ZAKHARIN, A.O., doktor tekhnicheskikh nauk.

Rural electrification in the U.S.S.R. Priroda 45 no.2:56-63 F '56. (MLRA 9:5)

(Rural electrification)

ZAKHARIN, A.G.

VEYTS, V.I., redaktor; ZAKHARIN, A.G., doktor tekhnicheskikh nauk, redaktor; klimov, v.a., redaktor izdatel'stva; MAKUNI, Ye.V., tekhnicheskiy redaktor.

[Electric power for agriculture from district electric systems] Elektrosnabzhenie sel'skogo khoziaistva of raionnykh energeticheskikh sistem. Moskva, 1957. 100 p. (MLRA 10:5)

1. Akademiya nauk SSSR, Energeticheskiy institut. 2.Chlen-korrespondent Akademii nauk SSSR(for Veyts)
(Electricity in agriculture)
(Electic power distribution)

8(6) PHASE I BOOK EXPLOITATION SOV/1277

Veyts, Veniamin Isaakovich, Zakharin, Andrey Georgiyevich, Karaulov, Nikolay Aleksandrovich, and Pirkhavka, Petr Yakovlevich

Mestnyye energeticheskiye sistemy (Local Power Systems) Moscow, Izd-vo AN SSSR, 1958. 294 p. 3,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Energeticheskiy institut.

Resp. Ed.: Krzhizhanovskiy, G.M., Academician; Ed. of Publishing House: Bogoslovskiy, B.B.; Tech. Ed.: Astaf'yeva, G.A.

PURPOSE: The book is intended for engineers and planners working in the field of rural electrification.

COVERAGE: According to Academician G.M. Krzhyzhanovskiy, responsible editor of the book, the electrification of agriculture will proceed by connecting rural areas with the networks of interconnected power systems. However, the electrification of a number of agricultural regions must, for the near future, be oriented on a local scale. Studies conducted at the Energeticheskiy institut AN SSSR (Power Engineering Institute AS USSR) led to conclusions that the basic

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form of development of local power engineering must be the local power system, connecting rural and other local power stations for parallel operation in a common high-voltage network. Basic theoretical assumptions determining the selection of parameters of local power systems were outlined in a series of works conducted at the Power Engineering Institute. The present book generalizes the results of these works without, however, attempting to cover all the problems connected with the development of local power systems of various types. The authors thank Academician G.M. Krzhizhanovskiy for his help and Doctor of Technical Sciences I.A. Bułzko and Engineer A.A. Beschinskiy for reviewing the manuscript. V.N. Sakharov, junior scientific assistant, helped with certain sections of Chapter V and Engineer N.S. Kanakin wrote section 2 of Chapter VII. There are 80 references, all Soviet.

8(3)

SOV/112-59-4-6855

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 64 (USSR)

AUTHOR: Zakharin, A. G.

TITLE: Problems of Selecting the Scheme and Parameters for Rural Electric Supply

PERIODICAL: Sb. tekhn. inform. po sel'sk. elektrifik., 1958, Nr 8-9, pp 65-67

ABSTRACT: Bibliographic entry.

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ZAKHARIN, A.G.

8(6) PHASE I BOOK EXPLOITATION SOV/2322

Avramenko, P.D., V.I. Veyts, B.A. Gurevich, V.I. Denisov, A.G. Zakharin, N.A. Karaulov, I.S. Kolosov, N.N. Krachkovskiy, A.V. [illegible], [illegible] Lebedev, T.I. Leont'yeva, M.F. Manzal', A.S. Nekrasov, G.I. Rosslyevskiy, and B.I. Savorin

Osnovnyye voprosy planirovaniya yedinoy energeticheskoy sistemy SSSR (Basic Problems in Planning a Unified Power System for the USSR.) Moscow, Izd-vo AN SSSR, 1959. 174 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Energeticheskiy institut.

Eds.: G.M. Krzhizhanovskiy, Academician and V.I. Veyts, Corresponding Member, USSR Academy of Sciences; Tech. Ed.: S.G. Markovich.

PURPOSE: This book is intended for government planning circles, scientific research organizations and others interested in the electrification of the USSR.

COVERAGE: The book examines the principal problems of a unified power system for the USSR as a basis for a program of government planning in that field. It is the result of several years of study conducted mainly at the Power Engineering Institute of the Academy of Sciences, USSR, in cooperation with power engineering institutes of the individual Soviet Republics, universities and learned societies, and in close cooperation with the Gosplan, USSR. These studies are concerned with basic problems of a scientific nature and problems of technical policy for the prospective development of a unified electric power system in the USSR. The problems outlined are applicable when the planned system reaches an output of 1000 billion kwhr's which is scheduled for 1970. One of the results of the plan is that since it is possible to obtain higher installed capacities in a shorter time and at lower capital outlays by the construction of steam turbine electric power plants rather than hydraulic ones, the emphasis is now on building steam-turbine plants with a simultaneous slowdown in hydro-power developments, excepting the most economical ones or those which are the only or the main sources of power in a given region or are dictated by other needs, such as irrigation, river control, etc. Nuclear plants will play a steadily increasing role in the development of a unified power system. Several problems of a purely scientific and technical nature were prompted by the study of a unified system: problems of nuclear power stations, the application of high-speed electronic computers for automatic control, regulation and protection of the system, the increasing use of semiconductors, the use of various types of fuels, etc. These problems were presented in two earlier publications of the Academy of Sciences: Nauchnyye osnovy sozdaniya i razvitiya yedinoy energeticheskoy sistemy SSSR (Scientific Bases in the Creation and Development of a Unified Power System in the USSR; Conclusions of a [illegible] Conference, Moscow, 1957) and Razrabotka nauchnykh osnov razvitiya elektrifikatsii strany i ikh ob"yedineniya yedinuyu energeticheskuyu sistemy

AVRAMENKO, F.D.; VEYTS, V.I.; GUREVICH, B.A.; DENISOV, V.I.; ZAKHARIN, A.G.; KARAULOV, N.A.; KOLOSOV, I.S.; KRACHKOVSKIY, N.N.; KRITSKIY, S.N.; LEBEDEV, M.M.; LEONT'YEVA, T.K.; MEKKEL', M.F.; NEKRASOV, A.S.; ROSSIYEVSKIY, G.I.; SHVORIN, B.I.; KRZHIZHANOVSKIY, G.M., akademik, red.; MARKOVICH, S.G., tekhn.red.

[Principal problems in designing a unified power system in the U.S.S.R.] Osnovnye voprosy planirovaniia edinoi energeticheskoi sistemy SSSR. Pod red. G.M.Krzhizhanovskogo, V.I.Veitsa. Moskva, 1959. 174 p. (MIRA 12:6)

1. Akademiya nauk SSSR. Energeticheskiy institut. 2. Chlen-korrespondent Akademii nauk SSSR (for Veyts).
(Electric power)

Zakharin, A.G.

PHASE I BOOK EXPLOITATION SOV/3407

Akademiya nauk SSSR. Energeticheskiy institut im. G.M. Krzhizhanovskogo

Problemy energetiki; sbornik posvyashchayetsya akademiku G.M. Krzhizhanovskomu (Problems of Power Engineering; Collection of Articles Dedicated to Academician G.M. Krzhizhanovskiy) Moscow, 1959. 851 p. Errata slip inserted. 2,500 copies printed.

Eds. of Publishing House: R.D. Antrushin, P.V. Bubkov, P.I. Bubkov, and S.M. Muyzhes; Tech. Ed.: T.A. Prusakova; Editorial Board: A.V. Vinter, Academician (Deceased), V.I. Popkov (Resp. Ed.) Corresponding Member, Academy of Sciences USSR, V.I. Veyts, A.S. Predvoditelev, M.A. Styrikovich, N.V. Chukhanov, Z.B. Bogdanova, Candidate of Technical Sciences, B.K. Kozlov, Candidate of Technical Sciences, M.M. Lebedev, Candidate of Technical Sciences, and I.V. Brodukov.

PURPOSE: This collection of articles is intended as a tribute to the memory of Academician G.M. Krzhizhanovskiy.

COVERAGE: The collection contains sixty articles by former students and coworkers of the deceased Academician. The articles deal with problems of a wide range of subjects in the field of power engineering: problems of the regional development of electrical and thermal power engineering, power engineering technology, and the physics of combustion. No personalities are mentioned. References are given after most articles.

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SERGOVANTSEV, V.T., kand.tekhn.nauk; YURASOV, V.V., kand.tekhn.nauk; ALUKER, Sh.M., kand.tekhn.nauk; ANDRIANOV, V.N., doktor tekhn. nauk; ASTAF'IEV, N.N., kand.tekhn.nauk; BUDZKO, I.A., akademik; BYSTRITSKIY, D.N., kand.tekhn.nauk; VEYALIS, B.S., kand.tekhn. nauk; GIRSHBERG, V.V., inzh.; GORSHKOV, Ye.M., inzh.; GRI-CHEVSKIY, E.Ya., inzh.; ZAKHARIN, A.G., doktor tekhn.nauk; ZLATKOVSKIY, A.P., kand.tekhn.nauk; IOSIPYAN, S.G., inzh.; ITSKOVICH, A.M., dotsent; KAUFMAN, B.M., inzh.; KVITKO, M.N., inzh.; KORSHUNOV, A.P., inzh.; LEVIN, M.S., kand.tekhn.nauk; LOBANOV, V.N., dotsent; LITVINENKO, A.F., inzh.; MERKELOV, G.F., inzh.; PIRKHAVKA, P.Ya., kand.tekhn.nauk; PRONNIKOVA, M.I., kand.tekhn.nauk; SMIRNOV, B.V., kand.tekhn.nauk; FATYU-SHENKO, S.G., inzh.; KHOLMOV, V.V., inzh.; SHCHATS, Ye.L., kand.tekhn.nauk; EDIN, L.Ye., doktor tekhn.nauk; ENTIN, I.A., kand.tekhn.nauk; SILIN, V.S., red.; SMELYANSKIY, V.A., red.; BALLOD, A.I., tekhn.red.; SMIRNOVA, Ye.A., tekhn.red.

