APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M. I.: Master Phys-Math Sci (diss) -- "Regulated groups". Moscow, 1959. 9 pp (Min Education RSFSR, Moscow Oblast Pedagogical Inst im N. K. Krupskaya) (KL, No 11, 1959, 114)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

Respiration and mineral nu rition of plants. Fiziol. rast. 12 no.5:794-804 S-O '65. (MIRA 19:1)

1. Institut fiziologii rasteniy AN SSSR, Moskva.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.; POZDNYAKOVA, V.A.

Some characteristics of soil nutrition in plants of the Far North.
Dokl.AN SSSR 138 no.5:1223-1226 Je '61. (MIRA 14:6)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR.
Predstavleno akademikom A.L.Kursanovym.
(Murmansk Province—Wheat—Fertilizers and manures)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.; SKOBENKO, D.M.; POTONYAKOVA, V.A.

Metabolism in wheat in connection with nutritional conditions in the Far North. Trudy Inst. evol. i ekol. fiz. no.2:137-162 '62. (MIRA 18:3)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

Studies on nitrogen metabolism of wheat in the Far East. Fiziol. rast. 8 no.3:318-324 '61. (MIRA 14:5)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva Akademii nauk SSSR, Moskva.
(Murmansk Province--Wheat) (Nitrogen metabolism)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

MAL'TSEV, Anatoliy Ivanovich; ZAYTSEVA, M.G., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[Principles of linear algebra] Osnovy lineinoi algebry. Izd. 2-oe, perer. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 340 p. (Algebra) (MLRA 9:11)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M. G.

35984 O razvitii formy u rasteniy-podashek. Sochsch. Tadzh. Filiala akad. Nauk sssr, Vyp. 1[illegible], [illegible], S. 16-[illegible]-Bibliogr: Nazv

SO: Letopis' Zhurnal'nykh Statey, Vol. [illegible], Moskva, 194[illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

Effect of low nightime temperatures on growth and metabolism of barley plants in the early phases of their development. Izv.Otd.est.nauk AN Tadzh.SSR no.1:27-32 '52. (MLRA 9:10)

1.Institut botaniki Akademii nauk Tadzhikskoy SSR, Pamirskaya biostantsiya. (Barley) (Plants--Metabolism)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

Effect of temperature on the germination of barley seeds. Izv.Otd.est. nauk AN Tadzh.SSR no.1:21-26 '52. (MLRA 9:10)

1.Institut botaniki Akademii nauk Tadzhikskoy SSR. Pamirskaya biostantsiya.

(Germination) (Barley)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GOLDOVSKIY, A.M., doktor tekhn.nauk; ZAYTSEVA, M.G., inzh.

Evaluation of the technological characteristics of sunflower seeds of the new improved varieties. Masl.-zhir.prom. 29 no.1:7-11 Ja '63. (MIRA 16:2)

1. Vsesoyuznyy zaochnyy tekhnologicheskiy institut pishchevoy promyshlennosti (for Goldovskiy). 2. Ukrainskiy nauchno-issledovatel'skiy institut maslozhirovoy promyshlennosti (for Zaytseva).
(Sunflower seed--Testing)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, [illegible] G.

[illegible] Ob opredelenii [illegible]. [illegible]. [illegible]. Nauk ssur, [illegible], [illegible], S. [illegible]

SO: Letopis' Zhurnal'nykh Statey, Vol. [illegible], Moskva, [illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

KUZNETSOV, S.M.; ZAYTSEVA, M.G. [Zaitseva, M.H.]

Jubilee sessions of the institutes of the Academy of Sciences of the Ukrainian S.S.R. dedicated to the 40th anniversary of the Ukrainian Soviet Socialist Republic. Visnyk AN URSR 29 no.1:66-71 Ja '58. (MIRA 11:4)

(Ukraine--Science)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

KUZNETSOV, S.M.; ZAYTSEVA, M.G. [Zaitseva, M.H.]

General jubilee session of the Academy of Sciences of the Ukrainian S.S.R. dedicated to the 40th anniversary of the Ukrainian Soviet Socialist Republic. Visnyk AN URSR 29 no.1:51-58 Ja '58. (MIRA 11:4)

(Ukraine--Science)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.; SEDENKO, D.M.; POZDNYAKOVA, V.A.

Effect of phosphorus and magnesium on the respiration of plants cultivated in the Kola Peninsula. Fiziol. rast. 9 no.1:98-105 '62. (MIRA 15:3)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.
(Kola Peninsula--Plants--Respiration)
(Plants, Effect of phosphorus on)
(Plants, Effect of magnesium on)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GORDEYEV, D.I., prof., glav. red.; DVORYANKIN, F.A., prof., red.; KONONKOV, A.F., red.; RYBNIKOV, K.A., prof., red.; SOLOV'YEV, A.I., dotsent, red.; SPASSKIY, B.I., dotsent, red.; FIGUROVSKIY, N.A., prof., red.; SHEVTSOV, N.S., prof., red.; KHRGIAN, A.Kh., prof., red.; ZAYTSEVA, M.G., red.; YERMAKOV, M.S., tekhn. red.

[History and methodology of the natural sciences] Istoriia i metodologiia estestvennykh nauk. Moskva. No.1. [Physics] Fizika. 1960. 221 p. (MIRA 14:5)

1. Moscow. Universitet.

(Physics)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

PREDVODITELEV, A.S., prof.; MLODZEYEVSKIY, A.B., prof.; ZAYTSEVA, M.G., red.; YERMAKOV, M.S., tekhn.red.

Ivan Filippovich Usagin. Moskva, 1959. 297 p. (MIRA 12:10)

1. Moscow. Universitet. Fizicheskiy fakul'tet. Kabinet istorii fiziki. 2. Chlen-korrespondent AN SSSR (for Predvoditelev). 3. Fizicheskiy fakul'tet Moskovskogo universiteta (for Mlódzeyevskiy).

(Usagin, Ivan Filippovich, 1855-1919)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.G.

Investigating the process of nitrogen and phosphorus absorption by plant roots as affected by light conditions and temperatures at higher altitudes in the Pamirs. Trudy AN Tadzh. SSR 47:3-63 '56. (MIRA 12:5)

(Pamirs--Plants--Assimilation)
(Plants, Effect of light on)
(Plants, Effect of temperature on)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

LEVSHIN, Leonid Vadimovich; VOVCHENKO, G.D., prof., otv.red.; BERNSHTEYN, S.B., prof., red.; VILENSKIY, D.G., prof., red.; GORDEYEV, D.I., prof., red.; GUDZIY, N.K., prof., red.; ZAYONCHKOVSKIY, P.A., prof., red.; KECHEK'YAN, S.F., prof., red.; MEL'NIKOVA, K.P., kand.nauk, red.; POLYANSKIY, F.Ya., prof., red.; RYBNIKOV, K.A., prof., red.; SKAZKIN, S.D., akademik, red.; SOLOV'YEV, A.N., dotsent, red.; ZAYTSEVA, M.G., red.; GEORGIYEVA, G.I., tekhn.red.

Sergei Ivanovich Vavilov. Moskva, Izd-vo Mosk.univ., 1960. 101 p. (Zamechatel'nye uchenye Moskovskogo universiteta, no.24).
(MIRA 13:6)

(Vavilov, Sergei Ivanovich, 1891-1951)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

KUZNETSOV, Ye.S., red.; ZAYTSEVA, M.G., red.; CHISTYAKOVA, K.S., tekhn.red.

[Some mathematical problems on neutron physics] Nekotorye matematicheskie zadachi neitronnoi fiziki; sbornik rabot kafedry atomnogo iadra fizicheskogo fakul'teta MGU pod red. E.S.Kuznetsova. Moskva, Izd-vo Mosk.univ., 1960. 219 p. (Neutrons) (MIRA 13:7)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

KONONKOV, Arkadiy Fedorovich; VOVCHENKO, G.D., prof., otv.red.; BERNSHTEYN, S.B., prof., red.; VILENSKIY, D.G., prof., red.; GORDEYEV, D.I., prof., red.; GUDZIY, N.K., prof., red.; ZAYONCHKOVSKIY, P.A., prof., red.; KECHEK'YAN, S.V., prof., red.; POLYANSKIY, F.Ya., prof., red.; RYBNIKOV, K.A., prof., red.; SKAZKIN, S.D., akademik, red.; SOLOV'YEV, A.N., dotsent, red.; ZAYTSEVA, M.G., red.; GEORGIYEVA, G.I., tekhn.red.

