine parts.

**OVERVIEW:** This collection of articles deals with problems of surface roughness and the effect of surface roughness on the wear and strength of machine parts. Among the topics discussed are the effects of cutting feeds and cutting-tool vibration on the surface roughness of machined parts, the effect of lay direction on the roughness of machined surfaces, methods and instruments for measuring surface roughness, the effect of surface roughness on the wear of plane friction surfaces, and the effect of surface roughness on fluid-film lubrication. No parame-trics are mentioned. References follow several of the articles.

—FOLLOWING FEATURES OF THIS MATERIAL:  
 DURABILITY, 3-Y. QUALITY AND WEAR OF FRICTION SURFACES

Polzella, P.J. -Effect of Lay Direction on the Use of Plans 49

Shearnberg, I. J. Use of the Cutting Process for Increasing the Fatigue Strength of Machine Parts

Chattynen, L.A.; P.Ye. D'yachenko, and O.Ye. Kestner. Solid Labor-  
Units in ~~the~~ the Prison 73

Pyuphev, D.B. Effect of Surface-Layer Quality on Fatigue Strength 65

Some Problems of the Formation of the Basis  
of the Working Cycle in Grinding as the Basis  
of the Theory of the Working Cycle in Grinding

for Improving Scheduling Quality  
Elkayev, A.A. Effect of Process Factors in Gridding on the Sur-

highest quality of chrome-plated parts.  
Markov, A.I. Roughness of Machined Surfaces in Precision and  
Ultra-Precision Machining of Steel  
127

Doobshins, A.P. Instrument for Determining the Surface Roughness  
of Machine Tools

Pydogenova, N.A. Thermal Phenomena in the Grinding of Quartz-  
in *Isvestiya Akad. Nauk SSSR, Ser. Khim. Nauk*, 1977, No. 1, p. 143.

Syresinakaya Z.P. Surface Hardening of Metals by Ball Burnishing 150

164	factor-engine parts	on the above the	164
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Larshmanov, A.P. Photoelectric Method of Recording Surface Profiles, 171

"Kallio-vai" instruction-type, profilograph-profiles-  
177

Yarov, A.I. Electric Circuit of the "Malib-VI" Profilograph-Pro-  
grammer  
184

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viten', V.A. MII-2 Opticomechanical Profilograph

Visual Device for Measuring the Roughness of  
Round Surfaces

PHASE I BOOK EXPLOITATION

SOV/5053

Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh. 3d, 1958.

Iznos i iznosostoykost'. Antifrictionnyye materialy (Wear and Wear Resistance. Antifriction Materials) Moscow, Izd-vo AN SSSR, 1960. 273 p. Irrata slip inserted. 3,500 copies printed. (Series: Its: Izudy, v. 1)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Ed.: M. M. Khrushchov, Professor; Eds. of Publishing House: M. Ya. Klebanov, and S. L. Orpik; Tech. Ed.: I. V. Polyakova.

NOTE: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection, published by the Institut mashinovedeniya, AN SSSR (Institute of Science of Machine, Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines) which was held April 9-15, 1958. Problems discussed were in 5 main areas: 1) Fundamentals of Theory of Lubrication and Friction Bearings (Chairman: M. M. Khrushchov, Doctor of Technical Sciences, and A. K. D'yachkov, Doctor of Technical Sciences); 2) Lubrication and Lubricant Materials (Chairman: G. V. Vinogradov, Doctor of Chemical Sciences); 3) Dry and Boundary Friction (Chairman: B. V. Derjagin, Corresponding Member of the Academy of Sciences USSR, and I. V. Kragelskiy, Doctor of Technical Sciences); 4) Wear and Wear Resistance (Chairman: M. M. Khrushchov, Doctor of Technical Sciences); and 5) Friction and Antifriction Materials (Chairman: I. V. Kragelskiy, Doctor of Technical Sciences, and M. M. Khrushchov, Doctor of Technical Sciences). Chairman of the general assembly (on the first and last day of the conference) was Academician A. A. Blagoderov. L. Ya. Khrushchanskiy, Candidate of Technical Sciences, was scientific secretary. The transactions of the conference were published in 3 volumes, of which the present volume is the first. This volume contains articles concerning the wear and wear resistance of antifriction materials. Among the topics covered are: modern developments in the theory and experimental science of wear resistance of materials, specific data on the wear resistance of various combinations of materials, methods for increasing the wear resistance of certain materials, the effects of friction and wear on the structure of materials, the mechanism of the seizing of metals, the effect of various types of lubricating materials on seizing, abrasive wear of a wide variety of materials and components under many different conditions, modern developments in antifriction materials, and the effects of finish machining on wear resistance. Many personalities are mentioned in the text. References accompany most of the articles.

Polyakova, I. V. Influence of the Direction of Machining Marks on the Character and Magnitude of the Wear of Friction Pairs During the Period of Running-In (Sb. Nauchno-tekhnicheskoy informatsii dlya inzh. i tekhn. nauch. SSSR, 1959)

270

Chashnov, A. L. Effect of the Finishing Treatment of Journals on the Wear Resistance of Plain Bearings and Journal Bearings (Sb. "Treniye i iznos v mashinakh", v. 15, Izd. AN SSSR)

270

Zamiaty, G. M. (deceased), A. L. Tarnovskiy, M. S. Vashonitskiy, and O. A. Ryabchikova. Formation of Martensite Elements on the Surface of Drawn Profiled Steel Wire Used in Cables ("Vestn. mashinostr.", No. 7, 1959)

270

Kislik, E. L. Wear and Damage to the Rolling Surface of Freight-car Wheels ("Vestn. mashinostr.", No. 7, 1959)

271

Card 11/13

7

GEL'FAND, Aleksandr Yevseyevich, inzh.; GETSOV, Iosif Yefremovich, kand. tekhn. nauk; CHERNOV, M.I., retsenzent; DOLGOLENKO, P.V., retsenzent; TYUTCHEV, N.A., red.; VITASHKINA, S.A., red. izd-va; YERMAKOVA, T.T., tekhn. red.

[Precision and finish of the machining of parts in repairing ship machinery] Tochnost' i chistota obrabotki detalei pri remonte sudovykh mekhanizmov. Moskva, Izd-vo "Rechnoi transport," 1961. 151 p. (MIRA 14:12)

(Marine engines--Maintenance and repair)

DOLGOLENKO, Pavel Valer'yanovich, dots., kand. tekhn.rauk;

RUSEYKIN, Boris Petrovich, dots.; ZYKOV, A.A.,  
retsenzent; KUNIN, P.A., red.; SHLENNIKOVA, Z.V., red.  
izd-va; BODROVA, V.A., tekhn. red.