[Handbook pertaining to the production and distribution of electricity in agriculture] Spravochnik po proizvodstvu i raspredeleniiu elektricheskoi energii v sel'skom khoziaistve. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 900 p. (MIRA 13:2)

1.Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Budzko).
(Rural electrification)

ZAKHARIN, A.G.; KANAKIN, N.S.; KNIPPER, L.A.

Electric power supply schemes for districts with small load density. Obshch. energ. no.1:101-109 '59. (MIRA 13:2)
(Electric power distribution)

KHARIN, A.G., doktor tekhn.nauk; EBIN, L.Ye., doktor tekhn.nauk

Ways and means of increasing reliability of power supply service to rural consumers. Mekh. i elek.sots.sel'khoz. 17 no.4:35-40 '59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.

(Rural electrification)

NIKITIN, Boris Ivanovich; ZAKHARIN, A.G., doktor tekhn.nauk, otv.red.; IOFFE, D.Ya., red.izd-va; MAKUNI, Ye.V., tekhn.red.

[Hydroelectric power stations in a coordinated power system] Gidrostantsii v edinoi energeticheskoi sisteme. Moskva, Izd-vo Akad.nauk SSSR, 1960. 146 p. (MIRA 13:8)
(Hydroelectric power stations)

BARDIN, I.P., akademik, glavnyy red. [deceased]; VEYTS, V.I., glavnyy red.toma; VOZNESENSKIY, A.N., prof., red.toma; ZAKHARIN, A.G., doktor tekhn.nauk, red.toma; HUSAKOVSKIY, Yo.A., prof., red. toma; SHVORIN, B.I., kand.ekon.nauk, red.toma; ANTKUSHIN, B.D., inzh., red.izd-va; DOROKHINA, I.N., tekhn.red.

[Power engineering; proceedings of the Conference on the Development of the Productive Forces of Eastern Siberia] Energetika. Trudy Konferentsii po razvitiiu proizvoditel'nykh sil Vostochnoi Sibiri. Moskva, Izd-vo Akad.nauk SSSR, 1960. 415 p. (MIRA 13:10)

1. Konferentsiya po razvitiyu proizvoditel'nykh sil Vostochnoy Sibiri, 1958. 2. Chlen-korrespondent AN SSSR (for Veyts). 3. Energeticheskiy institut im. G.M.Krzhizhanovskogo AN SSSR (for Veyts, Shvorin). 4. "Gidroenergoproyekt" Ministerstva stroitel'stva elektrostantsiy (for Voznesenskiy).

(Siberia, Eastern--Electric power)

ZAKHARIN, A.G. (Moskva)

Complete electrification of the Soviet Union. Izv.AN SSSR.Otd. tekh.nauk.Energ.i avtom. no.3:3-10 My-Je '60. (MIRA 13:7)
(Electrification)

ZAKHARIN, A.G.; KANAKIN, N.S.

Choice of circuits for rural electric networkds. Obshch. energ. no.3:107-118 '60. (MIRA 14:3)
(Electric networks)

S/105/60/000/04/022/024
B007/B008

AUTHORS: Veyts, V. I., Popkov, V. I., Markovich, I. M., Zakharin, A. G., Tolstov, Yu. G., Nikitin, B. I., Karaulov, N. A., Teleshev, B. A., Gurevich, B. A., Lebedev, M. M., et al.

TITLE: On the 70th Birthday of N. N. Krachkovskiy

PERIODICAL: Elektrichestvo, 1960, Nr 4, p 93 (USSR)

TEXT: Nikolay Nikolayevich Krachkovskiy is one of the oldest Soviet power engineers. He started his activities in 1916 after finishing his studies at the elektromekhanicheskoye otdeleniye Petrogradskogo politekhnicheskogo instituta (Department of Electromechanics of the Petrograd Polytechnic Institute). From 1922 he worked at the planning and construction of electric networks in the Volkhovstroy, Dneprostroy, and Sredvolgostroy. He worked as an engineer in a leading position in the eastern regions of the USSR from 1942 to 1944. From 1944 to 1946 he was Director of the sektor sistem Leningradskogo otdeleniya Gidroenergoproyekta (Sector of Networks of the Leningrad Branch of the All-Union Trust for the Design and Planning of Hydroelectric Power Plants and Hydroelectric Developments). His scientific and teaching activity began in 1930 at the Politekhnikum Putey soobshcheniya (Polytechnic Institute of Railroads), at the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic

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On the 70th Birthday of N. N. Krachkovskiy

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Institute), and the Akademiya nauk SSSR (Academy of Sciences of the USSR). Since 1950 he was in a leading position at a Planning Institute, directing simultaneously research work at the Energeticheskiy institut AN SSSR (Institute of Power Engineering of the AS USSR). Since 1954 he has devoted himself entirely to scientific work. He graduated as a Candidate in 1948. In 1953 he was approved as a Senior Scientific Collaborator of the Institute of Power Engineering of the AS USSR in the field of "Electric Networks". He published over 50 papers in the periodicals "Elektrichestvo", "Elektricheskiye stantsii", "Izvestiya AN SSSR", et al., and made a number of inventions. There is 1 figure.

Card 2/2

ZAKHARIN, L.G., doktor tekhn. nauk, prof., otv. red.

[Problems of power engineering development] Voprosy razvitiia energetiki. Moskva, Nauka, 1964. 162 p.
(MIRA 17:11)

1. Moscow. Energeticheskiy institut.

ZAKHARIN, A.G., doktor tekhn. nauk, otv. red.

[Engineering and economic calculations in power engineering] Tekhniko-ekonomicheskie raschety v energetike. Moskva, Nauka, 1965. 150 p. (MIRA 18:2)

1. Moscow. Energeticheskiy institut im. G.M.Krzhizhanovskogo.

L 22592-66

ACC NR: AP6013001 SOURCE CODE: UR/0105/65/000/006/0091/0091

AUTHOR: Andrianov, V. N.; Budzko, I. A.; Venikov, V. A.; Demin, A. V.; Gorodskiy, D. A.; Grudinskiy, P. G.; Zakharin, A. G.; Krasnov, V. S.; Levin, M. S.; Listov, P. N.; Markovich, I. M.; Mol'nikov, N. A.; Nazarov, G. I.; Razevig, D. V.; Smirnov, B. V.; Stepanov, V. N.; Syromyatnikov, I. A.; Fedoseyev, A. M.; Yakobs, A. I.

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B

ORG: none

TITLE: Doctor of technical sciences, Professor L. Ye. Ebin (on the occasion of his 60th birthday

SOURCE: Elektrichestvo, no. 6, 1965, 91

TOPIC TAGS: scientific personnel, electric network, lightning

ABSTRACT: Professor Lev Yefimovich Ebin, 60, graduated in 1928 from the Kiyevskiy elektrotekhnicheskiy institut (Kiyev Electrotechnical Institute). Between 1929 and 1936, he worked in the Donenergo system and published various original papers on lightning protection and grounding devices. From 1936 EBIN works at the Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva (All-Union Scientific Research Institute for the Electrification of Agriculture) where he heads a laboratory. In 1937, he defended his candidate's dissertation and in 1951 his Ph. D. Thesis dealing with studies of the nonsymmetrical operating conditions of electrical networks and of stationary and nonstationary electro-thermal processes in the

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country. These works served for further development of the rural distribution networks. He showed considerable interest in the problem of the raising of scientific personnel. Ebin was decorated with "Znak pocheta" and various medals. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

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L 24077-66 EWT(l)/EWP(m)/EWT(m)/EWA(d)/T/EWA(h)/EWA(l) JWT/WW/JW/JWT/WE/JT

ACC NR: AP6011966 SOURCE CODE: UR/0281/65/000/002/0158/0159

AUTHOR: Alad'yev, I. T.; Aleksandrov, B. K.; Baun, V. A.; Golovina, Yu. S.; Gol'denberg, S. A.; Zhimerin, D. G.; Zaitsev, A. G.; Lyovlev, V. N.; Knorre, V. G.; Kozlov, G. I.; Leont'yeva, Z. I.; Markovich, I. N.; Meyerovich, E. A.; Nikhnovich, G.V.; Popkov, V. I.; Popov, V. A.; Predvoditelev, A. S.; Pyatnitskiy, L. N.; Styrikovich, M. A.; Tolstoy, Yu. G.; Tsukhanova, O. A.; Chukhanov, Z. F.; Sheyndlin, A. Ye.

ORG: none

TITLE: Lev Nikolayevich Khitrin

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 2, 1965, 158-159

TOPIC TAGS: academic personnel, physics personnel, combustion, carbon, high temperature research, plasma beam, fuel

ABSTRACT: Professor L. N. Khitrin, Corresponding Member, Academy of Sciences USSR, State Price Laureate, and Doctor of Engineering Sciences, died after a short but severe illness at the age of 58. He was well known here and abroad as an outstanding scientist and specialist in the field of combustion theory and the development of methods for speeding up burning of fuel. He began his scientific work at the All-Union Heat Engineering Institute after graduating from the physics department of Moscow University in 1930. His early work was on the propagation of flames in gases, and on heterogenous combustion. In 1948 he defended his Doctor's Dissertation on the theory of combustion of car-

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ACC NR: AP6014966

bon. His monograph "Combustion of Carbon" was awarded the State Prize in 1950. In 1951 he became the permanent director of the laboratory for the intensification of combustion processes of the G. M. Krzhizhanovskiy Power Institute. He was elected a corresponding member of the Academy of Sciences USSR in 1953. He headed the All Union Advisory Board on combustion, represented Soviet science at International Symposia, and was a member of the International Institute of combustion. For a number of years, he directed the Moscow general seminar on combustion, and took an active part in the work of the Scientific Council of the Academy of Sciences USSR, on high temperature heat physics, and of the scientific council on the comprehensive utilization of fuel. He devoted a large amount of attention to teaching work. He directed the Combustion Division of the Physics Department of Moscow State University. His monograph "Physics of Combustion and Explosion" (1957) is a basic text for students in this field. Three Doctor's Dissertations and fifteen Candidate Dissertations were defended under his direction. In the last years of his life he directed work on methods for comprehensive utilization of fuel at power stations so as to obtain valuable products from the mineral part of the fuel, as well as work on the physical chemical processes in a plasma stream, and the mechanism of interaction between carbon and gases. He was the author of more than 60 scientific works, for which he was awarded the Order of the Red Banner of Labor and medals. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 21, 20 / SUBM DATE: none

Card 2/2 pla

ALAD'YEV, I.T.; ALEKSANDROV, B.K.; BAUM, V.A.; GOLOVINA, Ye.S.; GOL'DENBERG, S.A.; ZHIMERIN, D.G.; ZAKHARIM, A.G.; IYEVLEV, V.N.; KNORRE, V.G.; KOZLOV, G.I.; LEONT'YEVA, Z.I.; MARKOVICH, I.M.; MEYEROVICH, E.A.; MEKHNEVICH, G.V.; POPKOV, Z.I.; POPOV, V.A.; PREDVODITELEV, A.S.; PYATNITSKIY, L.N.; STYRIKOVICH, M.A.; TOISTOV, Yu.G.; TSUKHANOVA, O.A.; CHUKHANOV, Z.F.; SHEYNDLIN, A.Ye.

