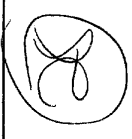


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| <u>Russian Periodicals</u> | | |
| "Elektrichestvo" (Electricity) Cards 24-37 | No 4 | Apr 1948 |
| "Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya" (News of the Academy of Sciences of the USSR, Physics Series) Cards 83, 92-100 | Vol XII No 2 | Mar/Apr 1948 |
| "Nauka i Zhizn'" (Science and Life) Cards 23, 69, 91 | No 6 | Jun 1948 |
| "Ognechek" (Little Flame)* Card 68 | Vol XXVI No 15 | Apr 1948 |
| "Pochvovedeniye" (Soil Science) Cards 101-104 | No 4 | Apr 1948 |
| "Priroda" (Nature) Cards 1, 2, 62, 70-75, 86-90 | Vol XXXVII No 2 | Feb 1948 |
| "Sovetskaya Geologiya" (Soviet Geology) Cards 38-61, 81, 82, 84, 85 | No 28 No 29 | 1948 1948 |
| "Uspekhi Matematicheskikh Nauk" (Progress of Mathematical Science) Cards 63-67 | Vol III No 1 No 2 | Jan/Feb 1948 Mar/Apr 1948 |
| "Zhurnal Obshchey Khimii" (Journal of General Chemistry) Cards 3-22, 76-80 | Vol XVIII No 3 | Mar 1948 |

NOTE

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|---|----------|--|----------|
| USSR/Academy of Sciences | Feb 1948 | USSR/Chemistry - Potatoes, Oil of Chemistry - Vitamin, B ₆ | Feb 1948 |
| "Review of 'A Great Reformer of Nature - Ivan Vladimirovich Michurin' by Yu. I. Milenushkin," Dr I. N. Konovalov, $\frac{1}{2}$ p | | "A New Property of Potato Oil," Prof A. N. Sutulov, $\frac{1}{4}$ p | |
| "Priroda" Vol XXXVII, No 2 | | "Priroda" Vol XXXVII, No 2 | |
| An 80 page pamphlet written in popular style which describes achievements of Soviet Scientist Michurin. | | W. Krcner and W. Volksen have succeeded in isolating linoleic and linolenic acids from potato oil. (Naturwiss, 1942). These acids are indispensable for maximum biological activity of pyridoxine (vitamin B ₆). Since they cannot be synthesized in human organism potato has a food value not previously recognized. | |
| FDB | 69T1 | FDB | 69T2 |
| USSR/Chemistry - Paraffins Chemistry - Oxidation | Mar 1948 | USSR/Chemistry - Oxalic Acid Chemistry - Reduction, Electrochemical | Mar 1948 |
| "Theory of Nitrating Saturated Hydrocarbons and Their Derivatives. IV. Mechanism of the Oxidation of the Paraffin Chain by Oxides and Nitric Acid," A. I. Titov, 10 pp | | "Study of the Cathode Processes During the Electroreduction of Oxalic Acid," N. A. Izgaryshev, I. I. Aryamova, Chair of Tech of Electrochem Products, Chemicotech Inst imeni D. I. Mendeleev, 8 pp | |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | |
| Alkyl nitrite is primary product of subject reaction. Further products obtained by oxidation and destruction is dependent upon conversion of alcohols and alkyl nitrites during reaction. There are also a few nitro compound products and a few nitro derivatives. Submitted 3 Aug 1945. | | Studies of polarization curves that can develop into a type of cathode curve. Determined that under conditions necessary for first appearance of glycolic acid interruption of polarization curve occurs thus establishing presence of zone of unstable condition. This zone present under all conditions. Submitted 6 Mar 1947. | |
| FDB | 69T3 | FDB | 69T4 |
| USSR/Chemistry - Lignin Chemistry - Separation | Mar 1948 | USSR/Chemistry - Alkaloids Chemistry - Alkaloids, Zongoricum | Mar 1948 |
| "Splitting of Lignin by Metallic Sodium in Liquid Ammonia. II.," N. N. Shorygina, T. Ya. Kefeli, Lab of Cellulose and Lignin, Inst Org Chem, Acad Sci USSR, 6 pp | | "The Alkaloids Aconitum Scogoricum Stapf. I. Alkaloids of Ranunculaceae Family," S. Yunusov, Lab of Chem of Alkaloids, Inst Chem, Acad Sci Uzbek SSR, Tashkent, 12 $\frac{1}{2}$ pp | |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | |
| Molecular weight of lignin is decreased by separation of molecules by hydrogen bonds. Supplementary processing of copper ammonia lignin with liquid NH ₃ does not alter composition of lignin. Separation of ROCH ₂ bond in lignin by a solution of Na in liquid NH ₃ proceeds slowly and does not come to a satisfactory conclusion. Submitted 12 Feb 1947. | | New alkaloid having formula C ₂₁ H ₂₉ NO ₃ , known as 'zongorinon,' was obtained from roots of Aconitum scogoricum Stapf. Gives description of following 'zongorinons': semicarbazone, diacetyl-, dihydro-, dihydrodiacetyl-, dichlor-, icdmethylate-zongorines. Submitted 28 Jan 1947. | |
| FDB | 69T5 | FDB | 69T6 |
| USSR/Chemistry - Camphene, Regrouping of Chemistry - Isoborneol | Mar 1948 | USSR/Chemistry - Bornylene Chemistry - Hydration | Mar 1948 |
| "Camphene Regrouping and Their Optical Effects," A. I. Shavrygin, Lab Org Chem, Moscow Inst of Fine Chem Tech imeni Lomonosov, 11 pp | | "Hydration of Bornylene and Its Nearest Homolog, 4-Methylbornylene," A. I. Shavrygin, Student N. S. Prostakov, Lab Org Chem, Moscow Inst Fine Chem Tech imeni Lomonosov, 3 $\frac{1}{4}$ pp | |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | |
| Studies of optical relationship in conversion cycle from alpha-methyl-camphene to 4-methylisoborneol. Type I regrouping of camphene group in conversion from camphene to isoborneol is a negative reaction. Type II regrouping has two changes in character of reaction. Author states that on basis of conclusions possible to claim full stereochemical and experimental | | Shows that esterification of 4-methylbornylene, nearest homolog of bornylene, results in series of individual compounds, while esterification of bornylene under similar conditions would produce a series of heterogeneous compounds. Submitted 17 Jan 1947. | |
| FDB | 69T7 | FDB | 69T8 |