[Marine engineering and ship repairs] Tekhnologiya sudovogo  
mashinostroeniia i sudoremonta. Moskva, Izd-vo "Rechnoi  
transport," Pt.1. [Marine engineering] Tekhnologiya sudovogo  
mashinostroeniia. 1962. 343 p. (MIRA 15:9)  
(Marine engineering)



BRANDT, N.B.; DOLGOLENKO, T.F.; STUPOCHENKO, N.N.

Studying the de Haas-van Alphen effect in bismuth at ultralow  
temperatures. Zhur. eksp. i teor. fiz. 45 no.5:1319-1335 N '63.  
(MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet.

DOLGOLENKO, V. YA.

Sudovye parovye ustanovki. Utverzhdeno v kachestve uchebnika dlia VTUZov vodnogo transporta. Leningrad, Morskoi transport, 1940, v. 1. diagra.

Marine steam plants.

DLC: VM741.D68

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

166T108

DOLGOLENKO, Yu. V.

USSR/Physics - Shimmy  
Aeronautics - Airplanes

Jul/Aug 50

"Comment on G. V. Aronovich's Article 'Theory of  
Shimmy in Automobiles and Airplanes,'" Yu. V.  
Dolgolenko, Leningrad Polytech Inst

"Priklad Matemat i Mekh" Vol XIV, No 4, pp 449-451.

Considers conditions governing self-induced excita-  
tions of oscillations in front wheels of cars, and  
in "three-wheel" chassis of airplanes. Submitted  
5 Apr 50.

166T108

3

Mathematical Reviews  
Vol. 14 No. 7  
July - August 1983  
Analysis

8-10-54  
LL

Dolgolenko, Yu. V. Stability and auto-oscillations of a class of relay systems of automatic discontinuous regulation. Akad. Nauk SSSR. Inzhenernyi Sbornik 13, 161-176 (1957). (Russian)

The systems considered, are closed relay circuits whose only nonlinear element is a pulsed limiter whose output  $y(t)$  for input  $x(t)$  is given by  $y(t) = h \operatorname{sign} x(t)$  for  $nT < t < (n+\gamma)T$  and  $y(t) = 0$  for  $(n+\gamma)T < t < (n+1)T$  ( $n=0, 1, \dots$ ). Let  $u(t/T)$  be the steady-state output of the circuit opened at the limiter for the input  $x(t) = 1$  for  $2NT < t < (2N+1)T$ ,  $x(t) = -1$  for  $(2N+1)T < t < (2N+2)T$  ( $N=0, 1, \dots$ ). The author calls  $u(N)$  the characteristic of the open system and shows how it can be used to decide whether the regulator is unstable or generates stable auto-oscillations.

M. Golomb (Lafayette, Ind.).

USSR/Engineering - Automatic Control

*Dolgolenko, Yu. V.*

FD-1374

Card 1/1 : Pub. 41-1/18

Author : Dolgolenko, Yu. V.

Title : ~~SECRET~~  
The influence of insensitivity on the dynamics of an indirect-regulation relay system

Periodical : Izv. AN SSSR, Ctd. tekhn. nauk 3, 3-23, March 1954

Abstract : Presents theoretical investigation of the regulatory process after momentarily throwing off the load in a regulatory system consisting of a regulation object, which is an astatic inertia link, and an indirect-action regulator. Equations, graphs, four references.

Institution :

Submitted : April 19, 1954

Dr. Dolgovskiy, Yu. V. Steady regimes in relay systems of  
digital control. Trudy vuzovskogo radiofizicheskogo  
otdeleniya po teorii avtomaticheskogo regulirovaniya  
transaktsii of the Academy of Sciences of the USSR  
Department of Automatic Control, Vol. 1, pp. 1-10  
1964, Akad. Nauk SSSR, Moscow-Leningrad.  
Russian

The paper contains a detailed discussion of the steady  
state regimes of the form  $\dot{x} = A_1 x + B_1 u$ ,  $y = C_1 x$   
where  $A_1$  is a linear form in  $x$  and  $y$ . R. Bellman.

*DOLGOLENKO Yu. V.*

KATS, Arnold' d Moiseyevich [deceased]; ~~DOLGOLENKO, Yu. V.~~, redaktor; LUR'YE, A.I., redaktor; GOFMAN, Ye.K., redaktor izdatel'stva; PO'LSKAYA, R.G., tekhnicheskiiy redaktor; SYCHEVA, O.Y., tekhnicheskiiy redaktor

[Automatic control of the speed of internal combustion engines]  
Avtomaticheskoye regulirovaniye skorosti dvigatelei vnutrennego sgoraniya.  
Pod red. Yu.V. Dolgolenko i A.I. Lur'ye. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 302 p. (MIRA 10:1)  
(Gas and oil engines)

Name: DOEGOFENKO, Yuriy Vladimirovich

Dissertation: Continuously varying modes  
in relay systems for indirect control

Degree: Doc Tech Sci

Affiliation: [not indicated]

Defense Date, Place: 6 Feb 56, Council of Leningrad Poly-  
technical Inst imeni Kalinin

Certification Date: 7 Jul 56

Source: BNVO 5/57



SOV/112-59-3-5415

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3,  
pp 159-160 (USSR)

AUTHOR: ~~Dolgolenko, Yau. V.~~

TITLE: Periodic Conditions in a Relay-Type Control System Comprising a Net  
Delay Component (Periodicheskiye rezhimy v releynoy sisteme regulirovaniya,  
soderzhashchey zveno chistogo zapazdyvaniya)

PERIODICAL: Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t, 1957,  
Nr 12, pp 3-12

ABSTRACT: Conditions are determined for periodic movements in automatic-  
control relay systems with a delay. On the basis of accurate methods  
developed by A. I. Lur'ye for determining periodic movements of relay  
systems, a new equation is deduced. This equation describes the periods of a  
delayed relay system for natural-oscillation and forced-oscillation conditions  
in the case of a symmetrical relay without neutral zone. Local stability of  
periodic motions is explored. Bibliography: 3 items.

N.A.K.

Card 1/1

DOLGOLENKO, Yu. V. (Leningrad)

Approximate determination of partially sliding periodic processes  
in control relay systems. Avton. i telen. 18 no.1:3-26 Ja '57.  
(MIRA 10:3)

(Electric relays) (Servomechanisms)

8(0)

SOV/112-59-4-7476

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 145 (USSR)

AUTHOR: Dolgolenko, Yu. V.

