14-57-6-12486

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6, p 110 (USSR)

AUTHOR: Lukin, V. N.

TITLE: Chilopsis linearis on the Bogar (Sagebrush Type Land) (Khilopsis lineynyy na bogare)

PERIODICAL: Izv. Otd. yestestv. nauk. AN TadzSSR, 1956, Vol 15, pp 89-94

ABSTRACT: Chilopsis linearis (Bignoniaceae) is a drought-resistant plant which grows in dry areas from Southern Texas to California. It has been tested on the bogar lands of the collective farms imeni Molotov and "Moskva" in the Ordzhonikidze Rayon. Observations made over a six-year period have shown that it is possible to grow Chilopsis linearis on the bogar land, and thus to provide decorative greenery for those populated areas of Tadzhikistan which lie at 800 m to 1200 m above sea level. The author recommends that two-year old seedlings be grown in the nurseries and

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Chilopsis linearis (Cont.) 14-57-6-12486

then planted wherever needed. He notes that although the Chilopsis itself is not resistant to frost, its exceptional ability to produce shoots enables it to regrow rapidly even after freezing, to flower, and to form fruit. Since the Chilopsis has large flowers of various colors, blooms for approximately 100 days and forms attractively shaped bushes, it represents a very desirable decorative plant. Moreover, its long pliable branches can be used for basket weaving.

Card 2/2

N. Ya. T.

Lukin V.N.

USSR/Forestry - Forest Plants. K-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10623

Author : Lukin, V.N.

Inst : Natural Sciences Division, Academy of Sciences TadzhSSR

Title : An Experiment in Planting Protective Forest Belts on Tadzhikskaya SSR /obespechennaya/ Unirrigated Land.

Orig Pub : Izv. Otd. yestestv. nauk. AN TadzhSSR, 1956, No 17, 55-70

Abstract : Field-protective forest belts, planted with various arboreal-brushwood species and oak in rows and in nests, were created on the fields of three kolkhozes of Stalinabadskiy rayon in 1949-1953. This experiment indicates the possibility of growing forest belts on the unirrigated well cared for /obespechennaya/ bogara of the Tadzhikskaya SSR; a large assortment of trees and underbrush have been developed for use in these forest belts. The belts have a

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USSR/Forestry - Forest Plants.

K-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10623

positive effect on the accumulation of moisture in the soil and on increasing the productivity of agricultural crops. The use of cover crops for oak nest sowing on bogara lands not only failed to justify itself but even gave extremely negative results and led to the death of all the young plants.

Card 2/2

USSR/Soil Science - Cultivation, Improvement, Erosion. J

Abs Jour : Ref Zhur Biol., No 22, 1958, 100108

Author : Lukin, V.N., Kostyayev, V.M.
Inst : -
Title : Tillage of Boggy Soils Without the Use of a Moldboard.

Orig Pub : Khochagin kishloki Tochikiston. 1957, No 9, 45-47 (tadzh.); S. kh. Tadzhikistana, 1957, No 9, 46-48

Abstract : No abstract.

Card 1/1

LUKIN, V.N., mashinist; VLADIMIROV, A.N., mashinist-instruktor

Simple method for converting to one section operation on the VL8 electric locomotive. Elek. i tepl. tiaga 7 no.6:35-36 Je '63. (MIRA 16:9)

1. Depo Petropavlovsk Yuzhno-Ural'skoy dorogi (for Lukin).
(Electric locomotives)

L 36399-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6018780 SOURCE CODE: UR/0070/66/011/003/0472/0474

AUTHOR: Finkel', V. M.; Serebryakov, S. V.; Lukin, V. P.

ORG: Department of Physics, Siberian Metallurgical Institute (Kafedra fiziki, Sibirskiy metallurgicheskiy institut)

TITLE: The possibility of the existence of Rayleigh waves in cubic single crystals

SOURCE: Kristallografiya, v. 11, no. 3, 1966, 472-474

TOPIC TAGS: cubic crystal, metalloid alloy, Rayleigh wave, single crystal, elastic wave, elastic stress, metal physics

ABSTRACT: Mathematical conditions for the existence of Rayleigh waves in cubic metal crystals are set forth. The conditions for the propagation of these waves on (100) planes, in [100] directions, were stipulated in terms of the existence of positive roots in the known equation

$$\left(1-\frac{c_{11}}{c_{44}}R\right)\left(1-\frac{c_{12}^2}{c_{11}^2}-R\right)^2=R^2(1-R),$$

where $R=\rho c^2/c_{11}$; ρ is density; c is speed of the Rayleigh wave; c_{11}, c_{12} and c_{44} are elastic constants. A similar problem was derived for the (110) planes and [110] directions, since this problem has never been solved quantitatively. The potential energy

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ACC NR: AP6018780

resulting from elastic stress on cubic crystals was given and the coordinates were transformed so that x and y laid in the (110) plane and z was normal to the plane. The stress components were obtained by partial differentiation of the potential energy with respect to the strain components. The mathematical conditions for the existence of the Rayleigh waves were developed for two cases:

$$e_{xy} = e_{xz} = e_{xx} = 0, \partial / \partial x = 0$$

this corresponding to the wave propagation in the [110] direction on the (110) plane; and the propagation of the waves in the [100] direction on the (110) plane. Calculations were made on the basis of the above mathematical conditions and 33 metallic and nonmetallic single crystals were tabulated, the results giving the existence or nonexistence of the Rayleigh waves for (100) and (110) planes and [100] and [110] directions. Orig. art. has: 1 table, 14 formulas.

SUB CODE: 20,11/ SUBM DATE: 29Apr65/ ORIG REF: 001/ OTH REF: 004

Card 2/2 mlf

LUKIN, V. P., (Dep. Minister of Apparatus Construction and Means of Automation)

"Review of Trends of Development Apparatus Construction and Means of Automation and Problems of Science,"

paper read at the Session of the Acad. Sci. USSR, on Scientific Problems of Automatic Production, 15-20 October 1956.
Avtomatika i telemekhanika, No. 2, p. 182-192, 1957.

9015229

LUKIN, V.S.; PEREVOZCHIKOV, B.F.

Mass sink formation in the city of Severoural'sk as a result of the change in the regime of underground waters. Izv. Vses. geog. ob-va 96 no.3:241-244 '64 (MIRA 17:8)

LUKIN, V.S.

Muskrats within the city boundaries of Kungur. Okhr. prir. na Urale no.2:121-122 '61. (MIRA 17:7)

LUKIN, V.S.; RYZHIKOV, D.V., kand. geol.-miner. nauk; TURYSHEV, A.V.; MORKIN, P.I., red.; SEREDKINA, N.F., tekhn.red.

[The Kungur ice cave]Kungurskaia ledianaia peshchera. Sverdlovsk, Akad. nauk SSSR. Ural'skii filial, 1961. 46 p. (MIRA 15:8)

1. Nauchnyye sotrudniki Kungutskogo statsionara Ural'skogo filiala Akademii nauk SSSR (for Lukin, Ryzhikov, Turyshev).
(Kungur (Perm Province))—Caves)

LUKIN, V.S.

