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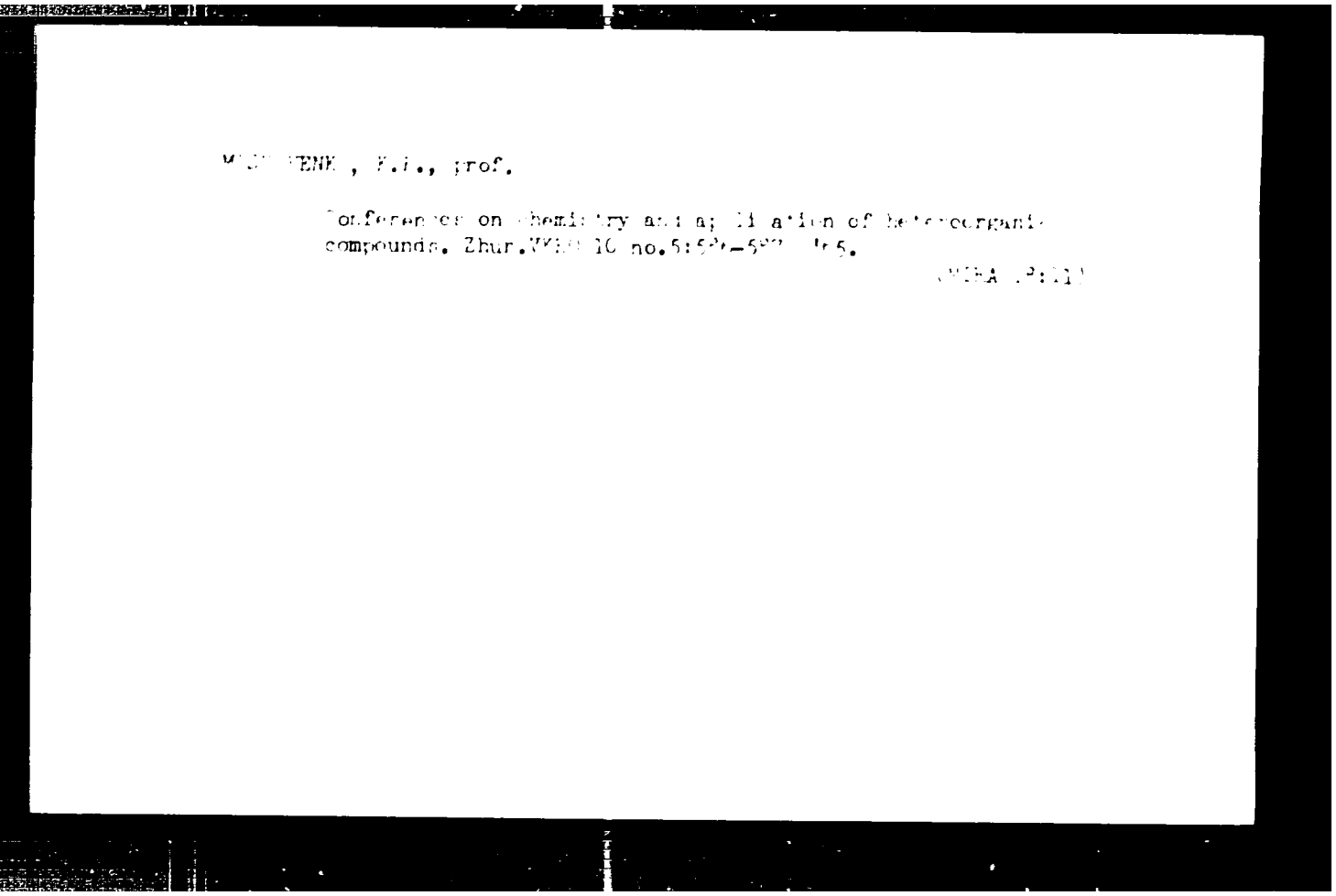

M[illegible]ENK , F.I., prof.

Conference on chemistry and application of heteroorganic compounds. Zhur.VKHO 10 no.5:[illegible] '65.

(MIRA 18:11)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

PLIS, I. Ya.; ARKHIPOVA, G.P.; MISHCHENKO, K.P.