Lev Nikolaevich Khitrin, 1907-1965; obituary. Izv. AN SSSR. Energ. i transp. no.2:159-160 Mr-Ap '65. (MIRA 18:6)

ANDRIANOV, V.N.; BEYLIS, M.Ya.; BUDZKO, I.A.; ZAKHARIN, A.G.; ZLATKOVSKIY, A.P.; ZUYEV, V.A.; KRASNOV, V.S.; LISTOV, P.N.; NAZAROV, G.I.; POYARKOV, M.F.; SMIRNOV, B.V.

Nikolai Alekseevich Sazonov; obituary. Elektrichestvo no.5: 92-93 My '63. (MIRA 16:7)

(Sazonov, Nikolai Alekseevich, 1903-)

BRAILOV, V.P.(Moskva); GORUSHKIN, V.I. (Moskva); DENISOV, V.I. (Moskva); ZAKHARIN, A.G. (Moskva); KUZ'MINA, A.A. (Moskva); POLYANSKAYA, T.M. (Moskva)

Optimization of the selection of fuels for thermal electric power plants and boiler systems in long-range planning. Izv. AN SSSR. Energ. i transp. no.4:514-524 Jl-Ag '63. (MIRA 16:11)

ZAKHARIN, A.G.; KANAKIN, N.S.

Increase in the efficiency of electric power distribution in rural areas and the use of new machinery. Obshch. energ. no.6:101-110 '63. (MIRA 16:10)

(Rural electrification)
(Electric power distribution)

ZAKHARIN, A.G.; BRAILOV, V.P.; DENISOV, V.I.

Principal mathematical formulation of a problem concerning the choice of an efficient power distribution system and optimum alternative for the distribution of power resources. Obshch. energ. no.6:14-23 '63. (MIRA 16:10)

(Electric power) (Power resources)

ALUKER, Sh.M.; ANDRIANOV, V.N.; BUDZKO, I.A.; BURGUCHEV, S.A.; ZAKHARIN, A.G.; NAZAROV, G.I.; PRISHCHEP, L.G.; POYARKOV, M.F.; RASOVSKIY, E.I.; RUNOV, B.A.; SKVORTSOV, P.F.; SEIGEYEV, A.V.

P.N.Listov; on his sixtieth birthday and the thirty-fifth anniversary of his industrial, theoretical, and educational work. Elektrichestvo no.11:94 N '62. (MIRA 15:11)
(Listov, Petr Nikolaevich, 1902-)

ANDRIANOV, V.N.; BURGUCHEV, S.A.; YEVTEINOV, N.G.; ZAKHARIN, A.G.; KRASNOV, V.S.; LISTOV, P.N.; NAZAROV, G.I.; POYARKOV, M.F.; SAZONOV, N.A.; STEPANOV, V.N.; EBIN, L.Ye.

I.A. Budzko [deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina]; on his fiftieth birthday and thirtieth anniversary of scientific and pedagogical work. Elektrichestvo no.5:87 My '61. (MIRA 14:9)
(Budzko, Igor' Aleksandrovich, 1911-)

ZAKHARIN, A. G.

"Local power systems in rural areas"

report to be submitted for the Second Yerevan Conference on the Application of Atomic [illegible] for the Purpose of the Development of the Power Developed Areas - Yerevan, Armenian S.S.R., 5-10 Oct 61.

ANDRIANOV, V.N.; BUDZKO, I.A.; VENIKOV, V.A.; DEMIN, A.V.; GORODSKIY, D.A.; GRUDINSKIY, P.G.; ZAKHARIN, A.G.; KRASNOV, V.S.; LEVIN, M.S.; LISTOV, P.N.; MARKOVICH, I.M.; MEL'NIKOV, N.A.; NAZAROV, G.I.; RAZEVIG, D.V.; SMIRNOV, B.V.; STEPANOV, V.N.; SYROMYATNIKOV, I.A.; FELOGUEYEV, A.M.; YAKOBS, A.I.

Doctor of technical sciences, Professor Lev Efimovich Ebin, 1905-; on his 60th birthday. Elektrichestvo no.6:91 Je '65. (MIRA 18:7)

Zakharin, A.I.

4-10-17/47

AUTHOR: Zakhar'in, A.I., Chief Engineer of the Kirov Works

TITLE: The Kirov Works - Bearer of Orders (Kirovskiy - ordenonosnyy)

PERIODICAL: Znaniye - Sila, 1957, # 10, pp 15 - 21 (USSR)

ABSTRACT: The author describes the activity of the Kirov Works. Many of the machines constructed here are unique; they are built either in small quantities or transferred to other factories. Steel is automatically smelted in Martin furnaces; furnace temperatures, mazout and air combustion are maintained mechanically. Spectral and chemical metal analysis is performed next to the open-hearth furnaces.

The author describes the operations performed in manufacturing a rotor turbine from smelting to shipping and points out that follow-up inspections are made of the unit after it has left the plant.

A case is quoted, where a deficiency in the turbine operation was established to be caused by the closely located reductor, and by cyclic errors in the gear precision.

The author mentions the process of soldering, which in some cases must be performed in a vacuum or in hydrogen of inert gas. The author states an example where very thin metallic

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tubes had to be joined to a massive metallic body. Even soldering could not be applied as the tube's thin walls were corroded by the hot solder. Finally a solution was found, in collaboration with members of the Latvian Academy of Sciences; the parts were heated separately, dipped in the liquid solder and then cooled. The solder cannot corrode the parts within such a short time. Another example relates to bearings, where it was found that bearings must not be too precise, as a rougher bearing may better resist the compression.

There are 4 photographs.

AVAILABLE: Library of Congress

Card 2/2

ZAKHAR'IN, Aleksey Ivanovich; LEPIN, A.E., red.; ONOSHKO, N.G., tekhn.red.

[Benefits of production mechanization] Chto daet mekhanizatsiia proizvodstva. Leningrad, Lenizdat, 1960. 50 p. (MIRA 13:7)

1. Glavnyy inzh. Kirovskogo zavoda (for Zakhar'in).
(Leningrad--Machinery industry--Technological innovations)
(Automation) (Socialist competition)

ZAKHARIN, O. F.

GODNEV, T.M.; LISHEVICH, S.V.; ZAKHARIN, O.F.

Chloroplast structure and chlorophyll concentration in some aquatic plants. Uch.zap.BGU no.26:158-169 '56. (MLRA 10:9)
(Pondweed) (Chlorophyll) (Chromatophores)

S/123/59/000/007/003/014
A004/A001

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, No. 7, p. 101, # 25141

AUTHOR: Zakhar'in, K.I.

TITLE: On the Problem of Grinding Poorly Machinable Materials

PERIODICAL: V sb.: Dokl. 16-y Nauchn. konferentsii prof.-prepodavat. sostava Leningr. inzh.-stroit. in-ta, Leningrad, 1958, pp. 444 - 448

TEXT: The author describes the results of investigations carried out to establish the optimum grinding conditions and select the best disk characteristics for the machining of the TC-6 (ZhS-6) alloy. The difficulty of grinding the mentioned alloy consists in the fact that the abrasive grains of the grinding disk are quickly covered during the working process with a film of the ground metal and the grinding process is stopped. It was found that monocorundum disks of 80 granularity with ceramic binder, possessing a hardness of CM-2 - C_1 (SM-2 - S_1) are the most efficient. Disks of black and green silicon carbide show only a very low efficiency. Electro-

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S/123/59/000/007/003/014
A004/A001

On the Problem of Grinding Poorly Machinable Materials

corundum disks do not come up to monocorundum disks but ensure a considerably higher efficiency than silicon carbide disks. The following conditions are recommended for monocorundum grinding: U_d = 13 m/sec and lower U_g (?) = 20 m/min, t = 0.01-0.02 mm, longitudinal table feed S = 2-4 mm/rev of work piece.

B.I.M.

Translator's note: This is the full translation of the original Russian abstract.

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B/123/61/000/016/005/022
A004/A101

AUTHOR: Zakhar'in, K.I.

TITLE: Investigating the grinding process of heat-resistant alloys

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 16, 1961, 57, abstract 16B369 (V sb. "XVII Nauchn. konferentsiya prof.-prepodavat. sostava Leningr. inzh.-stroit. in-ta s uchastiyem predstavit. stroit. organizatsiy, predpriyatiy i nauchno-tekhn. o-v. Dokl. sektsiy tekhnol. sborn. stroit. konstruktsiy i stroit. proiz-va, stroit. mashin, detaley mashin i tekhnol. metallov, stroit. materialov", Leningrad, 1960, 42 - 45)

TEXT: Investigations were carried out to determine the optimum cutting conditions and find the best coolant composition for the grinding of the heat-resistant ЭИ-826 (EI-826) and ЭИ-766А (EI-766A) alloys. It was found that the most efficient wheels are those made of monocorundum with a ceramic binder. Finish-grinding should be effected with wheels of grain size 80, hardness C 1 (S1), while rough grinding is carried out with wheels of 46 or 60 grain size and CM2 (SM2) or S1 hardness. The best results were obtained at a wheel speed of 37 m/sec, a

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Investigating the grinding process ... S/123/61/000/016/005/022
A004/A101

longitudinal feed of 3 - 6 mm/rev and a speed of the workpiece of 20 m/min. The maximum efficiency was attained by cooling with sulfofrezol with an addition of 10% diesel oil. Aqueous solutions of citric and vanillic acids are inferior to sulfofrezol as regards efficiency. The lowest efficiency was obtained when an aqueous potassium bichromate solution was used.

