

DUNDUCHENKO, L.Ye. (Kiyev)

Extremes of certain Stiltjes functionals. Izv. vys. ucheb. zav.; mat.  
no.3:78-90 '65. (MIRA 18:7)

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AUTHOR: Dunduchenko, L. Ye. 27  
3

ORG: none

TITLE: Use of electrical simulation for evaluating the curvature of level lines during convex mapping of a circular ring

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 7, no. 2, 1966, 270-284

TOPIC TAGS: mathematics, function

ABSTRACT: The author evaluates from above and below the curvature of iso-lines (i.e., images of the circle  $|z| = r$ ,  $q < r < 1$ ) during single sheet and convex mapping of the circular ring  $K_2(q; )$ ,  $0 < 1 < |z| < 1$ , by a class of functions which are concave within it. The problem is reduced mathematically to the search for the roots of certain functions which are solved by conformal mapping and electrical simulation. The paper presents a detailed derivation and discussion of all the pertinent mathematical relationships. The electrical simulation shown in the article which led to the establishment of the general pattern of iso-lines, was carried out at the electrical simulation laboratory of the Mathematics Institute of the UkrSSR Academy of Sciences (Institut matematiki Akademii nauk USSR). The author thanks Corresponding Member AN UkrSSR P. F. Fil'chakov for assistance in setting up the test for electrical simulation.

Orig. art. has: 3 figures and 37 formulas. [JPRS: 36,487]

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UDC: 517.53

Card 1/1 MLP

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S/021/62/000/002/001/010  
D299/D304AUTHORS: Dunduchenko, L. O. and Kas'yanyuk, S. A.

TITLE: On a regular function with positive real part in an ellipse

PERIODICAL: Akademiya nauk UkrRSR. Dopovidi. no. 2, 1962, 147-150

TEXT: Let E denote a univalent simply-connected region of the z-plane, bounded by the ellipse  $z = a \cos \theta + ib \sin \theta$ ,  $c^2 = a^2 - b^2$ . Picard showed that the function  $f(z)$ , regular in E, can be expressed by the series

$$f(z) = c_0 + \sum_{n=1}^{+\infty} c_n P_n(z), \operatorname{Re} c_0 = 1 \quad (1)$$

where

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$$P_n(z) = (z + \sqrt{z^2 - c^2})^n + (z - \sqrt{z^2 - c^2})^n \quad (2)$$

is a non-normalized Chebyshev polynomial. One sets

$$\xi = \frac{z + \sqrt{z^2 - c^2}}{a + b}, \quad q = \frac{a - b}{a + b} \quad (3)$$

Using Schwarz's formula for the ellipse, it is possible to prove the following Theorem 1: The necessary and sufficient condition for the single-valued function  $f(z)$  to have a positive real part in  $E$ , is that it should be expressed by the formula

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$$f(z) = iB + \frac{1}{2\pi} \int_{-\pi}^{\pi} \left[ F \left( \frac{z + \sqrt{z^2 - c^2}}{a + b} e^{-i\theta} \right) + 2\bar{\Phi} \left( \frac{z + \sqrt{z^2 - c^2}}{a + b} e^{i\theta} \right) \right] d\mu(\theta) \quad (6)$$

where  $\mu$  and  $B$  are real constants, and

$$F(x) = \frac{1+x}{1-x} + 2 \sum_{n=1}^{+\infty} \frac{q^{2n}}{1-q^{2n}} (x^n - x^{-n}); \quad 2\bar{\Phi}(x) = F\left(\frac{q}{x}\right) - 1 \quad (7)$$

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On a regular function  $\Delta(z)$ .

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It is noted that if one takes in formula (6) the function  $\mu(\theta)$  as a step function with a single discontinuity at  $\theta = 0$ , one obtains a regular normalized function which effects a univalent mapping of  $E$  on the right halfplane. Theorem 2: If  $\text{Re}f(z)$  is positive in  $E$  and the regular function  $f(z)$  can be expanded in Series (1), then the exact inequalities

$$|c_n| \leq \frac{2}{(a+b)^n(1-q^n)}, \quad n = 1, 2, \dots, \quad (9)$$

hold, which are only satisfied by functions of type

$$w = \frac{1}{\pi} \left[ \zeta \left( u - \frac{1}{4n} \right) - \zeta_3 \left( u + \frac{1}{4n} \right) \right], \quad n = 1, 2, \dots, \quad (10)$$

where

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$$u = \frac{1}{2\pi i} \ln \left( \frac{z + \sqrt{z^2 - c^2}}{a + b} \right); \quad \zeta(u) = \frac{\sigma'(u)}{\sigma(u)}; \quad \zeta_3(u) = \frac{\sigma_3'(u)}{\sigma_3(u)}$$

A function  $f(z)$  which can be expanded in Series (1) is said to be typically-real in  $E$ , if for any  $z, (z \in E)$  the quantity  $\text{Im}f(z) \cdot \text{Im}z$  retains its sign for  $\text{Im}z \neq 0$ . In the following, one sets  $c_0 = 0$  in Eq. (1). Theorem 3: If  $f(z)$  is regular and typically-real in  $E$ , then the regular function

$$\varphi(z) = \frac{1}{a^2 - b^2} [bz - a\sqrt{z^2 - c^2}] \cdot f(z) \quad (11)$$

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has a positive real part in E. A further theorem gives inequalities related to typically-real functions. The definition is given of a regular function, convex in the direction of the imaginary axis; two theorems are stated for such functions (analogous to Theorems 1 and 2). There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. K

ASSOCIATION: Zaporiz'kyk mashynobudivnyy instytut (Zaporizhe Machine-Building Institute)

PRESENTED: by Academician Yu. O. Mytropol'skyk of the AS UkrRSR

SUBMITTED: June 21, 1961

Card 6/6



DUNDUKOV, G., kand.ekon.nauk

Balance of lunchrooms. Obshchestv.pit. no.1:53-59 Ja '60.  
(MIRA 13:5)  
(Restaurants, lunchrooms, etc.--Accounting)

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commerce." Reviewed by G.Dundukov, A.Kurrienko, P.Kamyshanov).  
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(Accounting)

DUNDUKOV, G.

For a successful carrying out of the 1961 budget and model  
preparation of the draft state budget for 1962. Fin. SSSR  
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(Budget)

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Shaft recirculation grain dryer at the Kochnev Grain Receiving Station. Mak.-elev. prom. 29 no.3:6-8 Mr '63. (MIRA 16:9)

1. Glavnyy inzh. Novosibirskogo upravleniya khleboproduktov (for Gun). 2. Direktor Sibirskogo filiala Vsesoyuznogo nauchno-isledovatel'skogo instituta zerna i produktov yego pererabotki (for Krsheminskiy).

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Technology of ship piping-system work. Rech. transp. 12, No 2, 1952.

*DUNDUK I.D.*

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(Accounting)

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1. Kafedra bukhgalterskogo ucheta Moskovskogo instituta narodnogo  
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(Restaurants, lunchrooms, etc.--Auditing and inspection)

GORCHEV, I.I.; PASEKOVA, V.D.; DARKOV, G.V.; DUNDUKOV, G.F., red.;  
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(Budget) (Russia--Statistics)

YEFIMOV, A.N., glav. red.; BACHURIN, A.V., red.; VOLODARSKIY, L.M., red.; GERSHEBERG, S.R., red.; GINZBURG, S.Z., red.; DUNDUKOV, G.F., red.; KIRZHNER, D.M., red.; KLIMENKO, K.I., red.; KOMAROV, F.V., red.; KOROL'KOV, A.N., red.; KRYLOV, P.N., red.; LIVANSKAYA, F.V., red.; LOKSHIN, E.Yu., red.; OSTROVITYANOV, K.V., red.; POSVYANSKIY, S.S., red.; PRUDENSKIY, G.A., red.; RAZUMOV, N.A., red.; RUMYANTSEV, A.F., red.; TATUR, S.K., red.; SHUKHGAL'TER, L.Ya., red.; BAZAROVA, G.V., starshiy nauchnyy red., kand. ekon. nauk; KISEL'MAN, S.M., starshiy nauchnyy red.; GLAGOLEV, V.S., nauchnyy red.; TUMANOVA, N.L., nauchnyy red.; BLAGODARSKAYA, Ye.V., mlad. red.; SHUSTROVA, V.M., mladshiy red.; GAYDUKOV, Yu.A., kand. ekon. nauk, red.; ZBARSKIY, M.I., red.; LOZOVY, Ya.D., red.; SERGEYEV, A.V., dots., red.; KHEYFETS, L.M., kand. tekhn. nauk, red.; LYUBOVICH, Yu.O., kand. ekon. nauk, red.; SYSOYEV, P.V., red.; KOSTI, S.D., tekhn. red.

