SHCHERBAKOV, I.B.

Genesis of anorthosite of the middle Bug Valley. Geol.zhur. 22 no.4:26-36 '62. (MIRA 15:9)

1. Institut geologicheskikh nauk AN UkrSSR.
(Bug Valley--Anorthosite)

KHMARUK, T.G. [Khmaruk, T.H.]; SHCHERBAKOV, I.B.

Accuracy in determining the composition of plagioclases by the Fedorov method. Geol.zhur. 22 no.6:88-90 '62. (MIRA 16:2)

1. Institut geologicheskikh nauk AN UkrSSR.
(Plagioclase—Analysis)

SHCHERBAKOV, I. B.

Paragenesis of some garnet containing rocks in the middle Bug Valley. Trudy Inst. geol. nauk AN URSR. Ser. petr., min. i geokhim. no.16:35-45 '62. (Mira 15:10)

(Bug Valley—Garnet)
(Bug Valley—Paragenesis)

SHCHERBAKOV, I.B.

Limestones of the middle Bug Valley. Trudy Inst. geol. nauk AN URSR. Ser. petr., min. i geokhim. no.20:5-40 '63. (MIRA 16:8)

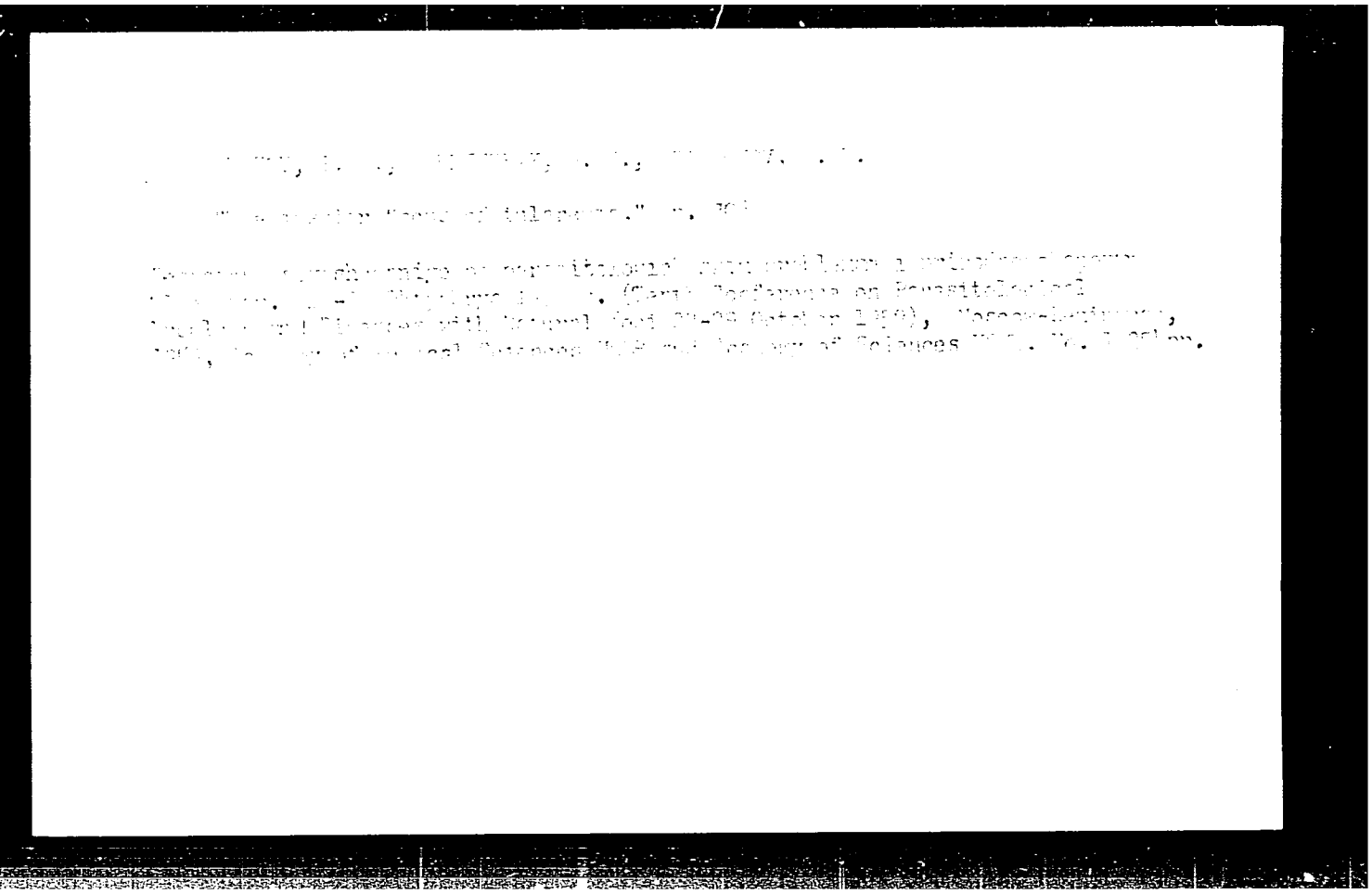
KHMARUK, T.G. [Khmaruk, T.H.]; SHCHERBAKOV, I.B.

Green clinopyroxenes from metasomatites of the region of the Sea of Azov and the Bug Valley. Trudy Inst. geol. nauk AN URSR. Ser. petr., min. i geokhim. no.20:51-55 '63. (MIRA 16:8)

SHCHERBAKOV, I.D.

Experimental transplantation of the pied flycatcher and the greater titmouse into the forest patches of Mordovia. Trudy Probl. i tem. sov. no.9: 351-361 '60. (MIRA 13:9)

1. Mordovskiy gosudarstvennyy zapovednik im. P.G.Smidovicha
(Mordovia--Flycatchers) (Mordovia--Titmice)



[redacted], I. I., (Lieutenant Colonel of the Medical Service); CHEKOVA, O. O.; [redacted]SYPKIN, V. YA., (First Lieutenant of the Medical Service); [redacted]-BERENSHTEYN, A. G., (Candidate of Medical Sciences, Lieutenant Colonel of the Medical Service); and KARAPETYAN, A. YE., (Candidate of Medical Sciences)

"The Effectiveness of Immunization with Live Mumps Vaccine in a Focus of Infection"

Voyenno-Meditsinskiy Zhurnal, No. 12, December 1961, pp 62-73

GRIGOR'YEVA-BERENSHTEYN, A. G., kand. med. nauk; KARAPETYAN, A. Ye., podpolkovnik meditsinskoy sluzhby, kand. med. nauk; SHCHERBAKOV, I. F., podpolkovnik meditsinskoy sluzhby; CHIRKOVA, O. O.; ZASYPKIN, V. Ya., starshiy leytenant meditsinskoy sluzhby

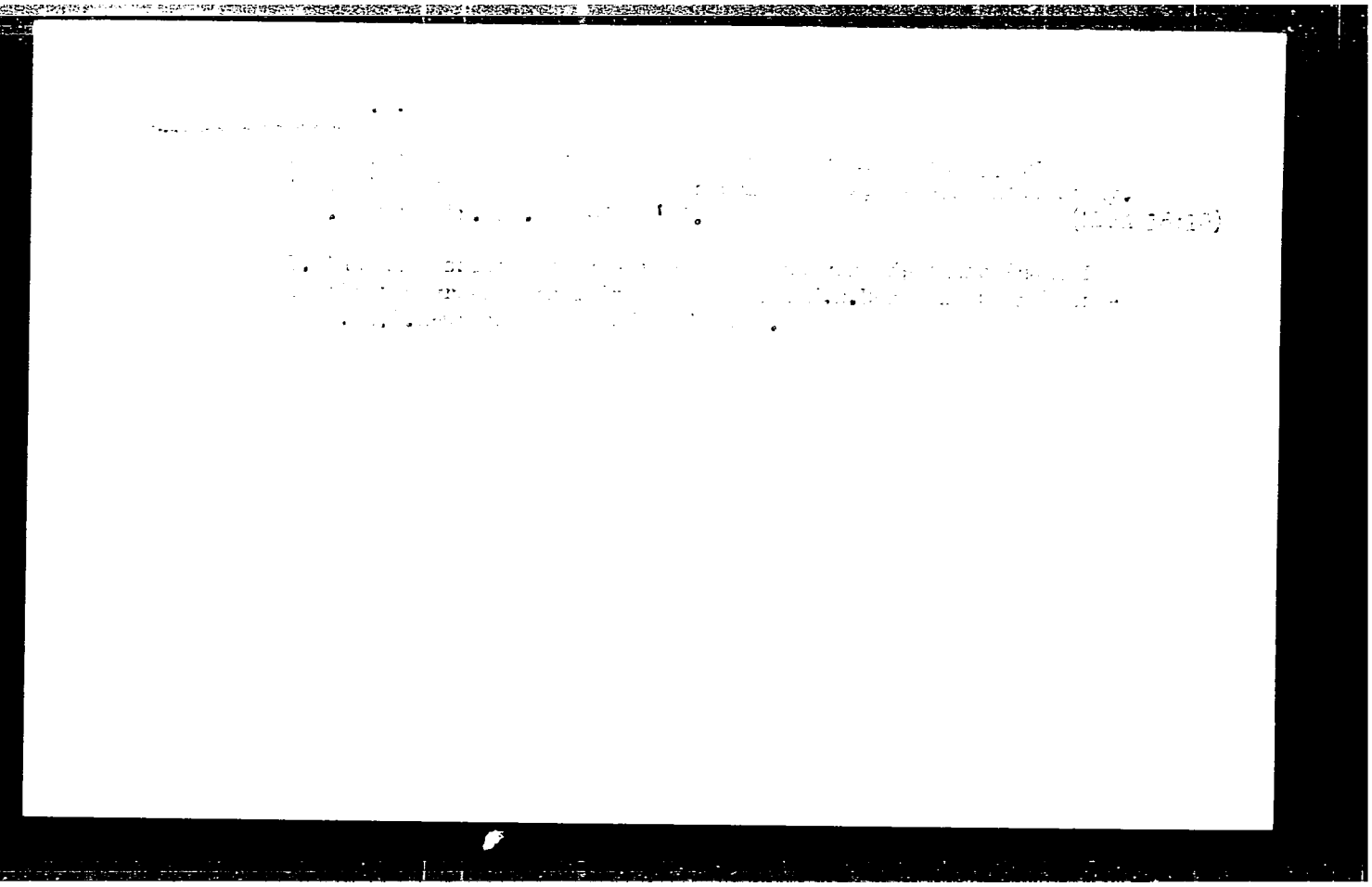
Effectiveness of immunization with live vaccine against parotitis in the focus of infection. Voen.-med. zhur. no.12:63 D '61. (MIRA 15:7)