I. Brozgol'

[Abstracter's note: Complete translation]

Card 2/2

S/123/62/000/011/009/011
A052/A101

AUTHOR: Zakhar'in, K. I.

TITLE: Investigation of the process of grinding difficult-to-work materials

PERIODICAL: Referativnyy zhurnal, 'Mashinostroyeniye, no. 11, 1962, 104, abstract 11B671 ("Sb. nauchn. tr. Leningr. inzh.-stroit. in-t", no. 32, 1960, 66 - 72)

TEXT: This is a report on an investigation of the effect of disk characteristics and grinding conditions on the specific efficiency, disk wear, power consumed and surface microgeometry when grinding high-chromium Л 25 Х 13 (L25Kh13) and 2 Х 13 (2Kh13) steels. The experiments were carried out on a face-grinding machine with disks of the following characteristics: КЧ 46СМ 2К (KCh46SM2K), 3 46СМ2Б (E46SM2B), 3 46СМ 2К (E46SM2K) and 3Б 46СМ1К (EB46SM1K). During grinding the disk speed and the transverse table feed were constant (27 m/sec. and 10 mm per travel). The table speed was 12 and 18 m/min. and the depth of grinding 0.01, 0.02, 0.03 and 0.05 mm per travel. It has been found that the highest specific efficiency is achieved when working with disks

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Investigation of the...

S/123/62/000/011/009/011
A052/A101

of ceramics-bound white electrocorundum. Electrocorundum disks secure a specific efficiency 3 - 4 times higher than the specific efficiency of silicon carbide disks. With an increase of the longitudinal table speed the specific efficiency is higher than when grinding 2Kh13 steel. There are 6 figures.

I. Brozgol'

[Abstracter's note: Complete translation]

Card 2/2

Zakhar'in, L.

V.A.Pelageichev, the oldest worker of the synthetic fiber industry.
Khim.volok. no.5:78 '59. (MIRA 13:4)
(Textile fibers, Synthetic)
(Pelageichev, Vladimir Aleksandrovich, 1909-)

ZAKHARKIN, L. I., Doc Chem Sci -- (diss) "Study in the field of polychlor-derivatives of hydrocarbons and related compounds." Mos, 1958. 24 pp (Acad Sci USSR, Inst of Elemento-Organic Compounds) (KL, 35-58, 105)

5(3)

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu. SOV/62-59-6-33/36

TITLE: Synthesis of Borotrialkyls by the Action of Organo-metallic Compounds on the Esters of the Metaboric Acid (Polucheniye bortrialkilov deystviyem metalloorganicheskikh soyedineniy na efiry metabornoy kisloty)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 6, pp. 1135 - 1136 (USSR)

ABSTRACT: The reaction mentioned in the title has hitherto hardly been investigated. In the present investigation the borotrialkyls from alkylmetaborates $(ROBO)_3$ (with $R=CH_3$, $n=C_4H_9$) with aluminum trialkyls, zinc dialkyls and magnesiumhalcid alkyls were synthetized.

$(ROBO)_3 + AlR'_3 \rightarrow R'_3B + Al_2O_3 + (RO)_3Al$; $R' = C_2H_5$, $i\text{-}C_4H_9$

$(ROBO)_3 + ZnR'_2 \rightarrow R'_3B + ZnO + (RO)_2Zn$; $R' = C_2H_5$, C_3H_7

$(ROBO)_3 + R'MgX \rightarrow R'_3B + MgO + MgX + ROMgX$; $R' = p\text{-}C_4H_9$, $i\text{-}C_5H_{11}$

The reactions occurred with high yield. In the experimental part the methods for the production of borotrialkyls are described. The yield in borotrialkyls obtained by different methods is

Card 1/2

Synthesis of Borontrialkyls by the Action of Organo-metallic Compounds on the Esters of the Metaboric Acid SOV/62-59-6-33/36

given in a table. There are 1 table and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: December 24, 1958

Card 2/2

ZAKHARKIN, L. I.

81933
S/062/60/000/06/04/011
B020/B061

5.3700A

AUTHORS: Zakharkin, L. I., Savina, L. A.

TITLE: Preparation and Properties of Some Organo-aluminum Chelate Compounds

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 6, pp. 1039 - 1043

TEXT: Here, the authors studied the action of triethylaluminum and diisobutylaluminum hydride on the unsaturated compounds $CH_2{=}CH{-}(CH_2)_nX$, where $X = OC_2H_5$, $N(C_2H_5)_2$, and $n = 2$ and 3. The action of diisobutyl-aluminum hydride on allylchloride and Δ^4-pentenylchloride was examined. in order to obtain the compounds $(C_4H_9)_2Al(CH_2)_3Cl$ and $(C_4H_9)Al(CH_2)_5Cl$. In neither case is there a depositing of the hydride on the double bond, but the chloride becomes reduced to propylene or pentene-1, respectively. Compounds of the type $R_2Al(CH_2)_nX$, in which $n = 3, 4$, $X = OC_2H_5$, $N(C_2H_5)_2$ are cyclic chelate compounds and monomers. As apart from these, the

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Preparation and Properties of Some Organo-aluminum Chelate Compounds

compounds $R_2Al(CH_2)_5X$ are not monomeric, but associated compounds, which contain structures with complex intermolecular formations as well as inner complex seven-membered structures. Cyclopropane or cyclobutane are formed on the thermal decomposition of $(i\text{-}C_4H_9)_2Al(CH_2)OC_2H_5$, where n = 3,4. The spectra were taken by T. A. Sidorov with an infrared spectrometer constructed on the basis of the ИКС-11 (IKS-11) monochromator, and the authors thank him for this. There are 9 references: 2 Soviet, 1 German, 6 English, and 1 French.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences USSR)

SUBMITTED: December 22, 1958

ZAKHARKIN, L.I.; KORNEVA, V.V.

Some conversions of 1,5,9-cyclododecatriene. Dokl.AN SSSR 132 no.5:1078-1081 Je '60. (MIRA 13:6)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR. Predstavleno akademikom A.N. Nesmeyanovym.
(Cyclododecatriene)

S/079/60/030/06/03/009
B002/B016

5.3700 B

AUTHORS: Zakharkin, L. I., Khorlina, I. M.

TITLE: Symmetrization of Alkyl Aluminum Sesquihalides to Dialkyl Aluminum Halides in the Presence of Sodium Halides

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6, pp. 1926-1929

TEXT: In the present paper the authors outlined the conditions for the above method of synthesis devised by them. The symmetrization of the alkyl aluminum sesquihalides with the corresponding sodium halides proceeds according to the formula: $2R_3Al_2X_3 + nNaX \longrightarrow 3R_2AlX + AlX_3 \cdot nNaX$ (X = Cl, Br, I). The investigation was performed on methyl and ethyl aluminum sesquichloride, ethyl aluminum sesquibromide and ethyl and propyl aluminum sesquiiodide. The mixture of the above-mentioned initial substances with the corresponding sodium salt was heated for 2 hours up to 200-220° under vigorous stirring. Two immiscible liquid layers were formed. The upper one consisted of pure dialkyl aluminum halide, the lower one of a complex compound with the sodium salt which crystallized on

Card 1/3

Symmetrization of Alkyl Aluminum Sesquihalides to Dialkyl Aluminum Halides in the Presence of Sodium Halides

S/079/60/030/06/03/009
B002/B016

cooling. This phenomenon was observable in all compounds investigated. The separation of the dialkyl aluminum halide from the sodium halide complex salt was not possible any longer. The influence of the amount of NaBr used in the reaction upon the degree of symmetrization was investigated on the example of the reaction of ethyl aluminum sesquibromide with NaBr. Complete symmetrization occurred at a molar ratio of ethyl aluminum sesquibromide to NaBr = 1:1-1.2. At a lower ratio a mixture of diethyl and ethyl aluminum bromide was formed, in which connection the former prevailed in proportion to the amount of the initial substances used. A more intense symmetrization did not occur any longer even at a higher excess of NaBr. If the synthesis is made without stirring, a higher quantity of NaX is necessary for the corresponding degree of symmetrization. On evaporation in vacuo a mixture of dimethyl aluminum iodide and trimethyl aluminum is formed from methyl aluminum sesquiiodide and NaI. On evaporation under atmospheric pressure the total amount symmetrized to trimethyl aluminum. In the experimental part the syntheses are described in detail. The following compounds were obtained: diethyl aluminum bromide, yield 92%, without stirring 85%; dimethyl aluminum

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Symmetrization of Alkyl Aluminum Sesquihalides to Dialkyl Aluminum Halides in the Presence of Sodium Halides

S/079/60/030/06/03/009
B002/B016

chloride, yield 84%; diethyl aluminum chloride, 85%, without stirring 79%; diethyl aluminum iodide, 98%, without stirring 91%; di-n-propyl aluminum iodide (twofold distillation), 75%; trimethyl aluminum (twofold distillation), 80%. There are 1 table and 6 references: 1 Soviet, 3 German, and 1 English.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences of the USSR)

SUBMITTED: July 6, 1959

Card 3/3

SAMOKHVALOV, G.I.; DAVYDOVA, L.P.; ZAKHARKIN, L.I.; KHORLINA, I.M.; VAKULOVA, L.A.; ZHIKHAREVA, L.T.; PREOBRAZHENSKIY, N.A.