[Economic encyclopedia; industry and construction]Ekonomicheskaya entsiklopediya; promyshlennost' i stroitel'stvo.  
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DUNDUKOV, G.

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KUZ'NIN, P.G., kandidat tekhnicheskikh nauk; SHELYAPIN, R.S.,  
kandidat tekh. nauk; MAKSIMOV, O.H., inzhener; MALYSHEV, M.I.,  
professor; RODSHEYN, A.G., kandidat tekh. nauk; GOL'DSHEYN, M.H.  
professor; ABELEV, Yu.M., professor.

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 N.A.; VERTSAYZER, B.A.; VOVK, G.M.; VOZMAN, B.A.; YOSHCHININ, A.P.;  
 GALAKTIONOV, V.D., kand. tekhn. nauk; GERKIN, Ye.M.; GIL'DENBLAT,  
 Ya.D., kand. tekhn. nauk; GINZBURG, M.M.; GLEBOV, P.S.; GODES, E.G.;  
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 KARANOV, I.F.; KNYAZEV, S.N.; KOLEGAYEV, N.M.; KOMAREVSKIY, V.T.;  
 KOSENKO, V.P.; KORENISTOV, D.V.; KOSTROV, I.N.; KOTLYARSKIY, D.M.;  
 KRIVSKIY, M.N.; KUZNETSOV, A.Ya.; LAGAR'KOV, N.I.; LGALOV, V.G.;  
 LIKHACHEV, V.P.; LOGUNOV, P.I.; MATSKEVICH, K.F.; MEL'NICHENKO,  
 K.I.; MENDELEVICH, I.R.; MIKHAYLOV, A.V., kand. tekhn. nauk;  
 MUSIYEVA, R.N.; MATANSON, A.V.; NIKITIN, M.V.; OVES, I.S.;  
 OGUL'NIK, G.R.; OSIPOV, A.D.; OSMER, N.A.; PETROV, V.I.; PERYSHKIN,  
 G.A., prof.; P'YANKOVA, Ye.V.; RAPOPORT, Ya.D.; REMEZOV, N.P.;  
 ROZANOV, M.P., kand. biol. nauk; ROCHEGOV, A.G.; RUBINCHIK, A.M.;  
 RYBCHEVSKIY, V.S.; SADCHIKOV, A.V.; SEMENTSOV, V.A.; SIDENKO, P.M.;  
 SINYAVSKAYA, V.T.; SITAROVA, M.N.; SOSNOVIKOV, K.S.; STAVITSKIY,  
 Ye.A.; STOLYAROV, B.P. [deceased]; SUDZILOVSKIY, A.O.; SYRISOVA,  
 Ye.D., kand. tekhn. nauk; FILIPPSKIY, V.P.; KHALTURIN, A.D.;  
 TSISHEVSKIY, P.M.; CHERKASOV, M.I.; CHERNYSHEV, A.A.; CHUSOVITIN,  
 N.A.; SHESTOPAL, A.O.; SHEKHTER, P.A.; SHISHKO, G.A.; SHGHERBINA,  
 I.N.; ENZEL', F.F.; YAKOBSON, A.G.; YAKUBOV, P.A., ARKHANGEL'SKIY,  
 (Continued on next card)

ANDON'YEV, V.L.... (continued) Card 2.

Ye.A., retsenzent, red.; AKHUTIN, A.N., retsenzent, red.; BALASHOV, Yu.S., retsenzent, red.; LARABANOV, V.A., retsenzent, red.; BAFJNER, P.D., retsenzent, red.; BORODIN, P.V., kand. tekhn. nauk, retsenzent, red.; VALUTSKIY, I.I., kand. tekhn. nauk, retsenzent, red.; GRIGOR'YEV, V.M., kand. tekhn. nauk, retsenzent, red.; GUBIN, M.F., retsenzent, red.; GUDAYEV, I.N., retsenzent, red.; YERMOLOV, A.I., kand. tekhn. nauk, retsenzent, red.; KARAULOV, B.F., retsenzent, red.; KRITSKIY, S.N., doktor tekhn. nauk, retsenzent, red.; LIKIN, V.V., retsenzent, red.; LUKIN, V.V., retsenzent, red.; LUSKIN, Z.D., retsenzent, red.; MATRIROSOV, A.Kh., retsenzent, red.; MENDELEYEV, D.M., retsenzent, red.; MENKEL', M.F., doktor tekhn. nauk, retsenzent, red.; OBRZHKOV, S.S., retsenzent, red.; PETRASHEN', P.N., retsenzent, red.; POLYAKOV, L.M., retsenzent, red.; RUMYANTSEV, A.M., retsenzent, red.; RYABCHIKOV, Ye.I., retsenzent, red.; STASENKOV, N.G., retsenzent, red.; TAKANAYEV, P.F., retsenzent, red.; TARANOVSKIY, S.V., prof., doktor tekhn. nauk, retsenzent, red.; TIZDEL', R.R., retsenzent, red.; FEDOROV, Ye.M., retsenzent, red.; SHEVYAKOV, M.N., retsenzent, red.; SHMAKOV, M.I., retsenzent, red.; ZHUK, S.Ya. [deceased], akademik, glavnyy red.; RUSSO, G.A., kand. tekhn. nauk, red.; FILIMONOV, N.A., red.; VOLKOV, L.N., red.; GRISHIN, M.M., red.; ZHURIN, V.D., prof., doktor tekhn. nauk, red.; KOSTROV, I.N., red.; LIKHACHEV, V.P., red.; MEDVEDEV, V.M., kand. tekhn. nauk, red.; MIKHAYLOV, A.V., kand. tekhn. nauk, red.; PETROV, G.D., red.; RAZIN, N.V., red.; SOBOLEV, V.P., red.; FERINGER, B.P., red.; FREYGOWER, (Continued on next card)

ANDON'YEV, V.L.... (continued) Card 3.

Ye.F., red.; TSYPLAKOV, V.D. [deceased], red.; GRABLINOV, P.H.,  
tekhn. red.; GRENIN, Ye.M., tekhn. red.; KACHEROVSKIY, N.V., tekhn.  
red.

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(Continued on next card)

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Bazin).

(Volga Don Canal--Hydraulic engineering)



BOMBCHINSKIY, V.P.; VFOROV, N.A.; DUNDUKOV, M.D.; YEGOROV, S.A., doktor tekhn.nauk, prof.; YERMOLOV, A.I.; ZAVORUYEV, V.P.; KALININ, V.V.; KACHEROVSKIY, N.V.; KUZNETSOVA, A.K.; KUZ'MIN, I.A., kand.tekhn.nauk; MEDVEDEV, V.M., kand.tekhn.nauk; MIKULOVICH, B.F.; MIKHAYLOV, V.V., kand.tekhn.nauk; PEPRASHEN', R.N.; REYZIN, Ye.S.; SINYAVSKAYA, V.M.; EHALTURIN, A.D.; SHCHERBINA, I.N., kand.tekhn.nauk; SEVAST'YANOV, V.I., red.; KERAULOV, B.F., retsenzent; LOVEFSKIY, Ye.S., retsenzent; MIKHAYLOV, A.V., doktor tekhn.nauk, retsenzent; NATANSON, A.V., retsenzent; SOKOL'SKIY, M.M.; retsenzent; STANKEVICH, V.I., retsenzent; FREYGOFER, Ye.F., retsenzent; GOTMAN, T.P., red.; VORONIN, K.P., tekhn.red.