(MUMPS—PREVENTIVE INOCULATION)

SHCERBAKOV, I.G. DECEASED c1954 1961/I

SEE IIC

CHEMISTRY



1. [illegible]

2. [illegible]

3. Jura Valley - Geology

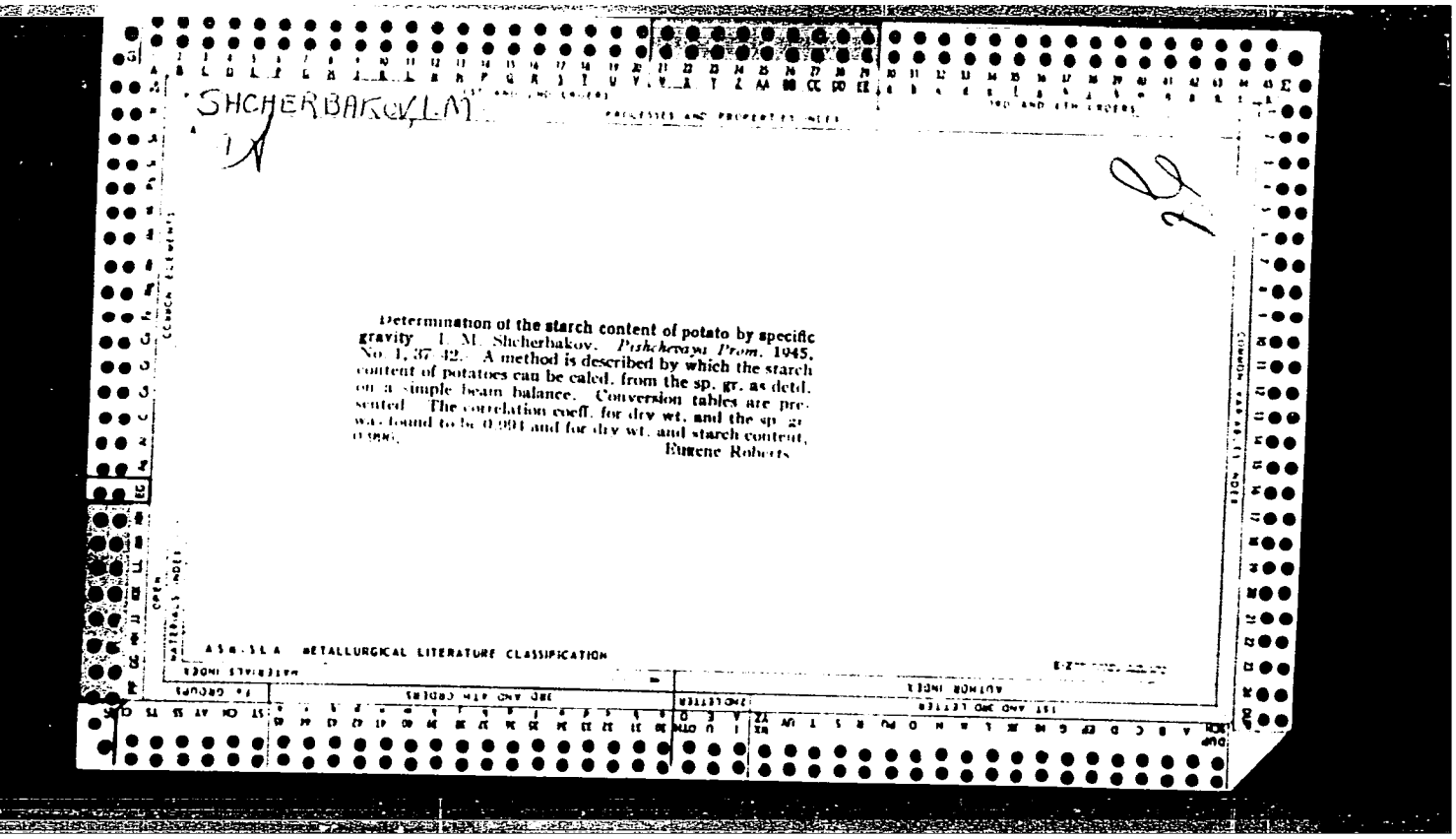
7. Report on the geological exploration for oil along the left bank of the lower Jura River in 1944. (Abstract.) Izv. Nav. upr. geol. fon. no. 2, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.

SHCHERBAKOV, I.I.

Brick dimensions for blast furnace air preheater tops.
Ogneupory 27 no.12:540-544 '62. (MIRA 15:12)

1. Sibirskiy gosudarstvennyy soyuznyy institut proyektirovaniya metallurgicheskikh zavodov.
(Firebrick)



SHCHERBAKOV, I.M.

Determination of the starch content of potato by specific gravity. I. M. Shcherbakov. *Pishchevaya Prom.* 1945, No. 1, 37-42. A method is described by which the starch content of potatoes can be calcd. from the sp. gr. as detd. on a simple beam balance. Conversion tables are presented. The correlation coeff. for dry wt. and the sp. gr. was found to be 0.994 and for dry wt. and starch content, 0.986.

Eugene Roberts

A 54-51 A METALLURGICAL LITERATURE CLASSIFICATION

SHCHERBAKOV, I. M.

Regeneration of metals and salts from used electrolytes. A. I. Popova and I. M. Shcherbakov. *Priklad. Khim. v Mashinostroenii, Sbornik Statei* 36, 41–8(1955).—Ni baths consisting of $NiSO_4$, NH_4Cl, and H_3BO_3 and contaminated with Fe, Cu, and Zn salts can be purified by addn. of NaOH to a pH of 6.2–6.4 after having blown air through to change Fe^{++} to Fe^{+++}. Cr baths are contaminated with CrO_3 and Fe. Several methods to remove Fe have been tried without success, but such spent electrolytes can be used for paints. Oxidizing baths consisting of NaOH and $NaNO_3$ and contaminated with Na_2CO_3, Na_2FeO_2, and $NaFeO_2$ can be cleaned by blowing air through to ppt. $Fe_2O_3.2H_2O$ and $Fe_2O_3.H_2O$. This deposit can be filtered through a 270-mesh Ni or Fe screen. S. Palgwer

Chem

2 5

RM

SHARYGIN, A.I.; PEYSAKH, I.I.; ISKAKOV, S.I.; MITROFANOV, V.N.; SHASTINA, Z.Ya.; SHCHERBAKOV, I.M.; GOMBERG, I.B.

Information. Tekst. prom. 24 no.9:91-97 S '64.
(MIRA 17:11)

1. Direktor Voronezhskoy kordnoy fabriki (for Sharygin). 2. Nachal'nik proizvodstvenno-tekhnicheskogo otdela upravleniya legkoy promyshlennosti Soveta narodnogo khozyaystva Moldavskoy SSR (for Peysakh). 3. Nachal'nik konstruktorskogo otdela Spetsial'nogo konstruktorskogo byuro Yuzhno-Kazakhstanskogo Soveta narodnogo khozyaystva (for Iskakov). 4. Nachal'nik konstruktorskogo sektora Spetsial'nogo konstruktorskogo byuro Yuzhno-Kazakhstanskogo soveta narodnogo khozyaystva (for Mitrofanov). 5. Nachal'nik Byuro tekhnicheskoy informatsii Melekesskogo l'nokombinata (for Shastina). 6. Glavnyy inzh. Khersonskogo khlopchatobumazhnogo kombinata (for Shcherbakov). 7. Nachal'nik tekhnicheskogo otdela Khersonskogo khlopchatobumazhnogo kombinata (for Gomberg).

SHCHERBAKOV, I.M., dots., LISOVSKAYA, N.D., SOBOLEVA, T.I.

Etiopathogenetic treatment of psoriasis, lupus erythematosus, and some other skin diseases presumably of viral origin. Trudy LMI 2:223-232 '55 (MIRA 11:8)

1. Kafedra kozhnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR prof. O.N. Podvyeotskaya) Pervogo Leningradskogo meditsinskogo instituta imeni akademika I.P. Pavlova.
(SKIN--DISEASES)
(VIRUS--DISEASES)

SHCHERBAKOV, I.M.