Observations of the air exchange over karst massifs as revealed by the studies in the Kungur ice cave. Trudy Inst.geol. UFAN SSSR no.62. Gidrogeol.sbor. no.2:107-119 '62. (MIRA 16:5)
(Sylva Valley--Karst)

YEZHOV, Ya.A.; LUKIN, V.S.

Regionalization of the city of Kungur and its surroundings for purposes of engineering geology. Trudy Inst.geol. UFAN SSSR no.62. Gidrogeol.sbor. no.2:143-151 '62. (MIRA 16:5)
(Kungur region—Engineering geology)

LUKIN, V.S.

Works on the restoration of the natural regime of the Kungur ice cave. Peshchery no.3:35-42 '63.

Speleological investigations in the Kungur Station of the Ural Branch of the Academy of Sciences of the U.S.S.R. Ibid.:105-106
(MIRA 18:2)

LUKIN, V.S.

Subsidence phenomena in the Urals and cis-Ural region. Trudy Inst. geol. UFAN SSSR no.69. Gidrogeol. sbor. no.3:133-160 '64. (MIRA 17:11)

LUKIN, V.S.

Mechki caves. Peshchery no.4:20-33 '64.
(MIRA 18:5)

1. Kungurskiy statsionar Ural'skogo filiala AN SSSR.

LUKIN, V.S.

Types of karst and the interrelationship between the development of karst and the formation of cover sediments. Trudy MOIP 15:73-78 '65. (MIRA 18:9)

LUKIN, V.S.; RYZHIKOV, D.V., kand. geol.-miner. nauk; TURYSHEV, A.V.; KOVALEV, V.F., doktor geol.-miner. nauk, otv. red.

[Kungur ice cave] Kungurskaia ledianaia peshchera. Sverdlovsk, AN SSSR, Ural'skii filial, 1965. 44 p. (MIRA 18:12)

BACHELIS, A.S., inzhener; LUKIN, V.V., inzhener.

Flat sluice gates made of prestressed reinforced concrete. Gidr. stroi. 25 no.2:37-39 '56. (MLRA 9:8)
(Sluice gates)

SOV/32-24-10-65/70

AUTHORS: Lukin, V. V., Vaksman, S. S., Dolzhanskiy, A. I., Berezin, V. I., Malkin, S. Z., Moldaver, T. I.

TITLE: News in Brief (Korotkiye soobshcheniya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1292-1293 (USSR)

ABSTRACT: V. V. Lukin (Moskovskiy inzhenerno-fizicheskiy institut) (Moscow Technological-Physical Institute) suggests a new method of determining the maximum plasticity of metals by the destruction of crosspieces (obtained by the drilling of two holes at the ends of the metal piece to be investigated). The crosspieces are destroyed by pressing a special instrument into the bore holes (Figure). The tests are carried out with the testing machine -5. The measurements of the crosspiece prior to and after the test are carried out by means of a metallographical microscope. The idea of this testing method comes from M. P. Markovets (Ref 1). S. S. Vaksman (Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov) (All-Union Scientific Research Institute for the Autogenous Treatment of Metals) mentions that at this institute an electric furnace with a capacity of 15 kg was constructed for the melting of cast-iron and non-ferrous

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News in Brief

metals. The highest operation temperature of the furnace is 1600°, the current being supplied by a transformer STE-34.
A. I. Dolzhanskiy (zavod "Elektrostal'") ("Elektrostal'" Factory) wrote that the crack detector according to L. K. Tatochenko, V. V. Lyndin et al. (Ref 1) was completed. According to a suggestion by the foreman A. A. Polyakov two permanent magnets EKh9K15M were used for the holding device.
V. I. Berezin, S. Z. Malkin completed the laboratory jaw crusher 58-Dr. To secure a higher resistivity the casing will be made of steel type St. 25-4518. The other modifications are explained by diagrams.
T. I. Moldaver (Berdskiy radiozavod) (Berdsk Wireless Factory) recommends the use of Teflon rings of a thickness of 2 mm in carbon analyses in Mars furnaces to protect the rubber sealings on the porcelain tubes.
There are 3 figures and 2 references, [illegible] which are Soviet.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Technological Physical Institute); Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov (All-Union Research Institute for the Autogenous Treatment of Metals); zavod "Elektrostal'" ("Elektrostal'" Factory); Berdskiy radiozavod

News in Brief

(Berdsk Wireless Factory)

Card 3/3

LUKIN, V.V.

ANDON'YEV, V.L.; BAUM, V.A.; BAUMGARTEN, N.K.; BEREZIN, V.D.; BIRYUKOV, I.K.; BIRYUKOV, S.M.; BLOKHIN, S.I.; BOROVOY, G.A.; BULEV, M.Z.; BURAKOV, N.A.; VERTSAYZER, B.A.; VOVK, G.M.; VORMAN, B.A.; VOSHCHININ, A.P.; GALAKTIONOV, V.D., kand. tekhn. nauk; GENKIN, Ye.M.; GIL'DENBLAT, Ya.D., kand. tekhn. nauk; GINZBURG, M.M.; GLEBOV, P.S.; GODES, E.G.; GORBACHEV, V.N.; GRZHIB, B.V.; GREKULOV, L.F., kand. s.-kh. nauk; GRODZENSKAYA, I.Ya.; DANILOV, A.G.; DMITRIYEV, I.G.; DMITRIYENKO, Yu.D.; DOBROKHOTOV, D.D.; DUBININ, L.G.; DUNDUKOV, M.D.; ZHOLIK, A.P.; ZENKEVICH, D.K.; ZIMAREV, Ye.V.; ZIMASKOV, S.V.; ZUBRIK, K.M.; KARANOV, I.F.; KNYAZEV, S.N.; KOLEGAYEV, N.M.; KOMAREVSKIY, V.T.; KOSENKO, V.P.; KORENISTOV, D.V.; KOSTROV, I.N.; KOTLYARSKIY, D.M.; KRIVSKIY, M.N.; KUZNETSOV, A.Ya.; LAGAR'KOV, N.I.; LGALOV, V.G.; LIKHACHEV, V.P.; LOGUNOV, P.I.; MATSKEVICH, K.F.; MEL'NICHENKO, K.I.; MENDELEVICH, I.R.; MIKHAYLOV, A.V., kand. tekhn. nauk; MUSIYEVA, R.N.; NATANSON, A.V.; NIKITIN, M.V.; OVES, I.S.; OGUL'NIK, G.R.; OSIPOV, A.D.; OSMER, N.A.; PETROV, V.I.; PERYSHKIN, G.A., prof.; P'YANKOVA, Ye.V.; RAPOPORT, Ya.D.; REMEZOV, N.P.; ROZANOV, M.P., kand. biol. nauk; ROCHEGOV, A.G.; RUBINCHIK, A.M.; RYBCHEVSKIY, V.S.; SADCHIKOV, A.V.; SEMENTSOV, V.A.; SIDENKO, P.M.; SINYAVSKAYA, V.T.; SITAROVA, M.N.; SOSNOVIKOV, K.S.; STAVITSKIY, Ye.A.; STOLYAROV, B.P. [deceased]; SUDZILOVSKIY, A.O.; SYRTSOVA, Ye.D., kand. tekhn. nauk; FILIPPSKIY, V.P.; KHALTURIN, A.D.; TSISHEVSKIY, P.M.; CHERKASOV, M.I.; CHERNYSHEV, A.A.; CHUSOVITIN, N.A.; SHESTOPAL, A.O.; SHEKHTER, P.A.; SHISHKO, G.A.; SHCHERBINA, I.N.; ENGEL', F.F.; YAKOBSON, A.G.; YAKUBOV, P.A., ARKHANGEL'SKIY,