Equilibria in aqueous solutions of sulfites at temperatures of 10 - 35°
Zhur. prikl. khim. 38 no.7:1494-1500 Jl '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

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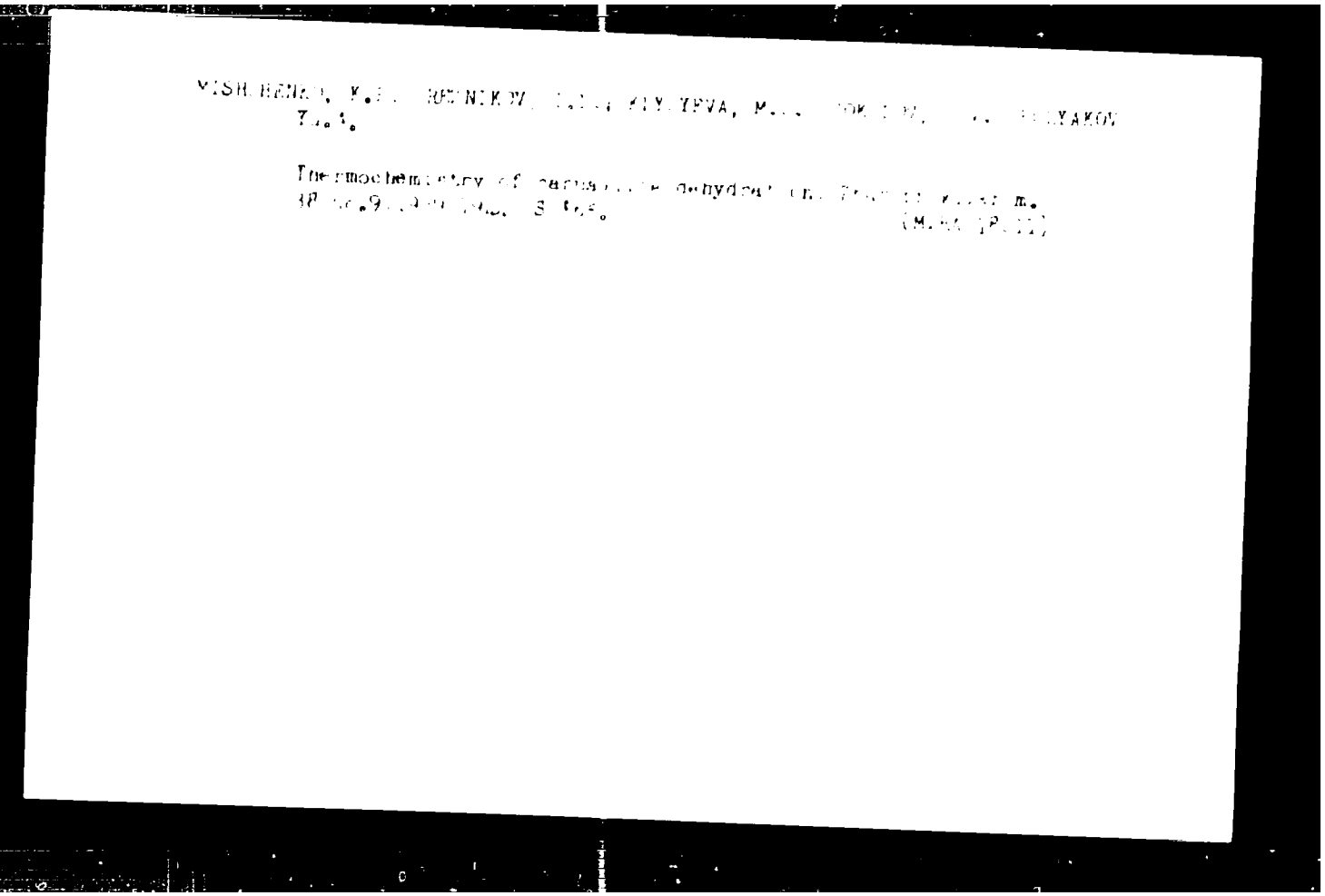