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|--|--|------------|
| USSR/Chemistry - Camphene, Regrouping of (Contd) Mar 1948 | USSR/Chemistry - Ketones Chemistry - Isomerization Mar 1948 | |
| solution of complex chemical processes in camphene regroupings. Submitted 17 Jan 1947. | "Research in the Field of Isomeric Conversion of Ketones and Aldehydes of the Acetylene Series. I.," F. Ya. Perveyev, Lab Org Chem, Sci Res Chem Inst, Leningrad State Order of Lenin U, 5 1/2 pp | |
| FDB 69T7 | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | |
| USSR/Chemistry - Paraffins Chemistry - Nitration Mar 1948 | Iotsich's reaction used to synthesize 1-phenyl-3-methyl-4-chlor-penten-1-ol-3 and its corresponding oxides, from magnesium-bromium-phenylacetylene and 3-chlor-butanone-2. Isomerization of oxides by zinc chloride produced 1-phenyl-3-methyl-penten-1-on-4. Explains character of isomerization and equilibrium between radicals. Submitted 10 Feb 1947. | 69T9 |
| "Theory of Nitrating Saturated Hydrocarbons and Their Derivatives. II. Mechanism of Formation of Hem-Dinitro Derivatives," A. I. Titov, Lab Org Chem, Mil Acad imeni K. Ye. Voroshilov, Moscow, 7 1/2 pp | USSR/Chemistry - Toluene Chemistry - Nitration Mar 1948 | |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | "Theory of Nitrating Saturated Hydrocarbons and Their Derivatives. III. General Theory of the Formation of Mononitro Derivatives. Nitrating Toluene With a Phenyl-Nitromethane Catalyst," A. I. Titov, Lab Org Chem, Mil Acad imeni K. E. Voroshilov, Moscow, 6 pp | |
| Radicals which result during primary stages of nitration of paraffins react with nitrogen oxide and monomers of nitrogen dioxide and produce alkylnitrites and nitric compounds, first products of nitrating. Studies made on possible conversion of intermediate compounds which result from nitrating process. Submitted 8 Feb 1945. | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | |
| FDB 69T10 | Due to fact that mechanism of reaction was represented incorrectly author was unable to give a good description of nitrating of paraffin chains to obtain mononitro compounds. Tests conducted to deter- | 69T11 |
| USSR/Chemistry - Petroselinic Acid Chemistry - Nitric Oxide Mar 1948 | USSR/Chemistry - Toluene (Contd) Mar 1948 | |
| "Action of Nitric Oxides on Unsaturated Acids of the $C_nH_{2n-2}O_2$ Series. II. Action of N_2O_4 on Petroselinic Acid," N. V. Vil'yams (Deceased), S. V. Vasil'yev, Lab Org Chem imeni Academician N. Ya. Dem'yanov, Moscow Order of Lenin Agr Acad imeni K. A. Timiryazev, 5 1/2 pp | mine true course of nitrating process. Submits a rapid method for changing pseudoacids into aciform salts with aid of ammonium additions, and stresses value for production of primary and secondary mononitro compounds. Submitted 8 Feb 1945. | |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | FDB 69T11 | |
| Complete saturation of dual bond of acid occurs due to action of nitrogen oxide on petroselenic acids. Catalytic reduction results in obtaining of oxyamino, monoamino-, and diamino acids. Submitted 4 Jan 1947. | USSR/Chemistry - Glycol, Trimethylethylene, Mar 1948 Esters Chemistry - Glycol, Isopropylethylene, Esters | |
| FDB 69T12 | "Monoesters of Isopropyl and Trimethylethylene Glycol," A. A. Tyazhelova, Lab Org Chem, Voronezh State U, 2 pp | |
| USSR/Chemistry - Acetyls Chemistry - Synthesis Mar 1948 | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | |
| "Conversions of Simple Vinyl Esters. II. Mechanism of the Interaction of Vinyl-Alkyl Esters and Alcohols in the Synthesis of Acetals. The Significance of the Hydrogen Bond in Reactions Forming New Compounds," N. A. Gersh'teyn, M. F. Shostakovskiy, Inst Org Chem, Acad Sci USSR, Lab of Vinyl Compounds, 7 1/2 pp | Action of suitable acids on alcohols with alcoholates as catalysts produced series of monoesters of trimethylethylene and isopropylethylene glycol. At same time it was possible to study their chief physical properties. Submitted 4 Mar 1947. | |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | FDB 69T14 | |
| New method for synthesis of acetyls from vinyl esters and alcohols, without aid of catalysts, but due to influence of heat. Formulas for complex hydrogen bonds which occur due to esterification reaction which occurs during synthesis of acetyls. Submitted 21 Feb 1947. FDB 69T13 | | |

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| USSR/Chemistry - Organic Compounds Chemistry - Synthesis | Mar 1948 | USSR/Chemistry - Isobutyl Alcohol Chemistry - Amination |
| "Action of Carbon Tetrachloride and Other Polyhalides of Paraffins on Alkylene Esters of Phenylphosphonic Acid," Gil'm Kamay, Lab Tech of Org Synthesis, Kazan Chem Tech Inst imeni S. M. Kirov, 5½ pp | | "Catalytic Amination of Primary Isobutyl Alcohol," M. A. Popov, Lab Org Chem, Crimean Med Inst imeni I. V. Stalin, 5 pp |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 |
| Establishes that trichlorobromethane reacts with ethyl esters of phenylphosphoric acid. As a result of reaction bromine esters are released and there is a formation of ethyl esters of phenyltrichloromethylphosphoric acid. Submitted 10 Mar 1947. | | Studies on 11 catalysts showed that activated charcoal (I) and platinized silical gel (II) produce best results. Optimum temperature when using I is 400 to 450°, while for II it was between 350 and 400°. More gas is released when using II. More hydrogen is released when alcohol is aminized with II as a catalyst. Submitted 18 Feb 1947. |
| FDB 69T15 | | FDB 69T16 |
| USSR/Chemistry - Sulfuric Acid, Esters (Acid), Condensation of Chemistry - Chlorosulfonic Acid, Esters of | Mar 1948 | USSR/Chemistry - Acronitrile Chemistry - Condensation |
| "Condensation of Acid Esters of Sulfuric Acid and Esters of Chlorosulfonic Acid With Benzene," Z. N. Nazarova, I. P. Tsukervanik, Lab Org Chem, Gen Asiatic State U, 7½ pp | | "Condensation of Acronitrile With Piperylene and Isoprene," A. A. Petrov, A. F. Sapozhnikova, Chem Lab, Leningrad Inst Avn Equipment Constr, 6 pp |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 |
| Studies of interaction of individual acid esters of sulfuric acid and benzene, showed an absence of alkylation process. Studies of reaction of thermal decomposition and hydrolysis of alkylchlorosulfonates. Submitted 11 Feb 1947. | | Nitrile methylcyclohexenecarbon obtained as a result of this condensation. Corresponding amines: 2-methyl-delta ² -tetrahydrobenzylamine and mixtures of 4- and 3-methyl-delta ² -tetrahydrobenzylamines were obtained by reducing products of condensation. Shown that electron theory can be applied to order of condensation on isoprene and piperylene with acronitrile. Submitted 4 Mar 1947. |
| FDB 69T17 | | FDB 69T18 |
| USSR/Chemistry - Amines Chemistry - Dehydrogenation | Mar 1948 | USSR/Chemistry - Adsorption Chemistry - Coatings |
| "Catalytic Dehydrogenation of Amines and Its Kinetics. I. The Dehydrogenation of 1-Diethyl Amino-4-Aminopentane," A. A. Balandin, N. A. Vasyunina, Chair of Org Catalysts, Chem Faculty, Moscow State U, 9 pp | | "Adsorptive Film as a Passivating Factor," G. S. Koshurnikov, 10 pp |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 |
| On basis of 1-diethylamino-4-aminopentane (I) as an example authors determined that primary amines which correspond to secondary alcohols, adapt themselves to catalytic dehydration. Studies of kinetics of dehydration of I at 245 to 325°. Deposits were observed on copper. Submitted 26 Feb 1947. | | Studies on adsorption of water solutions of phenol on iron, zinc, iron oxides, and aluminum oxides. Film which forms by adsorption does not revert as a result of fixation of surface of adsorbent. Fixation is accompanied by a chemical reaction. Adsorptive film of phenol has thermal as well as chemical stability. Submitted 17 Jan 1947. |
| FDB 69T19 | | FDB 69T20 |
| USSR/Chemistry - Heat Capacity Chemistry - Halogens | Mar 1948 | USSR/Chemistry - Electrochemistry Chemistry - Electrolysis |
| "Specific Heat of Fluids. 2. Specific Heat and Relation of Specific Heats to the Temperature of Halogen Derived Acyclic Hydrocarbons," V. Ya. Kurbatov, 16 pp | | "Problems Concerning the Electrochemical Theory of Dissolving Metals in Acids. IV.," Ya. V. Durdin, Lab Inorg Chem, Leningrad State Order of Lenin U, 19 pp |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 |
| Studies of extremes of specific heats for 34 halogen derivatives in three temperature ranges. Established a linear relationship to temperature. Introduction of chlorine increases specific heat. Introduction of majority of halogens and transitional forms to methane derivatives lowers specific heat temperature coefficient to 0.0015. Submitted 5 Nov 1946. | | Tests to establish relationship between intensity of cathode process of separating hydrogen and anode process in which ions leave metal and enter solution. Kinetic relationship between anode and cathode processes cannot be determined on basis of intensity of anode or cathode polarization. Submitted 13 Jan 1947. |
| FDB 69T21 | | FDB 69T22 |