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(Hydraulic engineering--Research)

ROGATINA, Nina Prokof'yevna; POPOVA, Zinaida Fedorovna; ARTMANIS, Stella  
Andreyevna; MEL'NIKOVA, Nina Ivanovna; AVDEYEVA Yekaterina Semenovna;  
KUZNETSOVA, Irina Pavlovna; ZHEREBINA, Anna Semenovna; VOYEVODINA,  
Aleksandra Dmitriyevna; KOLPAKOVA, Ninel' Yevgrafovna; KHAYEVA,  
Aleksandra Afanas'yevna; DUNDUKOVA, Valentina Petrovna; LAUSTEN, A.G.,  
nauch. red.; GABOVA, D.M., red.; VINOGRADOVA, G.A., tekhn. red.

[Women's and children's light dress] Zhenskoe i detskoe legkoe plat'e.  
Moskva, Gostekhizdat, 1962. 493 p. (MIRA 15:7)  
(Dressmaking)

DUNDUR, V. F.

"Cancer of the Mammary Gland, From Material Collected at the Surgical Department of the Alma-Ata City Clinical Hospital and the Republic Oncological Dispensary Between 1935 and 1948." Cand Med Sci, Kazakh State Medical Inst, Alma-Ata, 1953. (RZhBiol, No 2, Sep 54)

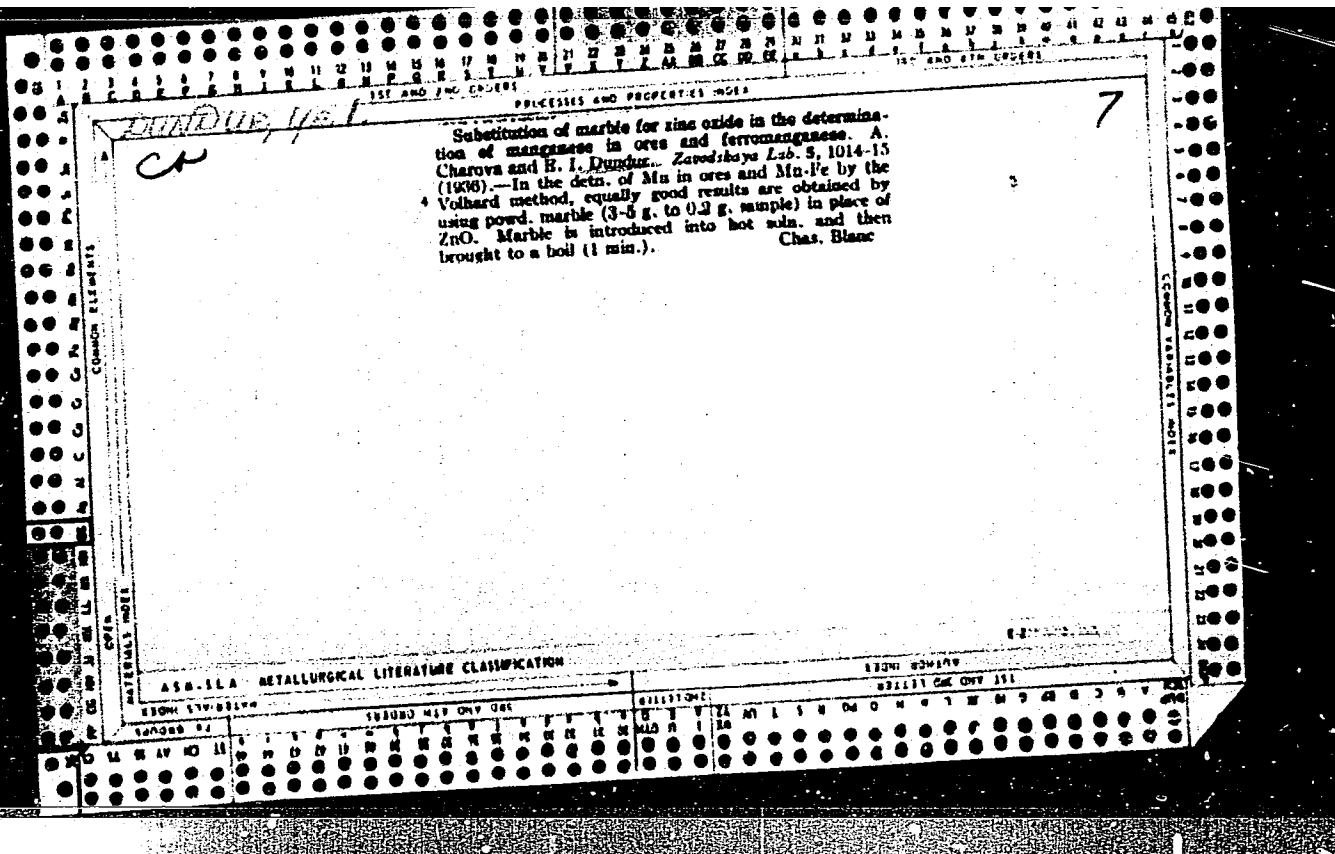
Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

DUNDUR, V.F.; FAYNSHMIDT, A.B.; KAZIKIN, B.K.

Geographical characteristics of the distribution of malignant tumors in Kazakhstan. Zdrav. Kazakh. 23 no.2'23-27'63.  
(MIRA 16:10)

1. Iz Kazakhskogo instituta onkologii i radiologii.  
(KAZAKHSTAN—CANCER)



7

*DUNBAR, 451*

PROCESSES AND PROPERTIES INDEX

Volumetric determination of arsenic in sedimentary iron ores by the Ledebur method. P. Ya. Anosov, B. I. Lunger and E. S. Firsova. *Zavodskaya Lab.* 7, 1423-5 (1938).—Highly accurate results are reported in the distn. of 0.01-0.2% As in sedimentary Fe ores free from sulfides by direct decompn. of a sample with HCl in the presence of reduction and distn. By this method the loss of As by the preliminary decompn. of an ore sample with HNO<sub>3</sub> is eliminated. To a 3-g. sample in the Ledebur distn. flask add 3 g. Cu<sub>2</sub>Cl<sub>2</sub>, a few fragments of pumice and 200 ml. of concd. HCl, connect the flask with an inclined condenser to a receiving flask contg. 100 ml. H<sub>2</sub>O and boil the reaction mixt. until all but 30-40 ml. distills over. Wash the condenser tube with a little H<sub>2</sub>O and titrate the AsCl<sub>3</sub> in the distillate with 0.01 N KBrO<sub>3</sub> and methyl orange.

Chav. 11-anc

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

TECHNICAL INDEX

REFLECTION

ACS  
DUNDUR, 451.

Chemistry F. O. figures

Alkalimetric method of determining magnesium oxide in calcined magnesia. E. I. DUNDUR AND B. A. BEHMAN. *Zarodshaya Lab.*, 15 [12] 1471 (1949).—After removing the Ca by treating with  $H_2SO_4$  and then neutralizing with 10% NaOH, add 5 to 7 drops of 6 N  $H_2SO_4$ , heat to dissolve hydroxides, and neutralize with dry  $CaCO_3$ , checking with methyl-red indicator. Precipitate  $Mg(OH)_2$ , filter, and titrate excess NaOH with HCl. Deviations ranged from  $-0.16$  to  $+0.07\%$ . The determination requires 1.5 to 2 hr. B.Z.K.

CA  
DUNDUR, YE. I.

7

Determination of sodium in potassium salts. A. V. Vinogradov and E. I. Dundur. *Zhur. Anal. Khim.* 4, 117-21(1949).—The purpose of this investigation was to adapt the pyroantimonate method for pptn. of Na in the presence of K. This method (cf. Prikhod'ko, *C.A.* 26, 3480; Lewin, *C.A.* 30, 4427<sup>a</sup>) gave satisfactory results when the Na:K ratio did not exceed 1:1. Good results can be obtained in a sample contg. NaCl and KCl if the concd. soln. is treated with excess EtOH, to remove NaCl, before detg. the K. M. Hosen



ZORINS, K.; DUNDURS, J.; ZVIRBULIS, H., red.; UDRE, V., tekhn. red.

[Increasing labor productivity is the path to abundance] Darba  
raziguma paaugstināsana - cels uz parpilnību. Rīga, Latvijas  
Valsts izdevniecība, 1961. 71 p. (MIRA 15:3)  
(Latvia--Agriculture--Labor productivity)

30726

IS-2510

S/020/61/141/003/014/021  
B101/B117

AUTHORS: Aleynikov, F. K., Slizhis, V. A., Paulavichyus, R. B., and Dundzis, P. V.