TITLE: Accurate Determination of Partially-Slipping Periodic Modes in Relay-Type Control Systems

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1958, Nr 192, pp 171-200

ABSTRACT: The initial equations of a relay system of any order can be reduced to the canonical form by A. I. Lur'ye's method. Various types of periodic partially-slipping movements of a relay system are described, and the conditions for their existence are indicated. The case of a slipping-pausing periodic movement (that consists of alternating slipping and pausing) is analyzed in detail; the controlling signal of the relay element never exceeds the dead band. Equations for determining the slipping and pausing times during the period of self-oscillations are presented, as well as the conditions for the existence of slipping at the dead-band boundary. Forced oscillations are

Card 1/2

SOV/112-59-4-7476

Accurate Determination of Partially-Slipping Periodic Modes in Relay-Type . . . .

considered. The conditions for stability in the case of a slipping-pausing periodic movement are given for the case of simple nonzero roots and also for one zero root in the indicial equation of the linear part of the control system. The slipping-pausing conditions for a relay-type automatic-control system of the second order are calculated as an example; the range of existence and the stability of the above conditions are given. Bibliography: 9 items.

N.A.K.

Card 2/2



TSYPKIN, Ya.Z., doktor tekhn.nauk, otv.red. (Moskva); GAVRILOV, M.A., doktor tekhn.nauk, red.; MEGOLENKO, Yu.V., doktor tekhn.nauk, red. (Leningrad); KOTEL'NIKOV, V.A., kand.tekhn.nauk, red.; LEHNER, A.Ya., doktor tekhn.nauk, red.; KHROSANOV, I.S., red. (Moskva); POSPELOV, G.S., doktor tekhn.nauk, red.; FEL'DBAUM, A.A., doktor tekhn.nauk, red.; KHRAMOV, A.V., kand.tekhn.nauk, red.; PODGOYETSKIY, M.L., red.isd-va; MARKOVICH, S.G., tekhn.red.

[Theory and application of discrete automatic control systems] Teoriya i primeneniye diskretnykh avtomaticheskikh sistem; trudy konferentsii. Moskva, Izd-vo Akad.nauk SSSR, 1960. 572 p.

(MIRA 13:7)

1. Konferentsiya po voprosam teorii i primeneniya diskretnykh avtomaticheskikh sistem. Moscow, 1958.  
(Automatic control)

DOLGOLENKO, Yu.V.

Natural vibrations of optimising control systems having a relay  
and a step-by-step switch in the control device of the servomotor.  
Trudy LFI no.210:259-281 '60. (MIRA 13:11)  
(Automatic control) (Vibration)

16-4000

S/194/61/000/009/022/053  
D209/D302

AUTHOR: Dolgolenko, Yu.V.

TITLE: Self-oscillations of extremum regulation systems with a relay and a step-by-step commutator in the servo-motor control circuit

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 9, 1961, 33, abstract 9 V274 (Tr. Leningr. politekhn. in-ta, 1960, no. 210, 259-281)

TEXT: A system of extremum regulation with a relay and a step-by-step commutator in the control circuit of a servomechanism is examined. The search for the extremum is carried out by scanning at a constant speed of variation of the input of the object. A signal that the system is passing through the extremum, is worked out by the extremum indicating transmitters of two types. The transmitter of the first type ~~РДЭ~~-1 (DPE-1) produces a signal proportional to the time derivative of the output of the control ob-

✓  
B

Card 1/2



S/194/61/000/009/022/053  
D209/D302

Self-oscillations...

ject. The transmitter of the other type ДП-22 (DP-22) memorizes the extremum of the object's output and produces a signal proportional to the deviation of the object's output from the extremum. The operation of the system is then self-oscillation about the extremum. Determination of conditions for the existence of self-oscillatory ranges and conditions of their local stability in the system with transmitters DPE-1 and DPE-2 is carried out. An example of determination of self-oscillations in a system with DPE-1 is given and a comparison with the results obtained by the method of harmonic balance is carried out. 4 references. [Abstracter's note: Complete translation]

✓  
B

Card 2/2

PETRENKO, Grigoriy Grigor'yevich; DOLGOLIVICH, N.G., retsenzent;  
FEYGIN, L.M., otv. red.; MIRONOVA, T.A., red.izd-va;  
LAVRENT'YEVA, L.G., tekhn. red.

[Crushing machinery operator] Mashinist drobil'noi ustanovki.  
Moskva, Izd-vo "Nedra," 1964. 140 p. (MIRA 17:3)

DOLGONOS, B.M.

Some organizational questions in the work of airborne medical care.  
Zdravookhranenie 4 no. 2:13-16 My-Ap '61. (MIRA 14:4)

1. Iz kafedry organizatsii zdavookhraneniya (zav. dotsent M.Ya. Gekhtman) Kishinevskogo meditsinskogo instituta i Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach T.V. Moshnyaga).  
(MOLDAVIA--AERONAUTICS IN MEDICINE)

DOLOGOS, B.M.; SAUSHKIN, M.A.

Ophthalmological aid in the work of the Republic Station of  
Medical Aviation in the Moldavian S.S.R. Vest.of. no.4:79-  
80 '62. (MIRA 15:11)

1. Kafedra organizatsii zdravookhraneniya (zav. - dotsent M.Ya.  
Gekhtman) i kafedra glaznykh bolezney (zav. - dotsent A.N.  
Dobromyslov) Kishinevskogo meditsinskogo instituta i Respubli-  
kanskaya klinicheskaya bol'nitsa.

(MOLDAVIA—OPHTHALMOLOGY) (MOLDAVIA—AVIATION MEDICINE)

MOSHNYAGA, T.V.; DOLGONOS, B.M.

Urgent problems in reorganizing the work of the Republic station of  
the airborne public health service of the Moldavian S.S.R.  
Zdravookhranenie 5 no:1:6-8 Ja-F '62. (MIRA 15:4)

1. Iz kafedry organizatsii zdavookhraneniya (zav. dotsent M.Ya.  
Gekhtman) Kishinevskogo, meditsinskogo instituta i Respublikanskoy  
klinicheskoy bol'nitsy (glavnyy vrach T.V.Moshnyaga).  
(MOLDAVIA---AERONAUTICS IN PUBLIC HEALTH)

DOLGUNOS, B.M.

Consultation service for patients under doctor's care according to data of the Republic Sanitary Aviation station of the Moldavian SSR. Zdravookhraneniye 6 no.1:16-20 J-F'63.  
(MIRA 16:8)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - dotsent M.Ya. Gekhtman) i kafedry gosspital'noy terapii (zav. - prof. M.A.Polyukov) Kishinevskogo meditsinskogo instituta i Moldavskoy respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach T.V.Moshnyaga).  
(MOLDAVIA---MEDICAL CARE)

KUCHEROVA, K.V.; DOLGONOS, B.M.