A clinician's opinion on the pathogenesis of eczema and dermatitis.
Vest.derm. i ven. 31 no.1:13-17 Ja-F '57. (MLRA 10:7)

1. Iz kozhnoy kliniki I Leningradskogo meditsinskogo instituta
(zav. - prof. O.N.Podvysotskaya)
(ECZEMA, etiol. and pathogen.
review)
(DERMATITIS, etiol. and pathogen.
review)

SHCHERBAKOV, I.M., dotsent

Studies on the etiology and pathogenesis of diseases of the pemphigus group; survey of the literature. Vest. derm. i ven. 34 no.2:46-55 F '60. (MIRA 13:12)

1. Iz virusologicheskogo otdela Instituta eksperimental'noy meditsiny AMN SSSR (zav. - chlen-korrespondent AMN SSSR A.A. Smorodintsev) i kozhnoy kliniki I Leningradskogo meditsinskogo instituta (zav. - prof.A.N.Araviyskiy).
(PEMPHIGUS etiol.)

NIKOL'SKAYA, V.V.; SHCHERBAKOV, I.N.

Tracesof ancient glaciation of the Tukuringra-Dzhagdy Range. Izv. AN SSSR.Ser.geog. no.2:58-65 Mr-Ap '56. (MLRA 9:8)

1. Institut geografii AN SSSR.
(Tukuringra-Dzhagdy Range--Glacial epoch)

SHCHERBAKOV, I.N.

Origin of surface loams in the central part of the East European Plane. Izv. AN SSSR. Ser. geog. no.4:74-78 Jl-Ag '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(East European Plain--Soil formation)

NIKOL'SKAYA, V.V.; SIDOROV, V.A.; SHCHERBAKOV, I.N.

Forms of microrel[illegible] connected with soils frozen over a period of many year[illegible] in the Sutar intermontane depression. Dokl. AN SSSR 154 no. 3:582-585 Ja '64. (MIRA 17:5)

1. Predstavleno akademikom A.A.Grigor'yevym.

SCHERBAKOV, I.P.

8.1-349

551.586:634.9:581.5

Shcherbakov, I. P. et al. (*Akad. Nauk SSSR*), **Estestvennoistoricheskie uslovila raionov dubrav promyshlennogo znacheniia.** [Natural historical conditions of oak grove regions of industrial importance.] (In: Akademiia Nauk SSSR, Kompleksnaia Nauchnaia Ekspeditsila po Voprosam Polezashchitnogo Lesorazvedeniia, 1949–, **Trudy.** Vol. 1, Pt. 2. Moscow, Akademiia Nauk SSSR, 1951. p. 86–119. fig.) DLC—Presents results of investigations carried out by the "oak grove" party of a scientific expedition under the supervision of the author. The purpose was to determine the possibility and effectiveness of the development of oak groves of industrial importance, and tree species accompanying the oak, in different conditions of soil and climate in 3 geobotanical areas of the Stalingrad and Astrakhan Regions, chiefly in the Ergenin Hill land and the Green Ring of Stalingrad. Greatest importance is attributed to the quality of soils and to climatic conditions of the areas studied. The peculiar features of each season, their temperature, humidity, wind and precipitation regimes are described and analyzed in detail. Deficiency of moisture during all seasons is considered to be the most important limiting factor for the successful development of oak groves in these areas. Measures of snow retention are therefore of highest importance and must be carried out with greatest care and effort. *Subject Headings:* 1. Forest ecology 2. Oak groves 3. Stalingrad, U.S.S.R. I. Kleiman, V. S. II. Levina, E. F. III. Krukovskaia, Z. V. IV. Pavlova, N. P.—*A.M.P.*

SHCHERBAKOV, I. P.

Reforestation in the principal types of forests of Southern Maritime Region Moskva, Izd-vo Akademii nauk SSSR, 1953. 131 p. (54-17612)

SD232.M3S5

1. Forests and forestry - Siberia - Maritime Province. 2. Botany - Siberia - Maritime Province. 3. Forest ecology.

SHCHERBAKOV, I.P.

Use of a semiconducting electric thermometer to measure the temperature of wood tissues. Fiziol.rast.2 no.4:392-396 Jl-Ag'55. (MLRA 8:12)

1. Yakutskiy filial Akademii nauk SSSR
(Thermometers) (Trees)

SHCHERBAKOV, I.P., CHUGUNOVA, R.V.

Classification of burnt-over areas in southwestern and central Yakutia. Izv.Sib.otd.AN SSSR no.1:127-136 '60.
(MIRA13:7)

1. Yakutskiy filial Sibirskogo otdeleniya AN SSSR.
(Yakutia--Forests and forestry)

SHCHERBAKOV, Igor' Petrovich; URTAYEV, Georgiy Timofeyevich; MIKHAYLOVA, L.G., red. izd-va; PARAKHINA, N.L., tekhn. red.

[Forests and forest industries of Yakutia] Lesa i lesnaia promyshlennost' IAkutii. Moskva, Goslesbumizdat, 1961. 108 p. (MIRA 14:7)

(Yakutia--Forests and forestry) (Yakutia--Lumbering)

SHCHERBAKOV, I.P.; CHUGUNOVA, R.V.

Forests of southwestern districts of the Lena Valley in Yakutia and measures for furthering forest regeneration in felling and burnt-over areas. Trudy Inst. biol. IAFAN SSSR no.7:5-161 '61. (MIRA 14:5)

(Yakutia--Forests and forestry)

SHCHERBAKOV, Igor' Petrovich; OKHLOPKOV, Ye.D., red.

[Forest resources of Yakutiia and their utilization] Lesnye resursy IAkutii i ikh ispol'zovanie. IAkutsk, IAkutskoe knizhnoe izd-vo, 1962. 34 p. (MIRA 17:5)

L 15726-66

ACC NR: AP5024173 SOURCE CODE: UR/0290/65/000/002/0053/0061

AUTHOR: Shcherbakov, I. P.

ORG: Yakutsk Affiliate, Siberian Department of the AN SSSR (Yakutskiy filial, Sibirskogo otdeleniya AN SSSR)

TITLE: Reforestation in the northernmost part of Eurasia

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya biologo-meditsinskikh nauk, no. 2, 1965, 53-61

TOPIC TAGS: forestry, forest product, botany, soil type

ABSTRACT: Flora and fauna on the island of Tit-Ara, located in the Lena River valley 50 miles above the delta, are described. Tit-Ara had one of the northernmost larch forests in Northeastern Eurasia until 1942-1943 when most of it was cut down. Since then, there has been some regrowth and efforts aimed at renewal and preservation of the vegetation are under way. Tit-Ara larch is of considerable interest to investigators because it grows at the most northern limit of its range. Tit-Ara, one of the largest islands in the lower reaches of the Lena River, consists of four

UDC: 634.9(571.56)581.526.533(571.56)

Card 1/2

L 15726-66

ACC NR: AP5024173

main elements or terraces with forest-tundra vegetation. The author presents an outline of the geomorphological features and main plant species on each terrace, followed by a detailed discussion of the characteristics of the larch regrowth, which is half as slow as in the southwestern and central regions of Yakutia. Some notes are presented on the island's flowers and wildlife. It is recommended that the Yakutsk Branch of the Siberian Department of the Academy of Sciences SSSR or Yakutsk State University organize a combined scientific expedition to Tit-Ara. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 02/06/ SUBM DATE: 03Jan64/ ORIG REF: 004/ OTH REF: 002

Card2/2

SHCHERBAKOV, I. V.

U-2

USSR/General Problems of Pathology. Allergy

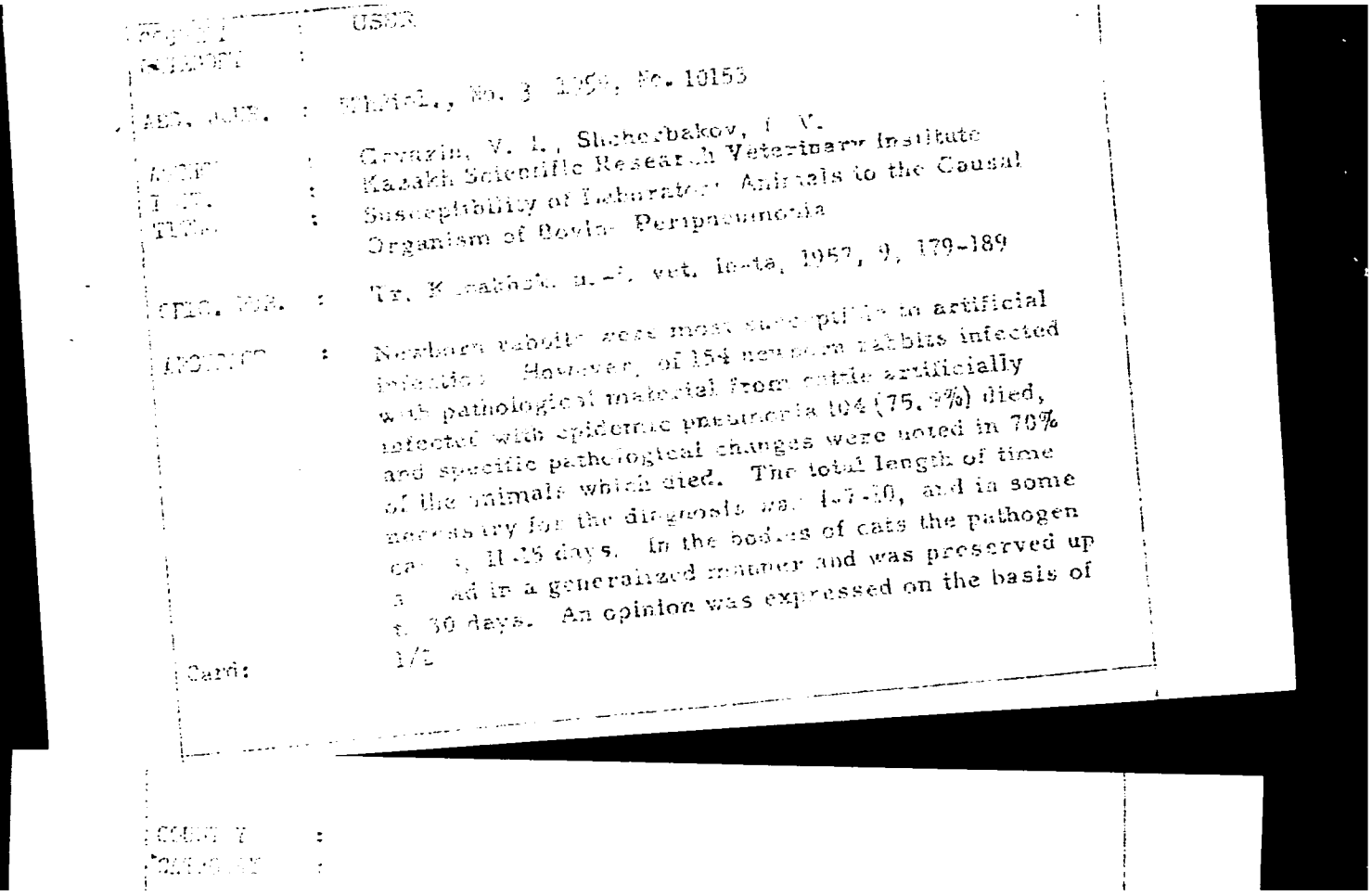
Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65940