Petr Ivanovich Strakhov. Moskva, Izd-vo Mosk.univ., 1959. 91 p. (MIRA 13:2)
(Strakhov, Petr Ivanovich, 1757-1813)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

BARANOVSKIY, L.M., vrach; ZAYTSEVA, M.D., meditsinskaya sestra

Nurses' councils. Med. sestra 20 no.6:56-57 Je '61. (MIRA 14:7)

1. Iz Gorodskoy klinicheskoy bol'nitsy No.2, Ryazan' (for Baranovskiy).
2. Iz Krovoozerskoy rayonnoy bol'nitsy Nikolayevskoy oblasti (for Zaytseva).

(RYAZAN--NURSES AND NURSING)
(NIKOLAEVSK PROVINCE--NURSES AND NURSING)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GOVORUKHIN, A.P.; PSHENICHNAYA, A.M.; SMELAYA, T.V.; ZAYTSEVA, M.B.; Prinimali uchastiye: KALASHNIKOV, N.V.; PLAKSINA, A.I.; DOLGOSHOV, V.I., starshiy nauchnyy sotrudnik. PORTNYAGIN, I.I., otv.red.; ROGOVSKAYA, Ye.G., red.; BRAYNINA, M.I., tekhn.red.

[Agroclimatic reference book on Orel Province] Agroklimaticheskii spravochnik po Orlovskoi oblasti. Leningrad, Gidrometeor.izd-vo, 1960. 91 p. (MIRA 13:11)

1. Kursk. Gidrometeorologicheskaya observatoriya. 2. Upravleniye gidrometsluzhby tsentral'no-chernozemnykh oblastey (for Govorukhin, Pshenichnaya, Smelaya). 3. Institut geografii AN SSSR (for Dolgoshov).
(Orel Province--Crops and climate)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GOVORUKHIN, A.P.; SMELAYA, T.V.; PSHENICHNAYA, A.M.; ZAYTSEVA, M.B.
Prinimali uchastiye: KALASHNIKOV, N.V.; PLAKSINA, A.I.; DOLGOSHOV, V.M., starshiy nauchnyy sotrudnik. PORTNYAGIN, I.I., otv.red.; MIRONENKO, Z.I., red.; VOLKOV, N.V., tekhn.red.

[Agroclimatic manual for Lipetsk Province] Agroklimaticheskii spravochnik po Lipetskoi oblasti. Leningrad, Gidrometeor.izd-vo, 1960. 94 p. (MIRA 14:1)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeorologicheskoy sluzhby. Upravleniye gidrometeorologicheskoy sluzhby TSentral'no-Chernozemnykh oblastey. 2. Upravleniye gidrometsluzhby TSentral'no-Chernozemnykh oblastey (for Govorukhin, Smelaya, Pshenichnaya, Zaytseva). 3. Institut geografii Akademii nauk SSSR (for Dolgoshov).
(Lipetsk Province--Crops and climate)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GOROKHOV, D.I.; GOVORUKHIN, A.P.; SMELAYA, T.V.; PSHENICHNAYA, A.M.; ZAYTSEVA, M.B.; Prinimali uchastiye: KALASHNIKOV, N.V.; PLAKSINA, A.I.. PORTNYAGIN, I.I., otv.red.; ROGOVSKAYA, Ye.G., red.; VOLKOV, N.V., tekhn.red.

[Agroclimatic reference book on Tambov Province] Agroklimaticheskii spravochnik po Tambovskoi oblasti. Leningrad, Gidrometeor.izd-vo, 1959. 123 p. (MIRA 13:2)

1. Kursk. Gidrometeorologicheskaya observatoriya. 2. Upravleniye gidrometsluzhby TSentral'no-Chernozemnykh oblastey (for Gorokhov, Govorukhin, Smelaya, Pshenichnaya, Zaytseva).
(Tambov Province--Crops and climate)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GOVORUKHIN, A.P.; SOKLAYA, T.V.; PSHENICHNAYA, A.M.; DOLGOSHEV, V.I., nauchnyy sotrudnik; ZAYTSEVA, M.B.; NEDOSHIVINA, T.G., red.; VLADIMIROV, O.G., tekhn.red.

[Agroclimatic manual for Bryansk Province] Agroklimaticheskii spravochnik po Brianskoi oblasti. Leningrad, Gidrometeor.izd-vo, 1960. 111 p. (MIRA 14:4)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeorologicheskoy sluzhby. Upravleniye gidrometeorologicheskoy sluzhby TSentral'no-chernozemnykh oblastey. 2. Institut geografii AN SSSR (for Dolgoshev).
(Bryansk Province--Crops and climate)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

KOZLOV, A.M.; ZAYTSEVA, M.A.; DOLIOV, V.G.

Our experience in compiling a reference book for the transcription of geographical names. Geod. i kart. no.1:46-48 ja '64.
(MIRA 17:1)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

BELOV, K.P.; ZAYTSEVA, M.A.; KODOMTSEVA, A.M.

Characteristics of magnetic hysteresis phenomena in the systems $Pr_2O_3 \cdot Fe_2O_3$ and $La_2O_3 \cdot Fe_2O_3$. Zhur.eksp.i teor.fiz. 37 no.4:1159-1161 O '59. (MIRA 13:5)

1. Moskovskiy gosudarstvennyy universitit.
(Praseodymium oxide--Magnetic properties)
(Iron oxide--Magnetic properties)
(Lanthanum oxide--Magnetic properties)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

BELOV, K.P.; ZAYTSEVA, M.A.; KADOMTSEVA, A.M.

Magnetic properties of the lanthanum and praseodymium orthoferrites in the partial substitution of the Fe^{3+} ions for Al^{3+} ions. Zhur. eksp. i teor. fiz. 39 no.4: 1148-1150 O '60. (MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet.
(Rare earth ferrates--Magnetic properties)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

VYDREVICH, Ye. Z.; ZAYTSEVA, M.A.

Density of aluminate-alkali solutions. TSvet. met. 34 no.6:55-58 Je '61. (MIRA 14:6)
(Aluminum--Metallurgy)
(Hydrometallurgy)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

30073
S/048/61/025/011/010/031
B117/B102

Magnetic anisotropy and ...

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gos. universiteta im M. V. Lomonosova (Physics Division of Moscow State University imeni M. V. Lomonosov)

Card 4/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

30073
S/048/61/025/011/019/031
B117/B102

Magnetic anisotropy and ...

difference in the magnetization of the two sublattices of Fe^{3+} ions when they are partly replaced by nonmagnetic Al^{3+} ions. However, the Curie point is lowered in every case. Compositions in which Fe^{3+} ions were partly replaced by magnetic Cr^{3+} ions were examined. As compared with stoichiometric compositions, the coercive force diminishes sharply in La and Pr orthoferrites, when Cr^{3+} ions are introduced. As expected, and unlike Al^{3+} ions, Cr^{3+} ions do not change magnetization very much. The Debye diagrams taken by A. A. Katsnel'son and K. Yatskul'yan showed that all the examined compositions are solid solutions without any foreign phase. Ye. A. Turov is thanked for his help and for having discussed the results obtained. V. A. Naysh (Fizika metallov i metallovedeniye, 9, 10 (1960); 11, 161 (1960)) is mentioned. There are 5 figures and 6 references: 2 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: Bozorth, R. M., Phys. Rev. Letters, 1, 362 (1958); Gilleo, M. A., J. Chem. Phys. 24, 1239 (1956); Watanabe, H., J. Phys. Soc. Japan, 14, 511 (1959).

Card 3/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

30073
S/048/61/025/011/013/031
B117/B102

Magnetic anisotropy and ...

orthoferrites. If the temperature is increased to the Curie point, the anisotropy of weak ferromagnetism is virtually not reduced. The characteristic phenomena of hysteresis and thermal remanence effects appearing in rare-earth orthoferrites can be explained also by the strong magnetic anisotropy. Thermal remanence phenomena were observed on polycrystalline La, Pr, and Yb orthosilicates (Ref. 5: Belov, [illegible] Zaytseva, M. A., Kacontseva, A. [illegible], Zh. eksperim. i teor. fiz. [illegible] ([illegible]); Ref. 6: Watanabe, H. J. Phys. Soc. Japan. 14, 511 ([illegible]). Magnetization curves and hysteresis loops were recorded in magnetic fields of up to 20,000 oe by a pondermotive method. Specimens cooled in the magnetic field displayed asymmetric hysteresis loops with individual cycles. The thermal remanence was removed by a magnetic field of the order of 10,000 oe. This is indicative of the enormous coercive force of these orthoferrites. A partial substitution of nonmagnetic Al^{3+} ions for Fe^{3+} ions was performed in polycrystalline La and Pr orthoferrites. A sharp diminution of both coercive force and thermal remanence phenomena was observed along with a steep rise of magnetization. The latter may be explained by a prevailing diminution of the exchange field. On the other hand, the growth of magnetization is possibly associated with the greater

Card 2/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

30073
S/048/61/025/011/019/031
B117/B102

152660

242200 1121 1160 1137, 1144

AUTHORS: Belov, K. P., Zaytseva, M. A., Kadomtseva, A. M., and Timofeyeva, V. A.