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| USSR/Engineering Construction Industry Glass "News of Science and Engineering" 1 p "Nauka i Zhizn'" No 6 Short extracts from Russian technical journals devoted to building, dairying, sugar, glass, electricity, and engineering. | Jun 1948 | USSR/Electricity Heating, Electric Heating, Industrial "High-Frequency Heating of Plastic Masses," V. I. Kalitvyanskiy, Cand Tech Sci, V. M. Degtev, Engr, All-Union Electrotech Inst imeni Lenin, 6 pp "Elektrichest" No 4 Results of work on high-frequency heating in technology of various plastics. Shows great advantages obtained from use of this method. Describes equipment necessary for heating plates composed of pressed thermoreactive powder. Article is summarized version of one presented by authors at Thirtieth Session of All-Union Bureau of Electrical Insulation in Sep 1946. FDB |
| FDB | 69T23 | 69T24 |
| USSR/Electricity Transmission Lines "Method for Improving Heavy Current Wire Installations," P. N. Gorshkov, Cand Tech Sci, Works of Ministry of Electrical Ind, USSR, 5 pp "Elektrichest" No 4 Method for installing wires of transmission lines carrying heavy currents has economical as well as technological benefits. Comparative studies of various types of transmission lines have resulted in data which can be used in projection of new transmission wires to fulfill present requirements. Presents various views showing how such replacement would effect Soviet industries. | Apr 1948 | USSR/Electricity Dryers, Electric Wood-Drying "High-Frequency Drying and Treatment of Wood," A. V. Netushil, Cand Tech Sci, B. A. Gol'dblatt, Engr, Cen Sci Res Lab for Electrification of Industrial and Constr Work, 6 pp "Elektrichest" No 4 Discusses advantages drying lumber by means of high frequencies. Experimental relationships and formulas for calculating losses in lumber on basis of anisotropy of its structure. Description of a 50-kw generator developed by TsNILEPS which can be |
| FDB | 69T25 | 69T26 |
| USSR/Electricity Heating, Electric Electrical Equipment "Unification of High-Frequency Installations," D. B. Mondrus, S. M. Margolin, V. M. Zil'berman, Engineers, 'ElektroPech' Trust, Ministry of Electrical Industries, USSR, 8 pp "Elektrichest" No 4 Soviet industry is sorely in need of invention of a series of apparatus for use in high-frequency heating technology. Mentions work done by SovZapPromElektroPech in this field of research and successes achieved. Some machines and equipment have already been placed | Apr 1948 | USSR/Electricity (Contd) used in drying lumber. Summarized version of article submitted at 1947 meeting of All-Union Bureau of Electrical Insulation. |
| FDB | 69T27 | 69T26 |
| USSR/Electricity (Contd) in various industries and authors ask that workers operating equipment send in testimonials or criticisms | Apr 1948 | USSR/Electricity Motors, Electric Magnetization "Approximation of the Magnetization Curve," Prof R. L. Aronov, Dr Tech Sci, Khar'kov Electrotech Inst, 5 pp "Elektrichest" No 4 Analyses of electrical motors and apparatus requires use of formulas which approximate magnetization curve. Formulates requirements for analytic representations of magnetization curves and on basis of requirements recommends new modifications for some of previously suggested formulas. |
| FDB | 69T27 | 69T28 |

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| <p>USSR/Electricity Motors, Electric Brakes</p> <p>Apr 1948</p> <p>"New Mechanical Brake for Testing Motors," Docent M. S. Mikhaylov-Mikulinskiy, Cand Tech Sci, 2½ pp</p> <p>"Elektrichest" No 4</p> <p>Describes new system of dynamometers and brakes suggested to replace old system for testing motors. Describes hydrostatic dynamometer, and use of dynamometer for testing electrical motors.</p> | | <p>USSR/Electricity Transformers, Dry Heating</p> <p>Apr 1948</p> <p>"Heating Process in a Dry Transformer," L. M. Shnitsler, Cand Tech Sci, Moscow Transformer Works imeni Kuybyshev, 3½ pp</p> <p>"Elektrichest" No 4</p> <p>Describes laboratory process of operation necessary for calculating determined effects of factors and establishing relationship between various factors. Relationship may be represented either in curve form or by mathematical formulas.</p> | |
| FDB | 69T29 | FDB | 69T30 |
| <p>USSR/Electricity Filters, Electric Dust Removal</p> <p>Apr 1948</p> <p>"Discussion of the Article 'Intensified Electrical Filters for Dust Elimination' by Yu. V. Baymakov," V. N. Uzhov, Engr, GazoOchistka Trust, Ministry of Chem Ind, USSR; Prof Yu. V. Baymakov, Dr Tech Sci, Leningrad Polytech Inst imeni Kalinin, 4 pp</p> <p>"Elektrichest" No 4</p> <p>Uzhov points out some important omissions in subject article, such as failure to mention contemporary filters, and research work in field. In latter part of review Baymakov defends his article.</p> | | <p>USSR/Electricity Capacitors</p> <p>Apr 1948</p> <p>"New Research on Condensers," V. T. Renne, Cand Tech Sci, 1½ pp</p> <p>"Elektrichest" No 4</p> <p>Renne summarizes research done by Godley and Hopkins in field of metal treated paper condensers. Explains tests made between leads, tests on main body of chassis, and tests between various sections of installation.</p> | |
| FDB | 69T31 | FDB | 69T32 |
| <p>USSR/Electricity Capacitors</p> <p>Apr 1948</p> <p>"Review of V. T. Renne's Book 'Electrical Condensers'," Prof G. I. Skanavi, Dr Phys Tech Sci, 1½ pp</p> <p>"Elektrichest" No 4</p> <p>Book published in 1947, 191 pages. Contains several errors, as pointed out, but on whole is valuable to those interested in condensers.</p> | | <p>USSR/Electricity Bridges, Electrical Measurement</p> <p>Apr 1948</p> <p>"Bridge Systems and Matrix Conversions," Prof M. L. Teukkerman, Leningrad Inst Power Mechanics and Optics, 4½ pp</p> <p>"Elektrichest" No 4</p> <p>Very short analysis of bridge systems, limited to examination of simple circuits not connected with inductive or power links.</p> | |
| FDB | 69T33 | FDB | 69T34 |
| <p>USSR/Electricity Dielectrics - Losses Dielectrics - Thermal Instability</p> <p>Apr 1948</p> <p>"Dielectric Losses in Impregnated Paper for Small Gradients," M. G. Gertsenshteyn, Cand Tech Sci, Works of Ministry of Electrical Ind, USSR, 2½ pp</p> <p>"Elektrichest" No 4</p> <p>Dielectric losses are usually studied on basis of tg δ to temperature relationship, and tg δ to electric field gradient relationship. Studies on impregnated paper conducted to determine value of tg δ at very low temperatures.</p> | | <p>USSR/Electricity Bibliography</p> <p>Apr 1948</p> <p>"New Books on Electricity, Electrical Engineering, and Electrical Energetics" 2½ pp</p> <p>"Elektrichest" No 4</p> <p>List of books in the above fields released for purchase in 1947.</p> | |
| FDB | 69T35 | FDB | 69T36 |

