KOLOTYRKIN, Ya.M.; MAKAROV, V.A.; KUZUB, V.S.; TSINMAN, A.I.; KUZUB, L.G.

Anodic protection of heat exchangers made of 1Kh18N9T steel in concentrated sulfuric acid at temperatures of 100 - 120°. Zashch. met. 1 no.5:598-600 S-O '65. (MIRA 18:9)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni L.Ya.Karpova, Moskva.

ACC NR: AP7002195 SOURCE CODE: UR/0203/66/006/006/1071/1075

AUTHOR: Kuzubov, F. A.

ORG: Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery, i rasprostraneniya radiovoln AN SSSR)

TITLE: Some properties of medium-wave propagation above uneven terrain

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 6, 1966, 1071-1075

TOPIC TAGS: radio wave propagation, medium frequency

ABSTRACT: Propagation of medium-length radio waves along statistically uneven terrain is studied. Although different in nature from radio wave propagation over even earth surface, propagation along uneven surfaces can lead to the same changes with distance in the electromagnetic field. Calculation of the average field above ground which has uniformly irregular electrical properties and uneven surface can be reduced to calculation of a field above smooth ground by introducing the apparent parameters σ_k and ε_k (apparent conductivity and dielectric constant of the ground, respectively). This method is only valid if the heights of the ground irregularities are much smaller than the wavelength ($d \ll \lambda$) and if the slopes of the discontinuities are mild ($\frac{d}{l} \ll 1$, where l is the horizontal length of the irregularities). Measurements of the attenuation made at λ = 295, 548 and 1730 m confirmed theoretical results. Orig. art. has: 2 figures and 11 formulas.

SUB CODE: 17/ SUBM DATE: 01Jul65/ ORIG REF: 001/ OTH REF: 002
UDC: 550.388.2

Card 1/1

Kuzubov, I. I

18(5,7), 25(5)
AUTHOR: None Given

SOV/125-59-5-13/16

TITLE: Scientific-Technical Conference on Questions of Welding Engineering

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 5 (74) pp 95-96 (USSR)

ABSTRACT: The scientific-technical conference on question of welding engineering convened in Khar'kov from March 11- 13, 1959. The following organisations convened in the conference: The Scientific-Technical State Committee of the Council of Ministers of the UkrSSR, the Khar'kov Sovnarkhoz, the Institute of Electric Welding imeni Ye.O. Patona of the Academy of Sciences of the UkrSSR, the Kiyev and Khar'kov oblast administrative KPO of the machine industry. After the introduction of the Chairman of UNTK UkrSSR, G.F. Kostenko, the conference heard the report of Academician AS UkrSSR, B.E. Paton "On the Reintroduction and production of Welding Engineering". After that, the following reports were heard at the conference: Member of Gos Plan UkrSSR

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D.I. Polyakov on establishing materials engineering bases in the republic for the development of welding. Vice Chairman of Sovnarkhoz V.M. Yakovlev on the introduction of welding engineering in the enterprises of the Dnepropetrovsk economic administrative area. Chief of Technical Administration of the Khar'kov Sovnarkhoz I.I. Kuzubov on the introduction of progressive welding techniques in the enterprises of the Sovnarkhoz; Comrade Ratnikov on successes of the Zaporozh'ye Metal Construction Factory in introducing welding engineering; Candidate of Technical Sciences I.I. Frumin (Institute of Electric Welding imeni Ye.O.Paton) on new works on automatic welding; Chief of Welding Department of the Novomoskovsk Machine Factory V.V. Yaremenko on the use of electric Slag welding in heavy machine building. Candidate of Technical Sciences Yu. A. Yurenko spoke on ceramic flux for welding. Chief of Welding Department of Khar'kov Turbine Factory, S.I. German on the use of radioelectric welding in carbon dioxide. Candi-

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date of Technical Sciences P.I. Savbo on new equipment for welding, worked out by the Institute of Electric Welding imeni Ye.O. Paton. Candidate of Technical Sciences V.K. Lebedev (Institute of Electric Welding imeni Ye.O. Paton) on new works on point-welding. Engineer I.M. Zaychik on new welding equipment, worked out by VNIIESO. Vice Director of the Institute of VNII Avtogen, Candidate of Technical Sciences I.A. Antonov on recent achievements in the gas flame treatment of metals. Candidate of Technical Sciences M.P. Kazakov (Chair of Technology of Metals at Moscow Institute of the Meat and Milk Production) on a new method of vacuum diffusion welding.

Card 3/3

KUZUBOV, S.A., zasluzhennyy vrach RSFSR; MINNULLIN, P.R.

Giant spermatocele. Urol. i nefr. no.2:62-63 '65. (MIRA 19:1)

ZHAGA, P.I., inzh., red.; VOROB'YEV, S.A., kand.tekhn.nauk, red.; KAHLOV, A.A., inzh., red.; KUZUBOV, V.I., inzh., red.; LEONOV, A.Ye., dotsent, red.; TUPITSYN, A.I., kand.tekhn.nauk, red.; KHMARA, S.M., kand.tekhn.nauk, red.; DONSKOY, Ya.Ye., red.; KARDASH, G.I., red.; LYALYUK, I.P., red.; LIMANOVA, M.I., tekhn.red.

[Mechanization and automation; collected articles on the introduction of mechanization and automation at machinery plants in Kharkov] Mekhanizatsiia i avtomatizatsiia; sbornik statei ob opyte vnedreniia mekhanizatsii i avtomatizatsii na Khar'kovskikh mashinostroitel'nykh zavodakh. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1960. 373 p. (MIRA 14:4)
(Kharkov--Machinery industry) (Automation)

KUZUDZHIYSKIY Krym, inzh.

Purification of fecal water by oxidizing ditches. Khidrotekh i melior 7 no.3:82-84 '62.

KUZURMAN, A.N.; PLYUSNIN, S.P., instruktor

Improve the design of the KTS-5 crane. Transp.stroi. 9 no.8: 38-40 Ag '59. (MIRA 13:1)

1. Nachal'nik Chelyabinskoy normativno-issledovatel'skoy stantsii.

(Cranes, derricks, etc.)

KUZURMAN, A.N.; PLYUSNIN, S.P., instruktor

Mechanized levelling of the overflow prisms of roadbeds.
Transp.stroi. 10 no.8:26--8 Ag '60. (MIRA 13:8)

1. Nachal'nik Chelyabinskoy nauchno-issledovatel'skoy stantsii Orgtransstroya (for Kuzurman).
(Railroads--Earthwork)

KUZURMAN, A.N.; SAMOKHVALOV, V.V., starshiy inzh.

Using the SSSM-680 derrick instead of a crane. Transp. stroi. 11 no.2:52-53 F '61. (MIRA 14:2)

1. Nachal'nik Chelyabinskoy nauchno-issledovatel'skoy stantsii Orgtransstroya (for Kuzurman).
(Cranes, derricks, etc.)

PAVLIK, Oldrich, inz. (Ostrava); DUFKA, Josef, inz. (Ostrava); KUZUSNIK, Josef (Senov).

High pressure liquid fuel burner. Energetika Cz 14 no.2: 99-100 F'64.

KUZVART, M.

Report on the exploration of magnesite deposits in Slovakia. p.178.
VESTNIK, Prague, Vol. 29, no. 4, 1954.

SO: Monthly List of East European Accessions. (EEAL), LC, Vol. 5, No. 6 June 1956, Uncl.

KUŽVART, Miloš

Geological and petrological conditions of the talc deposits and of their surroundings at Endšte in Slovakia. Miloš Kužvart. *Sborník ústřed. ústavu geol., oddíl geol.* 22, 145–96(1955)(English summary).—The talc deposits are bound to magnesite bodies located at the border-line between the garnet mica schist zone and the phyllite and migmatic zone. Talc occurs in veins several ft. thick, accompanied by chlorite-talc schist (I), "light mica," "dark mica," quartz, and dolomite. Talc was formed in the fissures of magnesite by the addn. of SiO_2 to the hydrothermal soln. The purity of talc is higher if more is present. Z. Pick

KUZVART, MIROSLAV

Thermal dehydration of talcs from near Hnúšta, Slovakia. Miroslav Kuzvart. *Věstník ústřed. ústavu geol.* 30, 168–72 (1955) (English summary).—Talc grades into chlorite-rich talc schist. Dehydration curves are given for pure talc, leuchtenbergite, and clinochlore, and for mixts. The quality of talc samples can be detd. from the dehydration curve. Michael Fleischer

COUNTRY : Czechoslovakia D
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 85791

AUTHOR : Kuzvart, M.
INST. : Central Institute of Geology
TITLE : Talc Deposits at Spissko-Gererske Rudohori in Slovakia

ORIG. PUB. : Sb. Ustredn. ustavu geol. Odd. geol., 1956 (1957), 23, No 2, 441-474

ABSTRACT : Of the three types of talc deposits associated with serpentinites, dolomites, and magnesites, the first two are considered. In the district of Muranska Dlge Luka serpentinite surrounded by talc occurs as a lenticular body in micaceous gneiss. Formation of talc took place according to equation: $2H_4(Mg,Fe)_2Si_2O_8 + 3CO_2 = H_2Mg_3Si_4O_{12} + (Mg,Fe)\cdot CO_3 + 3H_2O$. The principal active component of the solutions was CO_2, which resulted at some places in formation of individual dolomite veins. Hydrothermal changes of gneiss are manifested by chloritization. A deposit of talc in dolomites is described in the district of Klsava, where extensive development occured of green shale formed

CARD: 1/2

COUNTRY : Czechoslovakia D
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 85791

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : from diabasic tuffites. At the bottom of the [illegible] the dolomite has been converted to magnesite, as a result of metasomatosis. here is also found talc the formation of which took place according to the scheme: $(Mg,Ca)(CO_3)_2 + 2H_2O + 8SiO_2 = Mg_6Si_8O_{20}(OH)_4 + 6CaCO_3 + 6CO_2$. Concurrently, during magnesial metasomatosis and regional metamorphism, was formed clinochloritic shale.