TITLE: Magnetic anisotropy and hysteresis properties of rare-earth orthoferrites

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 11, 1961, 1389-1392

TEXT: Magnetic anisotropy was examined on single crystals of La, Pr, Nd, Sm, Eu, Gd, and Yb orthoferrites. The crystals were grown by spontaneous crystallization from their solution in a melt of lead compounds, lead oxide, and lead fluoride. The torque of the resulting crystals as a function of their angle of rotation with respect to an external magnetic field of up to 20 koe was measured with an anisometer. The torque curves drawn at room temperature resembled one another in the examined single crystals and showed that the orientation of the magnetic moment in the axis of easiest magnetization is very stable against rotation of the outer field. This points to an exceedingly strong magnetic anisotropy of these

Card 1/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

that of the second 12.347 as compared with 12.387 for the pure Y Fe garnet. In garnet there are three magnetic sub-lattices and on Neel's model M the curve observed for the first composition can be satisfactorily explained if the lattice having a weak inherent exchange interaction takes a different course from that of the other (iron) sublattices. The Ti-containing garnets $Mn_{0.5}Y_{2.5}Fe_{4.5}Ti_{0.5}O_{12}$ and $MnY_2Fe_4TiO_{12}$ were examined but showed no anomalies except that the second compound had a "tail" of residual magnetisation which persisted above the Curie point (506 °C) apparently connected with the appearance of another phase (traces of $Y_2Ti_2O_7$ were observed in the X-ray powder photograph).

There are 4 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova
(Moscow State University imeni M.V. Lomonosov)

SUBMITTED: June 27, 1961

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

S/070/62/007/002/008/022
E132/E160

24.2200

AUTHORS: Belov, K.P., Zaytseva, M.A., Kadomtseva, A.M., Kvitka, S.S., and Ovchinnikova, T.L.

TITLE: The magnetic properties and structures of certain garnet systems

PERIODICAL: Kristallografiya, v.7, no.2, 1962, 242-246

TEXT: Garnet structures have been synthesized by the substitution in yttrium iron garnets of Fe and Y ions by Mn, Ge and Ti and their structures and magnetic properties have been studied. In the garnet of composition $Mn_{0.5}Y_{2.5}Fe_{4.5}Ge_{0.5}O_{12}$ an anomalous temperature dependence of the spontaneous magnetisation has been observed at low temperatures (of Neel's type M). It is established that the garnet of composition $MnY_2Fe_4GeO_{12}$ has a Curie point below 0 °C and that the curve of the temperature dependence of the spontaneous magnetisation tends asymptotically to zero. The curves are explained qualitatively. The cell size of the first-mentioned compound is 12.367 Å, and

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

BELOV, K.P.; ZAYTSEVA, M.A.; KADOMTSEVA, A.M.; TIMOFEYEVA, V.A.

Magnetic anisotropy and hysteresis properties of orthoferrates of rare earth elements. Izv. AN SSSR. Ser. fiz. 25 no.11: 1389-1392 N '61. (MIRA 14:11)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Rare earth ferrates--Magnetic properties)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

BELOV, K.P.; ZAYTSEVA, M.A.; KADOMTSEVA, A.M.; KVITKA, S.S.; OVCHINNIKOVA, T.L.

Magnetic properties and structure of some garnet systems.
Kristallografiia 7 no.2:242-246 Mr-Ap '62. (MIRA 15:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Garnet--Magnetic properties) (Crystallography)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

VYDREVICH, Ye.Z.; ZAYTSEVA, M.A.; ORLOVA, A.N.

Diagrams for determining the density of aluminate sodium-alkali solutions. TSvet. met. 36 no.10:56-60 O '63. (MIRA 16:12)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP4011744

is associated with change in degree of dispersion and with the orthorhombic distortion of the lattice. Along with these changes, an increase was observed in magnetization intensity. This is explained by the ordered distribution of Al^{+3} ions in the crystal lattice. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 10Jul63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP4011744 S/0181/64/006/001/0101/0107

AUTHORS: Belov, K. P.; Iveronova, V. I.; Zaytseva, M. A.; Kadomtseva, A. M.; Katsnel'son, A. A.; Yatskul'yak, K.

TITLE: Magnetic and structural properties of lanthanum orthoferrite during partial replacement of Fe 3+ ions by other trivalent ions

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 101-107

TOPIC TAGS: magnetic property, structural property, orthoferrite, lanthanum, lanthanum orthoferrite, Fe 3+, Al 3+, Sc 3+, Co 3+, thermoremanent magnetization, magnetization intensity, hysteresis loop, crystal lattice

ABSTRACT: In these studies the Fe^{+3} ion was replaced, in part, by Al^{+3}, Sc^{+3}, Cr^{+3}, and Co^{+3}. Thermoremanent magnetization of $LaFeO_3$ cannot be reduced to zero even in a field of 20 000 oersteds, but if Al^{+3} ions replace some of the Fe^{+3} ions ($LaFe_{0.9}Al_{0.1}O_3$), introduced by orthorhombic distortion of the crystal lattice, thermoremanent magnetization almost disappears, and the hysteresis loops become symmetrical. These changes may be explained by the finely dispersed character of the samples. The change in magnetic properties on substitution of the indicated ions

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

BELOV, K.P.; IVERONOVA, V.I.; ZAYTSEVA, M.A.; KADOMTSEVA, A.M.; KATSNEL'SON, A.A.; YATSKUL'YAK, K.

Magnetic and structural properties of lanthanum orthoferrite with partial substitution of Fe^{+3} ions by other trivalent ions. Fiz. tver. tela 6 no.1:101-107 Ja '64. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

L 38536-66

ACCESSION NR: AP5005286

2

(ron-garnet). The observed decrease in the electric resistivity is due to the appearance of Fe^{2+} ions, located in both cases in octahedral sites. The temperature dependence of the electric resistivity displays kinks in the region of the Curie temperature. These anomalies are similar to those observed for ferrites with spinel structure. "The authors thank Yu. P. Drabin for valuable advice and a discussion of the results." Orig. art. has: 2 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 23Jul64 ENCL: 00 SUB CODE: EC, EM

NR REF SOV: 004 OTHER: 003

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

L 38516-65 EEB-2/EWT(1)/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) IJP(c) JD/JO

ACCESSION NR: AP5005286 S/0181/65/007/002/0477/0479

AUTHOR: Belov, K. P.; Zaytseva, M. A.; Kadomtseva, A. M.; Ovchinnikova, T. L. 26 24 B

TITLE: On the electric properties of yttrium ferrites with garnet structure

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 477-479

TOPIC TAGS: yttrium iron garnet, ferrite, temperature dependence, electric resistivity, resistivity anomaly

ABSTRACT: The authors measured the temperature dependence of the electric resistivity of samples of the following composition: $Y_3Fe_5O_{12}$, $Y_{2.5}Mn_{0.5}Fe_{4.5}Ge_{0.5}O_{12}$, $Y_{2.5}MnFe_{4.0}GeO_{12}$, $Y_{2.5}Mn_{0.5}Fe_{4.5}Ti_{0.5}O_{12}$, and $Y_{2.0}MnFe_{4.0}TiO_{12}$. The samples were prepared under the same conditions as in an earlier investigation (Kristallografiya v. 7, 242, 1962). The resistivity measurements were made in vacuum using direct current, at temperatures from room to 600K. The results show that the substitution of the Fe^{3+} ion by the tetravalent ions Ge^{4+} and Ti^{4+}, which occupy different crystallographic places in the iron-garnet structure, leads to a decrease in the electric resistivity (by several orders of magnitude compared with the pure