TITLE: Direct electron-microscopic examination of the fine structure of glass

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 3, 1961, 674-676

TEXT: Since the structure of replicas disturbs the electron-microscopic examination of glass, the authors developed a method of direct electron-microscopic glass examination. They used a JEM-5V electron microscope. Glass films were obtained from 0.2-0.5 mm thick glass laminas by grinding and polishing, or by blowing the molten glass with subsequent etching. Glass laminas were dissolved in HF until they permitted good penetrability to the electron beam. The laminas were first etched with 20%, then with 10; 4; 2; and 0.5% HF. Blown glass was etched with 4; 2; and 0.5% HF. Distinct fine structures were also obtained by etching with lye. The electron-microscopic examination showed that two-, three-, and multi-component glasses were not homogeneous. [Abstracter's note: electron  
Card 1/3

30726

S/020/61/141/003/014/021  
B:01/B117

Direct electron-microscopic ...

microphotographs not reproducible.] Microheterogeneities can be deciphered by a proper choice of the solvent. The following dimensions of microheterogeneities were found:

Type of glass or its composition	Dimensions of microheterogeneities, Å
----------------------------------	--

Optical quartz glass	-
Glass of quartz tubes	-
$Na_2O \cdot 5SiO_2$	60 - 150
$Na_2O \cdot 1.5Be_2O \cdot 5SiO_2$	50 - 150
$Na_2O \cdot CaO \cdot 5SiO_2$	60 - 80
$Na_2O \cdot ZnO \cdot 5SiO_2$	30 - 150
$Na_2O \cdot CdO \cdot 5SiO_2$	25 - 40
$Na_2O \cdot 2.5BaO \cdot SiO_2$	60 - 80
$Na_2O \cdot B_2O_3 \cdot 5SiO_2$	80 - 150
$Na_2O \cdot 9B_2O_3 \cdot 15SiO_2$	

microheterogeneity of the skeleton  
~ 100 Å

30726

S/020/61/141/003/014/021  
B101/B117

Direct electron-microscopic ...

Type of glass or its composition

Dimensions of microheterogeneities,

Window sheet glass

60 - 80

Cover glass

80 - 150

Microinhomogeneities do not only depend on the type of thermal treatment but also on the glass composition. There are 2 figures, 1 table, and 8 references: 6 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: I. Warshaw, J. Am. Ceram. Soc., 1, 4 (1960).

ASSOCIATION: Institut khimii i khimicheskoy tekhnologii Akademii nauk LitSSR (Institute of Chemistry and Chemical Technology of the Academy of Sciences Litovskaya SSR)

PRESENTED: May 30, 1961, by N. V. Belov, Academician

SUBMITTED: May 30, 1961

Card 3/3

S/236/62/000/002/003/004  
E071/E135

AUTHORS: Aleynikov, F.K., Dundzis, P.V., Paulavichyus, R.B.,  
and Slizhis, V.A.

TITLE: A direct electronmicroscopic investigation of the fine  
structure of di-, tri- and multi-component silicate  
glasses

PERIODICAL: Trudy Akademii nauk Litovskoy SSR, Seriya B, 2(29),  
1962, 95-108.

TEXT: In view of the scarcity and some uncertainties of the  
results obtained in published investigations, a study of the fine  
structure of transparent glasses was undertaken, on the following  
types of glass:  $\text{Na}_2\text{O} \cdot 5 \text{SiO}_2 \cdot \text{R}_2\text{O} \cdot \text{xRO} \cdot 0.5 \text{SiO}_2$  (where  $\text{R}_2\text{O} = \text{Li}_2\text{O}$ ,  
 $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$ ;  $\text{RO} = \text{BeO}$ ,  $\text{MgO}$ ,  $\text{CaO}$ ,  $\text{ZnO}$ ,  $\text{SrO}$ ,  $\text{CdO}$ ,  $\text{BaO}$ ,  $\text{PbO}$ ;  
 $\text{x} = 0.5, 1.0, 1.5, 2.0, 2.5$  and  $3.0$ ) as well as on some multi-  
component glasses - ordinary sheet glass, glass electrodes etc.  
The development of a suitable method was done using glass of  
composition  $\text{Na}_2\text{O} \cdot \text{CdO} \cdot 0.5 \text{SiO}_2$ . The electron microscope used had a  
power of about  $8-10 \text{ \AA}$  (magnification 50-100 thousand).  
The replicas with a preliminary shading of a fresh

A direct electronmicroscopic ...

S/236/62/000/002/003/004  
E071/E135

glass fracture at an angle of 15-20° with platinum or tungsten oxide were used. These replicas, however, showed their own structure and not that of the glass. Subsequently carbon-platinum replicas were made, applying the method of D.E. Bradley, by spraying a thin platinum-carbon film at an angle of 45° to the surface of the glass. Since this method is very laborious and the replicas can to some extent distort the actual glass structure, a direct method of preparation of glass films for studying the structure was developed. Initially, this consisted in etching thin, polished glass plates (0.2-0.5 mm thick); later blown glass films were used which were subsequently etched in hydrofluoric acid or mixtures of hydrofluoric with another mineral acid, until a necessary thin film was obtained. The experimental procedure is described in some detail. The structure observed directly on a thus prepared specimen of  $\text{Na}_2\text{O} \cdot \text{CdO} \cdot 5 \text{SiO}_2$  glass was identical with that observed on the replica prepared by the Bradley method. The specimens prepared by etching showed not only the surface structure of glass, but in some cases the distribution of micrononuniformities in the whole thickness of the glass film. Therefore this method of investigation was used in further studies. It was established

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A direct electronmicroscopic ... S/236/62/000/002/003/004  
E071/E135

that none of the glasses investigated were homogeneous; they consist of a skeleton rich in silica and a multiplicity of microdendrites which depend on the chemical composition of glass as well as on its thermal history and technological factors. The majority of the glasses investigated had microdendrites of an order of 40-100 Å.

There are 4 figures and 1 table.

ASSOCIATION: Institut khimii i khimicheskoy tekhnologii  
Akademii nauk Litovskoy SSR  
(Institute of Chemistry and Chemical Technology,  
AS Lithuanian SSR)

SUBMITTED: December 2, 1961.

Card 3/3

ALEYNIKOV, F.K.; DUNDZIS, P.V. [Kundzys, P.]; PAULAVICHYUS, R.B.  
[Paulavicius, R.]; SLIZHIS, V.A. [Slizys, V.]

Direct electron microscope study of the fine structure of  
two-, three, and multicomponent silicate glasses. Trudy  
AN Lit. SSR. Ser. B no.2:95-108 '62.

(MIRA 18:3)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy SSR.



*ANNÉCZY, F.*

6853485

51. The Skopin process for extracting vegetable oils and experiences obtained in laboratory experiments, by Gy. Somos and F. Dunyáky. ("Mezőgazdasági Ipar" Agricultural Industry Vol. IV, No. 9, pp. 20-24, Sept. 1950)

After making known the data contained in the trade literature pertaining to the Skopin process, there follows a description of the experiences obtained in the course of laboratory experiments. Investigations performed in test tubes of 3 cm diam proved that the rate of oil output was decisively influenced by the manner of filling the length of the apparatus and the treatment of the material. Further experiments made with ground sunflower seeds were performed in a cylindrical container of 10x10 cm. It could be established that the oil output depends, to a large extent, upon the quantity of raw material processed at one time. It appeared that a moisture content of 19 per cent proved most suitable with the apparatus used. The fineness of grinding influenced the oil output considerably. Excessive fineness in grinding resulted in a reduced output. Further experiments are

designed to establish the best suited conditions for processing the various Hungarian oil seeds; the quantity of oil produced and the effect of the processing conditions on the quality of the oil. All references to trade literature are given.

VOLKOVITSKY, I., mekhanik voditel', 3-go klassa serzhant; TEBUYEV, V.,  
starshiy serzhant; SMOLIN, Ye., michman; DUNEK, A., starshiy serzhant;  
SHONOKHOV, A., starshiy serzhant

Exercises were held. Starsh.-serzh. no.9:26-27 S '62. (MIRA 15:11)

(Military education)

DUNENA, A.A.

Category : USSR/Electricity - Dielectrics

G-2

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4115

Author : Shamovskiy, L.M., Dunena, A.A., Gosteva, M.I.