G. Vorob'yev.

CARD: 2/2

KUZVART, M. ; SUK, M.

"Palevolcanological observations carried out on the Lower Permian extrusion porphyry at Vrani hory in Northeastern Bohemia."

p. 333 (Central Geologic Institute, Czechoslovak Academy of Sciences) Vol. 32, no 5, 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. no. 5, May 1958

KUZVART, Milos

Commemorating the 60th birthday of Academician Jaromir Koutek.
Cas min geol 7 no.3:367-368 '62.

KONTA, I.[Konta, J.]; KUZHVART, M.[Kuzvart, M.]; BENESHOVA, Z. [translator]

Laterites and bauxites in Czechoslovakia. Kora vyvetr. no.5: 138-156 '63. (MIRA 16:7)

1. Karlov universitet, Praga.
(Czechoslovakia—Laterite)
(Czechoslovakia—Bauxite)

KUZVART, Milos, RNDr., kandidat geologicko-mineralogickych ved

Geology and deposist$ of the Mongolian People's Republic.
Geol Pruzkum 5 no.11:323-325 N '63.

1. Karlova universita, prirodovedecka fakulta, Praha.

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L 56492-65
ACCESSION NR: AP5017800

UR/0286/65/000/011/0031/0031
631.859.12.002.2

AUTHOR: Karatayev, I. I.; Mel'nik, B. D.; Repenkova, T. G.; Sviridova, A. G.; Doktorov, N. L.; Nazarov, G. N. Raygorodskiy, I. M.; Vasil'yev, B. T.; Bystrov, M. V.; Babaryka, I. F.; Kuzyak, F. A.; Fel'dman, M. V.; Soverchenko, D. A.; Buslakova, L. P.; Toroptseva, N. P.; Lyubimov, S. V.; Ul'yanov, A. T.; Andres, V. V.; Sobchuk, Yu. I.; Tsetlina, M. M.; Andreyev, V. V.; Kramer, G. L.

TITLE: A method for producing phosphoro-potassium fertilizers. Class 16, No. 171-409

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 31

TOPIC TAGS: fertilizer, phosphate, potassium

ABSTRACT: This Author's Certificate introduces a method for producing phosphoro-potassium fertilizers using cement dust (waste from cement production) as the potassium raw material. The process of adding potassium to the product is simplified and evaporation is prevented by using a 20% excess of an acid which directly neutralizes the cement dust for breaking down the phosphate raw material.

Card 1/2

L 56492-65

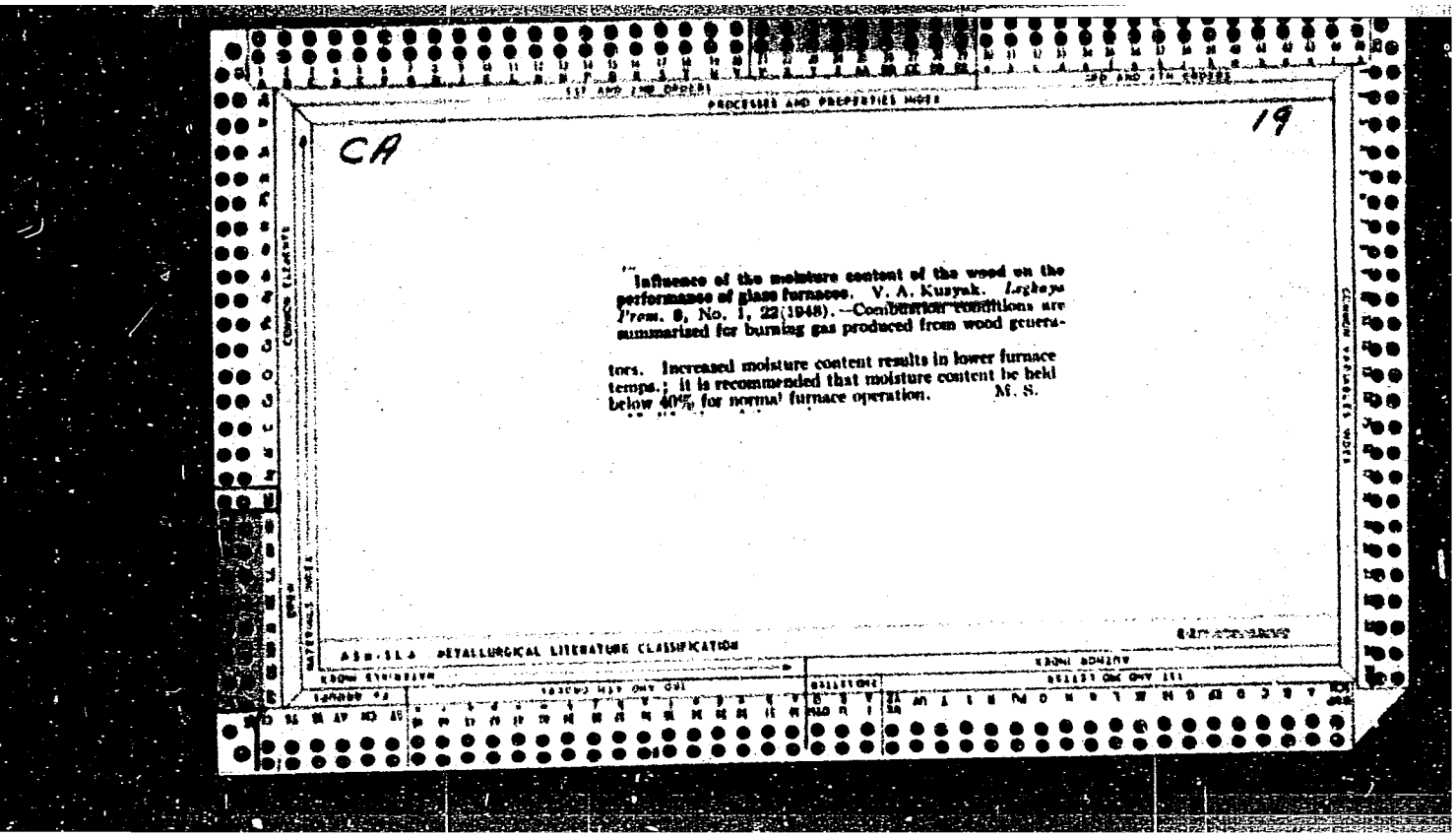
ACCESSION NR: AP5017800

ASSOCIATION: none

SUBMITTED: 29Mar62 ENCL: 00 SUB CODE: GC, LS

NO REF SOV: 000 OTHER: 000

Card 2/2



CA

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"Influence of the moisture content of the wood on the performance of glass furnaces. V. A. Kuzyak. *Legkaya Prom.* 8, No. 1, 22(1948).—Combustion conditions are summarized for burning gas produced from wood generators. Increased moisture content results in lower furnace temps.; it is recommended that moisture content be kept below 40% for normal furnace operation. M. S.

KUZYAK, V.A.; VOLKOV, I.I., retsenzent; PLEMYANNIKOV, M.N., redaktor; NEKRASOVA, O.I., tekhnicheskiy redaktor

[Kilns for annealing glass] Pechi dlia otzhiga stekla. Moskva, Gos. nauchno-tekhn. izd-vo legkoi promyshlennosti, 1952. 152 p. [Microfilm] (MLRA 7:10)
(Kilns) (Glass manufacture)

Kuzyak, V. A.