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

On the Magnetic Properties of Oxygen Compounds of Gadolinium SOV/56-36-6-7/66

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 5, 1959

Card 4/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

anomaly in the behavior of the temperature dependence of magnetostriction. Further results obtained by investigations concern gadolinium ferrite-perovskite $Gd_2O_3.Fe_2O_3$. Figure 8 shows the dependence of magnetization on the field (up to H= 7000 Oe) for various temperatures between 18 and 598°C, and figure 9 shows the analogous magnetization isothermal lines, but after heating beyond Curie point in the magnetic field. Figure 10 shows the temperature dependence of spontaneous magnetization in the magnetic field after the first and second heating (the curves differ considerably). It is found that perovskite gadolinium ferrite possesses a weak ferromagnetism of the hematite type. Finally, the results obtained by an investigation of gadolinium-manganite (perovskite) are described. Figure 11 shows the H-dependence of magnetization at various temperatures, and figure 12 the hysteresis in $Gd_2O_3.Mn_2O_3$ at 4.3°K, which may be observed within this temperature range although gadolinium manganite otherwise has paramagnetic properties. There are 12 figures, 1 table, and 6 references, 4 of which are Soviet.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

magnetization at helium temperatures and at Curie point ($\theta = 561^{\circ}K$), coercive force, magnetostriction, etc. The results obtained by the investigations are shown by numerous diagrams and are discussed in detail. Figure 1 shows the temperature dependence of specific magnetization at various field strengths (H= 25.8, 129 and 1550 Oe), figure 2 shows the temperature dependence of σ_s/σ_0 and of the residual magnetization σ_r/σ_0 within the range of compensation point, figure 3 shows the temperature dependence of the coercive force, and figure 4 the temperature dependence of the susceptibility of the paraprocess in $3Gd_2O_3 \cdot 5Fe_2O_3$; figure 5 shows the temperature dependence of magnetostriction, figure 6 the dependence of $(\sigma_s/\sigma_0)^2$ on (T/θ) within the range of the Curie point (straight line), and figure 7 the dependence of the magnetization on $H^{1/3}$ within the range of the Curie point. In a table the data of the garnet investigated are compared with those of other ferri- and ferromagnetics. It is found that at the compensation point and Curie point there is an anomalous growth of the coercive force and a very small paraprocess in garnet-ferrite and also an

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

24(3) SOV/56-36-6-7/66

AUTHORS: Belov, K. P., Zaytseva, M. A., Ped'ko, A. V.

TITLE: On the Magnetic Properties of Oxygen Compounds of Gadolinium (O magnitnykh svoystvakh okisnykh soyedineniy gadoliniya)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 6, pp 1672 - 1679 (USSR)

ABSTRACT: Considerable interest is at present being displayed in the magnetic properties of the oxides (ferrites) of rare earths. The authors of the present paper investigated the temperature dependence of the magnetic properties of various gadolinium oxides; the samples were of garnet- or perovskite structure and were, contrary to what was the case in earlier investigations (Refs 1,2) sufficiently large, so that the data obtained were more accurate. The samples were tempered in air at 900°C for 6 hours, pressed into shape (block 60.5.5 mm) under high pressure, after which they were again tempered for 4 hours at 1300°C. The magnetic properties were measured by ballistic, magnetometric and ponderomotoric means. Gandolinium ferrite garnets were subjected to the closest investigation. The authors operated with $3Gd_2O_3 \cdot 4.8Fe_2O_3 \cdot 0.2Y_2O_3$. They investigated saturation

Card 1/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

The Magnetic- and Resonance Properties of the Ferrite Granates of Yttrium in the Substitution of Fe^{3+}-Ions by Cr^{3+}- and Al^{3+}-Ions

SOV/56-36-5-66/76

The ratios found agree qualitatively with the theory developed by Clogston et al. (Ref 4), i. e. that ΔH is proportional to $\sqrt{\sigma_0}$ and θ. There are 2 figures and 4 references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: February 12, 1959

Card 3/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

resonance-characteristics were carried out on crystalline samples (sintering in air at 1300°C for 4 hours, density 2.75 g/cm^3). Figure 1 shows the connection between a and the saturation magnetization σ_0 as well as between a and Curie point θ in the range $0 \leq a \leq 1$. All four curves (σ_0, θ for Al^{3+} and Cr^{3+}) show a more or less steep decline with increasing a, with the exception of the chromium-substituted sample which shows an incline at $a < 0.5$ for σ_0. Figure 2 shows the results obtained by measurements of the width of the absorption lines ΔH. With increasing a there is an increase of ΔH for the chromium-substituted sample, and a decrease for the Al-substituted sample. For the former the g-factor increases from 2.150 ± 0.005 (unsubstituted sample) to 2.200 ± 0.005, in the case of the latter it increases to 2.030 ± 0.005.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

24(2), 24(3)

AUTHORS: Belov, K. P., Zaytseva, M. A., Malevskaya, L. A.

SOV/56-36-5-66/76

TITLE: The Magnetic- and Resonance Properties of the Ferrite Garnets of Yttrium in the Substitution of Fe^{3+}-Ions by Cr^{3+}- and Al^{3+}-Ions (Magnitnyye i rezonansnyye svoystva ferritov-granatov ittriya pri zameshchenii ionov Fe^{3+} ionami Cr^{3+} i Al^{3+})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 5, pp 1602-1603 (USSR)

ABSTRACT: The present "Letter to the Editor" is in close connection with the preceding one (pp 1600-1601). The present letter deals mainly with the investigation of the influence exerted by foreign ions on the physical character. The stoichiometric compound $3Y_2O_3 \cdot 5Fe_2O_3$ is conveyed to $3Y_2O_3 \cdot (5-a)Fe_2O_3 \cdot aAl_2O_3$ and $3Y_2O_3 \cdot (5-a)Fe_2O_3 \cdot aCr_2O_3$ respectively by the substitutions. a denotes the content of Al^{3+} and Cr^{3+} ions. Measurements of the magnetic- and

Card 1/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

AUTHORS: Belov, K. P., Zaytseva, M. A. SOV/53-66-1-8/11

TITLE: New Magnetic Materials - Ferrite-Garnets (Novyye magnitnyye materialy - ferrity-granaty)

PERIODICAL: Uspekhi fizicheskikh nauk, 1958, Vol. 66, Nr 1, pp. 141 - 144 (USSR)

ABSTRACT: The authors in extracts give the contents of a number of foreign papers (mainly from the USA and from France) dealing with ferrites of the formula

$3\ Me_2O_3 \cdot 5\ Fe_2O_3$ (or $Me_3Fe_2Fe_3O_{12}$).

There are 4 figures, 1 table, and 11 references.

1. Magnetic materials 2. Ferrites--Magnetic properties
3. Garnets--Magnetic properties

Card 1/1

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

On Magnetic Properties of Ferrites Exhibiting a Compensation Point SOV/48-22-10-23/23

for valuable suggestions. There are 10 figures, 3 tables, and 14 references, 4 of which are Soviet.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gos.universiteta imeni M. V. Lomonosova (Dept. of Physics at the Moscow State University imeni M. V. Lomonosov)

Card 4/4

USCOMM-DC-60,966

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

interaction within the sublattice B compared with the interaction between the sublattices A and B must not be neglected. The measurements showed that the value of the absolute saturation in the system LiFeCr-ferrites becomes higher in the case of hardening. In technical publications there are data on the influence of hardening upon σ_0 of various simple and composed ferrites (Refs 10 and 11) and theories (Refs 12 - 14) explaining the results of the papers (Refs 10 and 11). According to this σ_0 depends on the distribution of the cations on A and B. This distribution, however, depends on the temperature. In the present case the problem became more complicated as apart from the cation distribution also the variation of the angles between the magnetic moments in sublattices was possible. The possible influence of these two factors excludes a comparison of the experimental values found of saturation in hardening with respective theories. The question of the influence of these factors probably might be answered by means of radiographic and especially neutronographic investigations. The authors express their gratitude to K. G. Khomyakov and T. I. Bulgakova

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

the limiting cycle in the temperature range of from -30^{0} to about 10 to 20^{0} above the compensation point (by the astatic magnetometer); 4) temperature dependence of the paramagnetic sensitivity (according to the ponderomotive method). The measuring results showed that the ferromagnetic spinels Li FeCr in a certain range of solution exhibit an anomalous shape of the curve $\sigma_{s}(T)$ with a compensation point. This has been predicted by Neel. In contrast to the theory it was found that the compensation never was perfect. The phenomenon of an imperfect compensation may be explained by the heterogeneity of the samples. An other considerably greater difference is that the value of the absolute saturation computed (according to Neel) from the distribution of the cations does not agree at all with data found experimentally (Table 2, column 3 and 5). The modification of Neel's theory suggested by Yafet and Kittel (Ref 8) is capable of explaining this discrepancy qualitatively. The explanation is as follows: As the measured value of the magnetic value in these ferrites is lower than the value computed according to Neel's theory and $M_B > M_A$, in this case the negative exchange