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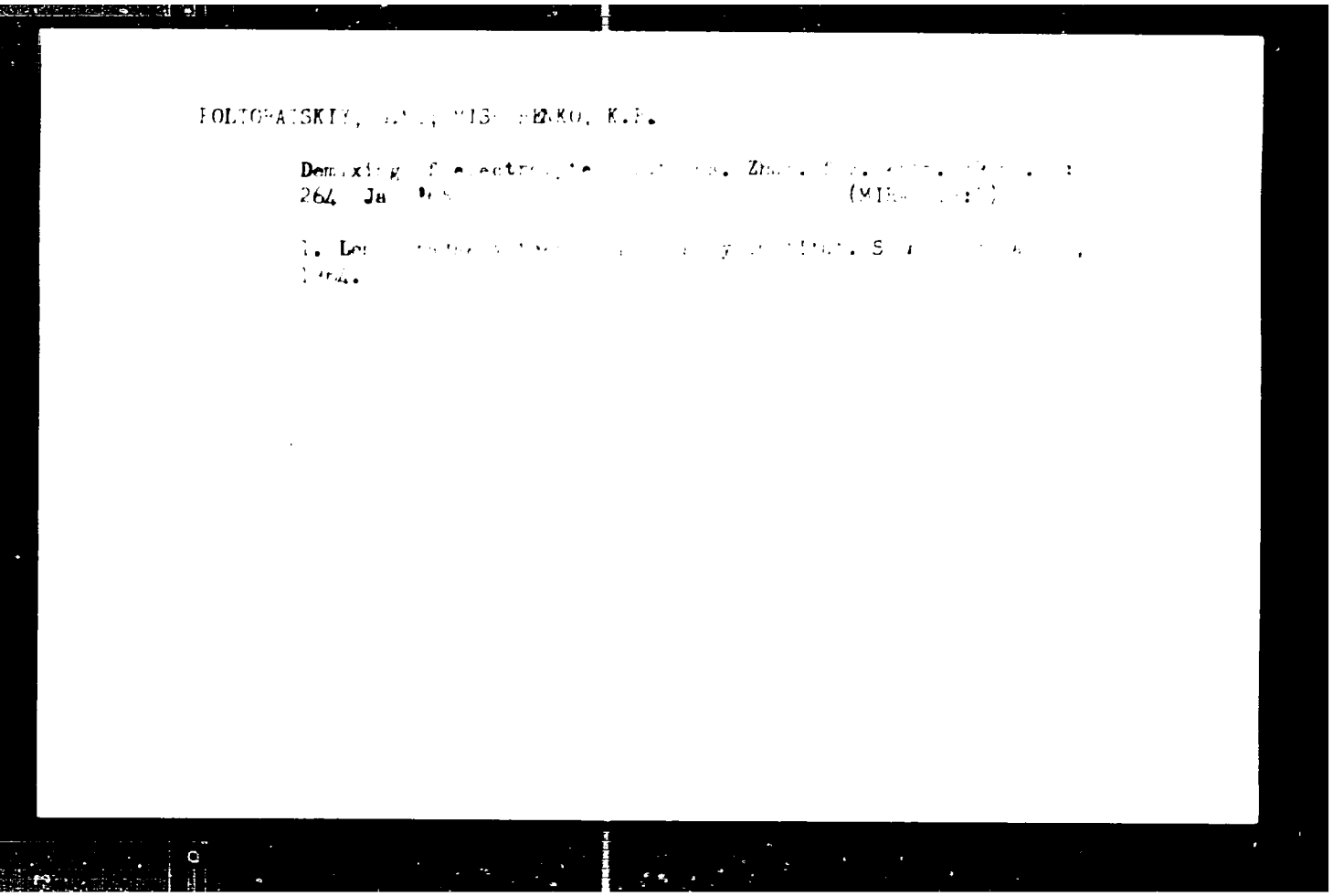

POLTORATSKIY, [illegible], MIS[illegible]ENKO, K.P.

Demixing of electr[illegible]. Zh[illegible]
264 Ja[illegible] (MIR[illegible])

1. Le[illegible] S[illegible]
[illegible].

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

ACC NR: AP7012404 SOURCE CODE: UR/0063/66/011/006/0696/0699

AUTHOR: Mishchenko, K. P. (Professor); Razumovskiy, V. V. (Professor)

ORG: none

TITLE: Third Conference on Chemistry and Application of organophosphorous compounds at the Leningrad Oblast Board of the All-Union Chemical Society imeni D. I. Mendeleyeva

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 11, no. 6, 1966, 696-699

TOPIC TAGS: organic phosphorus compound, scientific conference, organic chemical synthesis