GINZBURG, David Borisovich, doktor tekhnicheskikh nauk; DELIKISHKIN, Sergey Nikolayevich, kandidat tekhnicheskikh nauk; KHODOROV, Yevgeniy Iosifovich, kandidat tekhnicheskikh nauk; CHIZHSKIY, Anatoliy Fedotovich, kandidat tekhnicheskikh nauk; ZIMIN, V.N., dotsent, retsenzent; KUZYAK, V.A., dotsent, retsenzent; NOKHRATYAN, K.A., kandidat tekhnicheskikh nauk, retsenzent; IVANOV, A.N., dotsent, retsenzent [deceased]; BUDNIKOV, P.P., redaktor; FRADKIN, A.Ye., kandidat tekhnicheskikh nauk, nauchnyy redaktor; GOL'DENBERG, L.G., inzhener, nauchnyy redaktor; GLEZAROVA, I.L., redaktor; GLADKIKH, N.N, tekhnicheskiy redaktor

[Furnaces and driers in the silicate industry] Pechi i sushila silikatnoi promyshlennosti. Izd. 2-oe, perer. Pod red. P.P.Budnikova. Moskva, Gos. izd-vo lit-ry po stroit. materialam, 1956. 455 p. (MLRA 10:3)

1. Deystvitel'nyy chlen Akademii nauk USSR (for Budnikov)
(Kilns) (Clay industries)
(Drying apparatus)

KUZYAK, V.A.

Recuperative glass-melting tank furnaces. Stek. i ker. 13 no.12: 1-5 D '56. (MLRA 10:2)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
(Glass manufacture) (Furnaces)

AUTHOR: Kuzyak, V. A. SOV/72-58-11-5/15

TITLE: Supplementary Electrical Heating of Metals in Reverberatory Tank Furnaces (Dopolnitel'nyy elektronagrev steklomassy v plamennykh vannykh pechakh)

PERIODICAL: Steklo i keramika, 1958, Nr 11, pp 12 - 16 (USSR)

ABSTRACT: The specific metal output can be increased by intensifying the temperature conditions in the furnace. In figure 1 are shown curves of the dependence of the production increase in output upon the temperature of the furnace. The author refers to the paper by M. G. Stepanenko (Ref 1). Figure 2 shows the dependence of the increase in the heat content upon the furnace temperature. The amount of heat to which the metal is exposed can be increased by a supplementary electrical heating of the metal. This method of heating has the following advantages: the additional heating can be applied to any desired section of the furnace; the temperature of the metal can be increased without increasing the temperature of the atmosphere in the furnace, which is a very critical factor in maintaining the stability of the heat-resistant furnace walls; the efficiency of the electri-

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cal heating is almost double that of the flame heating. The additional electrical heating of the metal takes place by connecting the metal into an electric circuit. The Moskovskiy khimiko-tekhnologicheskiy institut, Institut ispol'zovaniya gaza AN USSR i GIS (the Moscow Chemical-Technological Institute and the Institute of Application of Gas AS UkrSSR and GIS) investigated the mechanics of reverberatory tank furnaces and ascertained the amount of heat which is absorbed by 1 m^2 of the metal surface; they referred to papers by A. A. Sokolov, N. A. Zakharikov, L. S. Pioro and D. B. Ginzburg (Ref 2). The results are given in the table. Figure 3 shows the dependence of the specific capacity of the melting zone of the furnace upon the general increase in the capacity of the furnace. Figure 4 shows the dependence of the necessary capacity of the supplementary electrical heating upon the capacity of the furnace. Plots of change in tension at different specific furnace outputs and different furnace breadths are given in figure 5. Various schematic diagrams of a supplementary electrical heating device in the tank furnace are given in figure 6. There are 6 figures, 1 table, and 6 references, 4 of which are Soviet.

KUZYAK, V.A.

Cooling glass articles in tunnel annealing furnaces. Stek. i ker. 18 no.11:4-9 N '61. (MIRA 15:3)
(Glass manufacture)

KUZYAK, V. A.

PHASE I BOOK EXPLOITATION SOV/6060

Vargin, V. V., Professor, ed.

Emalirovaniye metallicheskikh izdeliy (Enameling of Metal Articles). Moscow, Mashgiz, 1962. 546 p. Errata slip inserted. 7500 copies printed.

Reviewer: A. S. Ragozin, Engineer; Ed.: M. V. Serebryakova, Engineer; Eds. of Publishing House: I. A. Borodulina, A. I. Varkovetskaya, and T. L. Leykina; Tech. Ed.: L. V. Shchetinina; Managing Ed. for Literature on Machinery Manufacture (Leningrad Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for specialists in enameling, technical personnel of plants, and personnel of scientific research laboratories and institutes. It can also be used by teachers and students of schools of higher education.

COVERAGE: The book provides a brief discussion on raw materials and processes for melting enamels, describes in detail furnaces for melting enamels,

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and offers some recommendations for selection and calculation of furnaces. A special section [Ch. IV, sect. 8] on heat-resistant coatings is included. A flowsheet is given for centralized production of enamels. The properties and preparation of slips are also comprehensively described. The production of new enameled products such as pipelines, architectural and building materials, and aluminum articles is described. Individual chapters were written both by plant personnel and by technical personnel of scientific research institutes and schools of higher eduction. [See: Table of Contents.] No personalities are mentioned. There are 638 references, mainly Soviet, with many English and some German.

TABLE OF CONTENTS [Abridged]:

PART I. ENAMELING TECHNOLOGY

PART II. THE TECHNOLOGY OF ENAMELING METAL ARTICLES

BEREZHNOY, A.I.; BRODSKIY, Yu.A.; BRONSHTEYN, Z.I.; VEYNBERG, K.L.; GALDINA, N.M.; GLETMAN, B.A.; GINZBURG, D.B.; GUTOP, V.G.; GUREVICH, L.R.; DAUVAL'TER, A.N.; YEGOROVA, L.S.; KOTLYAR, A.Ye.; KUZYAK, V.A.; MAKAROV, A.V.; POLIYAK , V.V.; POPOVA, E.M.; PRYANISHNIKOV, V.P.; SENTYURIN, G.G.; SIL'VESTROVICH, S.I., kand. tekhn. nauk, dots.; SOLOMIN, N.V.; TEMKIN, B.S.; TYKACHINSKIY, I.D.; SHIGAYEVA, V.F.; SHLAIN, I.B.; EL'KIND, G.A.[deceased]; KITAYGORODSKIY, I.I., zasl. deyatel' nauki i tekhniki RSFSR, doktor tekhn. nauk, prof., red.; GOMOZOVA, N.A., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Handbook on glass manufacture] Spravochnik po proizvodstvu stekla. [By] A.I.Berezhnoi i dr. Pod red. I.I.Kitaigorodskogo i S.I.Sil'vestrovicha. Moskva, Gosstroiizdat. Vol.2. 1963. 815 p. (MIRA 16:12)

(Glass manufacture)

KUZUB, V.S.

PAMFILOV, A.V.; KUZUB, V.S.

Absorption phenomena and the electrodeposition of cadmium.
Ukr.khim.zhur. 28 no.8:939-944 '62. (MIRA 15:11)

1. Chernovitskiy gosudarstvennyy universitet.
(Cadmium plating)
(Absorption)

ZINCHENKO, A.A., nachal'nik mostopoyezda; KUZURMAN, A.N.; PLYUSNIN, S.P.

Electrothermal tightening of rod reinforcement. Transp. stroi. 12 no.9:26-29 S '62. (MIRA 16:2)

1. Nachal'nik Chelyabinskoy nauchno-issledovatel'skoy stantsii Orgtransstroya (for Kuzurman). 9. Starshiy inzhener Chelyabinskoy nauchno-issledovatel'skoy stantsii Orgtransstorya (for Plyusnin).

(Concrete reinforcement)

KUZJAKIN, A. P.

"N. A. Bobrinsky, B. A. Kiosnozor and A. P. Kuzjakin, Synopsis of Mammals of the U.S.S.R." (p. 125) Rev. by Sepatov, V. V.

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologii) Vol. XX, No.1, 1945.

KUZYAKIN, A.P.

History of the spreading of the brown rat, its present distribution and habitats in the U.S.S.R. Mat. k pozn. fauny i flory SSSR. Otd. zool. no.22:22-81 '51. (MIRA 11:3)

(Rats)

USSR/Medicine - Epidemiology, Transmitters May/Jun 52
of Infectious Diseases

"On the Propagation of Gray Rats in Cities," A. P. Kuzyakin

"Byul Mosk Obshch Ispytat Prirody, Otd Biol", Vol LVII, No 3, pp 15-26

Discusses in detail propagation of Rattus norvegicus Berk, fluctuations of rat population from year to year as affected by natural enemies, extermination, etc. States that in this investigation data from the "Autopsy Journals" of one of the observation stations of the Min of Pub Health USSR were used. To this station were delivered rodents caught by workers of disinfection bureaus in all districts of a large city located in the central belt of the RSFSR.

223T27

KUZYAKIN, A. P.

223T27

KUZYAKIN, A.P.

KUZYAKIN, A.P.