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

AUTHORS: Belov, K. P., Bol'shova, K. M., Yelkina, T. A., Zaytseva, M. A. SOV/48-22-10-23/23

TITLE: On Magnetic Properties of Ferrites Exhibiting a Compensation Point (O magnitnykh svoystvakh ferritov s tochkoy kompensatsii)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 10, pp 1282 - 1292 (USSR)

ABSTRACT: In the present paper the authors performed exact measurements of the magnetic properties of mixed lithium chromite ferrites (which were annealed and hardened) in the case of different annealing after hardening. For the investigation a system of ferromagnetic lithium spinels that contained chromium of the common formula

$$Li_2O \cdot (5 - 2a)\, Fe_2O_3 \cdot 2\, a\, Cr_2O_3 \quad (\text{for } a = 1{,}25;\ 1{,}5;\ 1{,}6;\ 1{,}7)$$

was synthetized. The following magnetic characteristics were investigated: 1) Temperature dependence of the spontaneous magnetization of $\sigma_s(T)$; 2) magnetic moments of the atoms (the measurements were carried out by A. V. Ped'ko); 3) temperature dependence of the residual magnetization of

Card 1/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

24(3)

Author: D'yakov, G.P., Candidate of Physical-Mathematical Sciences

SOV/55-58-2-34/35

TITLE: Survey of Papers Read by Scientists of Moscow University at the All-Union Congress on the Physics of Magnetic Materials (Obzor dokladov uchenykh Moskovskogo universiteta na vsesoyuznom soveshchanii po fizike magnitnykh materialov)

PERIODICAL: Vestnik Moskovskogo Universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 2, pp 247-252 (USSR)

ABSTRACT: From December 6 - 11, 1957 there took place the fourth Union Congress on physics of magnetic materials in Leningrad. (The first two meetings took place 1946 and 1955 in Sverdlovsk, the third meeting 1956 in Moscow). The congress was organized by: Academy of Sciences of the USSR, Department of Physical-Mathematical Sciences, Scientific Council on Fundamental Problems of Magnetism, Institute for Semiconductors of the Academy of Sciences, USSR and Committee for Magnetism. There were more than 500 participators, 59 lectures were given, among them the following lectures of the representatives of the Moscow State University:

1. Professor R.V. Telesnin, Ye.V. Kuritsyna, Lecturer "On the Velocity of Magnetic Reversal of the Ferromagnetics".
2. Professor R.V. Telesnin, Ye.V. Marchenkova, Assistant "On Magnetic Viscosity of Ferrites".
3. Professor R.V. Telesnin, V.I. Chiekov, Aspirant "Effect of Magnetic Viscosity on the Frequency Characteristics of Ferrites".
4. M.V. Degtyar, Lecturer "Variations of Structure and Antiferromagnetic Properties of Mn_3Fe".
5. M.A. Grabovskiy, Lecturer, S.Ya. Brodskaya, Junior Scientific Assistant "Magnetic Properties of Anisotropic Stones".
6. G.P. D'yakov, Lecturer "Magnetostrictive Properties of Binary Alloys".
7. Professor Ye.I. Kondorskiy, L.V. Sabolev, Assistant "Electric Properties of Ni-Zn-Ferrites".
8. N.Z. Miryasov, Senior Scientific Assistant, A.P. Parsanov, Aspirant "Magnetic Properties and Structure of Manganese - Boron - Alloys".
9. N.A. Smol'kov, Senior Scientific Assistant, K.P. Belov "Some Properties of Ferrites".
10. N.A. Smol'kov, Senior Scientific Assistant, [illegible], Lecturer "Properties of Ni Fe_2O_4 - Ni Fe_2O_4".
11. N.A. Smol'kov and Ye.I. Fomenko, Engineer "Properties of Ferrites in the High-Frequency Range".
12. Professor K.P. Belov, K.V. [illegible], Lecturer, T.I. Yelkina, Lecturer, and N.A. [illegible], Junior Scientific Assistant "Ferrites [illegible]".
13. K.P. Belov, Ye.T. [illegible], Lecturer "Thermoelectric and Galvanomagnetic Properties of the Manganese Ferrites".
14. T.A. Timofeyeva, Junior Scientific Assistant, A.T. Zalesskiy "Production of Monocrystals of Ferrites".
15. Professor K.P. Belov, A.V. [illegible], Junior Scientific Assistant "On Galvanomagnetic Properties of Ferromagnetic Alloys Near the Absolute Zero of Temperature".

The participators of the meeting visited a laboratory of the Institute of Semiconductors of the Academy of Sciences of the USSR (Professor V.A. [illegible]).

The meeting was concluded by Professor D.V. [illegible], Corresponding Member Academy of Sciences, USSR with the initiative to the following [illegible] congress [illegible] the [illegible].

1. Magnetic Resonance and Relaxation. Effects of Resonance.
2. Ferromagnetic Resonance. [illegible] Ferrites.
3. Electronic Structure of the Ferromagnetics and Their Phase Effects [illegible] of Interactions.

ZAYTSEVA, M.A.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ILLEGIBLE

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

Dissertation: "Influence of the Nature and Structure of Adsorbents on Adsorption from Solutions of Aliphatic Alcohols, Acids and Soaps."

28 Feb 49

Moscow Inst of Fine Chemical Technology imeni M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.A.

B

28

Solubilization and Its Importance in Emulsion Polymerization. (In Russian.) S. S. Voyutsky and M. A. Zaitseva. *Uspekhi Khimii* (Progress in Chemistry), v. 16, no. 1, 1947, p. 69-82.

After a theoretical analysis of emulsion polymerization, existing theories of the mechanism of solubilization are reviewed. Methods for determination of the dissolving power of emulsions, the influence of various factors on the process of solubilization, and its importance in the phenomena of polymerization are discussed. 35 ref.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.

In the Presidium of the Ukrainian Academy of Sciences. Visnyk AN URSR 24 D '53. (MLRA 7:3)

(Ukraine--Science) (Science--Ukraine)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

GOLOVINA, Lidiya Ivanovna; YAGLOM, Isaak Moiseyevich; ZAYTSEVA, M., redaktor; AKHLAMOV, S.N., tekhnicheskiy redaktor

[Induction in geometry] Induktsiia v geometrii. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 98 p. (Populiarnye lektsii po matematike, no.21) (MLRA 9:11)

(Geometry) (Induction (Mathematics))

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.

1. ZAITSEVA, M.

2. USSR (600)

4. Academy of Sciences of the Ukrainian S. S. R.

7. In the Presidium of the Academy of Sciences of the Ukrainian S. S. R. Visnyk AN URSR, 24, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, M.

In the Presidium of the Academy of Sciences of the U.R.S.R. Visnyk AN URSR 24 no.9:77-79 S '53. (MLRA 6:10)
(Academy of Sciences of the Ukrainian SSR)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

KAYTSEVA, M.

In the Presidium of the Academy of Sciences of the Ukrainian S.S.R.
Visnyk AN URSR 24 no.11:76-77 N '5[illegible]. (MLRA 6:12)
(Academy of Sciences of the Ukrainian S.S.R.)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

USSR/Cultivated Plants - Fruits. Berries. M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82529

Author : Kuminov, Ye., Zaytseva, M.
Inst : -
Title : Wild Growing Berry Fields of Tuva

Orig Pub : S. Kh. Sibiri, 1957, No 12, 95-98

Abstract : Minusinsk Fruit and Berry Experiment Field revealed wild growing mountain ash, hawthorn, elder, dog rose, the raspbem (Rubus saxatilis), blueberry, bilberry, cranberry, cultivated strawberry, the wild strawberry (Fragaria vesca), gooseberry of different forms resistant to Sphaerotheca, black current with large berries, red currant, raspberry (Rubus idaeus) and the common seabuckthorn. A number of forms of wild growing berry fields is of interest for introduction in cultivation.

Card 1/1

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

SAYFULIN, R.S.; ZAYTSEVA, I.V.