(Continued on next card)

ANDON'YEV, V.L.... (continued) Card 2.
Ye.A., retsenzent, red.; AKHUTIN, A.N., retsenzent, red.; BALASHOV, Yu.S., retsenzent, red.; BARABANOV, V.A., retsenzent, red.; BATUNER, P.D., retsenzent, red.; BORODIN, P.V., kand. tekhn. nauk, retsenzent, red.; VALUTSKIY, I.I., kand. tekhn. nauk, retsenzent, red.; GRIGOR'YEV, V.M., kand. tekhn. nauk, retsenzent, red.; GUBIN, M.F., retsenzent, red.; GUDAYEV, I.N., retsenzent, red.; YERMOLOV, A.I., kand. tekhn. nauk, retsenzent, red.; KARAULOV, B.F., retsenzent, red.; KRITSKIY, S.N., doktor tekhn. nauk, retsenzent, red.; LIKIN, V.V., retsenzent, red.; LUKIN, V.V., retsenzent, red.; LUSKIN, Z.D., retsenzent, red.; MATRIOSOV, A.Kh., retsenzent, red.; MENDELEYEV, D.M., retsenzent, red.; MENKEL', M.F., doktor tekhn. nauk, retsenzent, red.; OBRAZKOV, S.S., retsenzent, red.; PETRASHEN', P.N., retsenzent, red.; POLYAKOV, L.M., retsenzent, red.; RUMYANTSEV, A.M., retsenzent, red.; RYABCHIKOV, Ye.I., retsenzent, red.; STASENKOV, N.G., retsenzent, red.; TAKANAYEV, P.F., retsenzent, red.; TARANOVSKIY, S.V., prof., doktor tekhn. nauk, retsenzent, red.; TIZDEL', R.R., retsenzent, red.; FEDOROV, Ye.M., retsenzent, red.; SHEVYAKOV, M.N., retsenzent, red.; SHMAKOV, M.I., retsenzent, red.; ZHUK, S.Ya. [deceased], akademik, glavnyy red.; FILSO, G.A., kand. tekhn. nauk, red.; FILIMONOV, N.A., red.; VOLKOV, L.N., red.; GRISHIN, M.M., red.; ZHURIN, V.D., prof., doktor tekhn. nauk, red.; KOSTROV, I.N., red.; LIKHACHEV, V.P., red.; MEDVEDEV, V.M., kand. tekhn. nauk, red.; MIKHAYLOV, A.V., kand. tekhn. nauk, red.; PETROV, G.D., red.; RAZIN, N.V., red.; SOBOLEV, V.P., red.; FERINGER, B.P., red.; FRUYGOFER,

(Continued on next card)

ANDON'YEV, V.L.... (continued) Card 3.
Ye.F., red.; TSYPLAKOV, V.D. [deceased], red.; KORABLINOV, P.N., tekhn. red.; GENKIN, Ye.M., tekhn. red.; KACHEROVSKIY, N.V., tekhn. red.

[Volga-Don; technical account of the construction of the V.I. Lenin Volga-Don Navigation Canal, the TSimlyansk Hydroelectric Center, and irrigation systems] Volgo-Don; tekhnicheskii otchet o stroitel'stve Volgo-Donskogo sudokhodnogo kanala imeni V.I. Lenina, TSimlianskogo gidrouzla i orositel'nykh sooruzhenii, 1949-1952; v piati tomakh. Moskva, Gos. energ. izd-vo. Vol.1. [General structural descriptions] Obshchee opisanie sooruzhenii. Glav. red. S.IA. Zhuk. Red. toma M.M. Grishin. 1957. 319 p. Vol.2. [Organization of construction. Specialized operations in hydraulic engineering] Organizatsiia stroitel'stva. Spetsial'nye gidrotekhnicheskie raboty.

(Continued on next card)

ANDON'YEV, V.L.... (continued) Card 4.

Glav. red. S.IA. Zhuk. Red. toma I.N. Kostrov. 1958. 319 p. (MIRA 11:9)

1. Russia (1923- U.S.S.R.) Ministerstvo elektrostantsii. Byuro tekhnicheskogo otcheta o stroitel'stve Volgo-Dona. 2. Chlen-korrespondent Akademii nauk SSSR (for Akhutin). 3. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Grishin, Razin).

(Volga Don Canal--Hydraulic engineering)

LUKIN, V.V.

Shipbuilding in Japan [from foreign journals]. Sudostroenie 27 no.6:67-69 Je '61. (MIRA 14:6)
(Japan—Shipbuilding)

SHADUR, L.A., prof., doktor tekhn.nauk; LUKIN, V.V., inzh.

Technical and economic comparison of high-capacity gondola cars. Zhel.dor.transp. 43 no.8:17-22 Ag '61. (MIRA 14:8)
(Railroads--Freight cars)

LUKIN, V.V., inzh.

Selecting the optimum parameters of an eight-axle gondola car.
Trudy MIIT no.153:6-38 '62. (MIRA 16:2)
(Railroads--Freight cars)

LUKIN, V.V., inzh.

Selecting the optimum parameters of an eight-axle tank car.
Trudy MIIT no.153:39-53 '62. (MIRA 16:2)
(Tank cars)

LUKIN, V.V.

Use of electronic calculating machines in shoe industry accounting in the United States. Kozh.-obuv.prom. 4 no.6:31-32, 3 of cover Je '62. (MIRA 15:6)

(United States--Shoe industry--Accounting)
(Electronic calculating machines)

LUKIN, V.V.; KUR'YANOVA, Z.V.

Electronic calculating machines for accounting and control in the chemical industry abroad. Khim.i tekh.topl.i masel 7 no.2:49-52 F '62. (MIRA 15:1)

1. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii. (Electronic calculating machines) (Chemical industries) (Production control)

LUKIN, V.V., inzh.

Use of electronic computers in power engineering in foreign countries. Vest. elektroprom. 33 no.8:78-80 Ag '62. (MIRA 15:7)
(Power engineering)
(Electronic calculating machines)
(United States--Electronic data processing)

LUKIN, V.V.

Use of electronic computers in the machinery industry. Mashinostroitel' no.7:42-43 Jl '62. (MIRA 15:7)
(Electronic calculating machines) (Machinery industry)

LUKIN, V.V., inzh.