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| <p>USSR/Electricity Heating, Industrial Heating, Electric</p> <p>"Problem of Further Introduction of High-Frequency Heating in Industry" 2½ pp</p> <p>"Elektrichest" No 4</p> <p>One of the greatest contributions to Soviet industry was introduction of inductive electrical heating in vacuum industry for heating radio tube parts. Use of high-frequency heating was discovered some 15 years ago. Briefly mentions advantages to be gained by this method.</p> <p>FDB 69T37</p> | Apr 1948 | <p>USSR/Geology Glaciers Stratification</p> <p>1948</p> <p>"The Question of the Repetition of Glaciation in Kaluzhskaya, Tula, and Ryazan Oblasts," D. N. Utekhin, 6 pp</p> <p>"Sovet Geolog" No 28</p> <p>Describes some of cross sectional studies conducted by author during period 1936-1937, which showed that quaternary complex of Kaluzhskaya region was more complicated than was believed before. Data showing possible existence of two, as well as three, moraine layers, also obtained.</p> <p>FDB 69T38</p> |
| <p>USSR/Geophysics Gravimetry</p> <p>"A Test of the Interpretation of the Moscow Gravitational Anomaly," Ye. N. Lyustikh, Inst of Theoretical Geophys, Acad Sci USSR, 15 pp</p> <p>"Sovet Geolog" No 28</p> <p>General description of Moscow Magnetic Anomaly (MMA), quantitative interpretation of anomaly, and possible systems for representing crystalline foundation.</p> <p>FDB 69T39</p> | 1948 | <p>USSR/Geological Prospecting Ore Deposits</p> <p>1948</p> <p>"Regularity of the Distribution of Ore Deposits of Altai," V. P. Nekhoroshev, 18 pp</p> <p>"Sovet Geolog" No 29</p> <p>The southwestern Altai regions are a classic example of regularity in the distribution of various ores. Brief description of results of studies on this region conducted by geologists Pilipenko, Boldyrev, and Nikol'skiy.</p> <p>FDB 69T40</p> |
| <p>USSR/Geological Prospecting Ore Deposits</p> <p>"Ore Deposits of the Western Carpathians," V. I. Smirnov, 10½ pp</p> <p>"Sovet Geolog" No 29</p> <p>Describes geologic zones of western Carpathians, nature of igneous rock in that region, types of ore deposits, and some of conclusions regarding ore deposits. Under types of ore deposits author discusses paleozoic and tertiary deposits.</p> <p>FDB 69T41</p> | 1948 | <p>USSR/Geological Prospecting Iron Ores</p> <p>1948</p> <p>"Iron Ore Deposits of Central Asia," Kh. M. Abdullayev, A. B. Batalov, V. G. Gor'kovets, 9½ pp</p> <p>"Sovet Geolog" No 29</p> <p>Describes Abial deposits, located 17 km from Abail RR Station; Susingensk magnetite deposits, located around upper reaches of Ugam River; Turangly deposits, some 28 km from "Dal'verzin" Farm located near Begovata.</p> <p>FDB 69T42</p> |
| <p>USSR/Geology Stratification Tectonics</p> <p>"The Geology of the High Mountains in Nizhniy Tagil," N. N. Yakovlev, 5½ pp</p> <p>"Sovet Geolog" No 29</p> <p>Author conducted research on subject region in 1941 making studies of geology of Lower Tagil and Vysoliye Mountains. Investigated some of data presented by Stankevich and Kuznetsov and finds points of difference regarding Stankevich's theories of thickness of lime deposits lying under Vysokiye Mountains. Describes thickness of magnetite layers in mountains, and striated structure of various deposits.</p> <p>FDB 69T43</p> | 1948 | <p>USSR/Geological Prospecting Ore Deposits</p> <p>1948</p> <p>"Pre-Ore Structures of the Berezovsk Deposits in the Central Urals," M. B. Borodayevskaya, N. I. Borodayevskiy, NIGREZ, 16 pp</p> <p>"Sovet Geolog" No 29</p> <p>Data on geology of regions surrounding deposits, results of bores through greenstone layers of structure of ore field, vein granitoids, and an evaluation of practical use of conclusions on structural studies.</p> <p>FDB 69T44</p> |

| RESTRICTED | FDB Periodical Abstracts Scientific No 69 | RESTRICTED |
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| USSR/Geological Prospecting Molybdenum | 1948 | USSR/Geological Prospecting Copper |
| "Paragachaysk Deposits of Molybdenum," G. A. Tvalcherlidze, 10 $\frac{1}{4}$ pp | | "The Structure and New Type of Mineralization in Zangezur," B. S. Vartapetyan, ArmTsvetMetRazvedka, 9 pp |
| "Sovet Geolog" No 29 | | "Sovet Geolog" No 29 |
| Results of work conducted on Paragachaysk molybdenum deposits located on southwestern slopes of Kungur-Alengez Range in Ordubadskiy region of Nakhichevanskiy ASSR. Discusses geologic structure of region, formation and description of ores, and genesis of deposits. | | Discusses general geologic characteristics of Zangezur (Kafanskiy) copper and polymetallic deposits, structure of ore field, and new type of mineralization in mine No 7. Describes location, rocks mixed with mineral, morphological details, structure, and distribution of copper. Brief passage evaluated this new type of mineralization. |
| FDB | 69T45 | FDB |
| USSR/Geological Prospecting Gold Platinum | 1948 | USSR/Geological Prospecting Tin |
| "Importance of Geomorphology in Prospecting for Gold and Platinum Placers," A. P. Sigov, 6 pp | | "Tin of the Angren Plateau (Uzbek SSR)," I. M. Yevfimenko, Uzbek Geol Adm, 4 $\frac{1}{4}$ pp |
| "Sovet Geolog" No 29 | | "Sovet Geolog" No 29 |
| Using geomorphological map of Urals (RF 1:500,000) produced by Ya. S. Edel'shteyn, author shows how it is possible to determine theoretically sites which might be valuable for placer mining of gold and platinum. | | Presence of tin in this region was first determined in 1941. Describes briefly geologic structure of Kenkol River basin, presence of cassiterite in fundamental as well as in alluvial deposits. Evaluation of tin bearing capacity. |
| FDB | 69T47 | FDB |
| USSR/Geological Prospecting Copper | 1948 | USSR/Geological Prospecting Bauxites |
| "Question of the Leached Subzone in Kounradski," F. V. Chukhrov, 2 pp | | "Bauxites of Kosikov Deposits in the Alapayev Region of the Central Urals," Ye. V. Rozhkova, VIMS, 6 pp |
| "Sovet Geolog" No 29 | | "Sovet Geolog" No 29 |
| Drilling in Kounradski copper deposits has shown that below layers of copper oxides there lies a layer of industrially useless ores. This subzone is briefly described. | | Brief description of deposits discovered in 1942 by A. K. Gladkovskiy. |
| FDB | 69T49 | FDB |
| USSR/Geological Prospecting Petroleum Sedimentation | 1948 | USSR/Geology Hydrology Tectonics |
| "The Geology of the Lower Kazansk Deposits of the Buguruslan Petroleum Regions," A. B. Vistelius, All-Union Petroleum Sci Res Geol Survey Inst, 16 $\frac{1}{2}$ pp | | "The Hydrological Division Into Regions of Samarskiye Luki," M. P. Tolstoy, VSEGINGEO, 11 pp |
| "Sovet Geolog" No 28 | | "Sovet Geolog" No 28 |
| Studies were conducted in field of analytic geology. Certain porosity rythms were determined in P ₂ ^{kaz} layers which can be studied mathematically. Rythms had a stratigraphic character. Deposits were found to be a series of petroleum traps. Sedimentation and structural forms in lower Kazansk period were synchronous. | | Shows application of geologostructural principles for hydrological division of Samarskiye Luki region. Describes boundaries and general characteristics of eight regions. |
| FDB | 69T51 | FDB |