SUB CODE: 07

ABSTRACT: The third conference on chemistry and application of organophosphorous compounds was held in Leningrad in March 1966. It was organized by the Leningrad Oblast Board of the All-Union Chemical Society imeni D. I. Mendeleyeva conjointly with the section on general chemistry of the Central Board of the All-Union Chemical Society imeni D. I. Mendeleyeva. At this conference, outstanding problems on the theoretical aspects of the chemistry of phosphorous and new achievements in the field of synthesis and application of organophosphorous compounds were considered. S. A. SHCHUKAREV, of the

Card 1/2

UDC: 661.718.1

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ACC NR: AP7012404

Leningrad State University, considered the question of phosphorous bonds from the standpoint of orbital radii, obtained by integrating equations. The author was able to show the existence of significant mutual polarization of atoms, the interaction of electron configurations, partial excitation of valency states, and the role of d-electrons. Other papers were presented on the carbon-phosphorous bond at energies approaching 62 kilocalories, research on organophosphorous compounds employing nuclear magnetic resonance, the chemistry of phosphorous isocyanates, and diisocynates. E. Ye. Nifant'yev, presented a report on the chemistry of esters of acids containing trivalent phosphorous and sugars. Other papers covered alkylation of glycoamidophosphites, thermal conversion of amidoesters of methylphosphonic acid, the kinetics of thermal conversion of amidoesters of methylphosphonic acid, and others.

Acknowledgment to Corresponding Member AN SSSR A. A. Petrov; Professor A. P. Brestkin; Doctor of Chemical Sciences G. I. Derkach; Professor V. V. Pigulevskiy; Professor V. V. Razumovskiy; Professor R. N. Sterlin; Professor S. A. Shchukarev, V. N. Aleksandrov, P. M. Zavlin, B. I. Ionin, N. A. Loshadkin, A. A. Neymysheva, E. Ye. Nifant'yev, N. A. Razumova, and others took part in the discussion of the reports. Orig. art. has: 6 formulas. [JPRS: 40,422]

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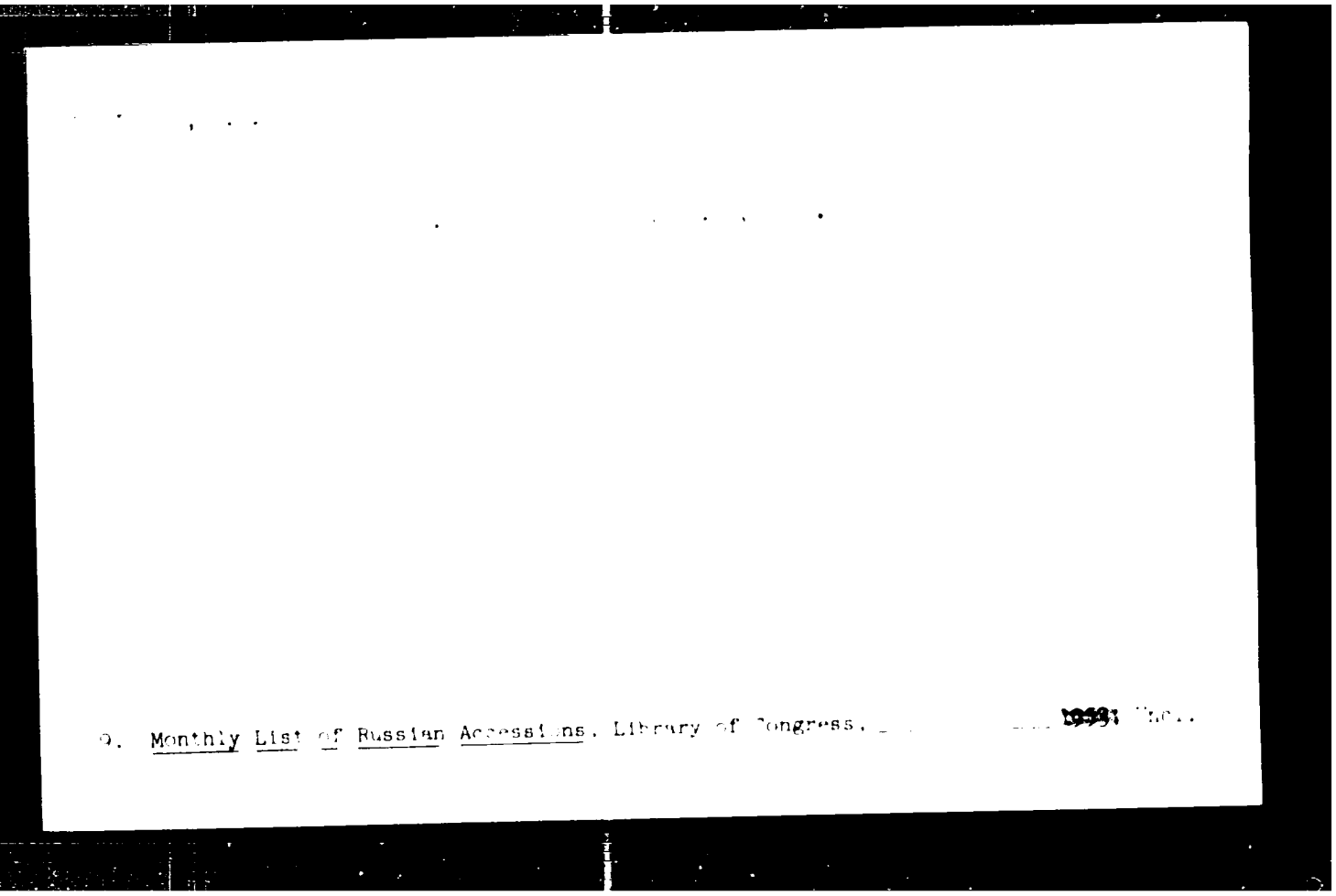