Evaluating the technological convenience features in the repair of eight-axle gondola cars and analyzing the state of stress of the structure under repair loading conditions. Trudy MIIT no.153:142-153 '62. (MIRA 16:2)

(Railroads—Freight cars)

LUKIN, V.V., inzh.

Use of electronic computers in steelworks. Mekh.i avtom.proiz. 16 no.5:47-48 '62. (MIRA 16:5)

(Steelworks) (Electronic calculating machines)

LUKIN, V.V.

Use of electronic computers in the automobile industry abroad.
Avt. prom. 29 no.4:45-46 Ap '63. (MIRA 16:6)

(Electronic computers)
(Automobile industry)

LUKIN, V.V.

Using electronic computers in analyzing wages at motor-vehicle and tractor plants. Avt.prom. 29 no.10:2-4 O '63. (MIRA 16:10)

1. Moskovskiy inzhenerno-ekonomicheskiy institut imeni Ordzhonikidze.

SHADUR, L.A., prof., doktor tekhn. nauk; LUKIN, V.V., inzh.

Freight car capacity in the long-range design. Zhel. dor. transp. 45 no.5:57-61 My '63. (MIRA 16:10)

LUKIN, V.V.

Analysis of general plant expenses by means of electronic computers. Mashinostroitel' no.2:32-35 F '64. (MIRA 17:3)

LUKIN, V.V.

Using electronic computers in improving the analysis of production durability and quality in enterprises of the automobile industry. Avt.prom. 30 no.1:1-4 Ja '64. (MIRA 17:3)

1. Moskovskiy inzhenerno-ekonomicheskiy institut imeni S.Ordzhonikidze.

LUKIN, V.V., inzh.

Using electronic computers in the analysis of material expenditures in plants. Mekh.i avtom.proizv. 18 no.2:50-53 F '64.
(MIRA 17:4)

LUKIN, V.V.

Means for improving the durability and quality of the output of the automobile industry. Avt. prom. 30 no.3:1-5 Mr '64. (MIRA 17:6)

1. Moskovskiy inzhenerno-ekonomicheskiy institut imeni S. Ordzhonikidze.

LUKIN, V.V., inzh.

Using electronic computers in every day analysis of losses from rejected materials. Vest. mashinostr. 44 no.9:71-74 S '64.
(MIRA 17:11)

SHADUR, L.A., prof., doktor tekhn. nauk; LUKIN, V.V., kand. tekhn. nauk

Efficiency of the use of heavy gondola cars without hatches.
Zhel. dor. transp. 46 no.7:40-42 Jl '64. (MIRA 17:8)

LUKIN, V.V.

Electronic computers improve the analysis of wages. Mashinostroitel' no.3:35-37 Mr '65. (MIRA 18:4)

SHADUR, L.A., prof., doktor tekhn.nauk; LUKIN, V.V., dotsent, kand.tekhn.nauk; RIDEL', E.I., dotsent, kand.tekhn.nauk; ZAMURUYEV, V.T.

Capacity and design of boxcars. Zhel.dor.transp. 47 no.12:30-32 D '65. (MIRA 18:12)

1. Glavnyy konstruktor Altayskogo vagonostroitel'nogo zavoda (for Zamuruyev).

SABUROVA, P.V.; FEDINOVA, A.A.; LUKIN, V.V.

Effect of simazine herbicide on photosynthetic pigments.
Trudy VIZR no.20:43-46 pt.A '64. (MIRA 18:12)

LUKIN, Ya.

Furniture for one-family apartments. Zhil. stroi. no.1:21-24 '59. (MIRA 12:10)

1.Direktor Leningradskogo vysshego khudozhestvenno-promyshlennogo uchilishcha im. V.I. Mukhinoy.
(Furniture)

LUKIN, Ya., prof.

Ways to improve the training of industrial designers in the higher education institutions of industrial arts. Tekh. est. 2 no. 10:2 - 5 O '65 (MIRA 19:1)

1. Rektor Leningradskogo vysshego khudozhestvenno-promyshlennogo uchilishcha imeni Mukhinoy.

LUKIN, Ye.

Republic of Sudan. Vnesh. torg. 41 no.8:29-32 '61.
(MIRA 14:8)

(Sudan--Economic conditions)

ARTAMONOV, K.I.; LEBEDEV, N.I.; YERGALIYEV, E.Ye.; LESECHKO, A.K.; YAKUSHIN, M.V.; KAZAKOV, V.N.; BRYUKHANOV, N.G.; NIKITINA, L.I.; KHVESYUK, F.I.; Prinimali uchastiye: MATVEYEV, A.T.; KOVALEV, S.I.; ROMANOV, V.S.; MARCHENKO, B.P.; ZUDOVA, T.I.; OMAROV, M.N.; PECHENKIN, S.N.; LUKIN, Ye.G; KHLUDKOV, V.I.

Shaft-furnace copper smelting with an oxygen-enriched blow. TSvet. met. 34 no.3:32-39 Mr '61. (MIRA 14:3)

1. Irtyshskiy polimetallicheskiy kombinat (for Artamonov, Lebedev, Yergaliyev, Lesechko, Matveyev, Kovalev, Romanov, Marchenko, Zudova, Omarov). 2. Vsesoyuznyy nauchnoissledovatel'skiy institut tsvetnykh metallov (for Yakushin, Kazakov, Bryukhanov, Nikitina, Khvesyuk, Pechenkin, Lukin, Khludkov).
(Copper--Metallurgy) (Oxygen--Industrial applications)

LUKINE, E. I.

"Lukine, E. I., Darwinism and Geographical regularities in variability of organism." (P. 558) Rev. by G. F. Gause.

SO: Advances in Modern Biology (Uspekhi Sovremennoi Biologie) Vol. XIV, No. 3, 1941

LUKIN, E. I.

"The Adaptive Non-hereditary Modifications of Organisms and the Destiny of their Evolution." (p. 235) by Lukin, E. I.

SO: Journal of General Biology (Zhurnal Obshechey Biologii) Vol. III, No. 4, 1942.

LUKIN, Ye.I.

Composition of leech fauna of Lake Sevan. Trudy Sevan.gidrobiol.sta. 13:213-225 '52. (MLRA 9:8)

(Sevan, Lake--Leeches)

LUKIN, Ye.I.

Interrelation of the plant and animal worlds. Bot.zhur. [Ukr.] 11 no.3:16-29 '54. (MLRA 8:7)

1. Kharkivs'kiy zootekhnichniy institut.
(Evolution)

LUKIN, Ye.I.

Leeches of Western Siberia. Zam. po faune i flore Sib. no.18:43-49 '55. (MIRA 11:1)

(Siberia, Western--Leeches)

LUKIN, Ye.I.

Leeches of the Amur River basin. Zool.zhur. 34 no.2:279-285 Mr-Ap '55. (MLRA 8:6)

1. Kafedra zoologii Khar'kovskogo zootekhnicheskogo instituta.
(Amur Valley--Leeches)

LUKIN, Ye.I.