Title : Conductivity of Silver Bromide in the Presence of Bromine

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 4, 640-648

Abstract : It is shown that an additional p-conductivity ( $\Delta\sigma$ ) is produced in the crystals in the case of additive coloring of AgBr crystals in Br vapors. The dependence of  $\Delta\sigma$  on the partial pressure of the bromine vapors ( $P_{Br_2}$ ) and on the temperature is  $\Delta\sigma = 1.82 \times 10^{-2} \sqrt{P_{Br_2}} \cdot \exp(-13520/RT)$ . The value of  $\Delta\sigma$  in AgBr is comparable in magnitude with the ionic conductivity of these crystals even at low values of  $P_{Br_2}$ . The mechanism of formation of p-conductivity is discussed. The atoms and molecules of bromine are not dissolved and do not diffuse in the AgBr lattice. The holes formed as a result of the electron exchange between the lattice ions and the bromine atoms adsorbed on the surface of the crystal can recombine with the cation vacancies to form  $V_1$  centers, which are in thermal equilibrium with the free holes. The

Card : 1/2

Category : USSR/Electricity - Dielectrics

G-2

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4115

energy of the thermal dissociation of the  $V_1$  centers in silver bromide is found to be approximately 0.3 electron volts. No F-centers are formed in silver bromide owing to the absence of anion vacancies in its lattice.

Card : 2/2

DUNICHEV, K. I., Cand Phys-Math Sci -- (diss) "Stratifiable pairs of manifolds in projective four-dimensional space." Moscow, 1960. 7 pp; (Ministry of Education RSFSR, Moscow City Pedagogical Inst im V. P. Potemkin); 150 copies; bibliography at end of text (10 entries); (KL, 17-60, 138)

DUNICHEV, I.I.

Fibering of two-parameter straight line families by lines in  
n-dimensional projective space. Dokl. AN SSSR 149 no.4:763-764  
Ap '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V.I.Lenina.  
Predstavleno akademikom P.S.Novikovym.  
(Geometry, Projective)

DUNIEC, Jan (Krakow)

Designing of slag concretes. Przegl budowl i bud mieszk 33  
no.2:106-107 F '61.

DUNIEWICZ, Milan  
SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: D

Affiliation: Infectious Diseases Clinic (Infekční klinika) Chief Prof Dr J. PROCHAZKA  
Prague 8 - Bulovka

Source: Prague, Praktický Lekar, Vol 41, No 15-16, Aug 21, 1961; pp 726-728 and 728-729

Data: "Our Experiences with the Treatment of the Acute Stage of Bang's Disease"  
"Our Experiences with the Treatment of the Chronic Stage of Bang's Disease by Means  
of the Intradermal Vaccine"

070 901443



DUNIEWICZ, Milan

CZECHOSLOVAKIA

MD

Prague

Prague, Veterinarstvi, No 11, Nov 62, pp 327-328.

"Our Experiences with Skin Test F-alergen in the Course of Bang's Disease"

DUNIEWICZ, M.; KROO, A.; DOBIAS, J.

Lesions of the central nervous system during the course of herpes zoster. Cas. lek. cesk 100 no. 36:1141-1145 8 S '61.

1. Infekční klinika Praha 8 Bulovka, přednosta prof. MUDr. J. Procházka.  
Patologickoanatomické odd. Praha 8 Bulovka, přednosta doc. MUDr.  
J. Víklíček.

(HERPES ZOSTER compl) (CENTRAL NERVOUS SYSTEM dis)

HEJZLAR, M.; DUNIEWICZ, M.

Cultivation of Brucella. Cesk. epidem. 11 no.1:46-52 Ja '62.

1. Vojensky lekarsky vyzkumny a doskolovaci ustav J. Ev. Purkyne,  
Praha Klinika infekcnich nemoci, Praha 8 - Bulovka.  
(BRUCELLA culture)

DUNIEWICZ, M.; TICHY, V.

Acute infectious lymphocytosis. Cesk. pediat. 18 no.4:329-336  
Ap '63.

1. Infekcni klinika nemocnice na Bulovce v Praze, prednosta  
prof. dr. J. Prochazka, DrSc. Infekcni oddeleni nemocnice na  
Bulovce v Praze, vedouci MUDr. M. Bradacova.  
(LYMPHOCYTOSIS) (LEUKOCYTE COUNT)  
(FEVER) (GASTROENTERITIS)  
(EOSINOPHILIA)

POTUZNÍK, V.; SVEJNOCH, V.; DUNIEWICZ, M.

Surface fixation test in brucellosis. *Česk. epidem. 13* no.4:  
209-212 J1 '64.

1. Mikrobiologické oddělení Krajské hygienicko-epidemiologické  
stanice, České Budějovice, Infekční klinika, Praha 8 - Břevkovka.

SRAMKOVA, L.; SCHECK, P.; DUNIEWICZ, M.

Treatment of a case of severe tetanus with prolonged curarization. Cas.lek.cesk.103 no.8:214-218 21 F'64.

1. Anesteziologicke oddeleni nemocnice na Bulovce v Praze 8, (vedouci: MUDr. P. Scheck) a Infekcni klinika nemocnice na Bulovce v Praze 8; (prednosta: prof.dr. J.Prochazka, DrSc).

\*

DUNIEWICZ, Milan

Sacro-ileitis in Bang's disease. Sborn. ved. prac. lek. fak.  
Karlov. Univ. 8 no.5:587-590 '65.

J. Infekcni klinika, Praha (prednosta - prof. MUDr.  
J. Prochazka).

CZECHOSLOVAKIA

UDC 616.981.42-036.12-06:616.12

TESAROVA, J.; DUNIEWICZ, M.; Clinic of Infectious Diseases, Faculty of General Medicine, Charles University (Infekcni Klinika Fak. Vseob. Lek. KU), Prague 8 - Bulovka, Head (Prednosta) Prof Dr J. PROCHAZKA.

"Late Cardiac Complications in the Chronic Stage of Bang's Disease."

Prague, Casopis Lekarů Ceských, Vol 105, No 36-37, 9 Sep 66, pp 988 - 991

Abstract [Authors' English summary modified]: A report describing complications suffered by a patient with epidemiologically and serologically confirmed Bang's disease is presented. Myocarditis with signs of decompensation and auricular fibrillation and a block of the left ramus of Tawara on the EEG were observed. 2 Figures, 13 Western, 6 Czech references. (Manuscript received May 66).

1/1



ZAK, Miloslav; KLESA, Josef; DUNIK, Oldrich

"Use of aluminum in manufacturing power transformers over 10 mVA.  
Energetika Cz 12 no.4:203-206 Ap '62.

1. Leninovy zavody, n.p., Plzen.

DUNIKOV, YE. YE.

5/193/60/021/009/013/015  
8012/8053

AUTHORS:

Gerasimov, M. Yu., Gul'ko, F. B., Penkaylov, A. R.,  
Polinoy, Ye. Ye., Rainov, V. D., Litvinenko, I. A.,  
Orlov, K. M., Prokhorov, N. L.

TITLE:

Scientific and Technical Conference of Young Scientists of the Institute of Automation and Telemechanics of the AS USSR

PERIODICAL:

Aviatsiya i telemekhanika, 1960, Vol. 21, No. 9, pp. 1326-1331

NOTE: The sad'waya massho-tekhnicheskaya konferentsiya molodyykh nauchnykh i inzhenerov avtomaticheskogo upravleniya (seventh scientific and technical conference of young scientists of the Institute of Automation and Telemechanics of the AS USSR), held from March 14 to 16 1960, dealt with the problems of automatic control systems by more than 400 persons, among them 200 scientists. It was attended by representatives from Moscow and the Moscow oblast; the discussed research work carried out by young scientists in 1959-75 lectures were delivered. The Card 1/9

Conference was opened by Academician Y. A. Izrael, Director of the Institute of Automation and Telemechanics, Professor K. A. Astashev, Doctor of Technical Sciences, spoke about scientific problems of the theory of finite automatic machines (konchnyye avtomaty). At the final plenary meeting, Ye. V. Yeloshina and Ye. V. Shil'man gave a report on the "Simulation of Teaching Processes". The following sections worked between the two plenary meetings: 1) for automatic control with sub-variables for the theory of automatic control and automatic control systems 2) for automatic checking 3) for computers 4) for elements and installations in automation and telemechanics 5) for statistical methods in automation 6) for the theory of relay circuits and finite automata 7) for the theory of relay circuits and finite automata. The following sections were followed at the first sub-session of the first section: Y. K. Goryshchikov reported on the determination of the formula for optimal control of relay-pulse systems of second order for the case of an insensitiv range. I. S. Korosov spoke about the effect of fluctuations on extremal relay systems in the self-oscillating state. Card 2/9