| RESTRICTED | FDB Periodical Abstracts Scientific No 69 | RESTRICTED |
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| USSR/Geology Petrology Dolomite | 1948 | USSR/Geology Stratification Petrology |
| "The Boundary of the Upper and Lower Permian in the Central Volga and Kama Regions," B. V. Selivanovskiy, 5½ pp | | "System of the Detailed Stratigraphy and Conditions of the Boundary Layers of the Devonian and Carboniferous (Etren') Periods in the Southern Basin Near Moscow," L. M. Birina, 7½ pp |
| "Sovet Geolog" No 28 | | "Sovet Geolog" No 28 |
| Data obtained by author and other investigations concerning interrelationship of lower Permian and upper Permian layers in subject region. Arrives at series of conclusions regarding nature and history of gypsum-dolomite and anhydrous layers of Volga-Kama region basin. | | Description of subject conditions. Mentions some of fauna located in etren' layer. Lengthy account of fluctuating movements in this region. |
| FDB | 69T53 | FDB |
| USSR/Geological Prospecting Iron Ore Sedimentation | 1948 | USSR/Geological Prospecting Oil Stratification |
| "Geological Structure of the Northeastern Belt and the Genesis of Iron Ore of the Kursk Magnetic Anomaly," I. A. Rusinovich, 23 pp | | "Oil-Bearing Devonian of the Volga Region," V. N. Tikhin, 12 pp |
| "Sovet Geolog" No 28 | | "Sovet Geolog" No 28 |
| Presents geological structure of region around Kursk magnetic anomaly (KMA), descriptions of sedimentary and crystalline layers, character of genesis of iron ores, and suggests further surveying of KMA. | | The Devonian deposits of eastern Volga region have been tapped only in Yablonov area, which is characterized by loose oil sands. Theoretical surveys of rest of region based on distribution and thickness of oil sand layers. On basis of present data it is possible to make a geologic chart of oil regions as far as Don-Medveditskiy fault. Author |
| FDB | 69T55 | FDB |
| USSR/Geological Prospecting Petroleum | 1948 | USSR/Geological Prospecting (Contd) |
| "Prospects of Petroleum of the Upper Devonian and Earlier Deposits of Western Bashkir," Q. A. Trofimuk, 5 pp | | notes that in this region surveyors are interested in possibility of petroleum as well as gas deposits in carboniferous layers. |
| "Sovet Geolog" No 28 | | |
| Description of the various surveys conducted in subject region. Work first begun in May 1940. On basis of data obtained it can be stated that technicians have high hopes for petroleum production in Volga-Ural region. If data obtained by surveys is correct this region should prove to be largest Soviet oil field. | | |
| FDB | 69T57 | FDB |
| USSR/Geological Prospecting Petroleum | 1948 | USSR/Geology Stratification Petrology |
| "Question on the Genesis of the Structure of the Buguruslan Petroleum Regions," L. N. Rozanov, Cen Volga Dept, GSGT, 17½ pp | | "The Upper Paleozoic Layer of the Northwestern Part of the Kel'tmansk Bank," N. N. Rostovtsev, 17 pp |
| "Sovet Geolog" No 28 | | "Sovet Geolog" No 28 |
| Describes stratigraphical cross section, morphological structure of region in general, variations in thickness and faces of strata, relationship of formation of relief to structure of region, and migration of elevations. | | Results of investigations conducted in basins of northern and southern Kel'tma Rivers, Vychegda and Kam tributaries. Descriptions of upper Permian, lower Permian (Kungur and Artinsk stages), upper carboniferous and middle carboniferous layers. |
| FDB | 69T58 | FDB |
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| FDB | 69T59 | |

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| <p>USSR/Geological Prospecting Coal</p> <p>1948</p> <p>"Jurassic Coal Deposits of the Central Oblasts of the Russian Platform," S. P. Vasil'yev, 4 pp</p> <p>"Sovet Geolog" No 28</p> <p>History of studies conducted on coal deposits of Jurassic layers of Russian platform, conditions surrounding formation of Jurassic fresh-water continental deposits, form of distribution and concentration of carboniferous material in these deposits, and conditions under which vegetable matter was accumulated.</p> | | <p>USSR/Geological Prospecting Coal Gas</p> <p>1948</p> <p>"Zoning of the Chemism of the Subterranean Waters and Gas Deposits of the Coal-Bearing Strata of the Don Basin," A. I. Kravtsov, 4 1/2 pp</p> <p>"Sovet Geolog" No 28</p> <p>Establishes relationship between water types and gas zones in coal-bearing layers. However, much more research is needed.</p> | |
| <p>FDB</p> <p>USSR/Geology Sedimentation Photography, Underwater</p> <p>Feb 1948</p> <p>"Underwater Photography of Recent Sedimentation," Prof L. B. Rukhin, 2 pp</p> <p>"Priroda" Vol XXXVII, No 2</p> <p>Describes arrangement of camera and illumination which enables sea bed to be photographed up to a depth of 130 meters. No mention is made of its use in USSR and references are made to American and French journals only.</p> | 69T60 | <p>FDB</p> <p>USSR/Mathematics - History</p> <p>Mar/Apr 1948</p> <p>"Concerning B. V. Gnedenko's Book 'Essays on the History of Mathematics in Russia' and N. I. Akhiyezer's Criticism of This Book," P. S. Aleksandrov, 4 pp</p> <p>"Uspekhi Matemat Nauk" Vol III, No 2 (24)</p> <p>Exposition of history of mathematics in Russia, treated in such a manner as to be intelligible to higher classes in schools. Aleksandrov reviews it favorably and disagrees with Akhiyezer's chief criticism viz. that only one theory of probability is described.</p> | 69T61 |
| <p>FDB</p> <p>USSR/Mathematics - Bibliography</p> <p>Mar/Apr 1948</p> <p>"Mathematical Literature Published in 1946 and 1947," S. I. Taubman, 4 pp</p> <p>"Uspekhi Matemat Nauk" Vol III, No 2 (24)</p> <p>A list of titles of books on mathematics published in USSR, in 1946 and 1947 with numbers and prices.</p> | 69T62 | <p>FDB</p> <p>USSR/Mathematics - Bibliography</p> <p>Jan/Feb 1948</p> <p>"Meetings of the Moscow Mathematical Society" 8 pp</p> <p>"Uspekhi Matemat Nauk" Vol III, No 1 (23)</p> <p>Summaries of papers read at Tuesday meetings of Society from 28 Oct 1947 to 9 Dec 1947.</p> | 69T63 |
| <p>FDB</p> <p>USSR/Mathematics - Bibliography</p> <p>Jan/Feb 1948</p> <p>"Reports of the Mechanics and Mathematics Faculty of Moscow, Dedicated to the Thirtieth Anniversary of the Great October Socialistic Revolution" 1 p</p> <p>"Uspekhi Matemat Nauk" Vol III, No 1 (23)</p> <p>A list of the titles of ten papers read on this occasion, with names of authors.</p> | 69T64 | <p>FDB</p> <p>USSR/Mathematics - Bibliography</p> <p>Jan/Feb 1948</p> <p>"The New Polish Mathematic Journal," L. A. Lysister-nik, 1 p</p> <p>"Uspekhi Matemat Nauk" Vol III, No 1 (23)</p> <p>Analysis of contents of first issue of "Colloquium Mathematicum."</p> | 69T65 |
| <p>FDB</p> <p>USSR/Mathematics - Bibliography</p> <p>69T66</p> | 69T66 | <p>FDB</p> <p>USSR/Mathematics - Bibliography</p> <p>69T67</p> | 69T67 |