Method of planned consultations in combined rural districts.  
Zdravookhranenie 6 no.5:10-12 S-0'63 (MIRA 16:12)

1. Iz respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach  
T.V. Mosknyaga), Moldavskaya SSR,

AL'TOVSKIY, Mikhail Yevgen'yevich; BRODSKIY, A.A.. Prinizhali uchastiye:  
DOBRYNIN, P.A.; SLAVYANOVA, L.V., CHURINOV, M.V.. CHAPOVSKIY,  
Ye.G., red.; SLOV'YEVA, kartograf, red.kart; DOLGONOS, L.G.,  
tekhn.red.kart; GRISHINA, T.B., red.isd-va; BYKOVA, V.V., tekhn.  
red.

[Methodological directions for the compilation of hydrogeological  
maps at the scales of 1:1,000,000 - 1:500,000 and 1:200,000 -  
1:1,100,000] Metodicheskie ukazaniya po sostavleniyu gidrogeolo-  
gicheskikh kart, mashtabov 1:1,000,000 - 1:500,000 i 1:200,000 -  
1,100,000. Moskva, Gos.nauchno-tekhn.isd-vo lit-ry po geol. i  
okhrane neдр, 1960. 49 p., maps. (MIRA 13:6)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy Institut gidro-  
geologii i inzhenernoy geologii.  
(Water, Underground--Maps)



DOLGONOS, M.A.

USSR/ Engineering - Mechanical classifiers

Card 1/1 Pub. 104 - 11/12

Authors : Dolgonos, M. A.

Title : A new type of installation for sifting and cleaning crushed refractory clay incorporating a ventilating fan

Periodical : Stek. i ker. 1, 30 - 31, Jan 1955

Abstract : A description is presented of a new type of installation for sifting and cleaning crushed refractory clay. The installation incorporates a ventilating fan which removes foreign particles from the refractory during sifting. Drawings.

Institution: .....

Submitted: .....

DOLGONOSOV, M.B. mayor meditsinskoy sluzhby

Use of a furacilin-tannin colloidal preparation in the prevention and treatment of skin diseases. Voen. med. zhur. no.4:80-81 Ap '59

(SKIN DISEASES, therapy, (MIRA 12:8)

nitrofurazone-tannin prep. (Rus))

(NITROFURAZONE, ther. use,

skin dis., with tannin (Rus))

(TANNIN, ther. use,

skin dis., with nitrofurazone (Rus))



*Dolgonosova, M.S.*

25-8-36/42

AUTHOR: Dolgonosova, M.S., Candidate of Historical Sciences

TITLE: Enigmatic Characters (Zagadochnaya pis'mennost')

PERIODICAL: Nauka i Zhizn', 1957, # 8, pp.57-59 (USSR)

ABSTRACT: Rapa-Nui, an island in the Pacific, is the only one of the many small islands in that region that is in possession of signs dating back to an old civilization with a high standard of culture. In 1860, plates with enigmatic characters were found on this island, which since then have attracted the attention of scientists and explorers of the various nations, such as the Englishman Macmillan Brown, the Norwegian Thor Heyerdahl, and the Russian Miklukho-Maklay. First attempts to translate these plates were made by the French missionary Tepano Zhossan, who with the help of a native compiled a catalogue of symbols. The American Thompson and the English scientist Rutledge (Rautledzh) made similar attempts, but the results proved to be unsatisfactory.

In May 1956, at the All-Union Conference on Ethnography, the Russian scientists, N.A. Butinov and Yu.V. Knorozov, projected their theory on these enigmatic characters. They

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Enigmatic Characters

25-8-36/42

claimed that one symbol did not give the meaning of various words (as was interpreted by their predecessors) but on the contrary, more than one symbol was used to form one word. The Russian scientist, B.G. Kudryavtsev, discovered that exactly the same text was written on three different plates, and later, Butinov and Knorozov again found the same text on two plates. This enabled the scientists to form word units and groups so that the meaning of the various images could be interpreted. That does not mean, however, that the plates could be read. In the texts of these plates, adjoining groups of characters are to be found, in which the first character is the same in all groups. Following one another, these groups form a single row. To give an example: there is a list of names. A peculiar alternation of the characters in these groups, where the second character becomes the first one in the following lower line, proves that this is not only a list of names but a genealogy arising from the descendent to the ancestor. The name of the father is passed on by the second character in each group.

The catalogue compiled by Zhossan was consulted and at times it proved useful; furthermore a relation of some words to the language used in Tahiti was revealed. The meaning

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Enigmatic Characters

25-8-36/42

of the symbols on the plates found on Rapa-Nui, as developed by these two Russian scientists, has been accepted by fellow international ethnologists and it is hoped that a complete solution of these enigmatic characters can be found in further research.