The author showed that the methods of calculating statistical transfer coefficients in the form suggested by I. Ye. Krasov cannot be employed in this case. V. G. Gandel'skiy and Yu. I. Ostrovskiy gave a report on "The Operation of Extremal Control Systems in Which the Extreme Value of Noise is Known". N. V. Grishko gave the results of the determination of optimal characteristics of an extremal system under random actions. Ye. F. Babitskiy spoke about the investigation of the state of a control system having a servo-motor with a non-linear characteristic of speed and a strong feedback. He mentioned Kh. Masera, A. J. Pridmore and Ye. A. Gerasimov. Ye. A. Gerasimov presented the solution of a qualitative study of differential equations of the type of a problem of synthesis and synthesis about the determination of periodical control systems. Ye. A. Gerasimov and Ye. A. Gerasimov presented the method of stabilization of systems according to Lagrange in the case of vanishing modes of operation of two-dimensional automatic, non-linear control systems. Ye. A. Kislitsyn spoke about "Longitudinal Stability of an r-r-plane with a delay". Ye. A. Kislitsyn and N. K. Borshchikov. Ye. A. Gerasimov reported Card 3/9



Seventh Scientific and Technical Conference  
of Young Scientists of the Academy of Sciences  
of the USSR

2/19/69/02/1009/011/013  
B012/5083

16

lecture). N. N. Prakhov gave a report on the etching memory circuits of magnetic logical elements from the viewpoint of continuity. A. L. Kozlovskiy - "Contactless Code Pulse Resonance Measuring System". M. V. Silin - "Contactless Program Computer for the Automatic Operation of a Line Call-Back". I. S. Ginzburg report dealt with the possibility of construction of logic for proportional amplifiers, differentiators, and integrators of feedback control systems with the help of semiconductor elements on the vibration of contacts. The following lecture describes the synthesis and detection of the signals which are linearly dependent on random parameters. L. P. Sidorov solved the problem of judging the parameters and detecting the signals in the case of an independent variation of the carrier mixed with a noise in the case of an independent variation of the carrier frequencies. I. I. Palshov studied an apparatus of continuous and discrete mode of operation, which is used to expand a random function in canonical series. K. L. Kozlovskiy described an optimal operator used to separate an interfering signal on the background of normal noise with random dispersion. A. I. Sidorov spoke about problems connected with the

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overlapping of random functions. Ye. S. Kobeltsev explained the operation of theoretically and practically optimal linear and nonlinear systems of the type of the Kalman-Bucy filter. The problem of the optimal control of systems with the help of the Kalman-Bucy filter is solved with the effect of random noise upon the operation of external control systems of the step- and gradient-type. V. K. Bykovskiy spoke about the determination of the transmissibility of a channel with discrete difference equations in the absence of noise. V. M. Pechen gave a report on the theoretical and experimental study of limit systems in precise measurement with different cycles and different kinds of indication. The following lectures were held at the sixth section: V. V. Krasov - "The Form of Kuratow Symmetric Boolean Functions With Any Number of Variables"; V. P. Dikhtovskiy, A. G. Gerasimov, I. A. Gorbunov gave a report on the synthesis of systems with state feedback. I. A. Gorbunov gave a report on the synthesis of systems with state feedback. The form of logical operations - the Schaffer stroke and its dual functions. I. A. Gorbunov reported on "The Minimization of the Construction of Finite Automatic Machines (Konechny avtomat)".

Card 8/9

O. P. Krasovskiy described logical networks with unequal delay lines of the various elements. V. D. Kozlovskiy and I. V. Kuznetsov spoke about the realization of Boolean functions with a variable number of contacts. Logical Schemes by means of the method of Supplement to a Definition. A. D. Telatnikov reported on "The Application of Logic-algebraical Transient Operators in the Analysis and Synthesis of Finite Automatic Machines (Konechny avtomat) of a Special Type". The following lectures were held at the seventh section: O. A. Imshayev - "The Operation of an Asynchronous Motor of a Frequency Converter"; V. D. Kozlovskiy - "The Operation of a Frequency Converter of Thyristor Pulse Drive With a Step-by-step Motor"; V. D. Kozlovskiy - "Application of the Principles of Invariance for the Stabilization of the Speed of Direct-current Motors"; O. A. Kozlovskiy - "Direct-current Drive With a Semiconductor Pulse Rectifier"; Chango Chibrikov - "Optimal Control of Flying Drum Schedulers With Excitatory"; A. R. Dzhalalov - "Induction Motor With Longitudinal and Transverse Excitation as an Object of Automatic Control".

Card 9/9

DUNIKOWSKA, Hanna

Condition of the bacterial flora in the oral cavity under steel bridges in the light of bacteriological studies. Czas. stomat. 19 no.1:89-93 Ja ' 66

1. Z Zakładu Protetyki Dentystycznej AM w Krakowie (Kierownik: doc. dr. L. Sieppel) i z Zakładu Mikrobiologii Lekarskiej AM W Krakowie (Kierownik: prof. dr. Z. Prsybylkiewicz).

**A. The Points Method for Defining Irregularities in Elastic Media Acted upon by Mass Forces**

Wskazana metoda określania przesunięć punktów w ciele sprężystym pod działaniem sił masowych. Wskazano również sposób wyznaczenia przemieszczeń punktów w modelu z drutem stalowym.

This paper outlines a method of defining displacements in an elastic medium under the action of mass forces.

The displacement of points made on a model with a steel wire is used for heterogeneous injections. The points themselves were measured on a model using an Abbe comparator. For measuring the coordinates of the points a universal table is used.

The method here described is used for the purpose. The method here described is used for the purpose of determining the state of stresses and strains in a medium acted upon by mass forces.

For quantitative transformations of the stresses and strains recorded in natural conditions on points of the model, the formula deduces the function of the stresses.

The method may prove useful in the case of conditions of displacement of a medium.

It may also be used in the case of conditions of displacement of a medium.

It may be applied for the purpose of solving problems of the theory of elasticity.

It may be applied for the purpose of solving problems of the theory of elasticity.

It may be applied for the purpose of solving problems of the theory of elasticity.

It may be applied for the purpose of solving problems of the theory of elasticity.

It may be applied for the purpose of solving problems of the theory of elasticity.

It may be applied for the purpose of solving problems of the theory of elasticity.

DUNIKOWSKI, A.

Model investigations of displacements caused by an excavation in an elastic medium. p. 303.  
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Wplyw warunków atmosferycznych na...  
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USSR/Soil Science. Soil Genesis and Geography

J-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91368

Author : Duninyan M.S.

Inst : AS Armenian SSR

Title : Characteristics of Humus-Carbonate Forest Soils under Yew  
Trees in Dilizhanskir Rayon

Orig Pub : Izv. AN ArmSSR. Biol. i s.-kh. n., 1957, 10, No 3, 43-49

Abstract : The humus-carbonate forest soils under plantations of yew  
in the neighborhood of Dilizhan (Armenia) are distinguished  
by their thinness, intense skeletal nature, heavy loamy  
mechanical composition, small quantity of lime in the humus  
horizons. The soils are saturated with alkaline-earth bases  
that depend on the soil formation in limestone strata. The  
total chemical composition of the soils shows extremely weak  
migrations of sesquioxides to the humus horizons.

Card : 1/1

GORBACHEV, S.V.; DUNIN, A.I.

Effect of the flow rate on the process of electrolysis. Zhur. fiz.  
khim. 35 no.3:697-698 Mr '61. (MIRA 14:3)

1. Moskovskiy khimiko-tekhnologicheskii institut im. D.I. Mendeleeva.  
(Electrolysis)

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Effect of the viscosity of water-glycerol solutions on the  
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khim. 35 no.5:1019-1025 My '61. (MIRA 16:7)

1. Khimiko-tekhnologicheskij institut imeni D.I. Mendeleeva,  
Moskva.

(Ferrocyanides) (Electrochemistry)  
(Glycerol)

DUNIN, M., prof.