9. Monthly List of Russian Accessions. Library of Congress. [illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

ZVYAGIN, B.B.; MISHCHENKO, K.S.

Electron diffraction refinement of the muscovite structure. Kristallografiia 5 no.4:600-604 Jl-Ag '60. (MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Muscovite--Spectra)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

AUTHORS: Zvyagin, B.B. and [illegible]

TITLE: Electron-diffraction data on the [illegible] of phlogopite-biotite

PERIODICAL: Kristallografiya, v. 7, no. 4, [illegible]

TEXT: In preliminary experiments to [illegible] could be detected between X-ray diffracti[illegible] variants of these minerals which would reflect the [illegible] in the chemical composition. This was [illegible] stical distribution of the isomorphous [illegible] the properties which are generally characteristic [illegible] on electron-diffraction patterns of the [illegible] from a collection. [illegible] were observed and indexed. The [illegible] on the electron-diffraction pattern [illegible] with the parameters: a [illegible] = 99°5[illegible] and the trigonal cel[illegible] synthesis cycles, the R-factors, [illegible] for the reflexions [illegible] and [illegible] ceased to improve. The atom coordinates of the [illegible]

Card 1/3

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

Electron-diffraction data ....

structure corresponding to this state is well
distances are tabulated and a sketch
normal projection onto the plane
ation of the coordinates, evaluated according to the formula of
Vaynshteyn, was 0.02 for K atoms,
0.04 A for O atoms. From the
differed by the fact that the
ditrigonal loops, corresponding
about the vertical by an angle of
compared with the positi
other hand, the top and
any shift relative to the
but the octahedra themselves were
Al atoms are probably statistical
hedral positions, it was
distortions caused by
vite, such substitutions bring about certain shifts
due to their statistical nature,
the monoclinic angle as compared with

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

S/070/62/007/004/010/01[illegible]
Electron-diffraction data E073/E363

There are 4 figures and 3 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut All-Union Scientific Research Geological Institute)

SUBMITTED: June 13, 1961

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

ZVYAGIN, B.B.; MISHCHENKO, K.S.; SHITOV, V.A.

Electron diffraction data on the structures of sepiolite and palygorskite. Kristallografiia 8 no.2:201-206 Mr-Ap '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

DASHKOVSKIY, Solomon Aronovich; MISHCHENKO, L., red; POPOVA, T., tekhn. red.