On the occurrence in the U.S.S.R. of an interesting species of leech, Boreobdella verrucata (Fr.Muller) [with English summary in insert]. Zool.zhur. 35 no.9:1417-1419 S '56. (MLRA 9:12)

1. Kafedra zoologii Khar'kovskogo zootekhnicheskogo instituta.
(Leeches)

LUKIN, Ye.I.

Distribution of the medicinal leech in the U.S.S.R. [with summary in English]. Zool.zhur. 36 no.5:658-669 My '57. (MLRA 10:7)

1. Kafedra zoologii Khar'kovskogo zootekhnicheskogo instituta.
(Leeches)

LUKIN, Ye.I.

System of the leech class [with summary in English]. Zool. zhur. 37 no.11:1740-1741 N '58. (MIRA 11:12)

1.Kafedra zoologii Khar'kovskogo zootekhnicheskogo instituta.
(Leaches)

LUKIN, E. I. and EPSHTEYN, V. M.

"The Baykal Leeches."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

The Kharkov Zootechnical Institute

3(5) SOV/21-59-5-24/25

AUTHOR: Lukin, Ye.I.

TITLE: Zoogeographical Features of the Fresh-Water Leech Fauna of the Ukraine

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 5, pp 554-556 (USSR)

ABSTRACT: The author presents the composition of 7 groups of species of fresh-water leeches encountered in the Ukraine, in accordance with geographical areas of their habitation. The author notes that the leech fauna of the Ukraine is considerably richer than that of any other region of the USSR, with the exception of the Caucasus. A few inferences are advanced with regard to three more species of leeches, the geographical distribution of which has not yet been definitely ascertained. Geographical subdivisions are made after the one by V.G. Geptner and P.V. Terent'yev. There are 4 Soviet references.

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SOV/21-59-5-24/25

Zoogeographical Features of the Fresh-Water Leech Fauna of the Ukraine

ASSOCIATION: Khar'kovskiy zootekhnicheskiy institut (Khar'kov Zootechnical Institute)

PRESENTED: By A.P. Markevich, Member of the AS UkrSSR

SUBMITTED: January 19, 1959

Card 2/2

LUKIN, Ye.I.

Elements of the leech fauna of China and Japan in the fauna of the Amur basin within the U.S.S.R. Zool.zhur. 39 no.1:40-44 Ja '60. (MIRA 13:5)

1. Chair of Zoology, Kharkov Zootechnical Institute.
(Amur Valley--Leeches)

LUKIN, Ye.I.; EPSHTEYN, V.M.

Recent data on fresh-water leeches of the Crimea. Zool. zhur. 39 no.9:1429-1432 S '60. (MIRA 13:9)

1. Kharkov Zootechnical Institute.
(Crimea--Leeches)

LUKIN, Ye.I.; EPSHTEYN, V.M.

Leeches of the subfamily Toricinae subfam. n. and their geographical distribution. Dokl.AN SSSR 134 no.2:478-487 S '60. (MIRA 13:9)

1. Khar'kovskiy zootekhnicheskiy institut. Predstavleno akad. Ye.N. Pavlovskim.

(Leeches)

LUKIN, Ye.I.

Independent status of the leeches of Lake Baikal in relation to the general Palaearctic leech fauna. Dokl. AN SSSR 135 no.2: 489-492 N '60. (MIRA 13:11)

1. Khar'kovskiy zootekhnicheskiy institut. Predstavleno akademikom Ye.N. Pavlovskim.
(Baikal, Lake--Leeches)

LUKIN, Ye.I.; KASYANENKO, V.G.[Kas'ianenko, V.H.], akademik, glav. red.; MARKEVICH, O.P.[Markevych, O.P.], akademik, red.; PIDOPLICHKO, I.G. [Pidoplichko, I.H.], red.; VOINSTVENSKIY, M.A.[Voinstvens'kyi, M.A.] doktor biol. nauk, red.; BOSHKO, G.B.[Boshko, H.V.], kand. biol.nauk, red.; PANASENKO, M.D., red. izd-va; ROZENTSVEYG, Ye.N., tekhn. red.

[Fauna of the Ukraine; in forty volumes]Fauna Ukrainy; v soroka tomakh. Red. kol. V.H.Kas'ianenko ta inshi. Kyiv, Vyd-vo Akad.nauk URSR. Vol.30 [Leeches; external and internal structure, ecology, taxonomy, distribution and practical significance of leeches] P'iavky; zovnishnia i vnutrishnia budova, ekologiia, systematyka, poshyrennia ta praktychne znachennia p'iavok. 1962. 195 p. (MIRA 15:7)

1. Akademiya nauk USSR (for Kas'yanenko, Markevich). 2. Chlen-korrespondent Akademii nauk USSR (for Pidoplichko). 3. Kafedra zoologii Kharkovskogo zooveterinarnogo instituta (for Lukin).
(Ukraine--Coreoidea) (Ukraine--Leeches)

LUKIN, Ye.I.

Intraspecific ecologic changes in organisms. Vop. ekol. 4:49-51 '62. (MIRA 15:11)

1. Zooveterinarnyy institut, Khar'kov.
(Ecology)

LUKIN, Ye.I.

A study on leeches of Kuybyshev Reservoir. Biul. Inst. biol. vodokhran. no.12:30-31 '62. (MIRA 16:3)

1. Khar'kovskiy gosudarstvennyy zooveterinarnyy institut.
(Kuybyshev Reservoir—Leeches)

LUKIN, Ye.I.

Characteristics of leeches of the Amur basin. Izv. TINRO 48: 195-202 '62. (MIRA 16:4)

(Amur Valley—Leeches)

KOVALEV, N.G.; ZMEYEV, A.A.; LUKIN, Ye.I.; FADINA, G.I.; KATIN, V.K.; SYSHCHIKOV, Yu.T.; VLASOV, A.V.; KARPOV, I.N.; ASTAKHOV, A.S.; DARONYAN, M., red.; MOSKVINA, R., tekhn. red.

[Africa in figures; a statistical manual] Afrika v tsifrakh; statisticheskii spravochnik. Moskva, Sotsekgiz, 1963. 566 p. (MIRA 16:11)
(Africa--Statistics)

LUKIN, Ye.I.

Leeches of Irkutsk Reservoir and the problem of nonmiscibility of the Baikal region fauna and the common palearctic fauna. Dokl. AN SSSR 151 no.5:1225-1227 Ag '63. (MIRA 16:9)

1. Khar'kovskiy zooveterinarnyy institut. Predstavleno akademikom Ye.N.Pavlovskim.

(Irkutsk Reservoir--Leeches)

LUKIN, Ye.I.; EPSHTEYN, V.M.

Geographical distribution of two southern palaearctic species of leeches, Batracobdella algira (Moq.-Tand.) and Herpobdella stschegolewi Lukin et Epstein. Zool. zhur. 43 no.4:607-609 '64 (MIRA 17:8)

1. Chair of Zoology, Zooveterinary Institute, Kharkov.

LUKIN, Ye.I.

Differences in the evolution rate of various systems of organs and adaptations for reproduction and development of animals. Zool. zhur. 43 no.8:1105-1120 '64. (MIRA 17:11)

1. Kafedra zoologii Khar'kovskogo zooveterinarnogo instituta.

LUKIN, Ye.I.