Electrophoretic deposition of inorganic substances from organic media. Zhur.fiz.khim. 39 no.7:1720-1723 Jl '65. (MIRA 18:8)

1. Kazanskiy khimiko-tekhnologicheskiy institut.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

SAYFULLIN, R.S.; ZAYTSEVA, L.V.

Electrophoretic deposition of capron. Koll. zhur. 27 no.5:755-757 S-O '65. (MIRA 18:10)

1. Kazanskiy khimiko-tekhnologicheskiy institut imeni Kirova.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

L 1812-66

ACCESSION NR: AP5024022

Such coatings will protect metals from corrosion and mechanical action. Orig. art. has: 4 figures. [SM]

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut im. S. M. Kirova (Kazan Chemical Technology Institute)

SUBMITTED: 19Jun64 ENCL: 00 SUB CODE: MT, EM

NO REF SOV: 005 OTHER: 007 ATD PRESS: 4111

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

L 1812-66 EWT(m)/EWF(c)/EWP(j)/T DJ/RM

ACCESSION NR: AP5024022 UR/0069/65/027/005/0755/0757

541.18.047.6

AUTHOR: Sayfullin, R. S.; Zaytseva, L. V.

TITLE: Electrophoretic deposition of capron

SOURCE: Kolloidnyy zhurnal, v. 27, no. 5, 1965, 755-757

TOPIC TAGS: plastic coating, protective coating, nylon/capron

ABSTRACT: A study has been made of the electrophoretic deposition of capron (polycaprolactum) to form protective coatings on metals. This work was done because electrophoretic deposition eliminates the disadvantages of conventional methods of coating with poorly soluble polymers. The electrophoretic behavior of capron powder (particle size, 2—10 micron) in organic and aqueous media was studied and the optimum process conditions and suspension compositions were determined. It was found that deposition usually occurs on the cathode, but sometimes on both electrodes. Organic media were found to be most suitable for the deposition, toluene being the best. Strongly adhering coatings 100—200 micron in thickness were produced on Fe, Cu, Al, Ni, Zn, and brass in 3 min by electrophoresis from toluene with subsequent heat treatment at 220—240C for 3—10 sec.

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

SOURCE: Zhurnal Fizicheskoy Khimii, v. 39, no. 7, 1965, 1620-1623

TOPIC TAGS: metal deposition, metal oxide deposition, metal hydroxide deposition, electrophoretic deposition, complex compound deposition

ABSTRACT: The study deals with the electrophoretic behavior of various inorganic substances (metals, oxides, hydroxides, complex compounds, etc.) in organic media (benzene, toluene, diethylamine, o-nitrotoluene) at high potential gradients (2000 and 4000 V/cm) and of metals in dioxane, tert-butyl alcohol, isobutyl alcohol, pyridine, and dimethylformamide at lower gradients (450-500 V/cm). The experiments were carried out at 20 ± 1°C for 5-15 sec. and, if no deposit appeared on the platinum electrodes, for 3-4 min. All the dispersions studied could be deposited to at least a small extent from any medium. Deposition on both electrodes in benzene and toluene was frequently observed. Deposition occurred (with rare exceptions) at the

Card 1/1

L 50084-65

ACCESSION NR: AP5019789

No optimum conditions

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

doktor tekhn. nauk, retsenzent; SMIRNOVA, A.V., kand. tekhn. nauk, retsenzent; FOMIN, N.V., red.; GORDON, L.M., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Electrolytic polishing and pickling of metallographic sections] Elektropolirovanie i elektrotravlenie metallograficheskikh shlifov. 2., perer. izd. Moskva, Metallurgizdat, 1963. 410 p. (MIRA 16:5)

(Metallography--Equipment and supplies)
(Electrolytic polishing)
(Metals--Pickling)

[illegible] EWP(j)/EWT(m)/EWP(t)/EWG(m)/T/EWP(b)/EWP(t) Pc-4 IS/JD/RM

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

Electrolytic polishing of metallographic sections. L. P. Zaitseva and L. Ya. Popilov. *Zavodskaya Lab.* 13, 879-92(1946)(in Russian). - With c.d. 10-100 amps./sq. dm., 1-60 min., temp. 15-25 and 70-80°, neither solns. of H_3PO_4 (56-93%), with or without addn. of citric acid, glycerol or talc, nor solns. of H_2SO_4 (24-68%), with or without addn. of glucose, peptone, or citric acid, proved suitable; pitting occurred in all samples. Satisfactory results were obtained with mixts. of H_2SO_4 (12-19%) and H_3PO_4 (51-68%) with addns. of glycerol, citric acid, lactic acid, or casein; H_3PO_4 51, H_2SO_4 12, H_2O 6.5, glycerol 24, or H_3PO_4 67.9, H_2SO_4 19.3, H_2O 10.7, casein 3.1, etch stainless, acid-resistant and high-speed steel at room temp. and polish when hot. Mixts. of H_3PO_4 (70-81.5%), H_2SO_4 (11.5-17%), and CrO_3 (3.5-6.5%), without addn., act essentially in the same way, on all steels, both C and alloy; these electrolytes are not, however, effective when freshly prepd. but improve on working up to a certain stage, after which their efficiency and throwing power fall off rapidly. The condition of the H_3PO_4-H_2SO_4-CrO_3 bath can be diagnosed by visual colorimetric comparison with a standard Cr^{III}/Cr^{VI} scale: the bath polishes in the medium interval Cr^{III}/Cr^{VI} = 1:1 to 4:1, etches at 1:4 and 9:1 and corrodes at more extreme values of that ratio; these limits are valid for a soln. of sp. gr. 1.6-1.7; η, 7-20 centipoises. Artificial conditioning of the freshly prepd. H_3PO_4 76.5, H_2SO_4 11.5, H_2O 6, CrO_3 6 electrolyte was attempted by passing a current in the cold and hot soln, and by evapg. at 120°; the latter procedure proved most effective. A bath requiring but a very short preliminary conditioning can be prepd. directly from the anhydrous ingredients: H_2SO_4 (d. 1.84) 12.1, H_3PO_4 (d. 1.54) 81.3, CrO_3 (solid) 6.6%. A bath having departed from the correct sp. gr., η and Cr^{III}/Cr^{VI} criteria in the course of operation, is best regenerated by electrolytic oxidation with the Pb tank as anode and an immense porous vessel contg. a Pb cathode, at an anodic c.d. 0.5 amp./sq. dm., until the correct characteristics are reached; the etching-polishing ability of the bath is then fully restored. Regeneration by addn. of CrO_3, upsetting the total Cr content, or by chem. oxidation with $(NH_4)_2S_2O_8$, is not recommended. The correct H_3PO_4-H_2SO_4-CrO_3 of the given compn. is universal; best conditions for polishing are, for C steels, 30-40 amp./sq. dm., for medium-alloy steels 40-60, for high-alloy 60-70; temp. 75-90°, 8-15 min. The medium Cr^{III}/Cr^{VI}, normally polishing electrolyte, can be made to etch by lowering the c.d. to 15-30 amp./sq. dm. and the temp. to 40-60°. The c.d., time, and temp. conditions are const. for a given steel, irrespective of its heat-treatment, except for a slight increase of pitting in annealed and highly tempered samples. After unsatisfactory etching, samples can be repolished and re-etched. Drawbacks of the electrolytic methods are curvature of the polished surface, leaching out of certain inclusions and components, some amt. of opaque or colored film, striation and spotting. Main advantages are absence of mechanical and thermal changes and high fineness of structural detail.

W. R. Henn

4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

MASLENNIKOVA, N.L.; YAKUBOVICH, S.V.; SANZHAROVSKIY, A.T.; RIVLINA, Yu.L.; Prinimali uchastiye: EMMANUILOV, Yu.M.; KRUCHININA, G.I.; ZAYTSEVA, L.V.

Internal stresses developed in the process of formation and aging of nitrocellulose coatings. Lakokras.mat.i ikh prim. no.1:15-18 '63. (MIRA 16:2)

(Paint materials)
(Strains and stresses)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

YAKUBOVICH, S.V.; MASLENNIKOVA, N.L.; Prinimali uchastiye: ZAYTSEVA, L.V.; KRUCHININA, G.I.

Investigating the adhesion of paint coatings under aging conditions. Lakokras.mat. i ikh prim. no.4:20-25 '62. (MIRA 16:11)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, L.V., starshaya meditsinskaya sestra

Treatment of tuberculosis of the lungs and respiratory tracts with aerosol inhalations. Med. sestra 20 no.9:44-47 S '61.
(MIRA 14:10)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR.