| RESTRICTED | FDB Periodical Abstracts Scientific No 69 | RESTRICTED |
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| USSR/Medicine - Blood Medicine - Leukocytes | Apr 1948 | USSR/Medicine - Plants - Diseases Medicine - Immunity |
| <p>"Secrets of the Blood," Prof I. A. Kassirskaya, 1 p</p> <p>"Ogonek" Vol XXVI, No 15</p> | | <p>"Immunity of Plants to Diseases," Prof M. S. Dunin, Laureate of Stalin Prize, 6 pp</p> |
| <p>Cites historical research and experimentation on subject of origin and physical properties of constituent parts of blood, in particular red corpuscles and leukocytes. Deals primarily with major work in this field carried out by Russian scientist and professor, M. I. Arinkin, who developed means of studying blood condition through development of chest operation.</p> | | <p>"Nauka i Zhizn'" No 6</p> |
| LC | 69T68 | FDB |
| USSR/Medicine - Serum, Toxicity Medicine - Blood, Bactericidal Properties | Feb 1948 | USSR/Medicine - Endocrine Glands Medicine - Light, Effect |
| <p>"Spermicidal Effect of Sera," Prof I. F. Leont'yev, 1 p</p> | | <p>"Light and the Endocrine System," Prof A. A. Boytikevich, 6 pp</p> |
| <p>"Priroda" Vol XXXVII, No 2</p> | | <p>"Priroda" Vol XXXVII, No 2</p> |
| <p>Experiments carried out on effect of adding blood serum to sperm. Samples taken from men, and various animals. It was found that whereas animal serum kills animal sperm, human serum does not kill human sperm, but is toxic to animal sperm. In every case spermicidal property was destroyed by heating serum to 55°C for 10-20 minutes.</p> | | <p>Author maintains that endocrine system, sex glands in particular, is affected by light and describes experiments on animals which lend support to this view. Greatest stimulus produced by orange and red rays and least by green. Length of daily exposure is more important factor than intensity of illumination.</p> |
| FDB | 69T70 | FDB |
| USSR/Medicine - Gas, Poisoning Medicine - Heredity, Mechanism | Feb 1948 | USSR/Medicine - Botany Medicine - Biographies |
| <p>"Yperite and Mutations," D. V. Lebedev, 2 pp</p> | | <p>"Review of 'Russian Botanists. A Biographical and Bibliographical Dictionary. Vol I.' by S. Yu. Lipshits," D. V. Lebedev, 3 pp</p> |
| <p>"Priroda" Vol XXXVII, No 2</p> | | <p>"Priroda" Vol XXXVII, No 2</p> |
| <p>Recent medicobiological investigations of mustard gas have shown that it (1) attacks enzymatory apparatus of cell; (2) affects nucleus; in particular, mitotic activity is decreased. Larger doses split nucleus resulting in chaotic dissemination of chromatin. Various investigators have utilized this fact for producing artificial mutations. Chiefly US and British sources; one Russian reference.</p> | | <p>This is first volume of new work which will comprise ten volumes when complete. It will contain biographies of about 8,000 Russian botanists and workers in associated fields from 1725 to 1941. List of sources is appended to each article. Review is, on the whole, favorable.</p> |
| FDB | 69T72 | FDB |
| USSR/Medicine - Microorganisms Medicine - Marine Organisms | Feb 1948 | USSR/Medicine - Botany Medicine - Plants |
| <p>"Review of 'Marine Microbiology. A Monograph on Hydrobacteriology' by Claude E. ZoBell," A. A. Imshenetskiy, Corr Mem Acad Sci USSR, 5 pp</p> | | <p>"An Unusual Plant of Narym," P. P. Khorishikh, 1/2 p</p> |
| <p>"Priroda" Vol XXXVII, No 2</p> | | <p>"Priroda" Vol XXXVII, No 2</p> |
| <p>This American work is favorably reviewed, chapter by chapter.</p> | | <p>Description of water caltrop whose fruit, either raw or cooked, is eaten by local inhabitants.</p> |
| FDB | 69T74 | FDB |

| RESTRICTED | FDB Periodical Abstracts Scientific No 69 | RESTRICTED |
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| USSR/Chemistry - Arsenic Chemistry - Electrolysis | Mar 1948 | USSR/Chemistry - Rearrangements, Allylic Chemistry - Allyl Groups |
| "The Maximum of the Volt-Ampere Curves of Arsenic," N. Ya. Khlopov, Molotov State Pharmaceutical Inst, Oblast Sanitation-Hygiene Lab, 8 pp | | "Acetylene Derivatives. 62. Regrouping of the Allyl System. II. Isomerization of Dialkylene-Vinyl- Carbinols in Esterification Reactions. The Methyl Esters of α, α and β, β Dialkylene-Allyl Alcohols," I. N. Nazarov, I. N. Azerbayev, V. N. Rakcheyeva, Inst Org Chem, Acad Sci USSR, 7 pp |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 |
| Establishes that in sodium sulfate, potassium, ammonium and magnesium bands there occurs a reduction of tri- valent arsenic when weak acids or cobalt salts are present during period when charge is from minus 1.2 to minus 1.5 volts. During such period there is a sharply defined maximum, thus establishing a linear relationship between height of maximum and concentra- tion of arsenic. Submitted 31 Oct 1945. | 69T76 | β, β -dialkylallyl alcohols revert by isomerization to α, α -dialkylallyl alcohols when the former is in methanol solutions containing small amounts of sul- furic acid. There is a simultaneous esterification. |
| FDB | | FDB |
| USSR/Chemistry - Rearrangements, Allylic Chemistry - Allyl Groups | Mar 1948 | USSR/Chemistry - Rearrangements, Allylic (Contd) |
| "Acetylene Derivatives. 63. Reverse Regroupings of the Allyl System. III. Action of Hydrogen Chloride on the α, α and β, β -Dimethylallyl Carbinols and Iso- meric Changes of α, α and β, β -Dimethylallyl Chlorides in Exchange Reactions," I. N. Nazarov, I. N. Azerbayev, Inst Org Chem, Acad Sci USSR, 10 pp | | with a resultant formation of a methyl ether α, α , and β, β -dialkylallyl alcohol mixture. Submitted 7 Apr 1947. |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | |
| Action of gaseous hydrogen chloride on dimethylvinyl- carbinol greatly facilitates reaction of transfer of hydroxyl to chlorine. Reaction of α, α and β, β - dimethylallylchloride and potassium acetate frequently | 69T78 | FDB |
| FDB | | FDB |
| USSR/Chemistry - Rearrangements, Allylic (Contd) | Mar 1948 | USSR/Chemistry - Propionitrile, Beta (N-Piperidyl) |
| causes a regrouping, with a resultant mixture of di- methylvinylcarbinol acetates and β, β -dimethylallyl alcohol. Submitted 7 Apr 1947. | | Chemistry - Synthesis |
| FDB | 69T78 | "Synthesis With the Aid of Nitrile Acrylic Acid. VIII. 1-(1'-Piperidyl)-3-Amino-Propane and Its Urethan Derivatives," A. P. Terent'yev, A. N. Kost, Lab Org Chem imeni Academician N. D. Zelinskiy, Moscow State U, 5 pp |
| USSR/Chemistry - Acids, Oxo, Esters of Chemistry - Synthesis | Mar 1948 | "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 |
| "Steric Barriers in Grignard Reactions. VI. Reactions of Compound Esters of Keto Acids With Magnesium- Haloid-(Ortho Substituted) Aryls," I. I. Lapkin, A. I. Golovkova, Lab Org Chem, Natural Sci Inst, Moscow State U imeni A. M. Gor'kiy, 10 pp | | Piperidine and acrylonitrile were used to produce beta-(N-piperidyl)-propionitrile. Latter was re- duced by sodium potassium alloys to produce 1-(1'- piperidyl)-3-amino-propane. Article describes |
| "Zhur Obshch Khim" Vol XVIII (LXXX), No 3 | | FDB |
| Explains purpose and course of experiments and tests conducted. Describes properties of series of new sub- stances which have as yet not been discussed in chemi- cal literature: ethyl esters alpha-(2,4,6-trimethyl- phenyl)-lactic, alpha-(4-methyl-phenyl)-lactic, alpha- | 69T80 | USSR/Chemistry - Propionitrile, Beta (N-Piperidyl) (Contd) |
| FDB | | properties of some eight new compounds. Submitted 24 Feb 1947. |
| | | FDB |
| | | 69T79 |