Leeches of the Oka River according to collections of 1959. Trudy Pool. inst. 32:123-126 '64. (MIRA 17:11)

MARKIN, A.P.; LUKIN, Ye.P.; PETROVA, Ye.K.; VOROB'YEV, A.A.

Study of botulin anatoxins. Report No. 3: Botulin anatoxin type. Zhur.mikrobiol., epid.i immun. 32 no.12:96-99 D '61. (MIRA 15:11)

(BOTULISM) (TOXINS AND ANTITOXINS)

VOROB'YEV, A.A.; LUKIN, Ye.P.; SAMORODOV, L.M.

Determination of the immunogenic properties of sorbed botulin anatoxins types C and E on white mice. Zhur.mikrobiol., epid. i immun. 33 no.3: 123-127 Mr '62. (MIRA 15:4)
(CLOSTRIDIUM BOTULINUM) (TOXINS AND ANTITOXINS)

VOROB'YEV, A.A.; LUKIN, Ye. F.

Soluble antigens of viruses and Rickettsia and prospects of their use in vaccinal prophylaxis; a review. Zhur. mikrobiol., epid. i imm. 41 no. 2:21-24 F '64. (MIRA 17:9)

VOROB'YEV, A.A.; LUKIN, Y-.P.; YENISHEV, V.M.; SAMORODOV, L.M.

Study on the reactogenicity of botulin anatoxins of the A, B, C, D and E types. Vak. i syv. no.1:40-47 '63. (MIRA 18:8)

[illegible], Y. [illegible]

Obtaining of casein culture medium for the preparation of O botulin anatoxin. Vak. i syv. no.[illegible] '60. (MIRA 13:8)

L 58311-65 EWT(l)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5013797 UR/0016/65/000/005/0114/0119
576.851.71.097.2.98

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6

AUTHOR: Lukin, Ye. P.; Vasil'yev, N. N.; Vorob'yev, A. A.; Shevelev, V. M.

TITLE: Study of the immunological properties of soluble Rickettsia prowazeki antigen. Report II. Isolation of the antigen by means of DEAE-cellulose

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 5, 1965, 114-119

TOPIC TAGS: Rickettsia prowazeki, immunology, antigen, antibody, ion exchange chromatography

ABSTRACT: The method of ion exchange with diethylaminoethyl-cellulose (DEAE-cellulose) was used to obtain purified preparations of soluble *R. prowazeki*. Fractions of soluble *R. prowazeki* antigen of both the virulent (Breinl) and vaccinal (E) strains obtained by separating preparations of soluble antigen in columns with DEAE-cellulose and present in eluates corresponding to an ionic strength of 0.2, 0.3, or 0.4 *M* NaCl proved to be immunologically active. In adequate doses (4-10 EC) they ensured the appearance of complement-fixing antibodies in the blood of vaccinated animals and protected them from subsequent infection with a virulent culture. The

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ACCESSION NR: AP5013797

degree of protection varied with the dose of antigen and its source (Brain or [illegible] strain). To produce large quantities of soluble antigen by means of DEAE-cellulose requires the development of a technology for fractioning preparations on cellulose esters which possess ion-exchange properties. Orig. art. has: 3 tables.

ASSOCIATION: none

SUBMITTED: 07Apr64 ENCL: 00 SUB CODE: LS

NO REF SOV: 002 OTHER: 001

Card 2/2

L 63353-65 EWA(b)-2/EWA(j)/EWT(1) JK

ACCESSION NR: AP5011277 UR/0016/65/000/004/0041/0047

AUTHOR: Lukin, Ye. P.; Vasil'yev, N. N.; Vorob'yev, A. A.; Malina, V. P.

TITLE: Immunological properties of a soluble Rickettsia prowazeki antigen. Report I. Antigenic structure of Rickettsia prowazeki according to chromatographic analysis data using DEAYe-cellulose

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 4, 1965, 41-47

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TOPIC TAGS: rickettsia, Rickettsia prowazeki, soluble antigen, immunochemistry, chromatographic analysis, adsorption chromatography, diethylaminoethyl, cellulose, fractionation

ABSTRACT: The fractional structure of soluble R. prowazeki antigens isolated from a Breinl virulent strain and a strain E vaccine was analyzed by chromatographic methods using ion exchange diethylaminoethyl cellulose (DEAYe-cellulose) in the adsorbent columns. Findings show that the crude and purified soluble antigen preparations of the Breinl virulent strain contain three fractions with different

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ACCESSION NR: AP5011277

physicochemical properties. The group-specific and type-specific components of the soluble antigen are bound to the same fractions. The group-specific antigen of R. prowazeki, shared in common by R. mooseri, accompanied the type-specific antigen of R. prowazeki through the purifying stages, and could not be isolated by ammonia sulfate salting out, chromatographic separation, or a combination of both methods. The soluble antigen of the strain E vaccine has the same physicochemical properties as that of the Breinl virulent strain, and also consists of 3 different fractions. It should be noted that the purification of soluble R. prowazeki antigen preparations by ammonia sulfate salting out, followed by fractionating with DEAE-cellulose filled columns, purifies the antigen by 40-50 times. Orig. art. has: 2 figures.

ASSOCIATION: None.

SUBMITTED: 02Apr64 ENCL: 00 SUB CODE: LS

NR REF SOV: 005 OTHER: 006

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37233
S/131/62/000/005/004/004
B105/B138

15.2230

AUTHORS: Poluboyarinov, D. N., Lukin, Ye. S.

TITLE: Heat resistance of corundum refractories

PERIODICAL: Ogneupory, no. 5, 1962, 230-235

TEXT: The paper reports on the heat resistance and softening point under load of corundum refractories at temperatures above 1700°C. 30-50% finely disperse alumina with kaolin was used as binding agent. The specimens for determining the most important thermomechanical properties were prepared by injection molding from a mass calcined at 400°C and plasticized with 10% paraffin. With an Al_2O_3 excess, a solid solution of corundum crystallizes in mullite with the composition $2Al_2O_3 \cdot SiO_2$.

A method was devised for determining the heat resistance on the basis of the temperature gradient causing cracks in the specimen. The specimens were hollow cylinders, heated from inside, cooled from outside. Temperatures of the inner and outer walls of the cylinders were measured. The total phase composition of this mixture is 44% mullite, 46% corundum,

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Heat resistance of corundum ...

and 10% vitreous phase. Qualitative X-ray structural analysis was carried out on an УРС-50И (URS-50I) apparatus. Refractories on the basis of electrically fused corundum with alumina as a binder have comparatively low resistance to heat. The softening point of this material under a load of 2 kg/cm^2 is above 1800°C. Heat resistance may be increased by replacing the alumina binder by 10-20% kaolin, but the softening point then drops to 1700°C. Substitution of finely disperse alumina for the fine-grained electrically fused corundum causes active crystallization of mullite and a further increase in heat resistance. The softening point then remains at 1670°C. There are 1 figure and 3 tables. The English-language references read as follows: W. R. Buessem, E. A. Bush, Journ. Amer. Cer. Soc., No.1, 1955; Y. White, Trans. Brit. Cer. Soc., No.10, 1958.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. Mendeleyeva
(Institute of Chemical Technology imeni Mendeleyev)

L 14527-63 EPF(n)-2/EWP(q)/EWT(m)/BDS/T-2/ES(s)-2 AFFTC/ASD/SSD
Pu-4/Pt-4 JD/WH
ACCESSION NR: AP3004263 S/0131/63/000/007/0318/0323

'77
76

AUTHOR: Lukin, Ye. S.; Poluboyarinov, D. N.