AVAILABLE: Library of Congress

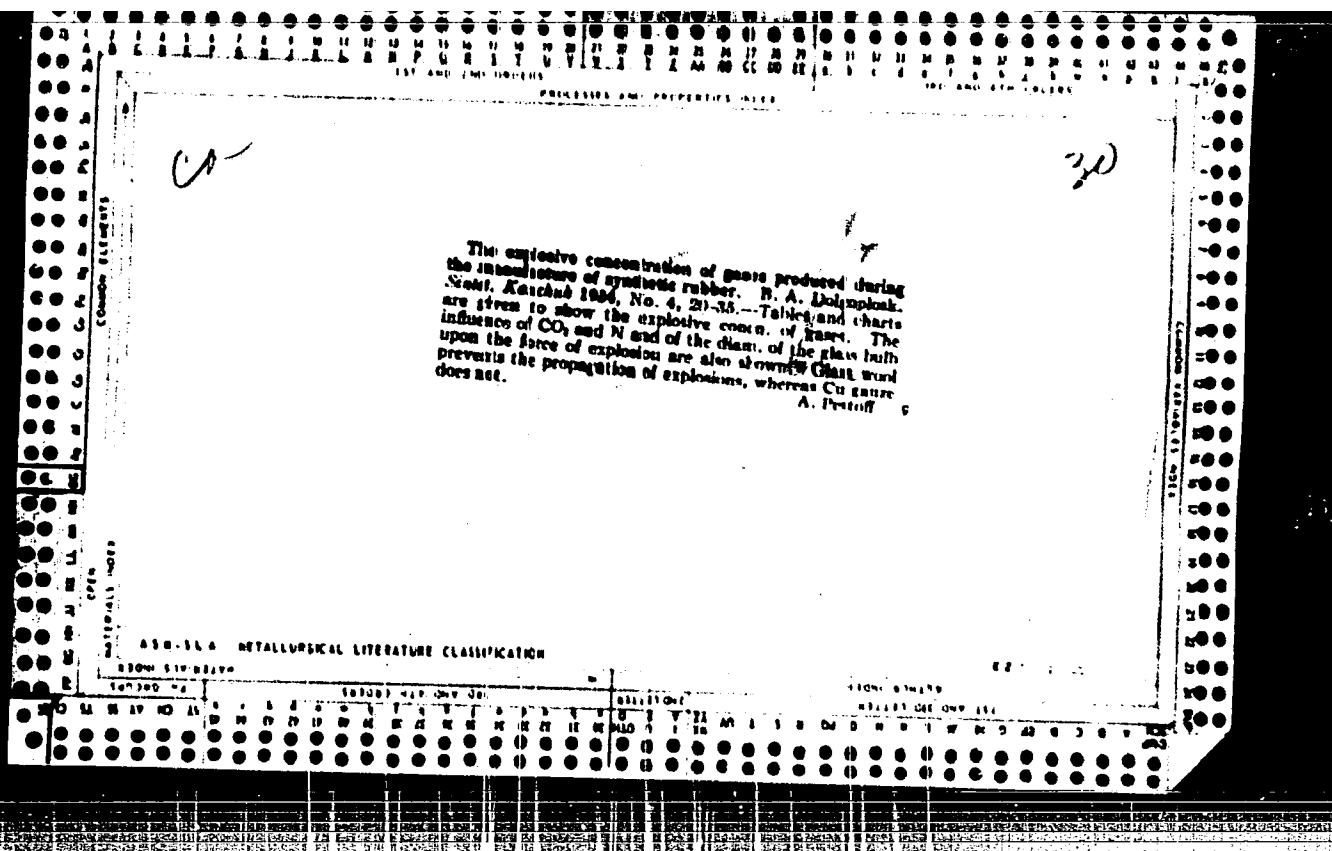
Card 3/3

*DOLGONOVSKIY, N.*

KISELEV, A. (Zaporosh'ye); ABRAMOV, P. (Zaporosh'ye); BAYEV, G. (Zaporosh'ye);  
AGARKOV, V. (Zaporosh'ye); GOSTRYI, I. (Zaporosh'ye); MAYBORODA, I.  
(Zaporosh'ye); RUBANIK, I. (Zaporosh'ye); SMERDOV, A. (Zaporosh'ye);  
KHLIVENKO, V. (Zaporosh'ye); DOLGONOVSKIY, N. (Zaporosh'ye).

We support the patriotic initiative of the Muscovites; a letter from  
active members of mass defense work in Zaporosh'ye. Voen.snan.32  
no.12:17 D '56. (MLRA 10:2)

1. Predsedatel' Dneprovskogo alyuminiyevogo zavodskogo komiteta Dobrovol'nogo obshchestva sdeystviya armii, aviatsii i flotu (for Kiselev). 2. Chlen komiteta (for Abramov, Bayev). 3. Obshchestvennyye instruktory (for Agarkov, Gostryy, Mayboroda, Rubanik). 4. Aktivisty obronno-massovoy raboty (for Smerdov, Khlivenko). 5. Sekretar' Dneprovskogo zavodskogo komiteta Leninskogo kommunisticheskogo soyuza molodezhi Ukrainy (for Dolgonovskiy).  
(Military education)





1

*cx*

PROCESS AND PROPERTIES INDEX

**Determination of diisobutylene by the hydrogenation method.**  
*Refr. Hydrogenation. Gmel. Kauchk 1935, No. 5, 11-18.*  
 The detn. was made in a special app. by passing the gas contg. butadiene dild. with H<sub>2</sub> (27-30 cc. of gas to 90-100 cc. of mixt.) over a catalyst and observing the change in vol. The catalysts used were 30% Ni or 30% Pd pptd. on asbestos, preferably the latter. The time of hydrogenation over Ni or Pd in the cold was 4-7 min., for the total analysis 12-15 min. In the presence of 0.001% Cu the catalyst became poisoned unless it was heated. Butadiene was detd. by this method in different products obtained in the manuf. of synthetic rubber from alc. and great results were obtained. A. Pestoff.

AND SEE METALLURGICAL LITERATURE CLASSIFICATION

UP

2

PROPERTIES AND PROPERTIES INDEX

Molecular volume of butadiene at different pressures.  
 B. A. Zhigzhigishvili and Kurneev. *Soviet. Acad. Sci.* 1966.  
 No. 4, 15-18. A special app. was devised to measure the  
 vol. of butadiene (1). The degree of the deviation of mol.  
 vol. from the ideal gas, depended upon its partial pressure.  
 The mol. vol. decreased with increase of partial pressure.  
 Within the limits 20.9 mm. to 1376 mm. at 15° and 80.1  
 mm. to 778.3 mm. at 0°, these deviations are in direct  
 ratio with the partial pressure. The mol. vol. of 1 at 0°  
 and 760 mm. was 21.65 l. and at 15° and 760 mm. was  
 21.80 l. The mol. vol. should be calc. by the formula:  
 $v = 22.41 (1 - \lambda(P - 100))$ , where  $P$  is a partial pressure  
 and  $\lambda = 0.000044$  at 15° and 0.00005 at 0°. Three  
 references. A. Prestoll

ASB-55-A METALLURGICAL LITERATURE CLASSIFICATION

ARBUZOV, B.A., redaktor; DOBROPOLOSK, B.A., redaktor; KARGIN, V.A., redaktor;  
MEDVEDEV, S.S., otvetstvennyy redaktor; RAFIKOV, S.R., redaktor;  
ROGOVIN, Z.A., redaktor; VASKOVICH, D.N., redaktor izdatel'stva;  
SIMKINA, Ye.N., tekhnicheskii redaktor

[Proceedings of the third conference on high molecular weight  
compounds; polymerization and polycondensation] Trudy tret'ei  
konferentsii po vysokomolekulyarnym soedineniyam; polimerizatsiya  
i polikondensatsiya. Moskva, Izd-vo Akademii nauk SSSR, 1948.  
177 p. (MIRA 10:1)

1. Konferentsiya po vysokomolekulyarnym soedineniyam. 3d, Moscow,  
1945.  
(Polymerization) (Condensation products (Chemistry))

~~SECRET~~ B. A.

USSR/Chemistry - Reaction processes

Card 1/1 Pub. 151 - 14/37

Authors : Dolgoplosk, B. A.; Yerasalimskiy, B. L.; Krol', V. A.; and Romanov, L. M.