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| <p>USSR/Chemistry - Acids, Oxos, Esters of (Contd)</p> <p>(2-methyl-phenyl)-lactic and alpha-(alpha-naphthyl)-lactic acid, alpha-(2,4,6-trimethyl-phenyl)-lactic acid. Submitted 15 Mar 1947.</p> | <p>Mar 1948</p> | <p>USSR/Medicine - Fossils Medicine - Paleontology</p> <p>"Migration of Spiriferidae of the Lower Carboniferous Basin Near Moscow," S. V. Semikhatova, 12 1/2 pp</p> <p>"Sovet Geolog" No 28</p> <p>Much data is available at Paleontological Institute of Academy of Sciences, which deals with fauna of basin in region around Moscow. Data has not been utilized to organize a report on stratigraphic and geologic history of fauna found in this basin. Reports briefly on some of spiriferidae mentioned in recent reports by other scientists.</p> |
| FDB | 69T80 | 69T81 |
| <p>USSR/Metals Copper Nickel</p> <p>"Modern Position on the Question of the Genesis of Copper and Nickel Sulfide Deposits," V. K. Kotul'skiy, 14 pp</p> <p>"Sovet Geolog" No 29</p> <p>Brief description of the characteristics of Canadian, Norwegian, Swedish, Serbian copper and nickel sulfide deposits.</p> | <p>1948</p> | <p>USSR/Metals Alloys, Ferrous Deformation</p> <p>"Plastic Deformation of Alloys With High Coercive Powers," B. G. Livshits, Inst of Steel imeni Stalin, 5 pp</p> <p>"Iz Ak Nauk SSSR, Ser Fiz" Vol XIII, No 2</p> <p>General account of these alloys and their properties. Present-day physics does not as yet provide a satisfactory explanation of various effects. Illustrated by diagrams.</p> |
| FDB | 69T82 | 69T83 |
| <p>USSR/Minerals Bauxite</p> <p>"Bauxite (ALOOH) From the Bauxite Deposits of the Southern Urals," Ye. V. Rozhkova, A. N. Lyamina (Deceased), VIMS, 5 pp</p> <p>"Sovet Geolog" No 29</p> <p>Historical account of studies on natural and synthetic bauxite. Discusses discovery of crystalline bauxite in southern Urals. Results of X-ray studies.</p> | <p>1948</p> | <p>USSR/Minerals Bauxite Ore Dressing</p> <p>"The Methods of Separating Finely Dispersed Minerals From the Bauxites of the Kamensk Region (Ural)," Ye. V. Kopchenova, V. N. Karyukina, VIMS, 7 pp</p> <p>"Sovet Geolog" No 29</p> <p>Discusses methods employed in separation of and surveying for finely dispersed minerals. Describes finely dispersed components of Kamenskiy region bauxite deposits.</p> |
| FDB | 69T84 | 69T85 |
| <p>USSR/Nuclear Physics - Active Substances Medicine - Photosynthesis</p> <p>"Radioactive Hydrogen and Photosynthesis," Prof I. F. Leont'yev, 2 pp</p> <p>"Priroda" Vol XXXVII, No 2</p> <p>Outlines various theories of photosynthesis. Discusses possibility of chlorophyll acting as a hydrogen donor. Experiments were carried out on sea plant <i>Chlorella pyrenoidosa</i>, using a solution of potassium bicarbonate in radioactive water produced by a cyclotron. Results were not conclusive but tend to disprove donor hypothesis.</p> | <p>Feb 1948</p> | <p>USSR/Physics Fluid Dynamics</p> <p>"Mechanical Properties of Fluids," I. V. Radchenko, 8 pp</p> <p>"Priroda" Vol XXXVII, No 2</p> <p>Explains terms "hardness," "brittleness," "compressibility," "tensile strength" as applied to fluids and describes associated phenomena. Mentions numerous practical applications, e.g. design of propeller blades, supersonic sounding devices, etc.</p> |
| FDB | 69T86 | 69T87 |