(AEROSOL THERAPY) (INHALATION (THERAPY))
(TUBERCULOSIS)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, L.V.; RAFALIBEYLI, R.Kh.

Structural characteristics of the Mekhmana ore zone and the stages of ore formation. Zakonom.razm.polezn.iskop. 7:363-364 '64. (MIRA 17:6)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov AzerbSSR.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

KVYATKEVICH, I.K., kand.tekhn.nauk, dotsent; ARBUZOV, S.V., kand.tekhn.nauk; Prinimali uchastiye: KRASIKOVA, Z.N.; NASYROVA, Sh.I.; SOLOV'YEV, N.S.; SHILOVA, Z.F.; ZAYTSEVA, L.V.; KOROTKOVA, L.N.; KONYLKIN, A.F.; GLAMAZDA, V.P.; LOZHKINA, V.T.

New simplified method of leather drying and moisturizing. Izv.vys.ucheb.zav.; tekh.leg.prom. 3:43-58 '62. (MIRA 15:6)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti (for Kvyatkevich). 2. TSentral'nyy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti (for Arbuzov). Rekomendovana kafedroy mashin i avtomatov Vsesoyuznogo zaochnogo instituta tekstil'noy i legkoy promyshlennosti.

(Leather--Drying)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA L.S.

Thermodynamic calculation of some reduction reactions of barium oxide. Izv.AN SSSR.Ser.fiz. 20 no.10:1123-1126 O '56.
(MLRA 10:1)

1. Institut fiziki Akademii nauk USSR.
(Barium oxides) (Electron tubes)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, L.S.

123 - 1 - 251 D

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957, Nr 1, p. 43 (USSR)

AUTHOR: Zaytseva, L.S.

TITLE: Experimental Study on the Heat Conductivity of Monoatomic Gases and Aviation Fuel Vapors (Eksperimental'noye issledovaniye teploprovodnosti odnoatomnykh gazov i parov aviatsionnykh topliv)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Moscow Aeronautical Institute (Mosk. aviats. in-t), Moscow, 1956

ASSOCIATION: Moscow Aviation Institute (Mosk. aviats. in-t)

Card 1/1

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, L. S.

The growth of carbon dendrites in flames. L. S. Zaitseva and V. I. Tverdokhlebov. *Zhur. Tekh. Fiz.* 25, 1910-18(1955).—An arc was struck between 2 electrodes and mixts. of C_2H_2 and air or C_2H_2 and CO_2 were passed through same. The growth of C dendrites was observed if the voltage of the elec. field was > 50 v. The growth of the dendrites on the anode depends upon the ratio between the cooled area, where the C particles are formed, and the no. of areas close to the anode, where $n_1 - n_2 \neq 0$ (n_1 and n_2 are the concn. of pos. and neg. ions, resp.). The presence of traces of alkali salts in the arc prevents the formation of dendrites.

Werner Jacobson

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

VARGAFTIK, N.B.; ZAYTSEVA, L.S.

Heat conductivity of D_2O in the gaseous phase. Inzh.-fiz. zhur. 6 no.5:3-6 My '63. (MIRA 16:5)

1. Aviatsionnyy institut imeni Sergo Ordzhonikidze, Moskva.
(Deuterium oxide--Thermal properties)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP3001437

ENCLOSURE: 3

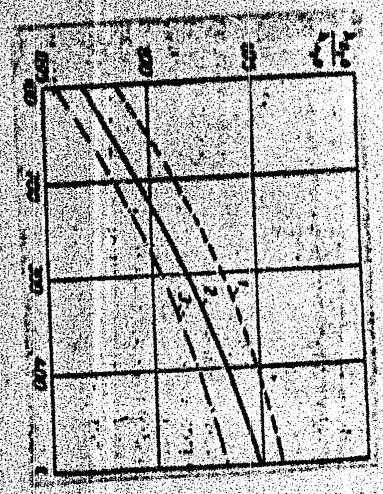

Fig. 3 Ratio $\lambda_{D_2O}/\lambda_{H_2O}$ as a function of temperature t (°C) according to experimental and calculated data. 1,3 - calculated, 2 - experimental.

Card 5/5

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP3000137

ENCLOSURE: 2

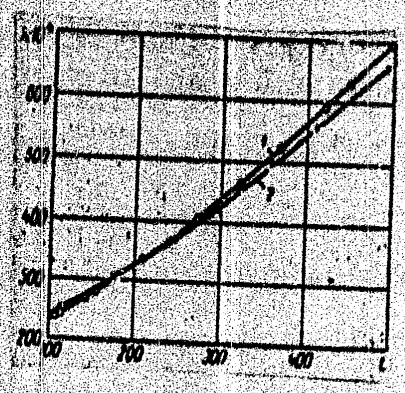

Fig. 2 Heat conductivity λ (J/m·sec·degree) of D_2O and H_2O vapor as a function of the temperature t (°C) according to experimental data: 1 - D_2O, 2 - H_2O.

Card 4/5

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP3001437

ENCLOSURE: 1

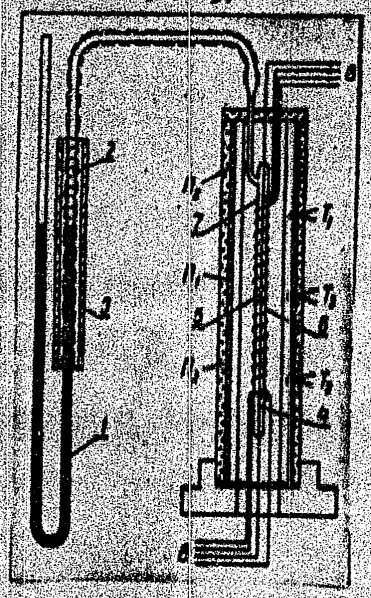

Fig. 1 Experimental apparatus.

1 - mercury, 2 - liquid investigated, 3 - electric heater, 4 - tungsten spring, 5 - platinum heater, 6 - external resistance thermometer, 7 - measuring tube, 8 - leads to potentiometer, H_1, H_2, H_3 - thermostat heaters, T_1, T_2, T_3 - thermocouples.

Card 3/5

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP3000437

ASSOCIATION: Aviatsionnyy institut im. Sergo Ordzhonikidze (Aviation Institute im. Sergo Ordzhonikidze), Moscow

SUBMITTED: 24Sept62 DATE ACQ: 10Jun63 ENCL: 03

SUB CODE: CO NR REF SOV: 004 OTHER: 004

Card 2/5

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ACCESSION NR: AP3000437 S/0170/63/006/005/0003/0006

AUTHOR: Vargaftik, N. B.; Zaytseva, L. S.

TITLE: Heat conductivity of deuterium in the gas phase

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 5, 1963, 3-6

TOPIC TAGS: Deuterium; heat conductivity

ABSTRACT: The heat conductivity of D sub 2 O and H sub 2 O vapor was measured by the hot-wire method, using the apparatus shown in Fig. 1 of the Enclosure. Experimental curves (Fig. 2) have been obtained for a pressure p = 9.8 x 10 sup 4 nm sup -2 and temperatures ranging from 100 to 500C. The experiments have shown that the ratio of the heat conductivity of the two isotopes is a function of temperature (Fig. 3). A theoretical explanation of the results is offered in terms of statistical mechanics. Orig. art. has: 5 equations, 4 figures, 2 tables.

Card 1/5

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, L.S., kand.tekhn.nauk

Experimental investigation of the thermal conductivity of the vapors of gasoline B-70, kerosene T-1, fuel T-5, and heptane. Trudy MAI no.132:79-93 '61. (MIRA 14:7)
(Gases--Thermal properties)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

Experimental investigation of

S/535/61/000/132/007/012
E030/E484

maximum error in the results is ± 1.3%. There are 7 figures, 10 tables and 10 references, 6 Soviet and 4 non-Soviet. The three references to English language publications read as follows:
Ref.7: Hilsenrath A., Touloukian D., Trans. ASME, v.76, no.6, 1954;
Ref.9: Scherratt G., Griffiths E., Phys. Mag. and Journal of Sciences, v.27, no.180, 1939;
Ref.10: Vines R., Austr. J. Chem. v.6, no.1, 1953.