Author : Gryazin V.I., Shcherbakov I.V.
Inst : Institute of Veterinary Medicine of the Kazakh Branch of the All-Union ordera Lenin Academy of Agricultural Sciences imeni V.I. Lenin
Title : Allergy and Allergens in Peripneumonia in Bovine Animals.

Orig Pub : Tr. In-ta vet. Kazakh. fil. VVASKhNIL, 1957, 8, 132-138

Abstract : No abstract

Card : 1/1



USSR

Sbornik, No. 3 1959, No. 10153

Gevrazin, V. I., Shcherbakov, I. V.
Kazakh Scientific Research Veterinary Institute
Susceptibility of Laboratory Animals to the Causal Organism of Bovine Peripneumonia

Tr. Kazakh. n.-i. vet. in-ta, 1957, 9, 179-189

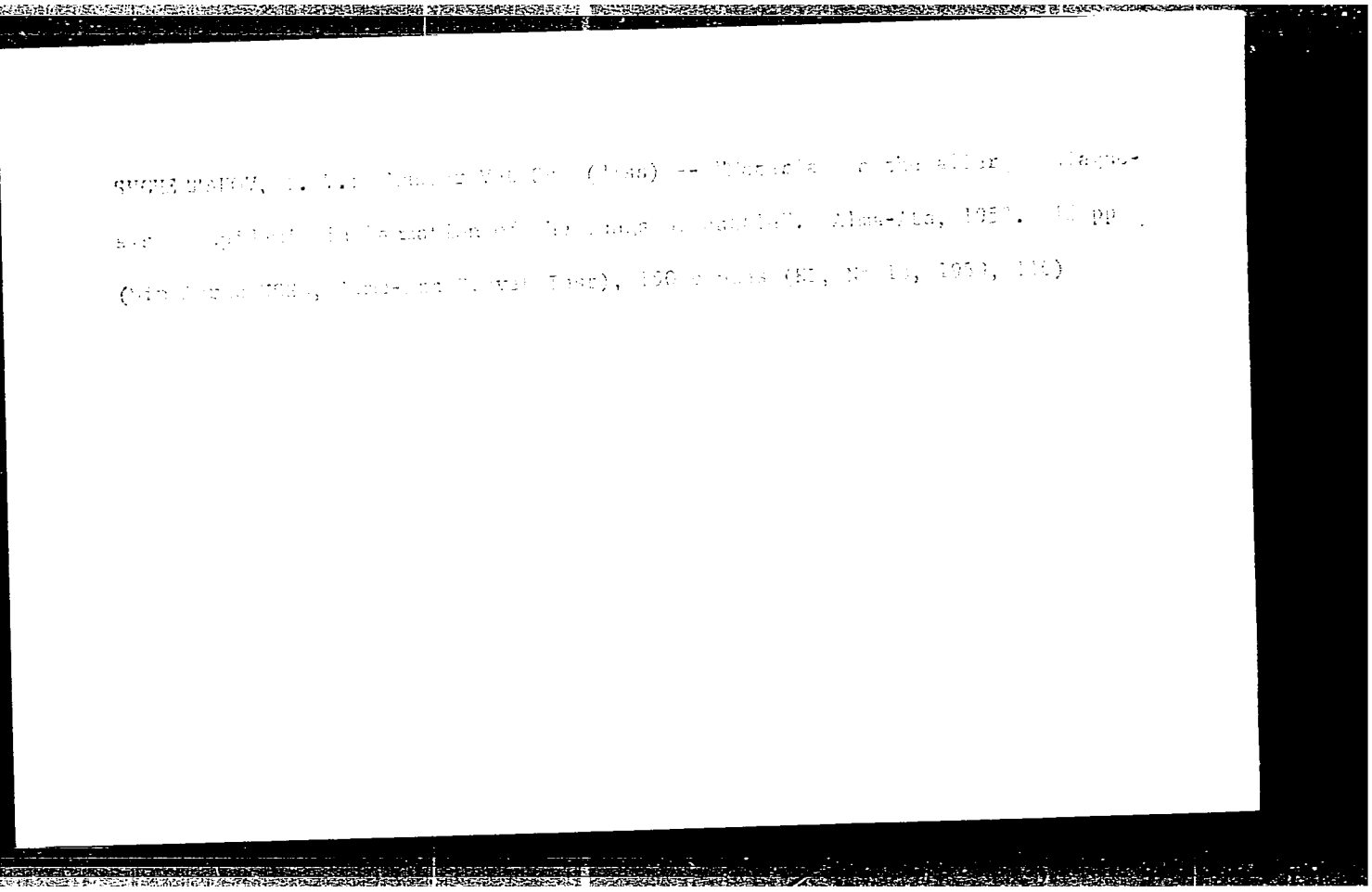
Newborn rabbits were most susceptible to artificial infection. However, of 154 newborn rabbits infected with pathological material from cattle artificially infected with epidemic pneumonia 104 (75.9%) died, and specific pathological changes were noted in 70% of the animals which died. The total length of time necessary for the diagnosis was 4.7-30, and in some cases, 11-25 days. In the bodies of cats the pathogen was found in a generalized manner and was preserved up to 30 days. An opinion was expressed on the basis of

Card: 1/2

R

Country : USSR
Category : Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi
Abs. Jour. : Ref Zhur-Biol, No 23, 1958, No 105818
Author : Gryazin, V. I.; Shcherbakov, I. V.
Institut. : Kazakh Scientific Research Veterinary Institute
Title : Biological Diagnosis of Infectious Peripneumonia of Cattle on Lambs and Kids
Orig. Pub. : Tr. Kazakhsk. n.-i. vet. in-ta, 1957, 9, 196-207

Abstract : A series of experiments carried out to find a model for biological diagnosis of infectious peripneumonia (IP) in cattle showed that lambs and sheep, as well as kids and goats, of any age, are suitable for this purpose. It was demonstrated that it is possible to make biological diagnosis of IP in cattle on lambs within 3-14 days, and on kids and goats within 7-14 days. By slaughtering affected animals on the second to fourth day after infection, it is



SHCHERBAKOV, K.

Continuous cast-iron desulfuration. Mashinostroitel' no.7: 47 '61. (MIRA 14:7)
(Desulfuration)

SHCHERBAKOV, K., inzh.

Member of the "Miner's glory" order. Sov.shakht. 11 no.2:9 F '62. (MIRA 15:1)

1. Otdel organizatsii truda tresta Kalininugol', Tul'skaya oblast'.

(Coal miners)

VOYDA, A.N. [reviewer]; KRUTIKOV, N.P.; SHCHERBAKOV, K.F.; SMIRNOV, I.I.; POPOV, I.F. [authors].

Review of "Theory, design and calculations of farm machinery," volume 1, by N.P.Krutikov, K.F.Shcherbakov, I.I.Smirnov and I.F.Popov. Sel'khoz-mashina no.10:31-32 O '53. (MLRA 6:11)

(Agricultural machinery) (Krutikov, N.P.)

SHCHERBAKOV, Konstantin Fedotovich, kand.tekhn.nauk; SOLOV'YEV, D.I., kand.tekhn.nauk, red.; KRASNOV, V.S., retsenzent; YEGORKINA, L.I., red.izd-va; EL'KIND, V.D., tekhn.red.

[Machines for harvesting industrial crops; theory, construction, and calculation] Mashiny dlia uborki tekhnicheskikh kul'tur; teoriia, konstruktsiia i raschet. Pod red. D.I.Solov'eva. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 301 p. (MIRA 13:6)

(Harvesting machinery)

SHCHERBAKOV, K.F., kand.tekhn.nauk; KANEYEV, I.V.

Attachement to the PRVN-2,5 vineyard plow for turning the soil and cultivating between rows. Trakt. i sel'khozmash. 31 no.10:39-40 O '61. (MIRA 14:12)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya.
(Plows---Attachments)
(Viticulture---Equipment and supplies)

SHCHERBAKOV, K.F., kand.tekhn.nauk

The KAS-2,8 scari-seeder with active operating parts. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. no.8:64-68 '62. (MIRA 15:7)

(Planters (Agricultural machinery))

SHCHERBAKOV, K.F., inzhener-geolog; FOMENKO, V.Yu., inzh.-geolog

Talc schist from the southern part of the Krivoy Rog Basin. Sbor. nauch. trud. NIGRI no.2:143-153 '59. (MIRA 14:1)
(Krivoy Rog Basin—Schists)
(Krivoy Rog Basin—Talc)

SHCHERBAKOV, K.F., kand.tekhn.nauk; SOLOMIN, A.N., aspirant

Problems of threshing sunflowers and deseeding castor-oil plants. Trakt. i sel'khozmash. no.11:15-17 N '64. (MIRA 18:1)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya.