Tasks of zoologists and zoogeographers in carrying out the resolutions of the September Plenum of the Central Committee of the Communist Party of the Soviet Union. Biul. MOIP. Otd. biol. 59 no.3:3-16 My-Je '54. (MLRA 7:7)
(Zoology) (Veterinary medicine)

KUZYAKIN, A.P.

Consideration of oölogical features and characteristics of nesting areas in the classification of birds. Biul.MOIP.Otd. biol. 59 no.6:27-35 '54. (MIRA 8:2)
(Birds--Classification)

Kuzyakin, A.P.

KUZYAKIN, A.P.

Introduction of bait methods to control the lesser suslik in southeastern and Kazakh livestock districts. Trudy probl. i tem.sov. no.5:70-71 '55. (MLRA 8:12)

1. Moskovskiy oblastnoy pedagogicheskiy institut
(Suslika) (Pesticides)

KUZYAKIN, A. P.

Review of V. G. Polezhayev and L. A. Kirin's brochure, "Methods of Rodent Control in Cities," Library of the Sanitary Physician and Epidemiologist, Medgiz, 1955, p 46, by Prof A. P. Kuzyakin, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 27, No 9, Sep 56, pp 108-109

The reviewer criticizes a brochure on the subject of rodent control in cities, which mentions a number of useful and accurate general concepts and principles concerning large-scale deratization, but does not cover them in sufficient detail to be of practical assistance to persons working in this field. The decisive role of organs of public health and the necessity for coordinating control measures by various groups are alluded to but not clarified.

It is the reviewer's opinion that slight indication has been given as to how the measures recommended could or should be carried out. Kuzyakin condemns the excessive concern with documentation in the brochure as a complete waste of time and considers that practical information has been neglected.

The methodology proposed in the brochure is also sharply criticized. Chemical and mechanical agents and methods outlined by the authors are considered to be ineffectual or impracticable.

Sum 1258

Kuzyakin, A.P.

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 16, 25 March, 1957, 21263

Author : Kuzyakin, A.P.
Inst : not given
Title : On the Theory of Species and Evolution of Species. (Closely Related Chiroptera Species in the Aspect of Their Historical Development).

Orig Pub: Tashkent, Trudi In-ta zoologiy i parazitologiy, 5, zool. 1. sb., 1956, 181-231.

Abstract: Based on comparisons of a few measurable indices (8 pairs) of close chiroptera forms, the author considers them independent species, while almost all other systematizers regard them as subspecies. An amplitude table is presented of variations in 9 indices of these 16 forms, which shows that in a number of forms according to certain criteria there exists a non-conformability with the neighboring species, while others

Card : 1/4 -27-

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 16, 25 March, 1957, 21263

it is absent. The number of measured individuals of each form is not stated. Information is furnished on encountering representatives of close species in the same regions and stations. A description is furnished on the areas of dissemination of close species, which showed reciprocal overlapping to a greater or lesser degree. The author considers that members of close "species" pairs originated from one another and that the overlapping of areas is primary, not secondary. The author states his concept of species evolution, denying interspecies struggle: "The facts of interspecies antagonism or interspecies competition are unknown to us." He considers that "indices of wide adaptive significance are developed with no connection with moments of species evolution and without a visible connection with the environment change. They may be developed in a relatively unchanged environment under the in-

Card : 2/4 -28-

Category: USSR/General Division. General Problems. Philosophy. Methodology. A-1

Abs Jour: Referat Zh.-Biol., No 16, 25 March, 1957, 21263

fluence of one or another constantly acting factor." The main error of Ch. Darwin consisted, according to the author, in a lack of comprehension of the fact that the change of characteristics and the origin of species are manifestations of a different order, that one does not follow the other, that no direct connection between these manifestations exists." The process of species evolution is represented as follows: "The species arises intermittently. The female of one species gives birth to an offspring (or to offsprings) of another species, morphologically close, but qualitatively different. The individuals of this newly-arisen species when matured, clearly and with stability differ from their generating species by morphological indications and in the majority of cases are incapable of crossing with their generating species." Editor's note: The author's concepts are very close to the opinions of T.D. Lysenko on problems of species evolution

Card : 3/4 -29-

KUZYAKIN, A.P.

"Methods of controlling rodents in cities." V.G.Polezhaev, L.A. Kirin. Reviewed by A.P.Kuziakin. Zhur.mikrobiol.epid. i immun. 27 no.9:108-109 S '56. (MLRA 9:10)
(RODENT CONTROL)
(POLEZHAEV, V.G.)
(KIRIN, L.A.)

KUZYAKIN, A.P.

Semipalmated sandpiper in the eastern part of the Chukchi Peninsula. Ornitologiia no.2:130-134 '59. (MIRA 14:7)
(Chukchi Peninsula--Sandpipers)

KUZYAKIN, A.P.

Materials on birds with colonial nesting habits. Uch. zap. MOPI 71:3-23 '59. (MIRA 14:9)
(Uzynkair Island--Birds--Behavior)
(Orlov Island (Black Sea)--Birds--Behavior)
(Kilekaran region--Birds--Behavior)

KUZYAKIN, A.P.

Ornithological observations in China. Ornitologiia no.3:467-472 '60.
(MIRA 14:6)

(China--Ornithological research)

KUZYAKIN, A.P.

Interrelationship between ecology and zoogeography. Vop. ekol. 4:42-43 '62. (MIRA 15:11)

1. Oblastnoy pedagogicheskiy institut imeni N.K.Krupskoy, Moskva.
(Zoogeography) (Zoology--Ecology)

KUZYAKIN, A.P.; VTOROV, P.P.

Landscape ornithogeography of the Okhotsk taiga. Ornitologiia no.6:184-194 '63. (MIRA 17:6)

KUZYAKIN, A.P.

Biology of the marbled murrelet. Ornitologiia no.6:315-320 '63. (MIRA 17:6)

30(1)
AUTHOR: Kuzyakin, N.I., Engineer

SOV/99-59-9-6/14

TITLE: Canal Slopes Levelling and Finishing

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, Nr 9, pp 40-43 (USSR)

ABSTRACT: When building the canal Severnyy Donets-Donbass, in which the organizations SMU Nr 13 and SMU Nr 6 of the Ukrvodstroy participated, the most difficult problem was how to lay out the canal bed. The trenching for the rubble layer, building of the jamb footing and of the set-off presented many problems. To surmount these difficulties, a special levelling scoop mounted on a metal plate was manufactured, (Fig 2). This scoop permitted an accurate finishing of canal slopes without resorting to any subsequent improvements. The accuracy of slope levelling was ± 5 cm; the levelling efficiency of the scoop - 70 to 80 sq.m. an hour. To speed up the levelling, the workers of the SMU Nr 13 and of the Zaporozhskiy remontno-mekhanicheskiy zavod (Zaporozh'ye Repair Mechanical Plant), of the

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Canal Slopes Levelling and Finishing

Ukrvodstroy have, in record time, manufactured 20 levelling scoops of this type. Simultaneously, new methods of work rationalization -- by applying excavators, bulldozers, scrapers, and graders to the canal building -- were employed. Finishing the slopes was done at the same time on both sides of the canal (Figure 4). The work was done in a most satisfactory way and fulfilled considerably ahead of schedule. There are 1 diagram and 5 photographs.

ASSOCIATION: Ukrvodstroy, Kakhovka (Ukrainian Hydro-Construction, Kakhovka)

KUZYAKIN, Ye.B.; KOGANOVSKIY, A.M.

Dependence of the speed of deposit precipitation on the ionic content of waste waters during their defluoridation by lime, aluminum sulfate, and polyacrylamide. TSvet.met. 35 no.12:40-42 D '62. (MIRA 16:2)

(Water--Purification) (Ion exchange)

ACC NR: AP6031589 SOURCE CODE: UR/0189/66/000/003/0035/0039

AUTHOR: Moskvitina, Ye. N.; Kuzyakov, Yu. A.

ORG: Department of Physical Chemistry, Moscow State University (Kafedra fizicheskoy khimii, Moskovskiy gosudarstvennyy universitet)

TITLE: Calculation of vibration spectra of difluoramine and chlorodifluoramine

SOURCE: Moscow. Universitet. Vestnik. Seriya II. Khimiya, no. 3, 1966, 35-39

TOPIC TAGS: difluoramine, chlorodifluoramine, vibration spectrum, vibrational frequency, force field, force constant, FLUORINE COMPOUND, CHLORINE COMPOUND, AMINE

ABSTRACT: The authors have calculated the force fields and the vibrational frequencies of the NF_2H, NF_2D and NF_2Cl molecules. The study was undertaken to determine the force constants of the NF_2 group. The NF_2H and NF_2U molecules have a symmetry plane along the N-H and N-Cl bonds, belong to the C_s, point group, and have six fundamental vibrations four of which are symmetric (A') and two anti-symmetric (A") in respect to this plane. The following configuration parameters were used: for NF_2H

$$r_{NH} = 1{,}025 \pm 0{,}002\ \text{Å},$$
$$\angle HNF = 99{,}8 \pm 0{,}2°.$$

for NF_2Cl

 UDC: 539.19+541.57

$r_{HCl} = 1,79$ A;
$\angle FNCl = 107°$.