| RESTRICTED | FDB Periodical Abstracts Scientific No 69 | RESTRICTED |
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| <p>USSR/Physics Solar Phenomena Filters</p> <p>Feb 1948</p> <p>"A New Interferential Filter and Its Use in Helio- physics," R. S. Gnevysheva, 2 pp</p> <p>"Priroda" Vol XXXVII, No 2</p> <p>Prof B. Lyot (French) invented a new interferential filter, details of which were published in "Annales d'Astrophysique" in 1944. Gives sketch of filter and explains principle of operation. Describes Prof Lyot's application of filter to observation of sun's corona.</p> <p>FDB 69T88</p> | <p>USSR/Physics Solar Phenomena</p> <p>Feb 1948</p> <p>"The Solar Constant," Prof N. W. Kalitin, 9 pp</p> <p>"Priroda" Vol XXXVII, No 2</p> <p>Solar constant is defined and methods of computing it are given. Monthly and annual variations of con- stant are shown diagrammatically. Attempts to con- nect constant with sunspots and with the weather are also mentioned.</p> <p>FDB 69T89</p> | |
| <p>USSR/Physics Sound, High-Frequency Wave Propagation</p> <p>Feb 1948</p> <p>"Ultrasonics," S. B. Gurevich, V. G. Panchenko, 14 pp</p> <p>"Priroda" Vol XXXVII, No 2</p> <p>Ultrasonics is study of sound waves of frequency from 20,000 cycles to 1,000 megacycles per second. De- scribes methods of producing and investigating these waves. Explains mathematical equations governing their propagation. Mentions various effects of waves together with application to metallurgy, television, etc.</p> <p>FDB 69T90</p> | <p>USSR/Physics Sound, High-Frequency Medicine - Therapy</p> <p>Jun 1948</p> <p>"Utilization of Ultrasonics in Medicine," I. M. Feygenberg, 4 pp</p> <p>"Nauka i Zhizn" No 6</p> <p>Describes various medical applications of ultra- sonics, e.g., heating of tissues, examination of bone fractures, sterilization, etc.</p> <p>FDB 69T91</p> | |
| <p>USSR/Physics Optics Photoelectricity</p> <p>Mar/Apr 1948</p> <p>"Optic and Photoelectric Properties of Antimony-Cesium Cathodes," N. D. Morgulis, P. G. Borzyak, B. I. Dya- tilovitskaya, Inst Phys, Acad Sci USSR, 16 pp</p> <p>"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2</p> <p>Detailed account of recent research in this field accompanied by a sketch of apparatus and graphs show- ing experimental results. Discusses theory of sub- ject. Authors consider that a substantial contribu- tion has been made to existing knowledge and theoreti- cal and practical investigations are being continued.</p> <p>FDB 69T92</p> | <p>USSR/Physics Wave Guides Diffraction</p> <p>Mar/Apr 1948</p> <p>"The Theory of Diffraction on Two Parallel Semisur- faces," L. A. Vaynshteyn, 15 pp</p> <p>"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2</p> <p>Author's formulas for wave guides are difficult to apply in certain instances. Considers extreme case, when parameter approaches infinity, and deduces simpler limiting formulas. Submitted 7 Jan 1948.</p> <p>FDB 69T93</p> | |
| <p>USSR/Physics Crystallography Structure Analysis</p> <p>Mar/Apr 1948</p> <p>"Review of 'Structure of Ionic Crystals and Metallic Phases' by N. V. Belov," L. M. Belyayev, 2 pp</p> <p>"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2</p> <p>Work is examined, chapter by chapter. After describ- ing basic laws of crystalline structure, author shows how they must be modified for certain elements because of peculiarities of their electronic structure. This class includes such important systems as carbides of iron and chromium. Among other subjects discusses phenomena of twinning and pseudosymmetry. Book con- tains 174 drawings.</p> <p>FDB 69T94</p> | <p>USSR/Physics Magnetism Magnetic Fields</p> <p>Mar/Apr 1948</p> <p>"Relation of the Energy Constant of Magnetic Anisot- ropy to the Intensity of the Magnetic Field," L. V. Kirenskiy, 5 pp</p> <p>"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2</p> <p>In 1941 a meteorite which had fallen near Boguslavka proved on examination to be monocrystalline. De- scribes electromagnetic experiments performed on a disc cut from this meteorite. Presents sketches of apparatus and magnetograms obtained. Results show that Tarasov's formula (Phys Rev, 1939) is valid for</p> <p>FDB 69T95</p> | |

| RESTRICTED | | FDB Periodical Abstracts Scientific No 69 | RESTRICTED | |
|---|--------------|---|---|--------------|
| USSR/Physics Ferromagnetism Fields, Electromagnetic | Mar/Apr 1948 | | USSR/Physics (Contd) | Mar/Apr 1948 |
| "The Properties of Ferromagnetics in Alternating Fields," K. M. Polivanov, 18 pp | | | field strengths up to 30,000 oersteds, and not merely 4,000 oersteds. | |
| "Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2 | | | | |
| Properties of ferromagnetics in alternating fields can be assessed only by strengths of electric and magnetic fields on surface of object. Describes mathematical method of obtaining values for interior of object, and is illustrated with graphs and diagrams. | | | | |
| FDB | 69T96 | | FDB | 69T95 |
| USSR/Radio Waves - Propagation Radio Waves - Refraction | Mar/Apr 1948 | | USSR/Radio Wave Guides | Mar/Apr 1948 |
| "Propagation of a Direct Wave Around the Earth in Connection With the Calculation of Diffraction and Refraction," V. A. Fok, 17 pp | | | "Exact Solution of the Problem of a Rectangular Wave Guide With an Open End," L. A. Vaynshteyn, 20 pp | |
| "Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2 | | | "Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2 | |
| Theory of this subject is of practical interest in connection with interference methods of determining distances. Allowance is made both for diffraction of wave due to curvature of earth, refraction in lower layers of atmosphere, and requisite differential equations are obtained and solved. | | | Presents full mathematical treatment of subject problem. Method is applicable to other cases, e.g., circular wave guides. For this paper, Presidium of USSR Academy of Sciences awarded to author the I. M. Mandel'shtam prize for best contribution to radio in 1947. Submitted 27 Jun 1947. | |
| FDB | 69T97 | | FDB | 69T98 |
| USSR/Radio Oscillators, Electron Tube Oscillators, Stabilized | Mar/Apr 1948 | | USSR/Radio Radio Waves - Propagation Ionosphere | Mar/Apr 1948 |
| "Stabilization of the Frequency of Tube Oscillators," S. M. Rytov, A. M. Prokhorev, M. Ye. Zhabotinskiy, 2 pp | | | "Session of the All-Union Scientific Council on Radio Physics and Radio Engineering of the Division of Physical and Mathematical Sciences of the Academy of Sciences USSR," M. Ye. Zhabotinskiy, 4 pp | |
| "Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2 | | | "Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2 | |
| Discusses subject with reference to small parameter method as applied to quartz stabilization. | | | Session of 8-12 Dec 1947 devoted to questions of solar radio emanations, propagation of radio waves, and investigation of ionosphere. Gives summary of each of 20 papers read on above topics. | |
| FDB | 69T99 | | FDB | 69T100 |
| USSR/Soil Science Chalk | Apr 1948 | | USSR/Soil Science Colloids | Apr 1948 |
| "Principles and Methods of Dokuchayev in the Study of the Soil of Latvia," P. S. Kulitans, 6 pp | | | "Soil as a Colloidal System," L. N. Barsukov, All-Union Inst Fertilizers, Agr Tech and Agr Soil Studies imeni Gedroyts, 11 pp | |
| "Pochvoved" No 4 | | | "Pochvoved" No 4 | |
| Dokuchayev bases much of his theory and conclusions regarding soil characteristics on nature of chalk-coal deposits of various regions. Investigated factors and conditions surrounding process of soil formation or 'soil formers.' Brief exposition of several methods and reliability of data. | | | Colloidal-chemical system of soil studies has received much attention in last ten years. Book known as "The Soil - A Dispersion System" released some 30 years ago by Vigner was first indication that soil was a colloidal system. Explains 'dispersoidological' point of view of studying soil. | |
| FDB | 69T101 | | FDB | 69T102 |

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FDB Periodical Abstracts Scientific No 69

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USSR/Soil Science - History Apr 1948

"History and Modern Status of Soil Science. Conference of Scientific Workers of the Don and Northern Caucasasia," F. Gavriljuk, Ye. Tupalova, 1 p

"Pochvoved" No 4

Conference convened 24-28 Dec 1947 at Rostov on the Don. Brief account of proceedings and papers submitted for evaluation. Exposition held in connection with conference showed "Productive Capacity of Don Region and Northern Caucasasia."

FDB 69T103

USSR/Soil Science Apr 1948

Clay
X-Ray Analysis

"Roentgenographic and Thermographic Characteristics of Montmorillonite Clays," N. I. Gorbunov, I. G. Tsyurupa, Ye. A. Shurygina, 8 pp

"Pochvoved" No 4

This is one of widest distributed mineral clays. Tests conducted to clarify genesis and structure of montmorillonite clays. However, it was first necessary to determine similarities and differences of subject clays to other clays in various deposits. X-ray studies made to determine curves showing

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ID Intelligence Division Library
AMC Air Documents Division, Air Materiel Command
ST Reference Division, State Department
BM Bureau of Mines, Department of Interior
BS National Bureau of Standards
SI Smithsonian Institution
LC Library of Congress
FDB Foreign Documents Branch, CIA
COM Department of Commerce
AF A-2 Library, USAF

USSR/Soil Science (Contd) Apr 1948

effect of heating on subject clays. X-ray studies also made of colloidal soils and comparisons were made of two series of X-ray data.

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