SHCHERBAKOV, K.I., akademik; LEVIN, B.Yu., doktor fiziko-matematicheskikh nauk.

A champion of materialistic science; on the first anniversary of O.IU. Shmidt's death. Priroda 46 no.9:40-46 S '57. (MLRA 10:8)

1. Institut fiziki Zemli im. O.Yu. Shmidta Akademii nauk SSSR, Moskva. (Shmidt, Otto Iul'evich, 1891-1956)

L 22352-66
ACC NR: AP6013268 SOURCE CODE: UR/0413/66/000/008/0060/0060

INVENTOR: Shcherbakov, K. K.; Bogdanov, V. V.; Kukushkin, Yu. A.

ORG: none

TITLE: Device for measuring the volume of inhaled and exhaled air. Class 30, No. 180735

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 60

TOPIC TAGS: respiration, human physiology, respiration sensor

ABSTRACT: An Author Certificate has been issued for a device to measure the volume of inhaled and exhaled air. It consists of active

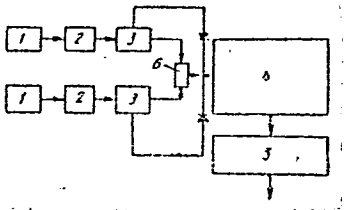


Fig. 1.

1 - inhalation and exhalation sensors; 2 - impulse amplifier-shapers; 3 - calibrators; 4 - reversible trigger counter; 5 - adder; 6 - transducer

Card 1/2 UDC: 625.47:
:612.2-087

AUTHOR: Yevseyev, A.S., Shcherbakov, K.L. SOV-113-58-10-1/16

TITLE: The Future Development of Foundries at Automobile Plants (Perspektivy razvitiya liteynykh tsekhov avtozavodov)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 10, p 1 - 3 (USSR)

ABSTRACT: The authors review the development of foundries at Soviet automobile plants. The productivity of these foundries is not on the same level as other modern foundries in the USSR, although the work is mechanized to a certain extent. They cite in this connection the Gor'kiy, Ural'skiy and the Minsk automobile plants and the Yaroslavl'engine plant. They also point out various methods for improvement which must be put into effect during the next 1 - 3 years. There is 1 table.

ASSOCIATION: NIITAvtoprom, Giproavtoprom

1 Automotive industry 2. Foundries--Development

Card 1/1

28(1) PHASE I BOOK EXPLOITATION SOV/2156

Soveshchaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhnologicheskikh protsessov. 2nd, 1956.

Avtomatizatsiya mashinostroitel'nykh protsessov; /trudy soveshchaniya/, tom. 1: Goryachaya obrabotka metallov (Automation of Machine-Building Processes; Proceedings of the Conference on Over-All Mechanization and Automation of Technological Process, Vol 1: Hot Metal-Forming) Moscow, 1959. 394 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut machinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: V.I. Dikushin, Academician: Compiler: V.M. Raskatov: Ed. of Publishing House; V.A. Kotov; Tech. Ed.: I.F. Kuz'min.

PURPOSE: The book is intended for mechanical engineers and metallurgists.

Card 1/8

SHCHERBAKOV, K.L., inzh.

Die casting of large aluminum parts. Mashinostroitel' no.3:44 Mr '60. (MIRA 13:6)
(Die casting)

SHCHERBAKOV, K.L.

Changes in the organization of the founding industry in the U.S.A. and Canada. Biul.tekh.-ekon.inform. no.8:88-91 '60. (MIRA13:9)
(United States--Founding) (Canada--Founding)

S/128/61/000/002/004/009
A054/A133

AUTHOR: Shcherbakov, K.L.

TITLE: On the working conditions at shaped-steel foundries of big-lot and mass production

PERIODICAL: Liteynoye proizvodstvo, no. 2, 1961, 21 - 23

TEXT: At present steel foundries with a great output and big-lot production are working in three shifts (for instance, the foundries of the Kharkov, Stalingrad, Chelyabinsk, Vladimir and Lipetsk Tractor Plants, spare-part plants as the Bezhitsk and ne-Tagil, im. Uritsk Railroad Car Plants, those of the Nizh- the NKPS, etc.). Three-shift operation is also planned for new, fully automated shaped-steel foundries, whereas pig-iron foundries are only planned for two-shift operation. The author maintains that under the present operational conditions in steel foundries, working in three shifts is not justified. It is much easier to put acid electric arc furnaces in such foundries into operation after a non-operational period, than pig-iron furnaces. It is a fact, that when working in two shifts, the power-consumption increases from 1,250 kwh/t to 1,350 kwh/t of serviceable product (the increase in specific power consumption for two-shift work

...30 - 35%, as it ...night shift has a favora- ...ound-the-clock operation is only ... with the technology (for instance, in

Card 1/2

SHCHERBAKOV, K.L.

Development of the production of pearlitic malleable cast iron in the United States. Biul.tekh.-ekon.inform. no.5:84-87 '61. (MIRA 14:6)

(United States—Cast iron—Metallurgy)

SHCHERBAKOV, K.L.

Foundry in a building of circular shape. Lit. proizv. no.12: 34 D '61. (MIRA 14:12)

(Denmark--Foundries)

SHCHERBAKOV, K.L.

New casting process used in the manufacture of automobiles. (MIRA 14:10)
Avt.prom. 27 no.8:42-44 Ag '61.
(Automobile industry) (Founding)

SHCHERBAKOV, K.L., inzh.

Automatic casting line. Mekh. i avtom.proizv. 16 no.1:51-52 Ja '62. (MIRA 15:1)

(Foundries—Equipment and supplies)
(Automation)

SHCHERBAKOV, K.L.

Over-all mechanization and automatization of foundries specialized in shell molding. Lit.proizv. no.2:17-19 F '62. (MIRA 15:2)
(Foundries--Equipment and supplies)
(Shell molding (Founding))

SHCHERBAKOV, K.L.

Continuous line in foundry practice. Lit. proizv. no.8:42-43 Ag '62. (MIRA 15:11)
(Founding) (Assembly-line methods)

SHCHERBAKOV, K.L.

New continuous action mixer. Lit.proizv. no.11:13-14 N '62.
(MIRA 15:12)

(Mixing machinery)

SHCHERBAKOV, K.L.

Low-pressure casting. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst. nauch.i tekh.inform. no.1:85-88 '63. (MIRA 16:2)
(Die casting)

SHCHERBAKOV, K.L.

New trends in precision casting. Biul.tekh.-ekon.inform.Gos. nauch.-issl.inst.nauch. i tekh.inform. no.3:80-86 '63. (MIRA 16:4)

(Precision casting)

SHCHERBAKOV, K.L.

New method for making cores. Biul.tekh.-ekon.inform.Gos. nauch.-issl.inst.nauch.i tekh.inform. no.9:86-92 '62. (MIRA 15:9)
(Coremaking)

SHCHERBAKOV, K. L.

Making cores in heated core boxes. Avt. prom. 28 no.6:45-47 Je '62. (MIRA 16:4)

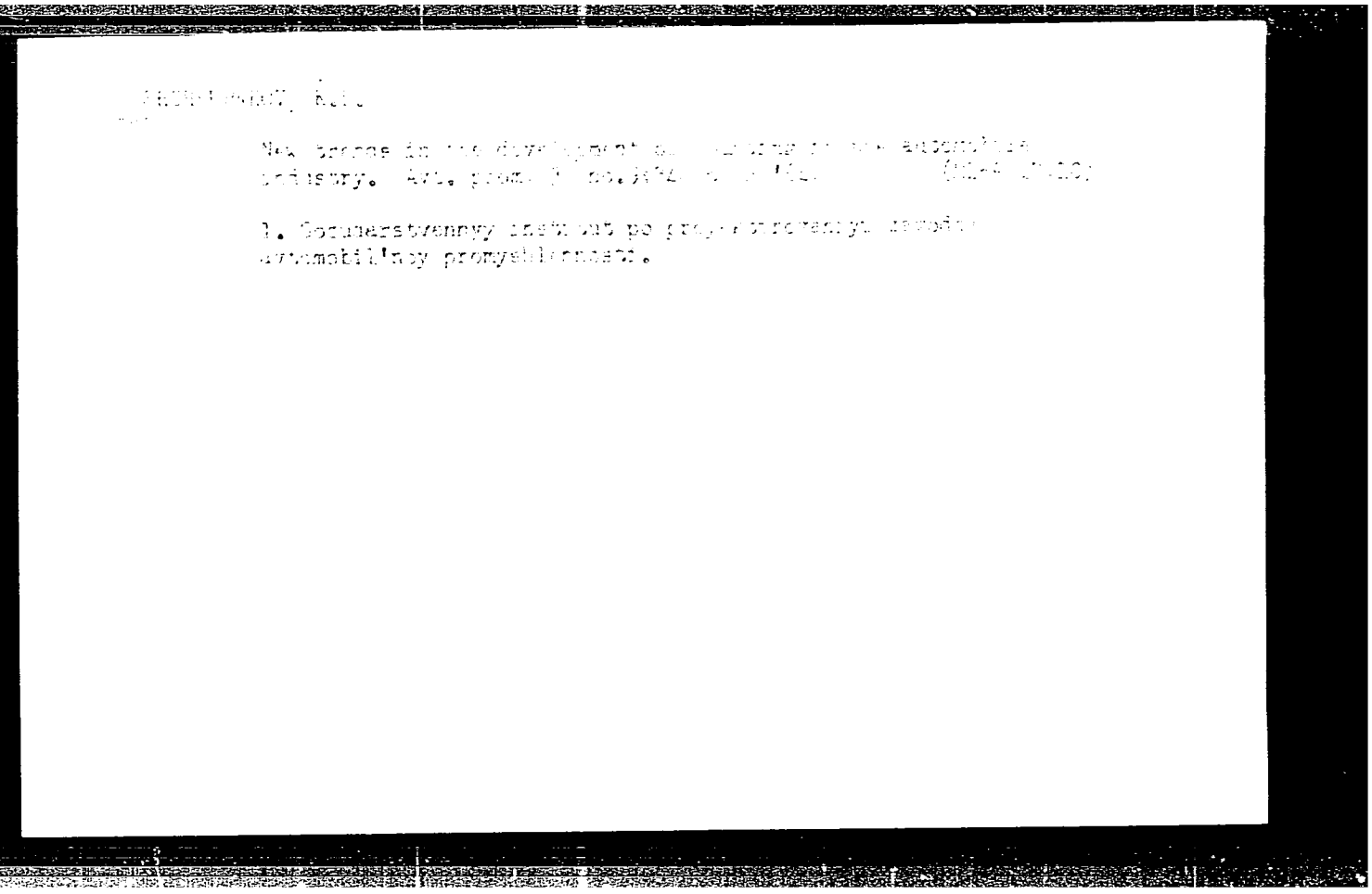
(Core making)