TITLE: Some thermal and mechanical properties of pure-oxide ceramics

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SOURCE: Ogneupory*, no. 7, 1963, 318-323

TOPIC TAGS: pure-oxide ceramic, refractory oxide, aluminum oxide, zirconium oxide, magnesium oxide, beryllium oxide, alumina refractory, zirconia refractory, magnesia refractory, beryllia refractory, ceramic refractoriness-under-load, ceramic expansion coefficient, ceramic bending strength, ceramic compressive strength, ceramic thermal-shock resistance, high-temperature refractory, vacuum furnace

ABSTRACT: Refractoriness under a 2 kg/cm² load, coefficient of linear expansion (α), bending strength (σ_b), compressive strength, (σ_{comp}), and thermal-shock resistance have been determined in pure-oxide sintered refractories. Samples based on alumina (Al_2O_3), zirconia (ZrO_2), magnesia (MgO), and beryllia (BeO) were prepared from: 1) technical-grade Al_2O_3 fired at 1450C with additions of 1% TiO_2 or MnO_2, 5% ZrO_2, or 1% TiO_2 and 5% ZrO_2; 2) pure zirconia (99.5% ZrO_2) stabilized with 8, 10, or 12% CaO or MgO; 3) technical-grade (97.5%) ZrO_2 stabilized with 5% CaO or MgO; 4) technical-grade MgO; and 5) chemically pure BeO fired at 1800C. All

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the samples were compacted and fired at 1550—1950C to form 4 x 4 x 20 mm specimens. Refractoriness-under-load and α were determined in a vacuum furnace, which is described in detail in the article and shown in Fig. 1 of Enclosure. Sample temperature was measured with an optical pyrometer, and α, with a graphite dilatometer built into the furnace. The softening point under load was found to be: 1) in the 1860—1930C range for Al_2O_3-base samples and 1900C for pure Al_2O_3 samples; 2) in the 2250—2300C range for pure ZrO_2 and about 2100C for technical-grade ZrO_2-based samples; and 3) 2300C and 2450C for MgO and BeO samples, respectively. It is noted, however, that the figures for MgO and BeO may not be correct because of considerable vaporization in vacuum at their softening points. The average α values for the pure-oxide ceramics studied were generally in agreement with literature data. Linear expansion at 1800—2000C amounted to 2—3%. Both σ_{comp} and σ_b decline rapidly at 1600—1800C. The highest σ_b— at 1630C and 483—505 kg/cm² — was found for the pure-ZrO_2-base samples stabilized with MgO. Among Al_2O_3-base samples, those with 5% ZrO_2 have the highest σ_b (290 kg/cm² at 1630C) and σ_{comp} (300 kg/cm² at 1800C). MgO and BeO exhibited σ_{comp} at 1800C of 340 and 360 kg/cm², respectively, which are the highest of all the oxide ceramics, but their σ_b were low. BeO displayed the highest thermal-shock resistance of all the oxide ceramics studied, as evidenced by σ_b, which remained practically unchanged after one 1300C-air cycle and decreased by only 30% after one 850C-water cycle. Samples based on Al_2O_3 with 5% ZrO_2 and on

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ACCESSION NR: AP3004263

pure ZrO_2 with optimum CaO or MgO content showed the highest thermal-shock resistance of all Al_2O_3- or ZrO_2-base samples. Additions of 1% TiO_2 and 5% ZrO_2 to Al_2O_3 contributed to a decrease in sintering temperature combined with an increase in thermal-shock resistance. Orig. art. has: 3 figures and 6 tables.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Institute of Chemical Technology)

SUBMITTED: 00 DATE ACQ: 20Aug63 ENCL: 01

SUB CODE: MA NO REF SOV: 004 OTHER: 006

Card 3/3

L 17634-65 EWP(e)/EWA(s)-2/EWT(m)/EPF(c)/FCS/EPF(n)-2/EWG(v)/EPR/EPA(w)-2/
EWP(j)/T/EWP(t)/EPA(bb)-2/EWP(b)/EWA(h)/EWA(l) Pc-4/Pe-5/Pq-4/Pab-10/Pr-4/Ps-4/
Pt-10/Peb/Pu-4 IJP(c)/ASD(m)-3/AS(mp)-2/AFETR JD/WW/JW/JG/RM/WH

ACCESSION NR: AP4045416 S/0131/64/000/009/0418/0424

AUTHOR: Lukin, Ye. S.; Poluboyarinov, D. N.

TITLE: Vaporization of pure oxide ceramics at high temperatures

SOURCE: Ogneupory*, no. 9, 1964, 418-424

TOPIC TAGS: ceramic, oxide ceramic, high temperature refractory oxide, magnesia, alumina, beryllia, calcium oxide, stabilized zirconia, spinel, mullite, oxide ceramic vaporization

ABSTRACT: Utilization of pure oxide ceramics at high temperatures in inert atmosphere or in high vacuum is often accompanied by a loss of weight. Weight loss and vaporization rate of certain pure oxide ceramic materials have been determined at various temperatures up to 2300C in a 10^{-4} mm Hg vacuum or in helium at 0.2 atm to ascertain the behavior of the materials under practical working conditions. The materials studied were MgO, Al_2O_3, BeO, CaO, high-purity ZrO_2 stabilized with 10 mol% of MgO or CaO, spinel ($MgO \cdot Al_2O_3$), and mullite ($3Al_2O_3 \cdot 2SiO_2$). No adequate study of these materials had been

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ACCESSION NR: AP4045416

made. Conventionally prepared samples were suspended from a calibrated quartz spring balance inside a high-temperature vacuum furnace, which is described and shown schematically. The rate of weight loss was determined by continuous weighing during vaporization; the total loss of weight, as the difference in weight before and after the experiment. Basically, this is the Langmuir method of vaporization from a free surface in vacuum. The rate of vaporization data for all oxide ceramics studied were presented in a table and plotted versus temperature. Differences were noted between various oxides, depending on operating conditions. The rate of vaporization of all oxides was lower in helium than in vacuum. The highest rate was found for pure MgO ceramics under any conditions. Addition of 4% Al_2O_3 considerably decreased vaporization of MgO. The rate of vaporization increased for all oxides, especially for MgO and BeO, when temperature was increased. The rate of vaporization of CaO stabilized ZrO_2 was somewhat higher than that of MgO stabilized ZrO_2. The changes in porosity and density of some oxide samples were noted after experiments in vacuum. Porous Al_2O_3, ZrO_2, BeO, and MgO samples were vaporized in vacuum 1.5--2 times faster than corresponding dense