In memory of Isak Grigor'evich Beilin, 1883-1965. Zashch. rast.  
ot vred. i bol. 10 no.7:63 '65. (MIRA 18:10)

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Mikhail Stepanovich Voronin; on the 125th anniversary of his  
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DUNIN, M. S., NAZAROVA, E. S., and FEIGINSON, N. I. Diseases of Kanaf (Hibiscus cannabinus L.), Publishing House "New Country", Moscow, 1928, 105 pp. 464.04. D92B

SO: SIRA, SI 90-53, 15 December 1953



PROCESSES AND PROPERTIES INDEX

2

CA

The reaction between silver nitrate and potassium ferrocyanide, and between copper sulfate and potassium ferrocyanide, in gelatin. M. S. DUNIN AND P. M. SAKS-YARIN. *J. Russ. Phys. Chem. Ser. 61, 875* (1928) -- The chem. reactions occurring in gelatin gels are classified in 3 grs. (1) Typified by the reaction between  $AgNO_3$  and  $K_4Fe(CN)_6$ . If a drop of the satd. soln. of one of these salts is placed on the surface of the jelly contg. the other salt, periodic deposits are formed in the diffusion field over a certain concn. interval. The drop acquires a radial structure resembling in appearance the diffusion of one liquid into another. No periodic deposits are formed within the drop. (2) Typified by the reaction between  $AgNO_3$  and  $K_4Fe(CN)_6$ . Within certain concn. intervals, periodic deposits are formed in the drop and roset-like radial structures in the diffusion zone. The appearance of rosetts is caused by spherulitic structures of the gel. (3) Typified by the reaction between  $AgNO_3$  and  $KCl$ . Rhythmic pptn. zones are absent. Structures of class (2) can be obtained best with satd.  $AgNO_3$ , outside and 0.01-0.05 *N*  $K_4Fe(CN)_6$  in the gel; on the other hand no roset is formed with  $AgNO_3$  as the "inner electrolyte." At 0.5-0.25 *M* concns. of  $K_4Fe(CN)_6$ , rhythmic deposits are formed only under the drop.  $K_4Fe(CN)_6$  inside and  $CuSO_4$  outside give a radial roset in the diffusion zone; between 0.25-0.5 *N*  $K_4Fe(CN)_6$ , microlayers are deposited under the drop. The morphological characteristics of the reactions depend on the quality of gelatin. A roset situated under the drop results with satd.  $K_4Fe(CN)_6$  outside and 1%  $Ca(NO_3)_2$  inside. B. SOVENKOFF

AS N. S. L. A. METALLOGICAL LITERATURE CLASSIFICATION

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"Sclerotinia of Jerusalem Artichoke," Biulleten' VII Vsesoiuznogo S'ezda po  
Zashchite Rastenii v Leningrade 15-23 Noiabria 1932 Goda, no. 6, 1932, pp. 14-15.  
423.92 V96

So: SIRA-S1-90-53, 15 Dec 1953

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Library of the Institute of New Bast Fiber Raw Materials, Moscow, 1933, pp.  
109-112. 464,04 M85

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Apparatus for gas analysis. M. S. Dunin and F. M. Shchuykin. *Zashchita Laz.* No. 5, 43-8(1933).  
 The 2 variants of the proposed app. are illustrated and described. Chas. Blanc

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS #4

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AM

BOUSINE (M. S.) & YAKIMOVICH (E. D.). *Bolnash Batata i nepiz  
koptazhennye*. [Sweet Potato diseases and their control.] 247  
pp., 102 figs., *Rezerwat. Haya. Mccca. Huer. Cui u Cneusynotyp*  
[Pan-Soviet sci. Res. Inst. Coll. Soy Bean and Spice Crops],  
Moscow, 1931. [Received July, 1935.]

The attempts which are now being made to spread sweet potato  
cultivation in the southern and eastern Republics of the Soviet Union  
have prompted the authors to publish this useful monograph, compiled  
mainly from foreign sources, summarizing all the information up to  
date on the more important diseases of the crop. The diseases are  
subdivided into those that appear during storage of seed material and  
in the greenhouse, those that only occur in the field, and commercial  
storage rot of the roots, the morphology, taxonomy, biology, geo-  
graphical distribution, and control of the causal organisms being fully  
dealt with.

Observations in 1932 in Poti (Black Sea littoral of the Caucasus)  
showed the occurrence there of the following parasitic fungi, apparently  
new to science, which are described with diagnoses in Russian by  
Khokhryakoff and Dyurinski. *Leptosphaeria bataticola* n.sp., causing  
brown spots on the leaves, has perithecia up to 130  $\mu$  in diameter, with  
an emergent ostiole; the asci are cylindrical, pedicellate, rounded at the  
apex, 53 to 65 by 10 to 11  $\mu$ , intermixed with paraphyses; the spores  
are light yellow, cylindrical fusiform, with pointed ends, 5-septate, and

over

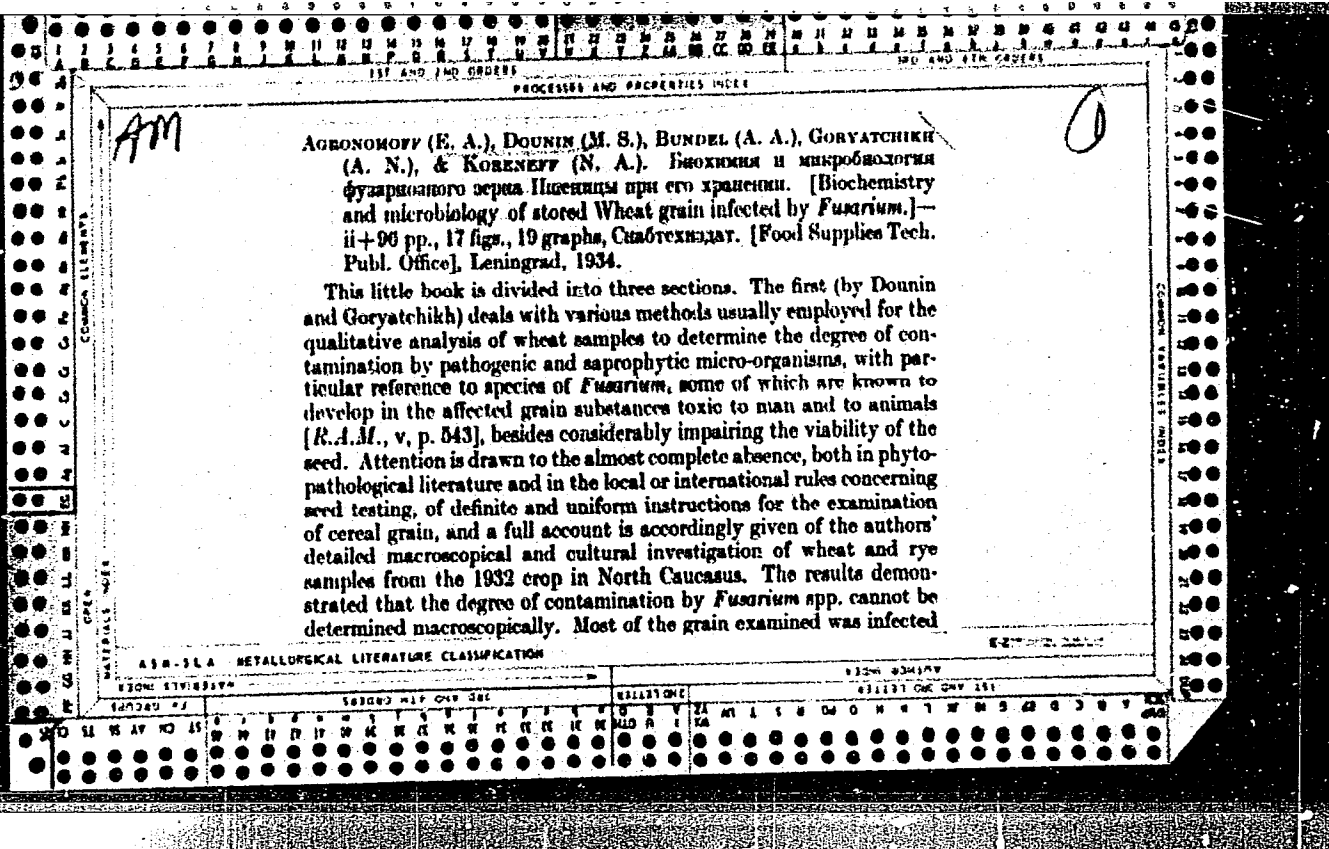
measure 24 to 28 by 4.5  $\mu$ . *Leptophaeria bataticola* n.sp. forms on the leaves rounded or oblong, brown spots, 1 to 2 cm. in diameter; the perithecia are light colored, parenchymatous, up to 150  $\mu$  in diameter; the asci are broadly ellipsoidal, ovate or pyriform, and 53 to 61 by 31 to 35  $\mu$ , and the ascospores are light brown, elliptical, slightly constricted at the septa, with three (more rarely four) transverse and one longitudinal septa, and measure 23 to 24 by 12 to 14  $\mu$ . *Coniosporium bataticola* n.sp. forms on the leaves irregular, corky spots, which frequently drop out, involving a large portion of the blade. The pycnidia are fairly numerous, non-ostiolate, and up to 15  $\mu$  in diameter. The spores are brown, ellipsoidal, and 9 to 12 by 4 to 5  $\mu$ .