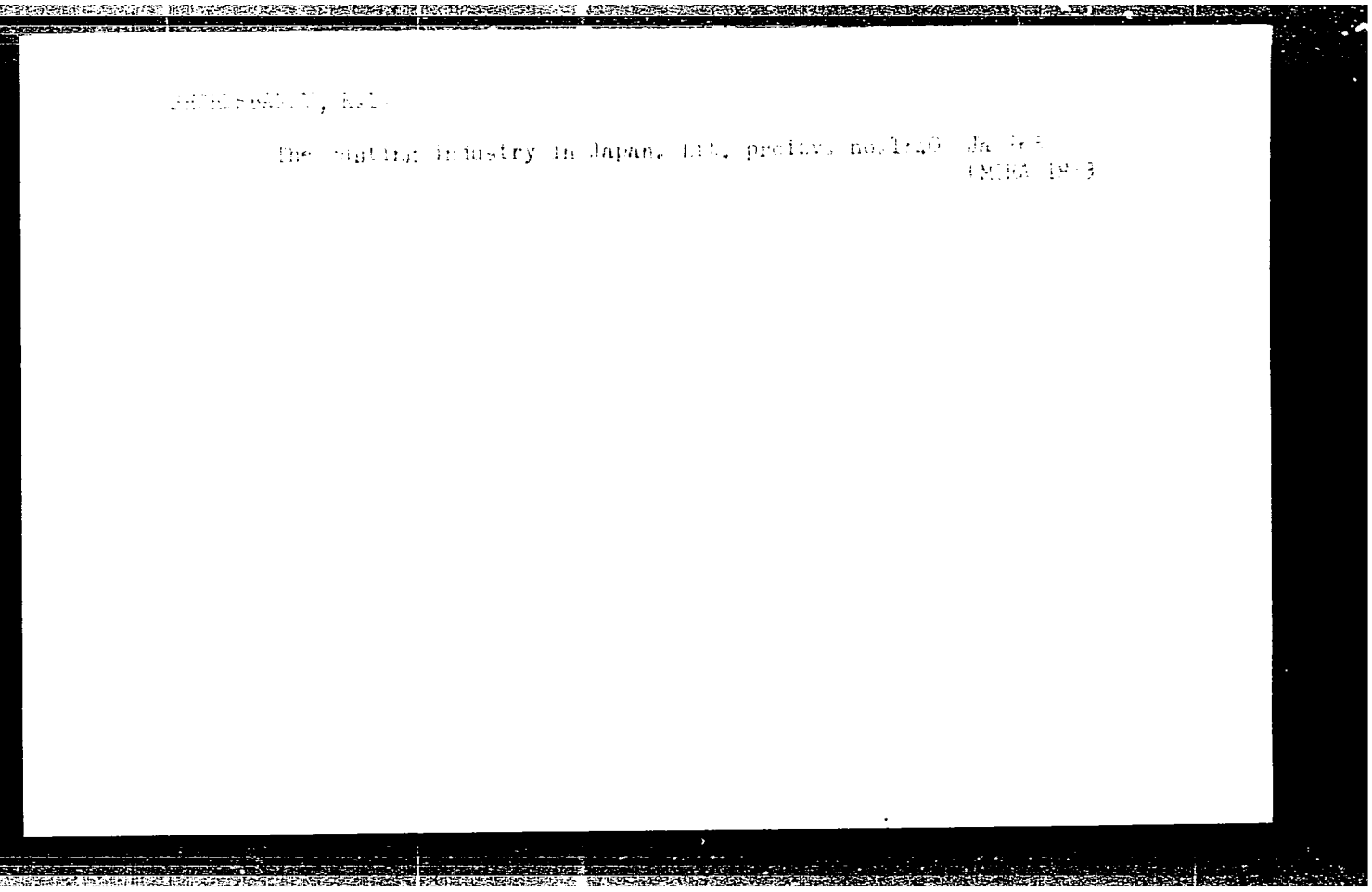
SHCHERBAKOV, K.L., inzh.

Modern foundries of Great Britain. Lit.proizv. no.10:41-48 O '64.
(MIRA 18:4)

SHCHERBAKOV, K.L.

Present state of founding in England. Biul.tekh.-ekon.inform.Gos. nauch.-issl.inst.nauch.i tekh.inform. 17 no.7:91-93 Jl '64. (MIRA 17:10)





SHCHERBAKOV, K.M.

Corrosion in hot water sypply systems. Vod.i san.tekh. no.6: 14-16 Je '56. (MLRA 9:8)
(Water pipes--Corrosion) (Radiators--Corrosion)

USSR/Engineering - Foundry, Equipment Feb 52

"Separator for Recovery of Molding Sand Using Corona Discharge," K. N. Shcherbakov, Engr, Gi-proavtotraktoroprom

"Litey Proizvod" No 2, pp 12, 13

Describes separator of chamber type, model 188 with productive capacity about 10 tons/hr, based on use of corona discharge initiated by electrode under dc voltage from 40,000 to 80,000 v. Grains of sand, on their passage through gap between electrodes, are deviated toward settling electrodes, lose their charges and fall down under effect of

207T42

USSR/Engineering - Foundry, Equipment (Contd) Feb 52

gravity, being distributed according to size among various bunkers. Gives schematic drawing of separator and flow sheet of entire recovery operation.

207T42

SHCHERBAKOV, K. N., Engr

SHCHERBAKOV, K. V.

Kratkii spravochnik po remenno-privodnomu khoziastvu. (Moskva) Gizlegprom. 1943. 51 p. illus.

Concise handbook of belt-drive operations.

DLC: TJ1100.S5

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SHCHERBAKOV, K. V.

Kratkii spravochnik po remenno-privodnomu khoziaistvu. 2. izd. Moskva, Gizlegprom, 1944. 47 p. illus.

Concise handbook of belt-drive operations. 2nd ed.
DLC: TJ1100.S5 1944

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SHCHERBAKOV, K.V., inzh.

Kalininugol' Trust mines are operating on a reduced work schedule.
Ugol' 34 no.2:56-57 F '59. (MIRA 12:4)

1. Trest Kalininugol'.
(Moscow Basin--Coal mines and mining)

[illegible], [illegible], kand. [illegible]; [illegible], [illegible], kand. tekhn. nauk; [illegible], A.Kh., [illegible]; [illegible], [illegible], inzh.; SHCHERBAKOV, L.A., inzh.

Unit for continuous forming of the glass reinforced plastic with a cross wave. Stroi. [illegible] no.[illegible] [illegible] '65. (MIRA 18:[illegible])

SHCHERBAKOV, L.A., aspirant.

Effect of the reaction of the medium on the productivity of the synthesis of cell substance and protein by micro-organisms recovered from a cow rumen [with summary in English]. Izv. TSKHA no.1:230-232 '62. (MIRA 15:6)

(RUMEN--MICROBIOLOGY) (PROTEINS)

SHCHERBAKOV, L.B.;

Unit for the remote control of fuel pumps. Transp. i khran. neft. i nefteprod. no.6:37-38 '65. (MIRA 18:8)

1. Kalininskaya neftebaza.

SHCHERBAKOV, L. I.

(2)

Rôle of carbon and alumino-silicates in the polymerisation of olefines with gaseous boron trifluoride. Ya. M. Paushkin and L. I. Shcherbakov. (*Dokl. Akad. Nauk. SSSR*, 1953, **90**, 795—798).—The d_4^{20}, n_D^{20}, mol. wt. content of unsaturateds, dimeric, trimeric, and tetrameric products from the polymerisation of *iso*- and *n*-butylene, and *iso*amylene on alumino-silicate and active C, both pure and when used as supports for BF_3, are recorded. It is suggested that BF_3 combines with alumino-silicates and is thereby activated for catalysis.

R. C. MURRAY.

10-14-54 M.E.F.

SCHERBAKOV, L...

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

Surface tension of drops of small dimensions. L. M. Shcherbakov. *Colloid J.* (U.S.S.R.) 14, 411-14(1952) (Engl. translation).—See *C.A.* 47, 1460*f*. H. L. H.

1 Chem

8-31-54

SHCHERBAKOV, L. M. and BOLOTIN, A. S.