The calculation was carried out by a method described by Vol'kenshtein, M. V., Yel'yashevich, M. A., and Stepanov, B. I. (Kolebaniya molekul [Vibrations of Molecules]. M.-L., Izd-vo GITTL, 1949). The calculated force constants are given in Tables 1 and 2. The high values of the force constants K_{qq}, K_{qQ}, and K_{q_α} of the NF_2 group indicate

Table 1.
Force constants of molecules NF_2H and NF_2O

k_q	k_Q	k_α	k_β	k_{qq}	k_{qQ}	$k_{q\alpha}$	$k_{q\beta}$	$k_{Q\beta}$	$k_{\alpha\beta}$	$k_{Q\alpha}$
7,80	9,50	2,02	1,50	2,11	2,10	1,20	0,60	0,31	0,07	0

Table 2. Force constants of the molecule NF_2C

k_q	k_Q	k_α	k_β	k_{qQ}	$k_{q\alpha}$	$k_{q\beta}$	$k_{Q\beta}$	$k_{\alpha\beta}$	$k_{\alpha Q}$	k_{qq}
7,80	4,42	2,35	1,20	2,00	1,20	1,00	0,30	0,1	0	2,11

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928310004-4"

Table 3. Calculated and observed vibrational frequencies of NF_2H, NF_2D и NF_2Cl

Vibrations and Symmetry		NF_2H Observed, cm^{-1}	NF_2H Calculated, cm^{-1}	NF_2D Observed, cm^{-1}	NF_2D Calculated, cm^{-1}	Assignment
ν_1	A'	3193	3194	2354	(2333)	N—H valence
ν_2	A'	1307	1261	989	1008	NHF deformation
ν_3	A'	972	941	928	972	N—F valence
ν_4	A'	500	499	490	(500)	NF_2 deformation
ν_5	A"	1424	1483	1114	1042	NHF deformation
ν_6	A"	888	902	883	888	N—F valence
			NF_2Cl			
ν_1	A'	932	953			N—F valence
ν_2	A'	698	694			N—Cl valence
ν_3	A'	556	541			FNF deformation
ν_4	A'	378	314			FNCl deformation
ν_5	A"	854	864			N—F valence
ν_6	A"	270	290			FNCl deformation

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ACC NR: AP6031589

a considerable mutual effect of the N-F bonds. The values of the observed and calculated vibrational frequencies of NF_2M, NF_2D and NF_2Cl were found tc be in good agreement.(see Table 3). Analysis of the results indicated that: 1) frequencies ν_3 and ν_6 of NF_2H and ν_1 and ν_5 of NF_2Cl in their parameters are not fully characteristic of the N-F bonds, because of the participation of other bonds and angles in their vibrations; 2) vibrations of the entire NF_2 group are highly characteristic of the NF_2H and NF_2Cl; molecules 3) frequencies ν_3, ν_6 and ν_4 are very sensitive to changes of numerous force coefficients and are not fully characteristic of the NF_2 group. Orig. art. has: 2 figures and 4 tables. [WA-77]

SUB CODE: 21, 20/ SUBM DATE: 07Oct65/ ORIG REF: 006/ OTH REF: 006/

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MESHKOVOY, N.P.; KUZYAKIN, Yu.I.; KATYUKHIN, V.Ye.; CGEREDINOV, N.M.

Independent data input on the magnetic drum of the "Ural-2" electronic digital computer. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. 16 no.10:47-49 '63.
(MIRA 16:11)

KUZYAKINA, A. P.

Kuzyakina, A. P. -- "Morphological Investigation of the Tendons and Their Sheaths of the Extremities of the Horse." Omsk State Veterinary Inst of the Min Higher Education, Omsk, 1955 (Dissertation for the Degree of Candidate in Veterinary Sciences)

SO: Knizhnaya Letopis', No. 24, Moscow, Jun 55, pp 91-104

UDOVIN, G.M., prof., otv. red.; PERVUKHIN, V.Yu., dots., red.; KHLYSTOVA, Z.S., prof., red.; DUNAYEV, P.V., dots., red.; KUZYAKINA, A.P., dots., red.

[Materials of the Histological Conference on the Problem "Reactivity and Plasticity of the Epithelium and Connective Tissue Under Normal Experimental and Pathological Conditions" dedicated to the memory of Professor F.M. Lazarenko, corresponding member of the Academy of Medical Sciences of the U.S.S.R.] Materialy Gistologicheskoi konferentsii po probleme "Reaktivnost' i plastichnost' epiteliia i soedinitel'noi tkani v normal'nykh, eksperimental'nykh i patologicheskikh usloviiakh," posviashchennaia pamiati chlena-korrespondenta AMN SSSR professora F.M.Lazarenko. Orenburg, Orenburgskii sel'khoz. in-t, 1962. 165 p. (MIRA 17:8)

1. Gistologicheskaya konferentsiya po probleme "Reaktivnost' i plastichnost' epiteliya i soyedinitel'noy tkani v normal'nykh, eksperimental'nykh i patologicheskikh usloviyakh," posvyashchennaya pamyati chlena-korrespondenta AMN SSSR professora F.M.Lazarenko. Orenburg, 1960. 2. Orenburgskiy sel skokhozyaystvennyy institut (for Udovin, Kuzyakina). 3. Orenburgskiy meditsinskiy institut (for Khlystova, Dunayev).

KUZYAKINA, O., kand.tekhn.nauk; GLAZKOVA, S., inzh.

Partial replacement of the cement in concrete and reinforced concrete elements with fly ash from burning brown coal at the Aleksandrovskaya Thermal Electric Plant. Bud.mat.i konstr. 4 no.6:30-33 N-D '62. (MIRA 15:12)
(Ukraine--Fly ash) (Lightweight concrete)

KUZYAKINA, YE. B.

Kuzakina, Ye, B. "Improving the water resistance of anhydrite cement," Izvestiya Kiyevsk. politekhn. in-ta, Vol. VIII, 1948 (on cover: 1949), p. 299-311

SO: U-5211, 17 December 1953, (Letopis 'Zhurnal'nykh Statey, No. 26, 1949)

KUZYAKINA, YE. B.

Alunite

Alunite rocks - new prospect for raw materials in the ceramic industry. Stek. i ker., 9, No. 6, 1952.

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

KUZYAKINA, Ye.R., kandidat tekhnicheskikh nauk.

Concrete spraying for the reinforcement of mine stopes. Gor. zhur. no.3:44-47 Mr '57. (MLRA 10:4)

1. VNIIOMpromshilstroy, Kiyev.
(Mining engineering) (Concrete)

KUZ'AKOV, Yu. V.

PRIKHOT'KO, A.F.

24(7) P 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Sarenyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

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S/081/60/000/015/001/014
A006/A001

5.2400A

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 15, # 60232

AUTHORS: Mal'tsev, A.A., Kuzyakov, Yu.Ya., Tatevskiy, V.M. (I)
Mal'tsev, A.A., Vinokurov, V.G., Tatevskiy, V.M. (II)

TITLE: Study of Electron Spectra and of the Isotopic Effect in Oxygen Boron Compounds. I. β-Bands of BO Molecules. II. "Boric Acid" Bands

PERIODICAL: Fiz. sb. L'vovsk. un-t, 1957, No. 3 (8), pp. 475-480; 480-485

TEXT: I. An ДФС-3 (DFS-3) spectrograph (2A/mm dispersion) was used to investigate the emission spectrum of BO β-bands ($B^2\Sigma - X^2\Sigma$ transition) in the arc and a discharge tube with a hot hollow cathode containing B_2O_3. Rotation analysis of 0 - 0, 0 - 1, 0 - 2, 0 - 3, 1 - 4, 1 - 5, 2 - 5, 2 - 6, and 3 - 4 bands was made, and by the method of least squares the following rotational constants (in cm^{-1}) of the $B^2\Sigma$ state were obtained: Be = 1.5192, α_e = 0.0210, $D_e = 7.4 \cdot 10^{-6}$ and $\beta_e = 2.0 \cdot 10^{-6}$. It is shown that divergence of Sheibe's rotational constant values (Sheibe, Z. Phys., 1930, Vol. 60, p. 74) with those of Djenkins and McKellar (Djenkins, McKellar, Phys. Rev. 1932, Vol. 42, p. 464)

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S/081/60/000/015/001/014
A006/A001

Study of Electron Spectra and of the Isotopic Effect in Oxygen Boron Compounds. I. β-Bands of BO Molecules. II. "Boric Acid" Bands

can be explained by the inaccurate treating of experimental data by Sheibe. The method of least squares was used to recalculate Sheibe's data for the $X^2\Sigma$ state. In all bands spin doubling was observed.