Synthesis studies in the field of polyene compounds. Part 17: New synthesis of retinal or 9,13-dimethyl-7-(1,1,5-trimethyl-cyclohexen-5-yl)-7,9,11,13-nonatetraen-15-al. Zhur.ob.khim. 30 no.6:1823-1828 Je '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut. (Nonatetraenal) (Olefins)

82294
S/079/60/030/007/004/020
B001/B063

5.3700B

AUTHORS: Zakharkin, L. I., Okhlobystin, O. Yu.

TITLE: Reactions of the Alkyl Exchange in the Series of Elements of the Third and Second Groups (Al, B, Zn, Mg)

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 7, pp. 2134-2138

TEXT: Sufficiently convenient methods are now available for the conversion of organoaluminum compounds into organoboron compounds (Refs. 1-4), whereas the reverse process has not yet been possible. The authors of the present paper attempted to exchange the radicals between organoboron and organoaluminum compounds. The reactions of the exchange of alkyl derivatives of different metals (Refs. 5-8) are well-known, especially those of lithium. This is also the case with some alkyl derivatives of sodium and mercury (Refs. 7,8). Apart from the exchange reactions between B_2H_6 and $(C_2H_5)_3Al$, as well as C_2H_5MgX (Scheme 2), which were described by E. Wiberg and P. Strebel (Ref. 9), such reactions have hitherto been unknown for aluminum- and boron trialkyls. The exchange reactions of the radicals

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Reactions of the Alkyl Exchange in the Series of Elements of the Third and Second Groups (Al, B, Zn, Mg)

82294
S/079/60/030/007/004/020
B001/B063

between aluminum- and boron trialkyls were studied by the authors by a reaction of triethyl aluminum or trimethyl aluminum with boron trialkyls and boron triaryls according to the scheme $R_3Al + R'_3B \rightleftarrows R'_3Al + R_3B$. The reversible reaction may take place with a complete exchange of radicals if the more volatile component is removed from the reaction zone. It may be assumed that this reaction proceeds in the following stages:
$R_3Al + R'_3B \longrightarrow R_2R'Al + R'_2RB$; $R_2R'Al + R'_3B \longrightarrow RR'_2Al + R'_2RB$.
$R'_3B + R_3B$

The authors studied exchange reactions of triethyl- and trimethyl aluminum with triphenyl boron, tributyl boron, and triisobutyl boron. The mechanism of radical exchange between organoaluminum- and organoboron compounds could not be clarified. It was found that alkyl exchange also took place between organoaluminum- and organozinc compounds as well as between organoboron- and organozinc- or organomagnesium compounds (cf. the three last-mentioned schemes). There are 13 references: 4 Soviet, 4 German. 4 US, and 2 British.

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82294

Reactions of the Alkyl Exchange in the Series of Elements of the Third and Second Groups (Al, B, Zn, Mg)

S/079/60/030/007/004/020
B001/B063

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences USSR)

IX

SUBMITTED: July 8, 1959

Card 3/3

33987
S/062/62/000/002/012/013
B117/B138

11.2223
11.2211

AUTHORS: Zakharkin, L. I., and Kovredov, A. I.

TITLE: Addition of diborane to isoprene and synthesis of β-methyl tetramethylene diboric acid

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 362 - 363

TEXT: The investigation started in Ref. 1 (Zh. obshch. khimii 32 (in print) (1962)) was continued as follows: β-methyl tetramethylene diboric acid was synthesized on the base of diborane and isoprene. All the reactions were performed in pure nitrogen atmosphere. Diborane and isoprene readily react in tetrahydrofuran at room temperature. The product is bis-1,4-(1-boro-2-methyl cyclopentyl)-2-methyl butane $C_{15}H_{30}B_2$ (I) (boiling point 88°C (0.2 mm Hg); yield 64.7%). By heating (I) with boro trichloride (200°C, 20 hr) and by distillation, 1,4-bis-(dichloro boro)-2-methyl butane $C_5H_{10}B_2Cl_4$ (II) was obtained (boiling point 36°C (0.7 mm Hg); yield 80%). The hydrolysis of (II) yielded β-methyl tetramethylene diboric acid

Card 1/2

Addition of diborane to...

$C_5H_{14}B_2O_4$ (III) (melting point 132 - 133°C; yield 90%), which was stored in a sealed capillary in nitrogen. The structure of (III) was confirmed by its oxidation with alkaline hydrogen peroxide; the products were 2-methyl butanediol-1,4 (boiling point 115 - 117°C (10.5 mm Hg); yield 72.6%) and bis-phenyl uretane (melting point 96 - 97°C). There are 4 references: 1 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: B. Wejcik, H. Adkins, J. Amer. Chem. Soc. 54, 4389 (1932); A. Shepard, J. R. Johnson. J. Amer. Chem. Soc. 383, 168 (1911).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: July 29, 1961

Card 2/2

ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; STRUNIN, B.N.

Preparation of alkyl magnesium halides from primary alkyl halides and magnesium in a hydrocarbon medium. Dokl. AN SSSR 147 no.1:108-110 N '62. (MIRA 15:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Predstavleno akademikom I.L. Knunyantsem.

(Magnesium organic compounds)
(Alkyl halides) (Hydrocarbons)

ZAKHARKIN, L.I.; ZHIGAREVA, G.G.

Production of nitrocyclododecane and some of its conversions. Izv. AN SSSR Otd.khim.nauk no.1:183-184 Ja '62. (MIRA 15:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Cyclododecane)

33271
S/062/62/000/001/012/015
B101/B110

5.2410
11.1240

AUTHORS: Zakharkin, L. I., and Gavrilenko, V. V.

TITLE: Production of sodium- and potassium boron hydride by reduction of boron halides by means of sodium- or potassium hydride in the presence of triethyl aluminum

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1962, 173 - 174

TEXT: The reaction $BCl_3 + 4MeH \xrightarrow{(C_2H_5)_3Al} MeBH_4 + 3MeCl$ (Me = Na or K) was investigated. $(C_2H_5)_3Al$ was added to a suspension of the alkali hydride in toluene, in N_2 atmosphere; the mixture was heated (using NaH to 80 - 85°C, using KH to 80°C), and BCl_3 was bubbled through the suspension at such a rate that the temperature was 80-95°C using NaH, and 75-85°C using KH. The precipitate was filtered off, washed with ether, and extracted by means of diglym (diglim). The $MeBH_4$ yield was 83% for Me = Na, 90% for Me = K. Dropwise addition of boron trifluoride etherate instead of BCl_3

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Production of sodium- and potassium ...

bubbling is one variant of the method. The triethyl aluminum forms complexes: $MeAl(C_2H_5)_3H$ (Me = Na or K), which reduce BCl_3 to BH_3, whereupon $MeBH_4$ is formed by BH_3 with MeH. There are 4 references: 1 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: H. I. Schlesinger, H. C. Brown, I. R. Gilbreath, I. I. Katz. J. Amer. Chem. Soc., 75, 195 (1953).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: July 12, 1961

Card 2/2

33976
S/062/62/000/002/001/013
B117/B138

11.2212
11.1250
5.3700

AUTHORS: Zakharkin, L. I., and Savina, L. A.

TITLE: Synthesis of organoaluminum compounds containing a silicon atom in their alkyl chain

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 2, 1962, 253-256

TEXT: The synthesis consists in the addition of diisobutyl aluminum hydride to unsaturated organosilicon compounds. A mixture of diisobutyl aluminum hydride and trimethyl allyl silane was heated for 8-10 hr at 90-95°C. In the process the hydride added to the double bond of allyl trimethyl silane. The resulting compound was disproportioned by heating in vacuo and triisobutyl aluminum was distilled off. The distillation of the residue in high vacuum (10^{-5} mm) yielded tris-(trimethyl silyl propyl) aluminum (I) $C_{18}H_{45}Si_3Al$, the structure of which was confirmed by oxidation with oxygen and the subsequent hydrolysis in 3-trimethyl silyl propanol. A solution of (I) in benzene was heated with ethylene in an

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S/062/62/000/002/009/013
B117/B138

Synthesis of organoaluminum compounds...

autoclave (90-120°C, 10 hr), and numerous solid polymers were formed as a result. After their oxidation, trimethyl silyl pentanol-5 ($C_8H_{20}SiO$, boiling point at 95-97°C (19 mm Hg), n_D^{20} 1.4380) was obtained by fractionation. The addition of the hydride to the double bond of the vinyl group takes place in the reaction of diisobutyl aluminum hydride with trimethyl vinyl silanes and is accompanied by disproportionation:

$$(C_4H_9)_2AlH + CH_2=CHSiR_3 \rightarrow (C_4H_9)_2AlC_2H_4SiR_3$$

$$3R_3SiC_2H_4Al(C_4H_9)_2 \rightarrow 2(C_4H_9)_3Al + [R_3SiC_2H_4]_3Al \quad (II)$$

(R = C_2H_5). In the former case, tris-(trimethyl silyl ethyl) aluminum ($C_{30}H_{69}Si_3Al$, transparent, mobile liquid) was separated by distillation of the residue in high-vacuum (10^{-5} mm). The distillation of tris-(trimethyl silyl ethyl) aluminum did not succeed in high vacuum. Besides trimethyl ethyl silane a dimer, $C_{10}H_{12}Si_2$, could also be separated from adducts of $(C_4H_9)_2AlH$ with $(CH_3)_3SiCH=CH_2$ by water. The oxidation

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Synthesis of organoaluminum compounds...

products of (II) yielded triethyl silyl ethanol (boiling point at 100-103°C (30 mm Hg); n_D^{20} 1.4420; d_4^{20} 0.8551), and hexaethyl disiloxane (boiling point at 74-76°C (2 mm Hg); n_D^{20} 1.4360; d_4^{20} 0.856[illegible]. Bromination yielded an unstable bromide $(C_2H_5)_3SiC_2H_4Br$. Regarding the structure of the products obtained, it is believed that adducts of diisobutyl aluminum hydride and trialkyl vinyl silanes are a mixture of two compounds, in which the silicon atom is in alpha and beta position with respect to the aluminum atom. B. M. Mikhaylov is mentioned. There are 8 references: 6 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: D. Seyferth, J. Amer. Chem. Soc. 81, 1844 (1959); H. C. Brown, Tetrahedron 12, 117 (1961).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: October 23, 1961

Card 3/3

ZAKHARKIN, L.I.; SAVINA, L.A.