"Dependence of Surface Tension on Radius of Drop".
Uch. Zap. Kishinevsk. un-ta, 11, pp 153-156, 1954

Semiempirical approximate equation of dependence of surface tension of the radius of the drop r is derived: $\sigma = C\,(1 - 2/\delta_0\, r\ 2/\delta_0^2\ r^2)$. Where C is the surface tension of flat liquid surface; δ_0 is a constant or the order of magnitude of 10^7 to 10^8 CGS units. Concrete values δ_0 for various liquids are not specified. (RZ hFiz, No 10, 1955)

SO: Sum No 812, 6 Feb 1956

Shcherbakov, L. M.

3

/Theory of type II capillary effects. L. M. Shcherbakov. *Trudy Tul'sk. Mekh. Inst.* 7, 117–22(1955); *Referat. Zhur., Khim.* 1955, Abstr. No. 51760.—Two types of capillary effects (CE) are suggested: CE type I, detd. by the surface development between 2 phases, and CE type II related to the change in surface tension with the change in dimensions of the body, especially the layer thickness. CE type II are not taken into consideration in Kelvin's well-known equation, which fact explains the disagreement between the theory and practice. The theory of CE type II is given. Expti. confirmation of these effects is found in the expts. of Deryagin on the wedging effect of thin liquid layers, the wedging effect being considered as CE type II.

N. Vasileff

SHCHERBAKOV, Leonid Mikhaylovich, kandidat fiziko-matematicheskikh nauk; TYLKIN, M.N., redaktor; PULIN, L.I., tekhnicheskiy redaktor.

[Atomic energy in the service of man] Atomnaia energiia na sluzhbe cheloveka. Izd. 2-oe, ispr. i dop. Tula. Tul'skoe kn-vo, 1956. 55 p. (Atomic power) (MIRA 9:6)

PHASE I BOOK EXPLOITATION SOV/4089

Shcherbakov, Leonid Mikhaylovich

Osnovy fiziki yadra (Fundamentals of Nuclear Physics) [Tula] Tul'skoye knizhnoye izd-vo, 1958. 60 p. 3,000 copies printed.

Ed.: A.I. Tupikov; Tech. Ed.: L.I. Pulin.

PURPOSE: This book is intended for readers with a knowledge of physics and mathematics at the level of the schools of higher education and can be useful to students taking a course in general physics.

COVERAGE: The book explains the principles of nuclear physics and nuclear technique in considerable detail and can supplement a course in general physics. No personalities are mentioned. There are 14 references, all Soviet.

TABLE OF CONTENTS:

Card 1/2

SOV-69-58-4-17/18

AUTHOR: Shcherbakov, L.M.

TITLE: A Traditional Error in the Theory of Capillarity (Ob odnoy traditsionnoy oshibke v teorii kapillyarnosti)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 4, pp 502-506 (USSR)

ABSTRACT: The theory of capillary phenomena was formulated in the last century (Ref. 1 and 2). It is based on two laws usually termed Laplace's laws. The first of these two laws determines the surplus pressure caused by a bent surface of a liquid. This formula has been incorrectly interpreted as a change of molecular pressure of a bent surface. The molecular pressure is an internal property of a liquid which does not influence the mechanical equilibrium of the system. A decrease of the droplet radius should cause an increase of the molecular pressure which contradicts the facts. The wrong interpretation of the mentioned formula also contradicts experimental results. The molecular pressure can not be measured directly, but the derivations of the formula may be checked by experiment. The conclusions of Laplace's formula, like the Jurin law, the law for the pressure in bubbles, etc., are correct because they are based on the second term of the formula which represents physically the change in hydrostatic and not molecular pressure.

Card 1/2

A Traditional Error in the Theory of Capillarity SOV-69-58-4-17/18

In the article, two formulas are given in which the mentioned error is avoided. They have been derived by means of thermodynamic methods. The surface tension, the specific total surface energy, and the mean curvature of the liquid are taken into consideration.
There are 5 references, 2 of which are Soviet, 2 German, and 1 French.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute)

SUBMITTED: April 2, 1957

1. Capillary tubes--Theory

Card 2/2

SHCHERBAKOV, L.M.

Heat of sublimation of small crystals. Izv. vys. ucheb. zav.; fiz. no.4:77-83 '59. (MIRA 13:3)

1.Tul'skiy mekhanicheskiy institut.
(Heat of sublimation)

SOV/69-21-4-15/22

AUTHOR: Ryazantsev, P.P., Shcherbakov, L.M.

TITLE: The Effect of Atomization on Solubility and Heat of Solution

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol XXI, Nr 4, pp 464-470 (USSR)

ABSTRACT: The authors have derived an equation, which establishes a correlation between the decrease in differential heat of solution and the full surface energy of an atomized dissolved substance. The obtained formula was used to correct data of an investigation carried out in 1927 by Lipsett, Johnson and Maass [reference 10]. These scientists experimentally established [illegible] in heat of solution for finely-dispersed NaCl. The theoretical foundation of this effect was given in 1945 by one of the authors of the article. The formula obtained for the decrease in heat of solution was given in the form $\Delta L=2\sigma v D$. σ was the surface tension of the crystal, v its molar volume and D the degree of dispersity. On the basis of this equation, the authors developed a new formula (12), $\Delta L=L-L_0=2\varepsilon v'D$, which is distinguished by the introduction of the specific full surface energy ε, which has replaced the surface

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The Effect of Atomization on Solubility and Heat of Solution

tension σ of the crystal. Formula (13a) $\Delta L = -2\varepsilon v' \frac{1}{3} \frac{S}{V'} = -\frac{2}{3} E_s$ (E=total surface energy) represents the final form of the equation, and shows that the decrease in differential heat of solution is equal to two thirds of the total surface energy of the atomized dissolved substance. Applying the results of their study to the above-mentioned investigation of the American scientists, the authors have shown that the excess values for ε NaCl were obtained by disregarding the heat effect of surface wetting. With the introduced corrections for the specific full surface energy of crystalline NaCl, the authors established a ε NaCl value of 155 erg/cm^2. The authors express their gratitude for help to the Corresponding Member of the AS USSR, B.V, Deryagin. They mention the scientists K.S. Lyalikov, V.K.Semenchenko, V.I. Rykov, Yu.V. Vul'f and P.E. Strebeyko. There are 1 table and 18 references, 9 of which

The Effect of Atomization on Solubility and Heat of Solution

are Soviet, 5 English and 4 German.

ASSOCIATION: Tul'skiy mekhanicheskiy institut
(Tula Mechanical Institute)

SUBMITTED: 4 April, 1956

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S/069/60/022/01/019/025
D034/D003

AUTHOR: Shcherbakov, L.M.

TITLE: On the Thermodynamics of Thin Liquid Layers

PERIODICAL: Kolloidnyy zhurnal, 1960, Vol XXII, Nr 1, pp 111-116 (USSR)

ABSTRACT: The author reports on a study of certain equilibria in thin liquid layers (change of phase transition temperature and heat of evaporation as a function of thickness of the layer). On the basis of the preceding works of B.V. Deryagin and his school [Ref 1] - Deryagin introduced the below-mentioned concept of "wedging action" -, the author points to the fact that the development of the phase boundary surface affects in two different ways the equilibrium of a heterogeneous system: 1) the usual capillary phenomena or capillary effects of the first order, called forth by the immediate effect of

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On the Thermodynamics of Thin Liquid Layers

the liquid surface development, and 2) the capillary effect of the second order, which are connected with a change in surface tension during the change of the geometric surface magnitudes (drop radius, layer thickness). The effects of the second order were termed by Deryagin the "wedging action" of the layer. According to the author, the latter can be connected with the dependence of the excess surface energy on the thickness of the layer. With the aid of thermodynamic methods the author established that the temperature of phase transition for a liquid in a thin layer will be lower than for a considerable mass of liquid. The fall of temperature of transition is equal to

$$\frac{\Delta T}{T_0} = -\frac{v'}{\lambda_0}\left(2\frac{\sigma}{h} + 2\frac{\partial\sigma}{\partial h}\right) \qquad (9)$$

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S/069/60/022/01/019/025
D034/D003

On the Thermodynamics of Thin Liquid Layers

(h - layer thickness, v - molar volume of the considered phase, λ_0 - molar heat of evaporation of the layer, σ - surface tension). The author has further shown that the heat of evaporation also diminishes with decreasing layer thickness, the relative decrease in the heat of evaporation being above the relative decrease in the temperature of phase transition. In connection with B.V. Deryagin the author also mentions scientist I.I. Abrikosova [Ref 6], who established a correlation between the values σ and h. He expresses his gratitude for help to Associate Member of the AS UkrSSR, B.V. Deryagin. There are 1 graph and 14 Soviet references.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Engineering Institute)

SUBMITTED: October 25, 1958

Card 3/3

S/076/60/034/009/038/041XX
B020/B056

AUTHORS: Shcherbakov, L. M. and Ryazantsev, P. P.