II. Spectrographs with diffraction gratings were used to investigate so-called fluctuation bands of boric acid, located in the 3700 - 6800 A range. The following spectrum sources were used: a discharge tube with a hot hollow cathode containing boron or boron-anhydride in an atmosphere of He and O_2 mixture, and an oxygen-hydrogen flame into which boric acid solution was introduced. At a high resolution the complicated rotational structure with several edges was observed for the majority of bands. The use of boron concentrated to 85% with a B^{10} isotope, allowed the determination of isotope band edges, shifted towards the short-wave side by about 6,5 and 5 A respectively for bands in the 5450 and 5750 A range. This result rejects Singh's theory (Singh, N.L., Proc. Indian Acad. Sci., 1949, Vol. A 29, p. 424) who relates the fluctuation bands of boric acid to the BO molecule. According to Singh the isotopic bands must be shifted to the long-wave side by 22 and 44 A respectively. When introducing to the spectrum source heavy water vapors, no isotopic effect is revealed in the

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83635

S/081/60/000/015/001/014
A006/A001

Study of Electron Spectra and of the Isotopic Effect in Oxygen Boron Compounds. I. β -Bands of BO Molecules, II. "Boric Acid" Bands

fluctuation bands of the boric acid. This indicates the absence of hydrogen in the molecule composition giving rise to these bands. It is assumed that the fluctuation bands of the boric acid belong to the multi-atomic oxygen compound of boron, B_xO_y.

A. Mal'tsev

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

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SOV/51-5-6-10/19

AUTHORS: Kuzyakov, Yu.Ya. and Tatevskiy, V.M.

TITLE: New Bands of the CF Molecule (Novyye polosy molekuly CF)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 6, p 699 (USSR)

ABSTRACT: Andrews and Barrow (Ref 1) found only 4 bands belonging to the $A^2\Sigma$-$X^2\Pi$ transition of the CF molecule: (0,0), (0,1), (1,0), (1,1). Other bands of this system could not be observed because of strong overlapping by complex bands of the CF_2 molecule (Refs 1, 2). Under more stable conditions of an electric discharge through a stream of CF_4 vapour, the present authors were able to decrease considerably the CF_2 band intensities and to measure 9 more bands of the $A^2\Sigma$-$X^2\Pi$ transition. Assuming that the edges of the new bands are due to the same branches as in the case of the 4 bands reported earlier, the authors calculated the positions of the zero lines of the 9 bands: (0.2), (0.3), (0.4), (0.5), (0.6), (1.4), (1.5), (1.6), (1.7), observed by the author for the first time and listed in col. 1 of a table on p 599. This table gives the zero lines found experimentally (col. 2) and calculated (col. 3) from the vibrational constants given in Ref 1. The good agreement between the experimental and calculated values confirms the correctness of the vibrational analysis. More precise

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values of the zero lines and the vibrational constants will be published later, when the full analysis of the rotations is complete. Measurements of the fine structure of the (0.2) and (0.3) bands yield the following values of the rotational constants: $B_2'' = 1.340$ cm^{-1} and $B_3'' = 1.341$ cm^{-1}. The absence of the transitions with v'= 3 both in the experiments reported in the present paper and those reported by other workers suggests pre-dissociation between vibrational levels v'= 1 and v'= 2 of the $A^{"}\Sigma$ state. In this case the upper limit of the dissociation energy of the ground state of the CF molecule should not exceed 5.8 eV. This is a complete translation except for the table. References: (1) E.B. Andrews, R.F. Barrow, Proc. Phys. Soc. London, A64, 481, 1951. (2) P. Venkateswarlu. Phys. Rev., 77, 676, 1950.

SUBMITTED: April 12, 1958

24(7)

SOV/156-59-2-2/48

AUTHORS: Kuzyakov, Yu. Ya., Tatevskiy, V. M.

TITLE: On the Spectrum of the CCl-Molecule (O spektre molekuly CCl)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 233-236 (USSR)

ABSTRACT: The oscillation analysis of the absorption bands of the electric discharge in carbon tetrachloride as suggested by P. Venkatesvarlu (Ref 2) is rejected and a new oscillation analysis is given. Table 1 shows the measured spectral lines and the frequencies in the range of 2713.2 - 2927.7 Å reduced in vacuum. The analysis was made on the basis of the similarity of the bands of CCl and those of the isoelectronic molecules CF, SiF, SiCl on the following assumptions: 1) The investigated bands belong to a $^2\Sigma - ^2\Pi$-transition; 2) the ground state of CCl is normal as in the case of CF, SiF and SiCl; 3) on the basis of the general process of the increasing doublet separation in the series SiF - SiCl - SiBr it may be expected that the doublet separation will in the case of CCl be 1.5 - 2 times that of CF (77 cm^{-1}), i.e. approximately 130 cm^{-1}; 4) the distance between the atoms C and Cl in the diatomic molecule CCl was equated with the distance in CCl_4;

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On the Spectrum of the CCl-Molecule SOV/156-59-2-2/48

herefrom follows a rotation constant in the ground state of the CCl-molecule of approximately 0.6 cm^{-1}; 5) following Venkatesvarlu the most intensive group of bands belongs to the sequence $\Delta v = 0$. On the basis of the expressions given by R. Mulliken (Ref 4) for the terms of the upper and lower electron state the formula was derived for the P_1-, P_2-, Q_1- and Q_2-branches of the $^2\Sigma - {}^2\Pi$ -transition. The measured distances between the individual bands were in good agreement with the calculated values. The formula for the Q-edges was set up. The doublet splitting amounted to $A = 118\ cm^{-1}$. The dissociation energy of the ground state of the CCl-molecule calculated by means of linear extrapolation proved to be approximately equal to 4.5 ev. There are 1 figure, 2 tables, and 4 references.

PRESENTED BY: Kafedra fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Physical Chemistry, Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 11, 1958

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24(7) SOV/156-59-2-3/48

AUTHORS: Kuzyakov, Yu. Ya., Tatevskiy, V. M.

TITLE: On the Spectrum of the Molecule CCl^+ (O spektre molekuly CCl^+)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 237-239 (USSR)

ABSTRACT: The authors investigated the luminescence spectrum of an electric discharge in carbon tetrachloride vapor. On this occasion they found the bands described by Barrow (Ref 1), however, in higher number (10 instead of 4) within the range 2337 - 2341 Å. The method of the experiments carried out by the authors is distinguished from Barrow's method by the fact that the authors used helium as carrier of the electric discharge. The bands were found to belong to the molecule CCl^+ as the oscillation constants (Table 1) calculated for this molecule according to the Deslaudres formula were in good agreement with the experimental values. The ionization potential of the CCl-molecule was determined to amount to 9.5 ev which agrees well with the ionization potentials of CO and O_2 with respect to the order of magnitude. There are 2 tables and 2 references, 1 of which is Soviet.

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On the Spectrum of the Molecule CCl^+

SOV/156-59-2-3/48

PRESENTED BY: Kafedra fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova
(Chair of Physical Chemistry, Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 11, 1958

Card 2/2

SOV/51-7-4-5/32

AUTHORS: Kuzyakov, Yu.Ya. and Tatevskiy, V.M.

TITLE: Rotational Structure of the (1--1) and (0--1) Bands in the Spectrum of the Carbon Monochloride Molecule

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 4, pp 467-471 (USSR)

ABSTRACT: The spectrum of carbon monochloride (CCl) contains a group of bands in the region 2713-2927 Å; they belong to transitions of the $^2\Sigma$--$^2\Pi$ type. In the existing literature (Refs 1-3) only the vibrational structure of these bands is discussed. The present paper gives the first rotational analysis of two bands in the CCl spectrum and determination of the rotational constants, corresponding to the ground and excited states. The band spectrum of CCl was obtained by means of a diffraction spectrograph DFS-3 (2 Å/mm dispersion in the first order). Only two band sequences ($\Delta v = 0, +1$) are suitable for the rotational analysis. Fig 1 shows the photograph of the bands of the sequence $\Delta v = 0$. Fig 2 gives the microphotogram of the $^2\Sigma$--$^2\Pi_{3/2}$ component of the (1--1) band. Values of the line frequencies in various branches and the combination ratios are given in Tables 1 and 2 (all values are in cm^{-1}). The calculated rotational constants were found to be

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Rotational Structure of the (1--1) and (0--1) Bands in the Spectrum of the Carbon Monochloride Molecule

$B_1'' = 0.6465 \pm 0.0032$ cm^{-1} for the $^2\Pi_{3/2}$ state, and
$B_0' = 0.6589 \pm 0.0038$, $B_1' = 0.6551 \pm 0.0026$ cm^{-1} for the $^2\Sigma$ state.
There are 2 figures, 2 tables and 6 references, 1 of which is Soviet, 3 English, 1 Indian and 1 translation from English into Russian.