Production of cyclopropane hydrocarbons via organoaluminum compounds.
Izv. AN SSSR. Ser.khim. no.9:1693-1695 S '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Cyclopropane) (Aluminum organic compounds)

ZAKHARIN, L.I.; KOVREDOV, A.I.

Synthesis of ethane-1,1- and ethane-1,2-diboronic acids from acetylene and diborane. Izv.AN SSSR.Ser.khim. no.2:393 F '64.
(MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ZAKHARKIN, L.I.; BRATTSEV, V.A.; CHUPOVSKIY, Yu.A.

Some transformations of alkyl halides, alcohols, and acids of the barene series. Zhur.ob.khim. 35 no.12:2160-2167 D '65. (MIRA 19:1)

ZAKHARKIN, L.I.; KORNEVA, V.V.

Synthesis and deamination of cis-and trans-2-aminocyclododecanols.
Zhur. org. khim. 1 no.9:1608-1615 S '65. (MIRA 18:12)

1. Submitted August 24, 1964.

UNANYAN, M.P.; KONDRAT'YEVA, G.V.; LOCHMELIS, A.Ya.; ZAV'YALOV, S.I.; ZEYFMAN, Yu.V.; GAMBARYAN, N.P.; MINASYAN, R.B.; KNUNYANTS, I.L.; KOCHARYAN, S.T.; ROKHLIN, Ye.M.; KAVERZNEVA, Ye.D.; KORSHAK, V.V.; ROGOZHIN, S.V.; DAVANKOV, V.A.; TSEYTLIN, G.M.; PAVLOV, A.I.; ZAKHARKIN, L.I.; OKHLOBYSTIN, O.Yu.; SEMIN, G.K.; BABUSHKINA, T.A.; BILEVICH, K.A.

Letters to the editor. Izv. AN SSSR. Ser. khim. no.1:1909-1914 '65. (MIRA 18:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR (for Unanyan, Kondrat'yeva, Lochmelis, Zav'yalov, Kaverzneva). 2. Institut elementoorganicheskikh soyedineniy AN SSSR (for Zeyfman, Gambaryan, Minasyan, Knunyants, Kocharyan, Rokhlin, Korshak, Rogozhin, Davankov, Zakharkin, Okhlobystin, Semin, Babushkina, Bilevich).

L 18567-66 EWT(m)/EWP(j)/T WW/JW/JWD/RM

ACC NR: AP6002700 SOURCE CODE: UR/0062/65/000/012/2190/2193

AUTHORS: Zakharkin, L. I.; Kazantsev, A. V.

ORG: Institute for Heteroorganic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

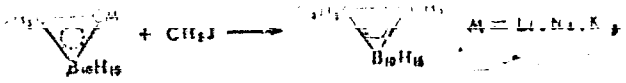
TITLE: Investigation of the alkylation reaction of C-metallic borane derivatives

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 12, 1965, 2190-2193

TOPIC TAGS: borane, boron compound, organoboron compound, alkylation, lithium, sodium, boron

ABSTRACT: A detailed investigation of the alkylation of lithium and sodium borane derivatives by different alkyl halides was carried out. This study is an extension of a study previously published by L. I. Zakharkin (Izv. AN SSSR, Ser. khim. 1963, [illegible]

[illegible] was studied on the system



Card 1/2 UDC: 542.91+661.718

L 18567-66
ACC NR: AP6002700

and the reaction yields as a function of the solvent and the nature of alkali metal were determined. Melting points of the synthesized compounds are tabulated. It is concluded that the alkylation proceeds more smoothly in liquid ammonia than in ether-benzene solution. Orig. art. has: 3 tables and 3 equations.

SUB CODE: 07/ SUBM DATE: 04Apr65/ ORIG REF: 003/ OTH REF: 003

Card 2/2 Snc

L 38569-66 EWT(m)/EWP(j)/T WW/JW/JWD/RM

ACC NR: AP6002702 SOURCE CODE: UR/0062/65/000/012/2206/2209

38
2

AUTHORS: Zakharkin, L. I.; Kalinin, V. N.

ORG: Institute for Heteroorganic Compounds, Academy of Sciences, SSSR (Institut [illegible] SSSR)

TITLE: Certain rearrangements of phenylborane and phenylneoborane

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 12, 1965, 2206-2209

TOPIC TAGS: borane, boron compound, organoboron compound

ABSTRACT: A number of substituted phenyl and neophenyl boranes were synthesized [illegible]

Card 1/2 UDC: 542.914+661.718.4

L 18569-66

ACC NR: AP6002702

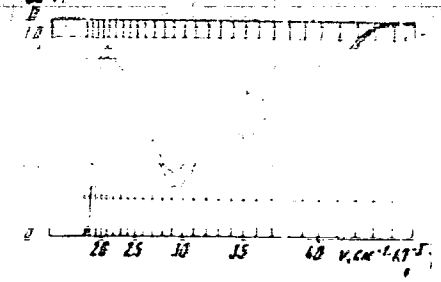


Fig. 1. UV spectra:

Orig. art. has: 2 tables and 2 graphs.

SUB CODE: 07/ SUBM DATE: 09Apr65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

ZAKHARKIN, L.I.; MASLIN, D.N.; GAVRILENKO, V.V.

Production of diborane from sodium alumohydride and boron halides in ether and hydrocarbon media. Zhur.neorg.khim. 11 no.1:13-19 Ja '66. (MIRA 19:1)

1. Submitted June 8, 1964.

ZAVELEKIN, I.I.; GAVRILENKO, V.V.; GOLUBEV, V.K.

Addition of sodium aluminum hydride to olefins. Izv.AN SSSR Ser.khim. no.1:142-143 '66. (MIRA 19:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Submitted April 20, 1965.

ZAYMARKIN, L. I.; [illegible], A. I.

Synthesis of ketones of the benzene series. Izv. AN SSSR. Ser. khim. no. 1, 153 '66. (MIRA 19:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Submitted May 10, 1965.

L 24296-66 EWT(m)/EWP(j)/T IJP/JW/SWB/RM

ACC NR: AP6009799 SOURCE CODE: UR/0062/66/000/002/0346/0348

AUTHOR: Zakharkin, L. I.; Ogorodnikova, N. A. 44 B

ORG: Institute of Organoelemental Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Alkylating B-decachlorobarene in an alcoholic medium

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1966, 346-348

TOPIC TAGS: chemical reaction, alkylation, organoboron compound

ABSTRACT: Alkylation of the mono- and disodium salts of B-decachlorobarene (I) with methyl iodide, ethyl iodide, allyl bromide and benzyl chloride was studied in alcoholic and in aqueous-alcoholic media. The decachlorobarene anion acts as a weak nucleophilic reagent in alkylations in alcohol. The mono- and disodium salts of I formed only the dimethyldecachlorobarene (II) with methyl iodide, but only monoethyldecachlorobarene (III) was formed with ethyl iodide. Mono- and diallyldecachlorobarene, respectively, were formed by reacting mon- and disodium salts of I with allyl bromide, and mono- and dibenzyldecachlorobarene were formed with benzyl chloride.

Card 1/2

UDC: 542.91+661.718.4

L 24296-66

ACC NR: AP6009799

Methylethyldecachlorobarene was formed from methyl iodide and the sodium salt of ethyldecachlorobarene. The IR spectra of II and III are given. Orig. art. has: 1 figure and 6 equations.

SUB CODE: 07/ SUBM DATE: 21Jun65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 FV

L 25833-66 EWT(m)/EWP(j)/T/EWA(h) RM/JW/WE/RM

ACC NR: AP6007124 SOURCE CODE: UR/0079/66/036/002/0362/0363

AUTHOR: Zakharkin, L. I.; Kalinin, V. N.

ORG: none

TITLE: Isomerization of B-halobarenes into B-haloneobarenes

SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 362-363

TOPIC TAGS: organoboron compound, halogenated organic compound, isomerization, isomer

ABSTRACT: It was found that on isomerization, B-chlorobarene, m. p. 224°-225°C, forms two B-chloroneobarenes, (Ia), m. p. 190°-191°C, and (Ib), m. p. 215°-216°C, and that B-bromobarene, m. p. 190°-191°C, yields two B-bromoneobarenes, (IIa), m. p. 153°-154°C, and (IIb), m. p. 171°-172°C. (Ib) is identical to the B-chloroneobarene and (IIb) to the B-bromoneobarene which are formed by halogenation of neobarene in the presence of $AlCl_3$. Isomerization of B-dichlorobarene, m. p. 262°-263°C, formed three B-dichloroneobarenes, of which two were isolated: (IIIa), m. p. 132°-133°C, and (IIIb), m. p. 187°-188°C. The third isomer is identical on the chromatogram to B-dichloroneobarene, m. p. 217°-218°C, obtained by chlorinating neobarene in the presence of $AlCl_3$. Halogenation of neobarene in the presence of $AlCl_3$ also forms B-trihalo- and B-tetrahaloneobarenes: thus, B-tetrabromoneobarene, m. p. 324°-325°C, was obtained. Photomonochlorination of neobarene forms the two B-chloroneobarenes (Ia) and (Ib).