Title : Reaction of free radical in solutions. Part 2.- Relative activity of free radicals during reaction with isopropyl benzene, cyclohexene and polymers

Periodical : Zhur. ob. khim. 24/10, 1775-1782, Oct 1954

Abstract : Data regarding the relative activity of numerous free radicals, which are distinguished by their entirely different reactivity characteristics, were obtained by studying the products of thermal decomposition of diazoamino compounds in solution. A series of free radical activities was established in the reaction of separation of the H-atom from various compounds. The reason why allyl, crotyl, benzyl and tertiary-butyl free radicals do not react with isopropyl benzene, is discussed. The effect of low-active free radicals (allyl, benzyl and anil) on the structure-formation of natural rubber, is explained. Twelve references: 4-USA; 5-German; 2-USSR and 1-English (1895-1953). Tables.

Institution : Acad. of Sc. USSR, All-Union Scientific Research Institute of Synthetic Rubber and Institute of High Molecular Compounds

Submitted : March 2, 1954

DOLGOPLOSK, B. A.

USSR/Chemistry - Thermal decomposition

Card : 1/1

Authors : Dolgoplosk, B. A., Ugryumov, P. G., and Krol', V. A.

Title : Reactions of free radicals in solutions. Thermal stability of amino-azo-compounds of the aliphatic and aromatic series.

Periodical : Dokl. AN SSSR, 96, Ed. 4, 757 - 760, June 1954

Abstract : Data are presented on the thermal decomposition of various amino-azo-compounds (triazones) in hydrocarbon solutions. The kinetics of thermal decomposition was determined by the rate of gas liberation during the reaction process. During the decomposition of aromatic compounds, the liberated gas contains only nitrogen. Eight references; 1-English 1887, 2-German since 1882 and 1907. Tables, graphs.

Institution : Scientific-Research Institute of Synthetic Rubber

Presented by: Academician A. A. Balandin, March 8, 1954

*DOUG O'LOSK, B.A.*

Free-radical reactions in solution. Polyisobutylene destruction by free-radical action. I. M. Romanov, B. A. Dolgonos, and B. L. Eysenkrantz. Doklady Akad. Nauk S.S.S.R. 101, 203-204 (1955); cf. C.A. 40, 1233k. — The reaction of C—C bond rupture was studied with the free-radical interaction with polyisobutylene as an example. For the source of free radicals were used methyl-, ethyl-, propyl-, isopropyl-, and tert-butyltriazene and the dinitrile of azobutyric acid, which decompose by heating with the formation of the corresponding free radicals. During the reaction the starting viscosity of polyisobutylene solution was decreased by free radicals in the following order: Me > Et > Pr > tert-Bu. W. M. Sternberg

*M. A. POUTZ*

*Scopies*

*PM*

*Inst. Higher Molecular Compds, AS USSR.*

*Dobroploski, B.A.*

*OK* ✓ The inhibition mechanism of radical chain reactions.  
B. A. Dobroploski, B. S. Korotkin, G. A. Pavlovskiy, G. J.  
Bren, *ibid.*, 1985, 11, 1, 1-10. *Voprosy Khim.*  
Kinetiki, Katalizi i Reaktivnoy Spetsializatsii, Akad. Nauk  
S.S.S.R., 1985, 11, 1-21. — A review of recent Russian and  
foreign research. W. M. Sternberg.

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*585*

DOLGOPLOSK, B.A.

608

✓ Reactivity of free radicals and the role of the polar factor.  
B. A. Dolgoplosk, B. A. Kostin, V. A. Mironov, and I. M. Kozlov. *Dokl. Akad. Nauk SSSR*, 1981, 253, 100-102. *Chem. Abstr.* 1981, 101:100-102. The yields of RH and RR in radical reactions of  $\text{H}_2\text{N}:\text{NNHPh}$  in iso-Eth or cyclohexane indicate the order of descending radical reactivity as  $\text{Me}$ ,  $\text{Pr}$ ,  $\text{CH}_3$ ,  $\text{Et}$ ,  $\text{Pr}$ ,  $\text{Bu}$ ,  $\text{Me}_2\text{CN}$ ,  $\text{iso-Pr}$ ,  $\text{sec-Bu}$ ,  $\text{allyl}$ ,  $\text{MeCH}_2$ ,  $\text{CHCH}_3$ ,  $\text{PhCH}_2$ , and  $\text{Me}_2\text{C}$ . A similar series is obtained in the yield of final products in reactions of these radicals with benzene polymers of rubber,  $\text{P}_2$  in thermal treatment of rubber in vulcanization. The following yields of tridimensional vulcanizate were obtained with: dibenzyltriazene 70-80%; diazaminobenzene 65-84%; methyphenyltriazene 13-41%; isopropylbenzene hydroperoxide 18-28%;  $\text{Br}_2\text{O}_2$  11-40%; Benzyl phenyltriazene, allylphenyltriazene, and butylphenyltriazene gave 0%. G. M. Kosolapoff

*[Handwritten signature]*



DOLGOPLOSK, B.A.

USSR/Organic Chemistry - Theoretical and General Questions on Organic Chemistry,  
E-1

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61379

Author: Tinyakova, Ye. I., Dolgoplosk, B. A., Tikhomolova, M. P.

Institution: None

Title: Reactions of Free Radicals in Solutions. III. Study of the Re-  
actions of Free Radicals with Sulfur

Original

Periodical: Zh. obshch. khimii, 1955, 25, No 7, 1387-1394

Abstract: A study of the reactions of methyl, ethyl, isopropyl and allyl free radicals with S and polysulfides. As a source of free radicals use was made of alkyl phenyltriazenes and azobenzene (mechanism of reaction, see communication II, Referat Zhur - Khimiya, 1955, 40009). As solvent was chosen isopropylbenzene (I) in order to evaluate the competing reactions of free radicals with S and with the solvent. A solution of 3.2 mol % triazene and S (6-8 mol per 1 mol triazene) in I was heated at 112° until evolution of gas ceased. It is shown

Card 1/3

USSR/Organic Chemistry - Theoretical and General Questions on Organic Chemistry,  
E-1

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61379

Abstract: that free radicals are almost completely taken up by S with the formation of alkyl polysulfides which are the primary products of the reaction and do not depend on the presence of by-products of the reaction, namely amines, in the reaction medium. The above-stated radicals differ greatly by their activity in the reaction of removal of H from I and differ but little in the reaction with S due to the lower energy of activation of this reaction. On reaction of allyl radical with S are formed diallylpolysulfides with a low yield which is explained by the instability of these products. On interaction of azobenzyl [sic] with S (1:13.7)  $H_2S$  is formed with a yield of 81-87% and benzaldazine (II), yield 51%. Formation of  $H_2S$  and II is the result of oxidation of azabenzyl by S. The author assumes that such reactions of dehydrogenation are also possible in rubbers containing diallyl groupings. It is shown that on reaction of methyl radical with S in the presence of mercaptans (or  $H_2S$ ) there takes place removal of hydrogen from mercaptan (or  $H_2S$ ) with formation of hydrocarbons and the radicals RS (or SH). Studied is the reaction of methyl radical with

Card 2/3

USSR/Organic Chemistry - Theoretical and General Questions on Organic Chemistry,  
E-1

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61379

Abstract: polysulfides (dilauryltetrasulfide and dibenzyltetrasulfide), which confirmed the fact that the polysulfides formed in the course of the reaction react with free radicals the same as elemental S. It is shown on the example of dimethylpolysulfide using S<sup>35</sup> that under these conditions are formed molecules of dimethylpolysulfide containing on the average 6 atoms of sulfur.