*Ascochyta bataticola* n.sp. forms on the leaves amphigenous, whitish or ochraceous, irregular, rounded or oblong spots, measuring 2 to 8 mm. in diameter. The pycnidia are chiefly epiphyllous, parenchymatous, and 210  $\mu$  in diameter. The spores are cylindrical or slightly fusiform, uni- (more rarely bi-) septate, and 10 to 16 by 2 to 4.5  $\mu$ . *Robillardia bataticola* n.sp. forms on the leaves dark-brown, irregular or rounded spots, up to 1 cm. in diameter, and concentrically zonate with a light-colored centre; the infected tissues drop out, thus destroying a large part of the lamina. The pycnidia are fairly numerous, epiphyllous, paraplectenchymatous, up to 155  $\mu$  in diameter, with a slightly prominent ostiole. The spores are cylindrical or fusiform-ellipsoidal, slightly pointed at the ends, almost hyaline or faintly olive-brown (brown in mass), straight, slightly bent, or inequilateral, 11 to 15 by 3 to 4  $\mu$ ,



35 to 42 by 10 to 13  $\mu$ . *Ascochyta batatae* n.sp. forms on the leaves brownish, rounded or irregular spots up to 5 mm. in diameter. The pycnidia are 140  $\mu$  in diameter. The spores are oval, cylindrical, or occasionally slightly fusiform, at first continuous but later bicellular, and 6 to 10 by 3  $\mu$ . *Mycosphaerella bataticola* Khokhr. & Dyur. is regarded as a synonym of *M. ipomoeae*.  
The bibliography appended comprises 357 titles.





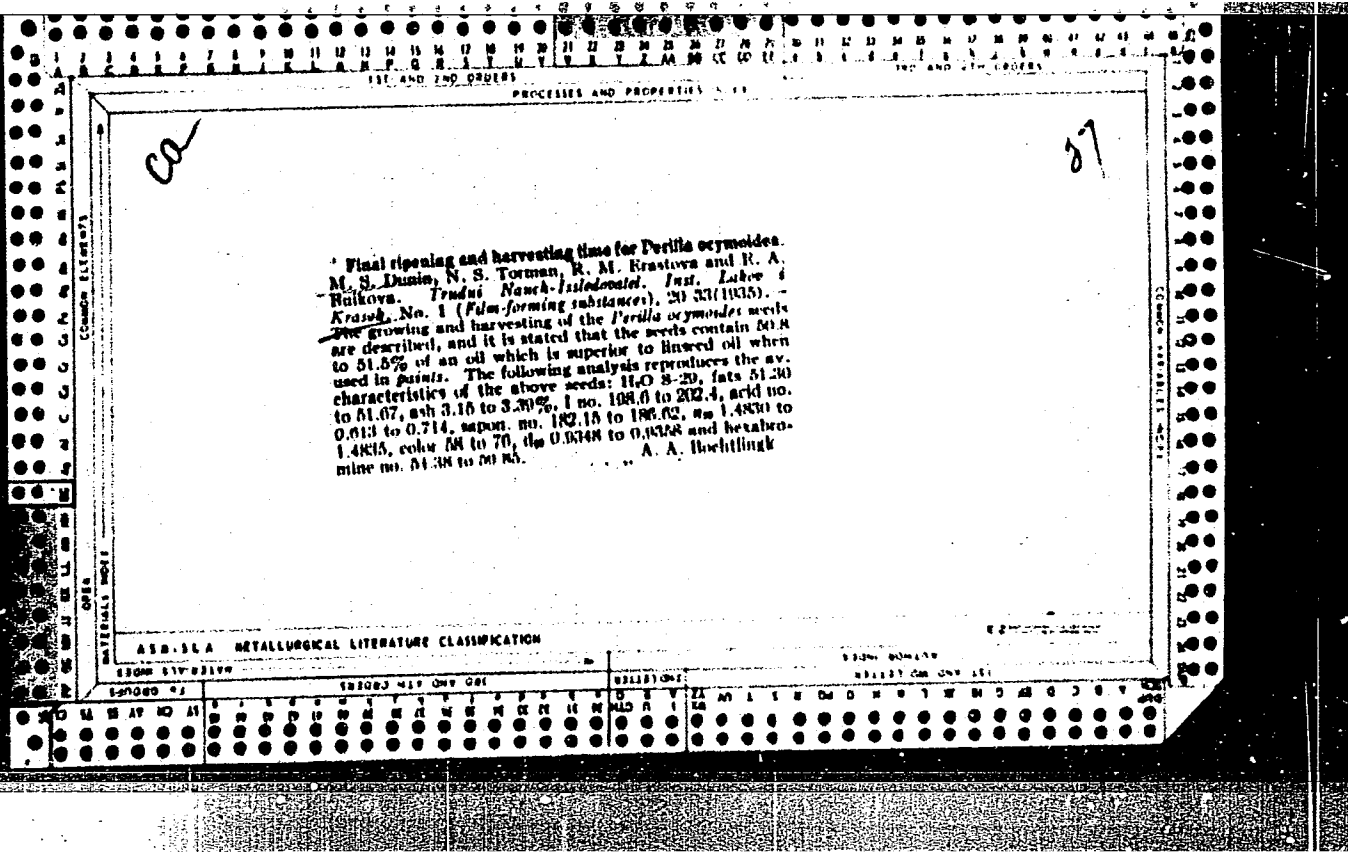
PROCESSES AND PROPERTIES INDEX

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atmosphere did not give a growth of *Fusarium* even when these fungi were known to be present, and they eventually died out. In damp grain and under moist conditions a marked development of *Fusarium* was noted at first, associated with a rise in the  $F_h$  value of the substratum, but later bacteria took the upper hand, terminating in the almost complete elimination of the fungi. Heating the infected grain at 60° and 80°C for one hour before storing did not kill the mycelium but markedly reduced its vigour; heating at 100° for the same length of time entirely suppressed the *Fusarium* spp. but also destroyed the germinability of the grain and promoted the growth of other mould fungi (particularly *Penicillium* and *Aspergillus*) even in wheat stored under comparatively dry conditions. The viability of the bacteria was but slightly reduced by heat at 100°. Biochemical investigation showed that the enzymic activity of the wheat grain was increased in samples exhibiting mixed infection, and the changes brought about in the chemical constitution of the grain by the activity of the bacteria and fungi are described in some detail; it was found that damp wheat containing a mixed infection kept under moist conditions

A 18 - 51 A METALLURGICAL LITERATURE CLASSIFICATION



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Common Illnesses

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Diseases of the Jerusalem artichoke and their control.  
M. S. Dunlop, M. S. Zayanchkovskaya and V. P. Sobolev. — *Bull. Pan.- Sov. sci. Res. Inst. for Leguminous Crops* 6, 7-13, 16-150(1956); *Rev. Applied Mycol.* 15, 431-2. — A complete list of all the bacteria (5) and fungi (32) recorded on this host is given. Control measures against all the diseases are discussed at length. There are 113 references.  
Oden E. Sheppard

438-11A METALLURGICAL LITERATURE CLASSIFICATION

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