SUBMITTED: February 9, 1959

S/153/60/003/02/14/034
B011/B003

51.3100
5.5310

AUTHORS: Kuzyakov, Yu. Ya., Tatevskiy, V. M.

TITLE: Investigation of the Emission Spectrum of a Very Strong Electric Discharge Across a Flow of Steam of Carbon Tetrachloride

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 2, pp. 293-294

TEXT: The authors used a modified discharge tube by Shyuler (Schueler ?) for the above-mentioned investigation. The electrodes were fed with high voltage from a 220/15,000 volt transformer block. The tube was filled with spectroscopically pure helium. The pressure was 2 - 3 torr. CCl_4 was continuously directed through the tube at 1-2 mm pressure. The emission spectrum was investigated between 1,600 and 10,000 A. The recordings were made on an apparatus of type DFS-3. Below 2,000 A, the spectrum was recorded on a vacuum spectrograph of type DFS-5. The

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Investigation of the Emission Spectrum of a Very Strong Electric Discharge Across a Flow of Steam of Carbon Tetrachloride

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B011/B003

authors obtained the following results: 1. No spectra whatsoever were observed in the vacuum range and in the range of 7,000 - 10,000 A. 2. In the ultraviolet spectrum range the known groups of intense bands belonging to the CCl-molecule were obtained. Furthermore, R. E. Barrow's bands (2,300 A) were obtained (Ref. 1), which had been ascribed by him to CCl or CCl^+. 3. In the range of 2,600 A a continuous background commences which reaches toward the direction of shorter wavelengths, i.e., to about 2,200 A. 4. In the visible and in the ultraviolet range numerous bands of the C_2-molecule were obtained which belong to various transitions. 5. In the 4,050 A range a band emerges intensely belonging to the C_3-molecule. The unclarified band system at 2,300 A is contrasted toward the direction of greater wavelengths and forms several sequences. The authors used the discharge of another type than that of Barrow and obtained ten bands instead of four, which belong to this system. The latter belongs to the CCl^+-molecule. The authors calculated the molecular constants. The dissociation energy D_o'' of the ground state of the CCl^+-molecule is 51,700 cm^{-1}. The

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Investigation of the Emission Spectrum of a Very Strong Electric Discharge Across a Flow of Steam of Carbon Tetrachloride

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authors found that the oscillation analysis by P. Venkateswarlu (Ref. 2) contains contradictions and is unsatisfactory. A new oscillation analysis for the CCl-molecule which excludes the disadvantages mentioned in Ref. 2 (Refs. 3,4) was obtained by the authors from various analogies. They specify the oscillation constants obtained. Doublet cleavage A = 118 cm $^{-1}$. The authors refer to the table by Deslandres for the Q-edges of the CCl-molecule. The dissociation energy of the ground state of the molecule is $\sim$4.5 ev on the strength of the linear extrapolation. Thus 2 band systems were detected in the ultraviolet range of the spectrum mentioned in the title. These systems are ascribed to the molecules CCl and CCl^+. The nature of continuous emission between 2,200 - 2,550 A remained hitherto unclarified. In the discharge of the type used no chlorine bands could be observed. There are 1 table and 4 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova; Kafedra fizicheskoy khimii (Moscow State University imeni M. V. Lomonosov; Chair of Physical Chemistry)

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Investigation of the Emission Spectrum of a Very Strong Electric Discharge Across a Flow of Steam of Carbon Tetrachloride

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SUBMITTED: July 25, 1958

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S/051/60/009/002/007/013/XX
E201/E491

AUTHORS: Kuzyakov, Yu.Ya., Tatevskiy, V.M. and Tunitskiy, L.N.

TITLE: A Rotational Analysis of Boron Monoxide Bands Lying in the Vacuum Ultraviolet Region

PERIODICAL: Optika i spektroskopiya, 1960, Vol.9, No.2, pp.156-161

TEXT: Chretien (Ref.1) studied the 1300 to 2100 Å spectra of discharges in BF_3 with a vacuum spectrograph fitted with a grating of 1 m radius and 8.3 Å/mm dispersion. Chretien found several bands which he ascribed to the BO molecule; the band edges, interpretations and relative intensities are given in Table 1. Later, Zelenskaya and Tunitskiy (Ref.2) reported a discharge spectrum of BF_3 recorded in the vacuum ultraviolet region with a spectrograph ДФС-5 (DFS-5) with a resolving power of 120000 and a dispersion of 2.7 Å/mm. Zelenskaya and Tunitskiy wrongly ascribed the bands in the 1700 to 1900 Å region to a hydrogen compound of boron. More detailed studies showed that Chretien's interpretation was correct. In the present paper the authors analyse the fine structure of the (0, 0) and (1, 0) bands (Chretien's nomenclature). A study of the isotopic shift in the BO bands, carried out in the authors' laboratory by A.A.Mal'tsev and V.M.Tatevskiy showed that Chretien's interpretation should be corrected so that his (0, 0) and

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(1, 0) bands become (1, 0) and (2, 0) respectively. These two bands lie between 1300 and 2100 Å and are due to $^2\Pi \rightarrow x^2\Sigma$ transitions of the BO molecule; interpretation of the (1, 0) band is given in Table 2 and of the (2, 0) band in Table 3. The rotational constants of the $^2\Pi$ state were also determined (Table 4). There are 4 tables and 7 references: 2 Soviet, 3 English, 1 Swiss and 1 translation from English into Russian.

SUBMITTED: November 23, 1959

Card 2/2

SHENYABSKAYA, Ye.A.; KUZYAKOV, Yu.Ya.; TATEVSKIY, V.M.

New analysis of the oscillatory structure of the spectrum of titanium monochloride in the region of 4200 Å. Opt. i spektr. 12 no.3: 359-363 Mr '62. (MIRA 15:3)

(Titanium chloride--Spectra)

S/051/62/013/005/003/017
E202/E192

AUTHORS: Ovcharenko, I.Ye., and Kuzyakov, Yu.Ya.

TITLE: The bands of the SiCl molecule in the region of 3220 - 2735 Å

PERIODICAL: Optika i spektroskopiya, v.13, no.5, 1962, 635-641

TEXT: Using detailed experimental data from the zero lines and Deslandres' tables, the authors determined vibrational constants ω_e; $\omega_e x_e$ for the $B^2\Sigma$; $X^2\Pi_{3/2}$ and $X^2\Pi_{1/2}$ states of the $Si^{28}Cl^{35}$ and $Si^{28}Cl^{37}$ molecules, in order to interpret further the bands of the B - X system in the region 2830-2770 Å, and to find in particular reliable vibrational constants for the $B^2\Sigma$ excited state. The $SiCl_4$ vapour discharge tube used was of the type used by H. Schüler (Spectrochim. Acta, v.4, 1950, 85). Various types of discharges in the $SiCl_4$ were tried to embrace the various SiCl bands. Low current density glow discharge was used to isolate the hitherto not described low intensity bands, e.g. an extensive Deslandres series with $v' = 2$, and a large number of bands in the isotopic molecule. A special high current density,

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impulse discharge tube with a central constriction, previously described (I.Ye. Ovcharenko, L.N. Tunitskiy, V.I. Yakutin, Optika i spektr. 8, 1960, 746), was used in exciting high vibrational levels to observe the bands with $v'' = 8$ and $v' = 4,5$ - also hitherto unobserved. In all, 16 new bands of the $B - X$ system of the $Si^{28}Cl^{35}$, and 21 bands of the isotopic molecules, were identified and tabulated, reducing the wavelength in air to wave-numbers in vacuum by means of the Kayser tables. The extensive transverse $v' = 2$ series and the bands (3,1), (4,1) and (5,2) yielded much higher accuracy in the determination of the vibrational constant of the upper excited state $B^2\Sigma$ and also served as a cross-check.
There are 2 tables.

SUBMITTED: September 14, 1961

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ACCESSION NR: AP4020975 S/0051/64/016/003/0542/0543

AUTHOR: Kuznetsova,L.A.; Kuzyakov,Yu.Ya.; Tatevskiy,V.M.

TITLE: On the electronic absorption spectrum of the NF_2 radical

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 542-543

TOPIC TAGS: radical absorption, tetrafluorohydrazine, nitrogen difluoride radical

ABSTRACT: F.A.Johnson and C.B.Colburn (J.Amer.Chem.Soc.83,3043,1961) observed a region of "continuous absorption" near 2600 Å in the spectrum of the products of thermal decomposition of tetrafluorohydrazine (N_2F_4), which they attributed to the NF_2 radical. In the present work this region was re-investigated by means of a higher dispersion and resolution instrument (an ISP-28 spectrograph). The tetrafluorohydrazine at different pressures from 5 to 200 mm Hg was heated in an alumdum tube to different temperatures - up to about 750°C - where absorption in the 2600 Å region disappears. The study disclosed that the NF_2 absorption spectrum in the 2600 Å region is actually not continuous but consists of 16 bands. The intensity and sharpness of the bands increase with temperature up to about 300-400°C. The wavelengths of the bands are tabulated, and a set of three microdensitometer traces is

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reproduced in a figure. The average separation between the bands is about 390 cm^{-1}. This frequency is associated with deformation vibrations of the radical. Orig.art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 16Jul63 DATE ACQ: 02Apr64 ENCL: 00

SUB CODE: PH, CH NREF SOV: 000 OTHER: 001

2/2
Card

MOSKVITINA, Ye.N.; KUZYAKOV, Yu.Ya.