Card 3/3

✓ Vulcanization of rubber plants. B. A. Dergolev, E. I.  
Tshivkova, V. P. Reznik, I. I. Zakharenko, and A. S.  
Kiselevskiy. U.S.S.R. 101,729, Oct. 28, 1950. Latex  
is used as a vulcanization accelerator for butadiene-styrene  
rubber plants. M. Hesch

PM nx

*Dolgoplosk, B. A.*

The role of hydrogen sulfide in the process of vulcanization. B. I. Tihonova, E. K. Khramkova, and B. A. Dolgoplosk (Inst. High Polymer, Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otd. Khim. Nauk* 1958, 1152-4. - Decipher. of H<sub>2</sub>S in terminal olefins leads only to addn. products without formation of H<sub>2</sub>S or S. The results are analogous to the reaction of S with H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>OH in soln. in terminal olefins. H<sub>2</sub>S was made to react in sealed ampals under N with 1-pentene, isoprene, PhCH=CH<sub>2</sub>, and H<sub>2</sub>C=CH<sub>2</sub>. The following products were characterized: Am.S, b<sub>760</sub> 36-7°, d<sub>4</sub><sup>20</sup> 0.8446, n<sub>D</sub><sup>20</sup> 1.4575; Am.S, b<sub>760</sub> 75°, d<sub>4</sub><sup>20</sup> 0.8401, n<sub>D</sub><sup>20</sup> 1.4575; Am.S, b<sub>760</sub> 110-7°, d<sub>4</sub><sup>20</sup> 0.8401, n<sub>D</sub><sup>20</sup> 1.5280. Reaction of S, H<sub>2</sub>C=CH-CH<sub>2</sub>NH<sub>2</sub>, and 1-pentene gave 1.55% Am.S and 90% Am.S after 10 hrs. at 150°.

G. M. Koshlakov

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*Wall*

1951. Mode of hydrogen chloride in the process  
reactions for E. I. Uchiyama, E. K. Ingers  
NOVA, and J. A. Hughes, Bull. Acad. Sci.  
S.S.R., Div. Chem. Sci., 1951, 1179-81; Chem.  
Abstr., 1951, 18487, C. R. Acad. Sci., 1951, abn.  
1951. No. 12 (English translation not appears. 35724)

On the reduction systems for initiation of radical processes. Reversible systems with participation of salts of metals with variable valence. B. A. Bol'shakov, B. A. Bol'shakov, and E. I. Lyubskaya. *High Potentials*, 1957, 1, 455-461, 1461-1462, 1463-1464, 1465-1466, 1467-1468, 1469-1470. The kinetic curves for reactions of dihydroxyacetic acid (I) and ascorbic acid (II) with  $\text{PhCH}_2\text{COOH}$  have shown that reactions in ether  $\text{Me}_2\text{O}$ , under N<sub>2</sub>, the reaction rate is considerably increased by addition of salts of metals with variable valence, Mohr salt and  $\text{CuSO}_4$ , being the most efficiently, with efficient acceleration being noted at  $-13^\circ$  or  $-11^\circ$ ; at such temps. essentially no reaction takes place without such addenda. The possible modes of radical reactions in the system are discussed. It was shown that such systems can be used to initiate the polymerization of butadiene, the system with (II) being the more effective of the two. Effective polymerization occurs at  $-15^\circ$  with 0.02% Mohr salt; copolymerization of butadiene with  $\text{PhCH}_2\text{COOH}$  in benzene is also induced well at pH 3-11, with min. rate at pH 7, using 1% in the system, with  $\text{Cu}$  salts as catalysts being more effective in basic medium. 11. Initiation of polymerization in aprotic solutions under influence of reversible systems at temperatures below zero and a study of microstructure of polymer chains. *Ibid.* 1957, 6:2-9. Polymerizations of butadiene are initiated by systems of the oxidation-reduction type with dihydroxyacetic acid,  $\text{PhCH}_2\text{COOH}$  or dihydroxyphenyl-hyperacid of *p*-methylstyrylphenylacetylene hydroperoxide, and Mohr salt components. The add component was 0.2% of the substrate, hydroperoxide 0.5%, and Mohr salt 0.2-15 mole %. The most effective hydroperoxide was that of *p*-methylstyrylphenylacetylene, although

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*Butadiene, C. 14.*  
 all these gave polymers and copolymers of butadiene with  
 $\text{PhCH}_2\text{Cl}$ . The polymers of butadiene and  $\text{PhCH}_2\text{Cl}$   
 obtained with this system at the low temp. indicated glycerol  
 was added to the  $\text{aq. mercuric}$  as an antifreeze) were  
 examined structurally by infrared spectra. Butadiene with  
 83% trans-1,4 and 17% 1,2 links was obtained at  $-85^\circ$ ,  
 with elevation of temp. the proportion of cis-1,4 links in-  
 creased steadily. The polymers at all temps. contained  
 7-8% 1,2 links, 4-6% 3,4 links, and mainly trans-1,4  
 links (at  $80^\circ$  the product contained 8% cis and 60% trans  
 links). With lowering of polymerization temp. the poly-  
 mer showed increased tendency to crystallize even in the un-  
 substituted state.

G. J. Knebel

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*Dolgoplosk, B.A.*

USSR/Chemistry of High Molecular Substances.

F

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 27064.

Author : Bresler, S.Ye., Dolgoplosk, B.A.,  
Krol', V.A., Frenkel', S.Ya.

Inst :

Title : Reactions of Free Radicals in Solutions. V.  
Destruction of Polymer Molecules under Influence  
of Free Radicals.

Orig Pub: Zh. obshch. khimii, 1956, 26, No. 8, 2201 -  
2209.

Abstract: The reactions of free radicals (forming in the  
result of disseciation of alkylpenyltriazones  
and of dinitryl of aziisebutyric acid) with  
natural rubber, synthetic polyisoprene and di-  
vinyl polymer were studied in a wide range of  
concentrations. The reactions of these polymers

Card 1/3

Role of oxidation-reduction systems in the process of  
vulcanization of rubber. B. A. Dolgoplos, E. I. Tshukova, R. K. Khramov,  
V. N. Kozlov, and T. O. Zhurav.