TITLE: Wetting Angle of Small Drops

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 9, pp. 2120-2122

TEXT: In the classical capillarity theory the equilibrium value of the wetting angle for drops with arbitrary radius is assumed to be equal. I. Petryanov and N. Rozenblyum (Ref. 1), however, experimentally found a decrease of the wetting angle with the decrease of the size of the drop in the case of small drops. In the present paper, the deviation from the second Laplace law in the case of small drops is theoretically analyzed. In this case, only drops were dealt with which are found on the free surface of a solid and are deformed under conditions when a mass transfer is excluded. A further paper deals with surfaces covered with adsorption layers of mainly polymolecular liquid layers of considerable thickness, whose existence has been experimentally proven by

B. V. Deryagin (Ref. 2), and whose part played in the theory of the incomplete wetting was determined by A. N. Frumkin (Ref. 3). For the wetting angle the relation $\cos\theta = \cos\theta_0/1 - 2/\alpha R$ (4) is derived, where θ_0 is the wetting angle for the drop with large dimensions, and α - a coefficient, whose value may e.g. be taken from Ref. 7. From equation (4) it follows that the wetting angle is vanishing if the radius of curvature of the drop surface $R = 2/\alpha(1 - \cos\theta_0)$. There exists a range $R - 1/\alpha < R < 2/\alpha \cdot (1 - \cos\theta_0)$ within which the wetting angle vanishes. For the purpose of illustrating the relations obtained, a table gives the change in the wetting angle with the radius of the drop for water on the surface of malachite. The value θ_0 was taken from P. A. Rebinder (Ref. 6), and the coefficient α was assumed to be equal to $5.5 \cdot 10^8$ cm^{-1}. The authors thank B. V. Deryagin, Corresponding Member of the AS USSR for valuable discussions. There are 1 table and 7 references: 5 Soviet, 1 US, and 1 German.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute)

Wetting Angle of Small Drops

S/076/60/034/009/038/041XX
B020/B056

SUBMITTED: December 22, 1958

Card 3/3

AUTHOR: Shcherbakov, L. M.

TITLE: General theory of capillary effects of second order

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1961, 69, abstract 18B520 (Sb "Issled. v obl. poverkhnostn. sil" M., AN SSSR, 1961, 28 - 37)

TEXT: If an object has small dimensions the deviation of the additive distribution of free energy will not lead to a term proportional to the area of the interface but requires that terms be introduced, which are functions of the dimensions of the object. The capillary effects of second order determined by this "excessive" energy are particularly strong in highly disperse systems ($r = 10^{-7}$ cm). A general theory of second-order capillary effects is developed. Taking into account second-order capillary effects in the calculation of the work of nucleus formation as a result the existence of an upper limit of the attainable supersaturation (absolute critical supersaturation) is obtained. This makes it possible to determine this absolute critical supersaturation on the basis of thermodynamic considerations. [Abstracter's note: Complete translation]

Card

LERYAGIN, B.V.; SHCHERBAKOV, L.M.

Effect of surface forces on phase equilibria of polymolecular layers and on the adsorption contact angle. Koll. zhur. 23 no.1:40-52 Ja-F '61. (MIRA 17:2)

1. Institut fizicheskoy khimii AN SSSR, Moskva i Tul'skiy mekhanicheskiy institut.

21103
S/069/61/023/002/006/008
B101/B208

11,7350

AUTHORS: Shcherbakov, L. M. and Rykov, V. I.

TITLE: Heat of evaporation of droplets

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 2, 1961, 221-227

TEXT: The present paper describes a precise thermodynamic study of the heat of evaporation as a function of the radius r of the liquid drop. The thermodynamic equilibrium of the drop (index ') with the saturated vapor (index ") may be defined as:
$\mu'(P', T) = \mu''(P'', T)$; $P' - P'' = 2\sigma/r + \partial\sigma/\partial r$ (2), where $\mu^{(i)}$ is the chemical potential of the i-th phase, and σ is the free surface energy.
Considering $\partial\mu/\partial P = v$ (v = molar volume of the respective phase) and assuming the condition $v'' = RT/P''$ for an ideal gas, the condition for the change of the chemical potential $d\mu = vdP - \eta dT$ (η = entropy of the respective phase), the following system of equations is obtained:
$v''dP'' - v'dP' = (\lambda/T)dT$; $dP' - dP'' = d(2\sigma/r + \partial\sigma/\partial r)$ (5), where λ is the molar heat of evaporation of the drop. To calculate the heat of evaporation, the authors proceed from the equation for enthalpy: $H = U + PV$. Taking

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Heat of ...

into account the surface enthalpy $H_s = \varepsilon S - \sigma S$ (ε = specific total surface energy) one obtains: $\Delta H = H'' - (H' + H_s)$ and the following is found for the heat of evaporation: $\lambda = h'' - h' - \partial H_s/\partial m$ ($h^{(i)}$ = molar enthalpy of the i-th phase, m = mass in moles). By definition, $h' = u' + P'v'$; $h'' = u'' + P''v''$. $v' \cong v'_\infty$ is substituted for the liquid phase (the subscript ∞ denotes the values for a large liquid surface), and $P''v'' = P_\infty v''_\infty$ for the gaseous phase. By substituting the expressions derived for h', h", and $\partial H_s/\partial m$ from $P' = P_\infty + 2\sigma/r + \partial\sigma/\partial r$ in (6) one obtains $\lambda = (h''_\infty - h'_\infty) - v'_\infty (2\varepsilon/r + \partial\varepsilon/\partial r) = \lambda_\infty - v'_\infty (2\varepsilon/r + \partial\varepsilon/\partial r)$. Now, the molar volume v' of the liquid is replaced by the density δ and the molecular weight M, and the following is obtained for the decrease of the molar heat of evaporation due to development of the drop surface: $\Delta\lambda = -(M/\delta)(2\varepsilon/r + \partial\varepsilon/\partial r)$ (7). It does not depend on the free, but on the total surface energy ε. $\Delta\lambda < 0$ holds, i.e., dispersion reduces the heat of evaporation in each liquid. According to Ya. I. Frenkel' (Ref. 7: Zh. eksper. i teor. fiz. 9, 641, 1939), molecular complexes are formed in supersaturated vapor prior to the formation drops. Since ε decreases with r, and vanishes at r_o, r_o is the boundary between these complexes ($r < r_o$)

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and the smallest drops ($r > r_o$). Next, $\varepsilon = \varepsilon_\infty \cdot \varphi(r/r_o) = \varepsilon_\infty \cdot \varphi(x)$ (8), is obtained where ε_∞ is the surface energy of a large quantity of liquid, $\varphi(x)$ is a function with $\lim\varphi(x) = 1$; $\lim\varphi(x) = 0$. By substituting (8) in (7), one obtains $\Delta\lambda = -(M/\delta)(\varepsilon_\infty/r_o)(2\varphi/x + \varphi')$ (9). If the number g_o of particles contained in the smallest drop is substituted for its radius r_o, it follows that $\Delta\lambda = -(4\pi N_A/3)^{1/3}(M/\delta)^{2/3}(\varepsilon_\infty/g_o^{1/3})(2\varphi/x + \varphi')$ (10) (N_A = Avogadro number). At maximum dispersion ($r = r_o$, $x = 1$), the heat of evaporation equals the association energy: $\lim_{x \to 1}\lambda = E_{ass}$ which is assumed to be equal to RT_{crit}. The limit of (10) thus gives:
$\lim_{x \to 1}\Delta\lambda = RT_{crit} - \lambda_\infty = -(4\pi N_A/3)^{1/3}(M/\delta)^{2/3}(\varepsilon_\infty/g_o^{1/3})\varphi'$ (1). λ_∞/RT_{crit} being equal for chemically related substances, this is also assumed for g_o, and one obtains: $\lambda_\infty/\varepsilon_\infty(v'_\infty)^{2/3} \cong \text{const} = B$ (11). The values of B were calculated for n-C_6H_{12}, n-C_8H_{18}, C_6H_6, $CHCl_3$, CCl_4, CH_3COOH. It is now

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assumed that Eq. (11) is also valid near the melting point:
$\varepsilon_{\text{solid }\infty}/\varepsilon_{\text{liqu }\infty} = (\delta_{\text{solid}}/\delta_{\text{liqu}})^{2/3} \varrho_\infty/\lambda_\infty$ (12), where ϱ denotes the molar heat of sublimation of the substance not triturated. $B \times 10^{-7}$ lies between 0.25-0.28. The values of the total surface energy of some solid substances were calculated from this equation (Table 2). The value obtained for ε from Eq. (8) is substituted in the corrected Laplace equation for the molecular pressure in the drop: $K = K_\infty - (2\varepsilon/r + \partial\varepsilon/\partial r)$ (13).

K_∞ is the molecular pressure on a plane liquid surface. By means of the van der Waals approximation $K \cong E_{ass}/v' \cong E_{ass}/v'_\infty$ one finds
$\lim_{x \to 1} K = E_{ass}/v'_\infty = K_\infty - (\varepsilon_\infty/r_o)\varphi'$ (1). Passage to the limit in (9) gives (considering that $M/\delta = v'_\infty$): $\lim_{x \to 1} \Delta\lambda = E_{ass} - \lambda_\infty = -(v'_\infty \varepsilon_\infty/r_o)\varphi'$ (1).

Combination of the two expressions leads to Stefan's law:
$K_\infty = \lambda_\infty/v'_\infty$ (14), which is thus substantiated. Mention is made of P. E. Strebeyko and Martynov. The authors thank B. V. Deryagin, Corresponding Member of AS USSR, for discussion. There are 2 tables and 15 refer-

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Heat of ...

ences: 12 Soviet-bloc and 3 non-Soviet-bloc. The 2 references to English-language publications read as follows: F. P. Buff, J. Chem. Phys. 19, 1591, 1951; 23, 419, 1955.

ASSOCIATION: Tul'skiy mekhanicheskiy institut (Tula Institute of Mechanics)
Kishinevskiy universitet (Kishinev University)

SUBMITTED: December 28, 1959

Card 5/6

MURASHEV, Nikolay Vladimirovich; SHCHERBAKOV, L.N., nauchnyy red.; IONOV, V.N., red.; NESMYSLOVA, L.N., tekhn. red.

[Methods of teaching a general course in metalwork] Metodika prepodavaniia obshchego kursa slesarnogo dela. Moskva, proftekhizdat, 1963. 163 p. (MIRA 16:9)
(Metalwork--Study and teaching)