SUB CODE: 07/ SUBM DATE: 23Aug65/ ORIG REF: 000/ OTH REF: 000

Card 1/1 FV

UDC: 546.271 : 542.952.1

24412

13,1500
3,2200

S/024/61/000/002/010/014
E191/E181

AUTHOR: Zakharin, M.I. (Kiyev)

TITLE: Kinematic equations of the motion of a coordinate frame in relation to the surface of the earth when its axes are stabilised in inertial space

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh naukm Energetika i avtomatika, 1961, No.2, pp.144-147

TEXT: It is assumed that a cartesian frame moves in relation to the surface of the earth, generally at an arbitrarily varying height. During this motion, the axes of the moving frame are stabilised along corresponding axes of another cartesian frame which is linked to inertial space. This second frame is oriented in accordance with the orthodrome frame with an origin at a point according to the instant of time assumed to be the time reference, for example, the beginning of the motion of the moving coordinate frame. The x axis of the orthodrome frame has the direction of the programme orthodrome of the motion and the y axis of this frame has the direction of the plumb line. A fourth coordinate frame which is the orthodrome frame linked with the actual

Card 1/3

Kinematic equations of the .....

trajectory of the motion has its y axis in the direction of the plumb line and its x axis parallel to the tangent of the programme orthodrome at an intermediate point of the path of the frame. The surface of the earth is assumed to be spherical. The kinematic equations of motion of the moving frame relative to the surface of the earth are derived, assuming its ideal stabilisation along the axes of the inertial coordinate frame. The system of equations so derived can be used to determine the variable values of the components of the acceleration and velocity vectors of the motion of the moving coordinate frame in relation to the surface of the earth as well as the values of the reference longitude and latitude and of the altitude of the motion. The initial data for solving the kinematic equation are the readings of accelerometers whose axes of measurement are fixed in inertial space and the initial values of the required kinematic parameters at the point of origin. Investigations have shown that the systematic errors of the accelerometers and the stabilisation errors of their measurement axes cause errors in computing the coordinates of the moving frame which will vary, in the first approximation, with the Schuler pendulum period around mean values determined by the same

Card 2/3

Kinematic equations of the motion....

errors. A consistent deviation of the measurement axes of the accelerometers in inertial space at a constant angular velocity causes the appearance of further errors in the measurement of the coordinates. These errors also vary with the Schuler pendulum period, but about a value which grows proportionally with the duration of motion of the moving coordinate frame. A method for taking into account the non-spherical nature of the surface of the earth is indicated.
There are 4 figures and 1 Soviet reference.

SUBMITTED: June 26, 1960

Card 3/3

25754
S/024/61/000/001/008/014
E061/E128

13,2500

AUTHOR: Zakharin, M.I. (Kiyev)

TITLE: A Contribution to the Problem of the Construction of an Inertial Navigation System With a Platform Fixed in Inertial Space

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1961, No.1, pp. 153-155

TEXT: The principle of construction of an inertial system of navigation with a platform fixed in inertial space is considered. The system consists of such a platform carrying two mutually perpendicular accelerometers. The moving object carrying the navigational system is assumed to be travelling in one plane passing through the centre of the earth which is assumed to be fixed. It is shown that the angular acceleration of the system in the plane is a function of the accelerations measured by the two accelerometers. The angular position of the moving object can thus be calculated by a computer fed with the accelerometer signals. The effects on the measurement of angular location of errors in the accelerometer measurements and in platform direction are

Card 1/2

25754

S/024/61/000/001/008/014
E061/E128

A Contribution to the Problem of the Construction of an Inertial Navigation System With a Platform Fixed in Inertial Space

examined. It is shown that constant errors lead to an error in location with a constant and a harmonic component. A drift of platform direction with a constant and angular velocity leads to an error in location increasing linearly with time and a harmonic error having an amplitude which depends on the drift velocity of the platform. The advantages of the system described over conventional inertial navigation systems is the fact that the gyroscopes are not disturbed and resultant errors avoided. The locking of the platform onto stellar bodies by means of telescopes is facilitated.
There are 4 figures.

SUBMITTED: March 25, 1960

Card 2/2

ACC NR: AP6021455 (N) SOURCE CODE: UR/0413/66/000/011/0078/0078

INVENTOR: Zakharin, M. I.

ORG: None

TITLE: A method for determining the instantaneous coordinates of moving objects. Class 42, 182347

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 78

TOPIC TAGS: space coordinate tracking, mechanical motion instrument, accelerometer

ABSTRACT: This Author's Certificate introduces a method for determining the instantaneous coordinates of moving objects. Accuracy is improved by solving kinematic equations based on data from three accelerometers for determining the coordinates. The measurement axes of these accelerometers are stationary in inertial space. The horizontal components of the vector of absolute acceleration are calculated together with the instantaneous coordinates of the object.

SUB CODE: 13/ 22/ SUBM DATE: 17Jun58

Card 1/1 UDC: 531.383

ACC NR: AP6021479 (A,N) SOURCE CODE: UR/0413/66/000/011/0106/0106

INVENTOR: Zakharin, M. I.

ORG: None

TITLE: An inertial navigation method. Class 42, No. 182423

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 106

TOPIC TAGS: inertial guidance, accelerometer, remote control

ABSTRACT: This Author's Certificate introduces a method for inertial navigation. The instantaneous coordinates of an object (e. g. in the orthodromic coordinate system) are determined with respect to the original position corresponding to the initial point of the trajectory of the object by using a computer for solving the equations of motion of the object according to data on the absolute linear accelerations of its center of mass and angular accelerations or velocities with respect to its center from instruments rigidly fastened to the object for registering linear accelerations, or accelerometers of this type combined with angular velocity gauges.

SUB CODE: 17,13 / SUBM DATE: 030ct58

Card 1/1

UDC: 531.76/77

ZAKHARIN, V.A.

AID P - 764

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 10/15

Author : Zakharin, V., Engineer, Senior Lt., Kand. of Tech. Sci.

Title : Special features of helicopter flight after a sudden stopping of the engine

Periodical : Vest. vozd. flota, 11, 71-79, N 1954

Abstract : The author considers special features of flight under conditions of autorotation of the rotor. He analyses transitional conditions, established conditions, changes of the rate of revolution, centrifugal forces, stalling, turning moment, etc. Diagrams, graphs, etc.

Institution : None

Submitted : No date

ZAKHARIN, Veniamin Aleksandrovich; ANIKEYEVSKIY, O.A., redaktor; GLADKIKH, N.N., tekhnicheskiy redaktor.

[Helicopters] Vertolet. Moskva, Ges. izd-vo ober. promyshl. 1956
82 p. (Helicopters) (MLRA 9:5)

ZAKHARIN, Veniamin Aleksandrovich, kand. tekhn. nauk; KANEVSKAYA, M.D., red.; STRIZHEVSKIY, S.Ya., red.; KOROLEV, A.V., tekhn. red.

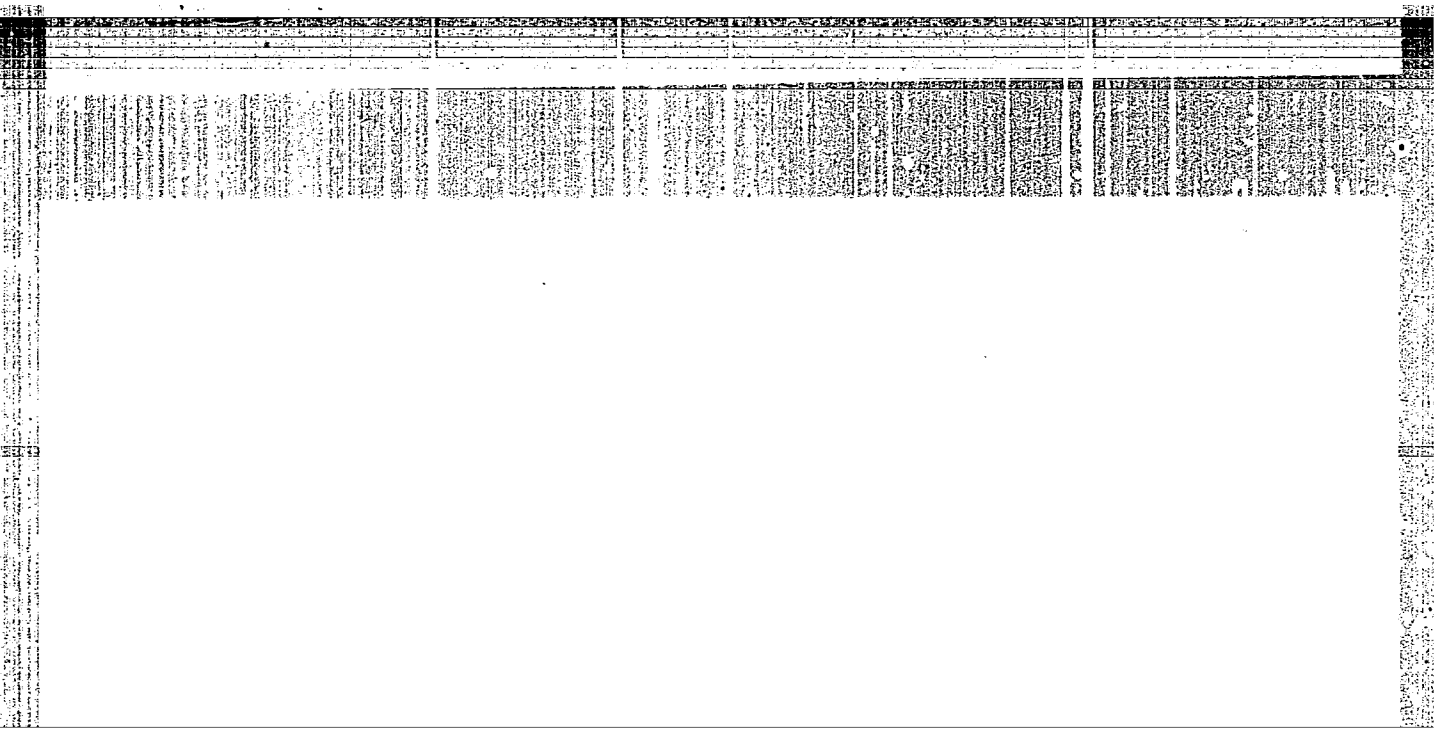
[Aviation with vertical take-off] Aviatsiia vertikal'nogo vzleta. Moskva, Izd-vo DOSAAF, 1961. 69 p. (MIRA 15:4)
(Vertically rising airplanes)

ZAKHARIN, Veniamin Aleksandrovich; BIRYULIN, V.I., inzh., retsenzent; SOKOLOV, A.I., inzh., red.; BOGOMOLOVA, M.F., red. izd-va; GARNUKHINA, L.A., tekhn. red.