1952. Zhur. Obshchei Khim. 26, 1171-85 (1950); cf. Vul-  
kanizatsiya Kauts. 1954, 31. The reaction of trichloro-  
peroxide of ethene with S<sub>2</sub> produces vulcanization of rubber  
without formation of free S. The mechanism of vulcaniza-  
tion suggested by Peartrey (C.A. 13, 1189) is refuted, with  
the introduction of free radical reaction concepts. A reaction  
with many vulcanization accelerators, forming considerably  
H<sub>2</sub>S. The reactions with PhI(HN)Ph, (PhI(HN))<sub>2</sub>, cyclohexa-  
ene, diethylphthalimide, glycerol, ethylene glycol, glucose,  
polyethylenes, polyvinylamine, ethylenediamine, and  
tetraethylenediamine were studied. In general, hydroxy-  
carbonyl groups, which can reduce S<sub>2</sub>, act as rub-  
ber accelerators. The decompos. of H<sub>2</sub>S can cause vul-  
canization of rubber. The reaction of accelerators with S  
was performed in anhydrous xylene or xylene-pyridine at  
50-160°, with H<sub>2</sub>S evolution being followed analytically.  
Argentometric detn. of H<sub>2</sub>S gives results which are con-  
siderably higher than those given by volumetry. Cf. C.A.  
-59, 1810c.

G. M. Kozlovskii

4. Reaction of heat radicals in solutions. VI. Mechanism of decomposition of allylaryltriazines in the presence of water and acids. V. V. Andakushkin, B. A. Dolgoplos, and I. I. Bogdanov. *Khim. Oksid. (USSR)* 26, 1072-80 (1969); *Chem. Abstr.* 63: 13310c; 61: 6345. The kinetics of the decomposition of  $2(RN_2)N$  in aq.  $H_2O$  and aq.  $HCl$  were studied. Acids of  $H_2O$  to the anhyd. solvents results in a steady increase of the rate of decomposition (kinetic curves at 20° are shown). In dry solvents no decomposition takes place at 20° or even 40°. Addn. of  $(C_6H_5)_3P$  or  $H_2SO_4$  as a catalyst accelerates the decompn. by 10-15%. The decompn. is most rapid at pH 1, while in very alk. soln. (pH above 10), the triazines decomposed only very slowly. During the decompn. of the Me derivative in  $H_2O$  or in neutral solutions the gaseous product was almost pure  $N_2$  amounting to 75% of the N content of the triazine, with very small amts. of  $C_2H_4$ ; among the liquid products  $MeOH$  and  $H_2O$  were identified; no  $PhOH$ , aliphatic alcohols, or aromatic hydrocarbons were found. In the decompn. of the Bu derivative the gases contained  $N_2$ , butane, and butene, the latter predominating over the said hydrocarbons;  $MeOH$  and  $PhOH$  were found in the liquid products. Decompn. of the Me deriv. in aq.  $HCl$  always gave larger vols. of gases than were obtained in neutral medium; in 2-2.5N  $HCl$  the total gas vol. exceeded the theoretical (calcd. on N expected from the triazine) by some 33-43%, owing to the presence of  $MeCl$ , with a decreased yield of  $MeOH$ . Org. acids accelerate the decompn. and  $H_2O$  esters of oleic and lauric acids the Me deriv. to yield Me esters of these acids. In the presence of  $S$  (thiophene and MeS), including the acid of  $MeOH$ , in the presence of  $PhOH$  or  $MeOH$ , the latter is a byproduct, again with a reduced yield of  $MeOH$ . Thus, the mechanism of decompn. of the triazines is probably the reaction such as that with  $HCl$ , which yields  $PhOH$  and  $RS-NOH$ ; the latter changes into  $S$  and forms a free radical  $R$  and  $OH$ .

ANDARUSHKIN, V. YA., DOLOBOV, A.

B. A., AND RADCHENKO, I. I.

which may correspond to R011 in any case with a  
substrate present

*Dolgoplosk, B.A.*  
USSR/Physical Chemistry - Kinetics, Combustion, Explosions,  
Topochemistry, Catalysis.

B-9

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 440

Author : B.A. Dolgoplosk, Ye.N. Kropocheva.

Inst :

Title : Oxidation-Reduction Systems for Initiating Radical Processes. III. Application of Reduction Reaction of Metal Oxide Salts by Hydrocarbons to Initiate Polymerization Process.

Orig Pub : Zh. obshch. khimii, 1956, 26, No 11, 2980-2984

Abstract : Naphthenate of  $\text{Fe}^{2+}$  is forming at the heating of  $\text{Fe}^{3+}$  naphthenate (I) solutions in a series of hydrocarbons (benzene, n-amylene, isoamylene, cyclohexene, pentadiene-1,4, -isoprene, isoprene dimer) at  $150^\circ$  and in absence of  $\text{O}_2$  in the system. Isoprene polymerizes at  $100^\circ$  in presence of I; the polymerization speed rises with the concentration increase of I, and the molecular weight of the polymers

Card 1/2

USSR/Physical Chemistry - Kinetics, Combustion, Explosions,  
Topochemistry, Catalysis.

B-9

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 440

drops; the content of 1-2 and 3-4 links in the polymer (5 to 6%) and the vitrification temperature ( $-66.4^{\circ}$ ) correspond to specimens obtained at the radical polymerization. The naphthenate of  $\text{Cr}^{3+}$  behaves similarly to I, but the polymerization speed is lower in its presence. Heating of a 2%-ual polyisoprene solution in benzene at  $150^{\circ}$  in presence of I results in polymer construction. The mechanism of formation of free radicals consists in tearing the  $\alpha$ -methylene H atom off from the hydrocarbon, reduction of  $\text{Fe}^{3+}$  to  $\text{Fe}^{2+}$  and liberation of the naphthenic acid.  
See part II in RZhKhim, 1957, 69062.

Card 2/2



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CIA-RDP86-00513R000410810014-2"



Complexes of Alkylolithium and D-Alkyl Sulfides. R.A. D. 1971  
V. A. Kropachay, and N. N. T. 1971

1971, which was found to be a complex of the type  $LiR_2 \cdot S$  with excess  $LiR_2$  in the form of  $LiR_2 \cdot S$ .



DOLGOPIASH, B. A., BELONOVSKAYA, G. P., and TINIAKOVA, E.Y.

"Low Temperature polymerization initiated by di-Enols and properties of the resulting polymers," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Polymer Research Inst.

B-3,084,395

DOIGOPILSK, B. A.

"Mechanism of emulsion polymerization," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 20 Jan-2 Feb 57, Moscow, Rubber Research Inst.

B-3,084,395