Card 3/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

pressure region (around 400 mm Hg for convenience) and then assumed to be correct at the required pressure, to a maximum inaccuracy of 0.2%. To resolve the difficulties of nonhomogeneous chemical composition, the fuels were fractionated into three cuts for gasoline and four cuts for the other fuels, and data found for each cut. The mean values of conductivities may then be represented by the equation proposed by N.B.Vargaftik

$$\lambda = \lambda_o (T/T_o)^n$$

where T_o is 273°K, and for gasoline, $n = 1.95$ and λ_o is 91×10^{-4} kcal/metre hour °C, and for kerosene, $n = 2.05$ and λ_o is 74×10^{-4} kcal/metre hour °C. λ can further be related to the boiling point t_k of a hydrocarbon by the formula:

$$10^4 \lambda_o = 114 - 0.224\, t_k$$

The check value for n-heptane was 274×10^{-4} kcal/metre hour °C, compared with the value of Moser (1913) of 256×10^{-4}. The

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

27661

S/535/61/000/132/007/012
E030/E484

11.0100

AUTHOR: Zaytseva, L.S., Candidate of Technical Sciences

TITLE: Experimental investigation of the thermal conductivity of the vapours of gasoline Б-70 (B-70), kerosene T-1, fuel T-5 and heptane

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.132.1961.79-93. Teplofizicheskiye svoystva nekotorykh aviatsionnykh topliv v zhidkom i gazoobraznom sostoyanii.

TEXT: A heated wire apparatus was calibrated with air over the temperature range 0 to 500°C and used for the vapours of the above substances. The calibration agreed excellently with the best accepted values for air. The measuring tube was 155.5 mm long, made of glass with 3.98 mm id and 5.98 mm od; to minimize end heating corrections, the measuring wire was small, with 0.1 mm diameter, made of platinum, which served both as heater and resistance thermometer. To estimate the effects of the boundary layers as heat barriers, the experiments were carried out at pressures from 217 to 546 mm Hg for gasoline and, as expected, there was negligible variation in the thermal conductivity. All subsequent experiments were therefore conducted at a standard

Card 1/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

L 23850-65

ACCESSION NR: AT4015965

aqueous solution of caustic soda and an alkaline solution of potassium manganate, both solutions giving good results. Under the microscope using ultraviolet light, the W and Mo phases were clearly visible and readily distinguished from ferrite, intermetallic and carbide phases. After etching an Fe-W-C alloy with an aqueous solution of caustic soda, the intermetallic phase shows up light brown under the microscope, carbide is brown and ferrite light. Molybdenum carbide was brown and its intermetallic and ferrite phase remain light. The intermetallic phase in W showed up red, tungsten carbide black and ferrite light green. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NR REF SOV: 009 OTHER: 009

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

TITLE: Investigation of the structure of iron-tungsten-carbon and iron-molybdenum-carbon alloys by method of color microscopy with ultraviolet rays

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 234, 1964, Metallovedeniye (Metallography), 18-24

TOPIC TAGS: iron, tungsten, carbon, molybdenum, ultraviolet radiation, chromium, titanium, niobium, carbide, caustic soda solution, potassium manganate solution

ABSTRACT: In preceding experiments the authors developed a method for the determination of the structure of alloys according to bright characteristic colors which are revealed under the effect of ultraviolet radiation. Furthermore the relevant colors were determined for carbide and the intermetallic phases of Cr, Ti and Nb making it possible to distinguish these phases in a complex alloy. The phases in Fe-W-C and Fe-Mo-C alloys were identified after etching with an

Card 1/2

L 23850-65

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

intermetallic phase remained invisible. Electrolytic polishing in a chromium phosphate electrolyte and etching in an alkaline solution of potassium manganate with a subsequent investigation of the structure by means of a three-color photographic method and chromoscopic measurements gave good results. Orig. art. has: 2 figures and 4 tables.

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NR REF SOV: 009 OTHER: 000

Card 2/2

L 27830-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG

ACCESSION NR: AT4045955 S/2583/64/000/234/0016/0024

AUTHOR: Zaytseva, L. P.; Porokhova, T. G.; Manyelova, K. V.

TITLE: Investigation of the structure of iron-tungsten-carbon and iron-molybde-

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

chemical analysis possible on the basis of the colors of the phases of an alloy. These colors appear after photographing the micrographic specimens, using various visible and ultraviolet regions of a spectrum and subsequently combining the prints for chromoscopic study. The authors investigated Fe-Ti, Fe-Ti-C, Fe-Nb

Card 1/2

L 23811-65
ACCESSION NR: AT4048154

and Fe-C alloys containing intermetallic compounds and either titanium or niobium carbonitrides. In all micrographic specimens, the colors of the individual phases were bright after etching in an alkaline solution of potassium manganate. The two-color method was found to be less effective in investigating the structure of the alloys since the colors of the different phases were not clearly marked despite the use of various etching agents and only a combination of the different etching conditions followed by a successive separation of the phases produced results. The three-color method made a satisfactory differentiation of the colors of ferrite and carbide possible. [illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

L 23831-64 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG

ACCESSION NR: AT4043984 S/2665/64/000/234/0008/0017

B+1

AUTHOR: Zaytseva, L. P.; Porokhova, T. G.

TITLE: Investigation of the structure of Fe-Ti-C and Fe-Nb-C alloys by method of color microscopy in ultraviolet rays

27 21 21

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 234, 1964. Metallovedeniye (Metallography), 8-17

TOPIC TAGS: iron, titanium, carbon, niobium, color microscopy, ultraviolet radiation, spectral analysis, potassium manganate, chromium phosphate, intermetallic phase, carbonitride, ferritic phase, chromoscope investigation

ABSTRACT: The method of ultraviolet color microscopy makes a qualitative

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

TORBOCHKINA, L.I.; DORMIDOSHINA, T.A.; ZAYTSEVA, L.P.

Carbohydrate metabolism in oleandomycin-producing Actinomyces antibioticus. Mikrobiologiia 33 no.1:162-166 Ja-F '64. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov (VNIIA).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

Category : USSR/Solid State Physics - Morphology of Crystals. Crystallization. E-7

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6699

made of the effect of the speed of cooling of the alloy on the crystallization process. The cooling curves were recorded at various speeds with the Kurnakov instrument. The experimental curve of the change in the amount of liquid phase as a function of the hardening temperature lies below the theoretical curve, showing that the lever rule cannot be applied to the case or rapid cooling of alloys. The crystallization process of a solid solution under ordinary cooling conditions does not correspond to the scheme given by the equilibrium diagram. A new scheme is proposed for the change of composition of solid-solution crystals and of the liquid phase under unbalanced conditions. The author also believes that the dendrite structure of the solid solution results not only from dendrite liquation, but also from the crystallographic difference between the initial and final sections.

Card : 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

ZAYTSEVA, L.P.

Category : USSR/Solid State Physics - Morphology of Crystals. Crystallization. E-7

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6699

Author : Zaytseva, L.P.

Title : Investigation of the Process of Crystallization of a Solid Solution

Orig Pub : Tr. Leningr. politekhn. in-ta, 1955, No 180, 13-31

Abstract : The process of crystallization of a solid solution under actual cooling conditions was investigated in 14 alloys of the Cu-Si, Cu-Si-Mn, Al-Mn, and Sb-Bi systems. The ratio of the liquid and solid phases during the crystallization process was fixed for each given instant by hardening, after which a metallographic investigation was made of the structure of the alloys on microsections, accompanied by measurement of the microhardness. The investigation of the change of concentration of the separating initial dendrites and of the parent solution was also carried out during the crystallization process with the aid of an ultraviolet color microscope and with the aid of local spectrography. A study was

Card : 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6

of the liquid and solid phases during the crystallization process was fixed for each given instant by hardening, after which a metallographic investigation was made of the structure of the alloys on microsections, accompanied by measurement of the microhardness. The investigation of the change of concentration of the separating initial dendrites and of the parent solution was also carried out during the crystallization process with the aid of an ultraviolet color microscope and with the aid of local spectrography. A study was

Card : 1/2

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6699

made of the effect of the speed of cooling of the alloy on the crystallization process. The cooling curves were recorded at various speeds with the Kurnakov instrument. The experimental curve of the change in the amount of liquid phase as a function of the hardening temperature lies below the theoretical curve, showing that the lever rule cannot be applied to the case or rapid cooling of alloys. The crystallization process of a solid solution under ordinary cooling conditions does not correspond to the scheme given by the equilibrium diagram. A new scheme is proposed for the change of composition of solid-solution crystals and of the liquid phase under unbalanced conditions. The author also believes that the dendrite structure of the solid solution results not only from dendrite liquation, but also from the crystallographic difference between the initial and final sections.

Card : 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100010-6