[Helicopter] Vertolet. Izd. 2., perer. Moskva, Gos.nauchno-tekhn. izd-vo Oborongiz, 1961. 112 p. (MIRA 14:6)
(Helicopters)

GRIDYUSHKO, Ye.A., podpolkovnik, voyennyy letchik 2 klassa; ZAKHARIN, V.A., inzhener-mayor, kand.tekhn.nauk

Characteristics of helicopter flight from the deck of a vessel. Mor.sbor. 44 no.2:71-76 F '61. (MIRA 14:4)
(Helicopters—Piloting)



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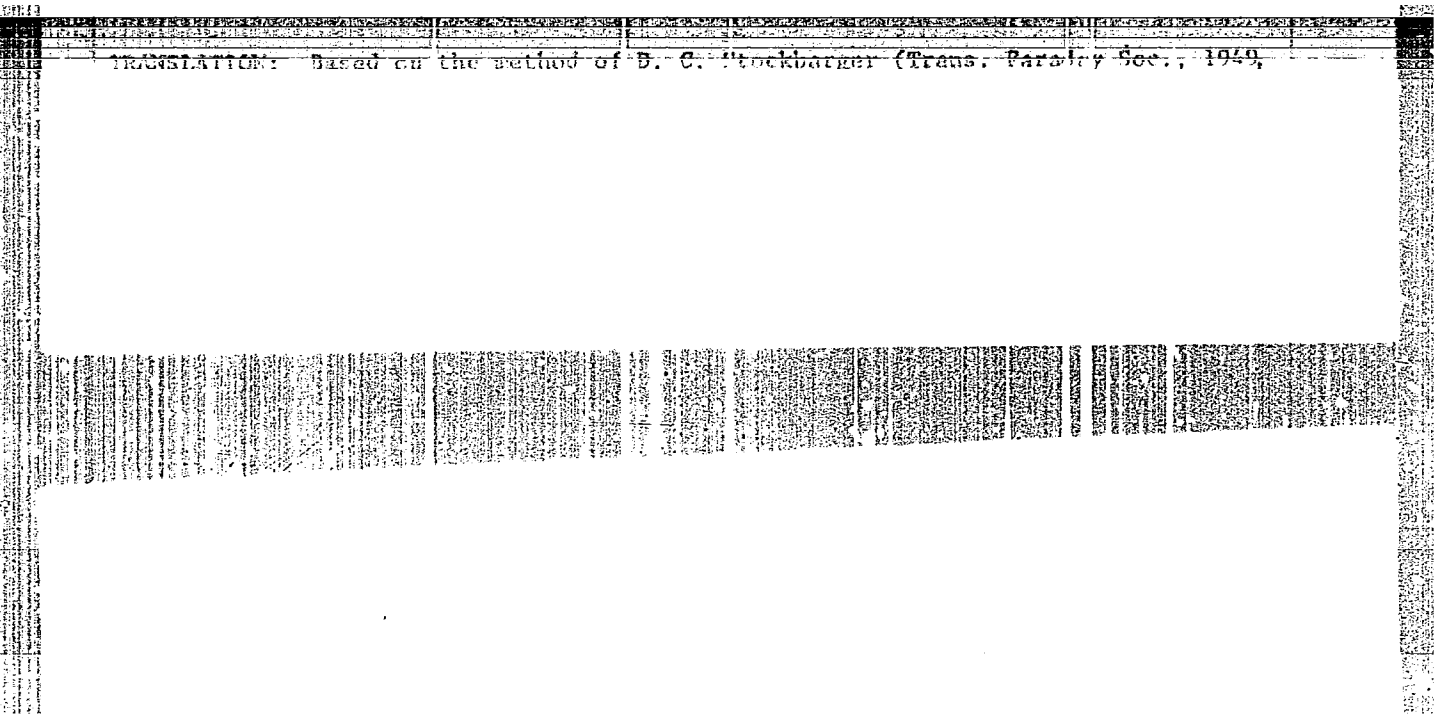

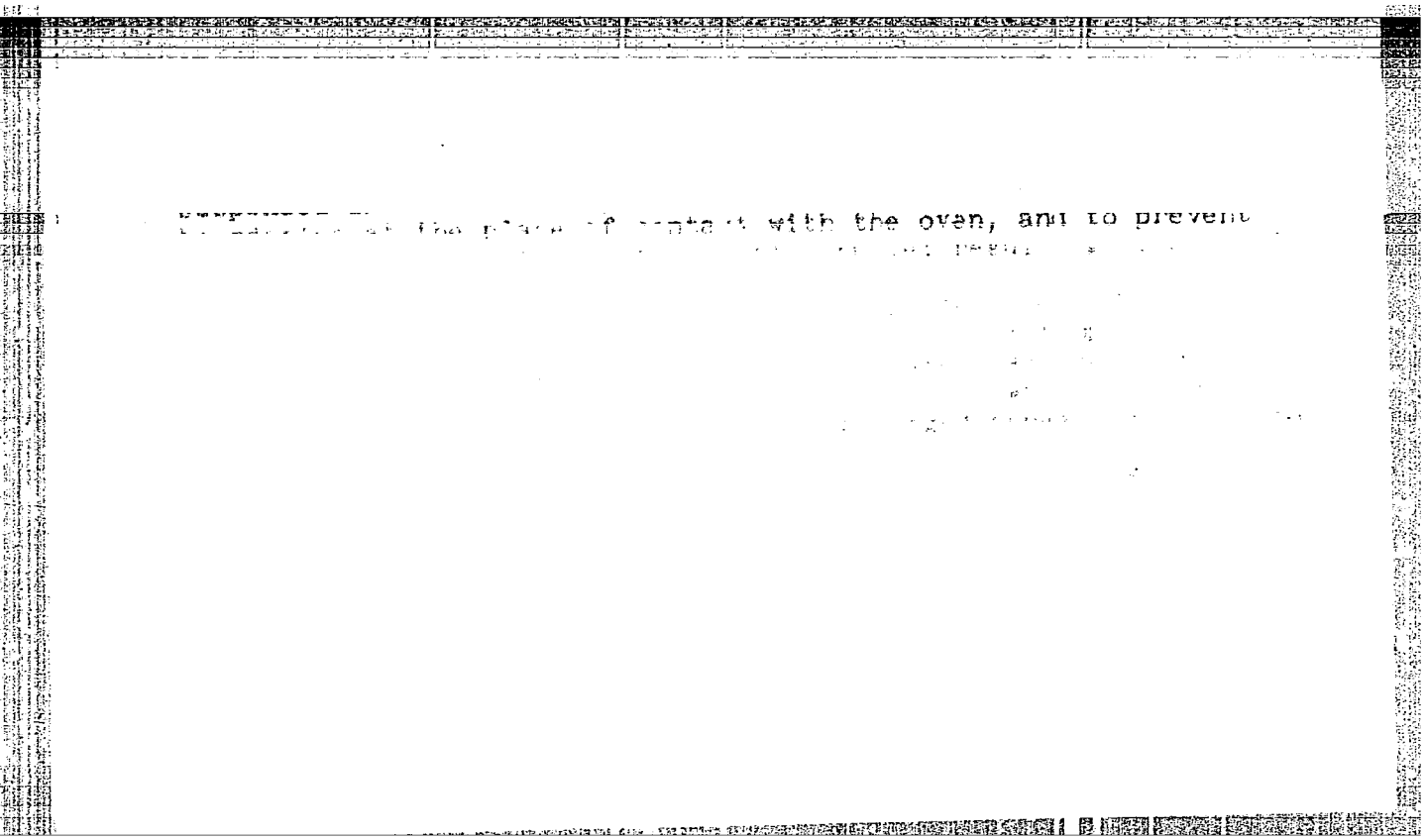

ZAMYATIN, Yu.V. [Zam'iatin, IU.V.]; ZAKHARIN, Ya.A.; KUTSYKOVICH, M.B. [Kutsykovych, M.B.]; CHEREDNICHENKO, K.P.

Experimental industrial unit for growing large single crystals for scintillation counters. Khim. prom.[Ukr.] no.1:43-44 Ja-Mr '65. (MIRA 18:4)

GRUDSKAYA, L.Ye.; ZAKHARIN, Ya.A.; TSIRLIN, Yu.A.; SHIRAN, N.V.; SHAKHOVA, K.V.

Determining the possibility of discriminating particles of different ionization density by the pulse shape in LiI(Tl), LiI(Eu), and CsI(In) crystals. Opt. i spektr. 18 no.3:450-452 Mr '65. (MIRA 18:5)

ZAKHAR'IN, Yu. [illegible].

"Inhibition of the Hexokinase Reaction by the Use of Extracts of Animal Tissues." Sub 4 Dec 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

EXCERPTA MEDICA Sec 2 Vol 12/2 Physiology Feb 59

562. GLYCOGEN DETERMINATION IN BLOOD (Russian text) - Zakharin Y. L. Inst. of Ther., Acad. of Med. Scis of the USSR, Moscow, USSR
BIOKHIMIYA 1958, 23/3 (366-371) Graphs 1 Tables 5

A modification of the Pflüger method is suggested. Neutralization of the alkaline blood hydrolysate prior to glycogen precipitation by alcohol greatly alters the results in that the glycogen content found is 2-5 times as high as when precipitated from an alkaline hydrolysate. A similar effect was obtained when glycogen was determined in lung tissues. Glycogen determination in an aqueous solution yields similar results in neutral and alkaline media. When added to the alkaline blood hydrolysate and precipitated by alcohol from an alkaline medium glycogen is not completely recovered; neutralization of this hydrolysate secures complete recovery of the added glycogen. Similar results have been obtained with dextran added to blood. The precipitate formed after neutralization of the alkaline blood hydrolysate when dissolved in KOH prevents complete precipitation of the added glycogen. (II, 6)

LANDO, L.I., kand. biolog. nauk; ZAKHAR'IN, Yu.L., kand biolog.nauk.

Content of adrenaline and adrenalinelike substances in the blood of patients with schizophrenia and vascular diseases of the brain with mental disorders. Trudy 1-go MMI 21:389-406'63. (MIRA 16:9)

1. Kafedra psikhiatrii (zav. - prof. V.M. Banshchikov) 1-go Moskovskogo ordena Lenina Instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR (dir. - prof. D.D. Fedotov)