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L 17634-65
ACCESSION NR: AP4045416

samples. A metal was deposited on MgO and, especially, CaO samples in contact with molybdenum or tungsten wire at high temperatures. The differences in vaporization patterns of various oxides are correlated with the structure and energy of their crystal lattices and, therefore, with the interatomic or interionic bond energy. Orig. art. has: 5 tables, 4 figures, and 1 formula.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Chemicotechnological Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 003 OTHER: 004

Card 3/3

L 10698-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/T/EPA(bb)-2/EWP(b) Pt-10/Pu-4
AFMD(t) JD/WW/JG/WH

ACCESSION NR: AP4047378 S/0294/64/002/005/0736/0741

AUTHORS: Lukin, Ye. S.; Serova, G. A. 16 B

TITLE: On several properties of refractories from calcium oxide

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 5, 1964, 736-741

TOPIC TAGS: ceramic material, refractory material, material strength

ABSTRACT: The properties of refractory materials from CaO were investigated at high temperatures, including tests of their stability under the action of alkaline metal vapor. The stock test material was composed of CaO and $CaCO_3$ in 55.20 and 43.37% respective concentrations with additional trace elements. The influence of the following factors upon the caking tendency of CaO was studied: 1) the temperatures of calcination of the base material; 2) the quantities of TiO_2 input, 3) temperatures and endurance lengths for final calcination of refractories, and 4) gas atmosphere of calcination. Tables are presented showing the caking characteristics of the material with heating at various temperatures for varying lengths of time in both cryptolite and vacuum furnaces. Deformation and resistance characteristics were also tabulated at various temperatures as were dilation character-

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ACCESSION NR: AP4047378

istics. Material fabric was investigated by x-ray after exposure to lithium fumes. Results of the fume tests include a roentgen rotation diagram and a plot of surface temperature drop during fume exposure. Results indicate satisfactory chemical stability under fume action, though CaO samples showed poor thermal durability under sharp temperature fluctuations. CaO ceramic pieces are recommended for use at constant high temperatures and in CO_2, H_2O, or in alkaline metal vapors. Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemico-technical Institute)

SUBMITTED: 21Dec63 ENCL: 00

SUB CODE: MT NO REF SOV: 007 OTHER: 011

Card 2/2

L 41370-66 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AT6022495 SOURCE CODE: UR/2539/64/000/045/0091/0095

43
B+1

AUTHOR: Lukin, Ye. S.; Serova, G. A.

ORG: none

TITLE: Certain thermomechanical properties of refractories from fused magnesium oxide

SOURCE: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no. 45, 1964. Issledovaniya v oblasti khimii i tekhnologii silikatov (Studies in the field of silicate chemistry and technology), 91-95

TOPIC TAGS: magnesium oxide, thermomechanical property, refractory

ABSTRACT: Some physicomechanical properties of refractories prepared from fused magnesium oxide of various grain distributions containing ~99% MgO were studied at room temperature and in the range of 1000-1400°; the temperature of the start of softening of these refractories under load and their thermal stability were determined. The effect of the addition of various amounts of Al_2O_3 was also investigated. It was found that Al_2O_3 admixtures increase the thermal stability of fused MgO refractories; they decrease the strength of the refractories at room temperature, but at 1000-1400°, the admixtures in amounts up to 8% strengthen the material. The optimum refractories from the standpoint of strength in the heated state are those containing 2 and 8% Al_2O_3. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 003

Card 1/1

ACC NR: AT6036924 SOURCE CODE: UR/0000/66/000/000/0005/0020

AUTHORS: Poluboyarinov, D. N.; Lukin, Ye. S.

ORG: none

TITLE: A high-temperature investigation of some properties of pure oxide ceramics

SOURCE: Nauchno-tekhnicheskoye obshchestvo chernoy metallurgii. Moskovskoye pravleniye. Vysokoogneupornyye materialy (Highly refractory materials). Moscow, Izd-vo Metallurgiya, 1966, 5-20

TOPIC TAGS: oxide ceramic, high temperature ceramic material, ceramic product property

ABSTRACT: Thermomechanical properties of oxide ceramics containing from 0.3 to 0.5% (by weight) of impurities have been investigated. Materials used were: $3Al_2O_3 \cdot 2SiO_2$, Al_2O_3 (I), $MgO \cdot Al_2O_3$ (II), BeO (III), CaO, ZrO_2 stabilized with MgO (IVa), ZrO_2 stabilized with CaO (IVb), and MgO (V). The properties studied at temperatures up to 2500C were: deformation under load of 2 kg/cm^2, mechanical strength, loss of weight, thermal expansion, and thermal stability. The method for determining these properties and the type of the high temperature furnace used have been described earlier by Ye. S. Lukin and D. N. Poluboyarinov (Ogneupory, 1963, No. 7, 318—323; 1964, No. 9, 418—424). It was established that the nature of the oxides and their melting points

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ACC NR: AT6036924

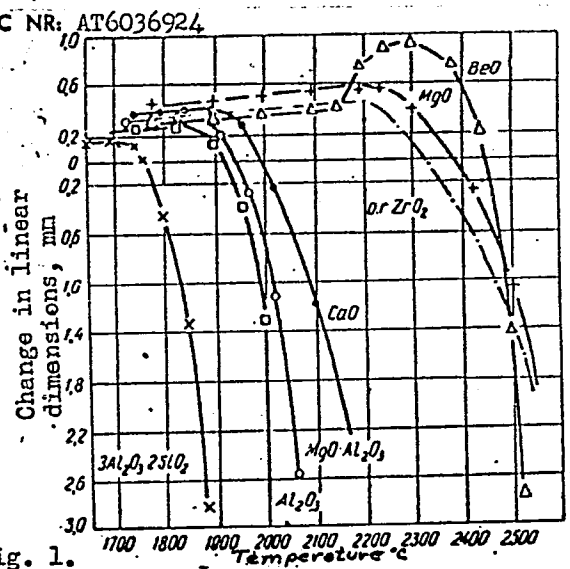

Fig. 1.
Deformation curves under load of 2 kg/cm^2 for sintered pure oxide ceramics

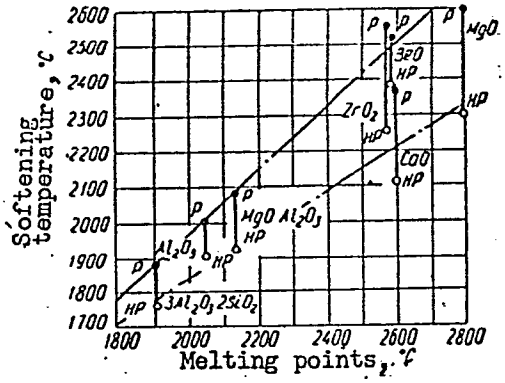

Fig. 2.
Deformation temperatures and melting points of oxide ceramics: HP - temperature at which softening starts; P - temperature of complete destruction. Softening temperatures for CaO are given for the specimens having relative density of 98%

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