Infrared spectrum and the calculation of the vibrational spectrum of the molecule of chlorodifluoramine (NF_2Cl). Vest. Mosk. un. Ser. 2 Khim. 19 no.2:23-25 Mr-Ap'64 (MIRA 17:6)

1. Kafedra fizicheskoy chimii Moskovskogo universiteta.

MOSKVITINA, Ye.N.; KUZYAKOV, Yu.Ya.; KNYAZEVA, N.A.; TATEVSKIY, V.M.

Infrared spectrum of tetrafluorohydrazine. Opt. i spektr. 16 no.5:768-771 My '64. (MIRA 17:9)

L 41488-65 EWT(m)/EPF(c)/EPR/EWP(t)/EWP(b) Pr-4/Pa-4 IJP(c) JD/JW
ACCESSION NR: AP5005732 S/0189/65/000/001/0015/0017

AUTHORS: Kuzyakov, Yu. Ya.; Moskvitina, Ye. N. 22 21 B

TITLE: Interpretation of the infrared absorption spectrum of the active isomers of N_2F_2

SOURCE: Moscow. Universitet. Vestnik. Seriya 2., Khimiya, no. 1, 1965, 15-17

TOPIC TAGS: nitrogen compound, fluoride, IR spectrum, absorption spectrum, microwave spectroscopy/ Strela computer

ABSTRACT: This article is mainly a criticism of R. H. Sanborn's conclusions (J. Chem. Phys., 33, 1855, 1960) that the structure of the active isomer of N_2F_2 cannot be explained on the basis of cis-configuration of the fluorine atoms. The authors have examined the frequency of normal oscillation for the "cis"-form of N_2F_2, which has the symmetry C_{2v} and has five active oscillations in the Ir spectrum. They have tabulated the absorption bands obtained by Sanborn and those obtained by their own microwave spectroscopy. They have also tabulated frequencies on the basis of Sanborn's results and on the basis of their own work. From these

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comparisons it becomes clear that computations give no band in the 550-580 cm^{-1} interval, and this indicates that Sanborn's view is essentially incorrect. The actual types of oscillation have been computed and tabulated, the computations being made on a Strela computer. "The authors thank Professor V. M. Tatevskiy for valuable advice and remarks offered during work on the present investigation." Orig. art. has: 1 figure and 3 tables. [Abstracter's note: One figure was referred to, but was not included with the article.]

ASSOCIATION: Moskovskiy universitet Kafedra fizicheskoy khimii (Moscow University, Department of Physical Chemistry)

SUBMITTED: 22May64 ENCL: 00 SUB CODE: OP

NO REF SOV: 000 OTHER: 005

Card 2/2 me

MOSKVITINA, Ye.N.; KUZYAKOV, Yu.Ya.

Calculation of the vibrational spectrum of difluoromethylamine (CH_3NF_2). Zhur. prikl. spektr. 2 no.5:467-469 My '65. (MIRA 18:7)

KUZYAKOV, Yu.Ya.; MOSKVITINA, Ye.N.

Interpretation of the infrared absorption spectra of an active isomer of N_2F_2. Vest. Mosk. un. Ser. 2: Khim. 20 no.1:15-17 Ja-F '65. (MIRA 18:3)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.

L 42872-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/AWW/JW/GG/RM

ACC NR: AR6017231 SOURCE CODE: UR/0058/65/000/012/D031/D031

AUTHOR: Moskvitina, Ye. N.; Kuzyakov, Yu. Ya.; Kotov, Yu. I.; Tatevskiy, V. M.

ORG: none

TITLE: Investigation of infrared spectra and spectra of the Raman effect of tetrafluorohydrazine

SOURCE: Ref. zh. Fizika, Abs. 12D249

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 197-204

TOPIC TAGS: absorption spectrum, Raman effect, IR spectrum, absorption band, tetrafluorohydrazine, hydrazine derivative

ABSTRACT: The infrared absorption spectrum of tetrafluorohydrazine (I) has been investigated in the gaseous and the solid phase in the 400—4000-cm^{-1} range. The spectrum of the Raman effect has been obtained in the gaseous phase. Coincidence

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of oscillation frequency in the spectrum of the Raman effect with the oscillation frequency in the infrared spectrum indicates that molecule I has a configuration corresponding to the symmetry of C_2. A preliminary interpetation of the absorption bands has been proposed. [Translation of abstract] [NT]

SUB CODE: 07/20/ ~~SUBM DATE: none/ ORIG REF: none/ SOV REF: none/ OTH REF: none/~~

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22(4) SOV/132-59-7-14/17

AUTHORS: Kuz'yan, N.Ye. and Ivanovskaya, Z.I.

TITLE: For a Wider Participation of Workers in the Production Management

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 7, pp 56-58 (USSR)

ABSTRACT: In connection with the decision of the December plenary session of the central committee of the CPSU on the increased role of the Trade-Unions in the struggle for the building of the communist state, the rights of trade-unions in industrial organizations and institutions were considerably widened. The trade-union of geological workers of Eastern Siberia increased its activity. On the initiative of the working team of the Lugovskaya geologorazvedochnaya partiya Mama-Chuyskoy ekspeditsii (Lugovskaya Geological Prospecting Team of the Mama-Chuya Expedition) (Head of the Team - A.V. Smirnov) the Irkutskoye geologicheskoye upravleniye (the Irkutsk Geological Directorate) opened a socialist competition for the creation of a "Fond mineral'nogo syr'ya imeni

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semiletnego plana" ("Fund of Mineral Raw Material Imeni Seven Year Plan"). Geologists of the Lugovskaya Team promised to increase the reserves of mineral raw materials 40 to 45% more than foreseen for the first year of the Seven Year Plan. This initiative was approved by the board of the East-Siberian Territorial Committee of the Trade-Union, and by the Board of the Irkutsk Geological Directorate. Thirty-two brigades are taking part in this competition. Mining brigades of the Slyudyanskaya ekspeditsiya (Slyudyanka Expedition) led by L.S. Vikhlyayev and T.F. Kravchenko, drilling brigades of the Trest Vostsibneftegeologiya (the Vostsibneftegeologiya Trust) led by drilling masters V.M. Danshin and P.M. Korshunov, and the drilling detachment of the Sogdiondonskaya Team led by V.L. Novopavshin, and many others took a pledge to work, study and live according to communist ideals. On the initiative of the Irkutsk Geological Directorate and the Irkutskaya Oblast' Committee of the VLKSM a komsomol-youth drive for mineral deposits was organized

in 1958. More than 20,000 men took part in this drive, and the Irkutsk Geological Directorate is checking about 200 claims of discovery of mineral deposits. This initiative was approved by the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Conservation of Mineral Resources of the USSR), by the Central Committee of the Trade-Union of Geological and Prospecting Workers and by the Central Committee of VLKSM. This drive will again be repeated in 1959. For the organization of the drive, 27 persons received honorary diplomas, among them the teacher of the Shelekhovo secondary school S.F. Sitnikov, the secretary of the Irkutskaya Oblast' Committee of VLKSM, A.I. Golovnykh, and the head of the Lugovskoye Team of the Mama-Chuya Expedition, V.T. Kilesso. Twenty-four participants received the badge of "Excellent Worker of the Socialist Competition of the Ministry of Geology and Conservation of Mineral Resources of the USSR." Special permanent production conferences have been organized throughout Eastern Siberia, at which plans for a better organization

of work have been worked out. The production conference of the Irkutskaya geologopoiskovaya ekspeditsiya tresta Vostsibneftegeologiya (the Irkutsk Geological Exploratory Expedition of the Vostsibneftegeologiya Trust) (Chairman - Tsakhnovskiy) discusses all the problems connected with the organization of geological operations, methods of work, etc. The production conference of the Cartographic factory (Chairman - Zdobnikov) is discussing all production problems and the introduction of new working methods, and is examining new rationalizing propositions. New methods introduced by the production conference of the Lugovskaya Geological Prospecting Team permitted a 54% reduction in the price of 1 ton of mica.

ASSOCIATION: Vostochno-Sibirskiy territorial'nyy komitet profsoyuza (The East-Siberian Territorial Committee of the Trade-Union) (N.Ye. Kuz'yan)

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TsK profsoyuza rabochikh geologorazvedochnykh rabot (Central Committee of the Trade-Union of Geological and Prospecting Workers) (Z.I. Ivanovskaya)

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