[Chemistry, equipment, materials; role of chemicalization in the creati n of the material and technical foundations of communism] Khimiia, tekhnika, materialy; znachenie khimizatsii v sozdanii material'no-tekhnicheskoi bazy kommunizma. Krasnoiarsk, Krasnoiarskoe knizhnoe izd-vo, 1963. [illegible] p. (MIRA 17:3)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

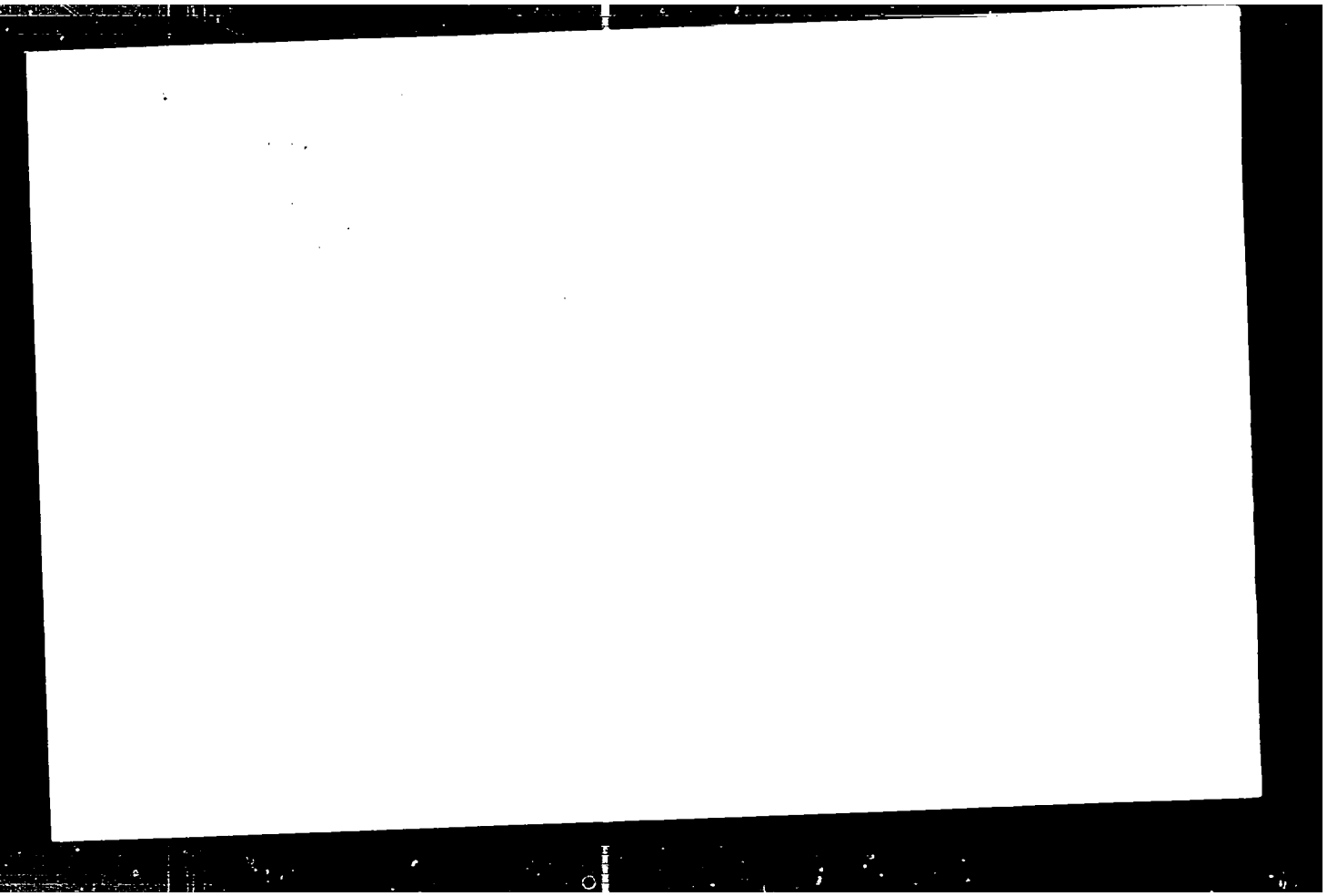
MEN'SHIKOV, A.Z.; NEMNONOV, S.A.; MISHCHENKO, L.B.

Effect of chemical bonds on L_2 and L_3 energy levels of a chromium atom. Fiz. met. i metalloved. 14 no.3:383-386 S '62. (MIRA 15:9)

1. Institut fiziki metallov AN SSSR.
(Chromium--Spectra) (Chemical bonds)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6



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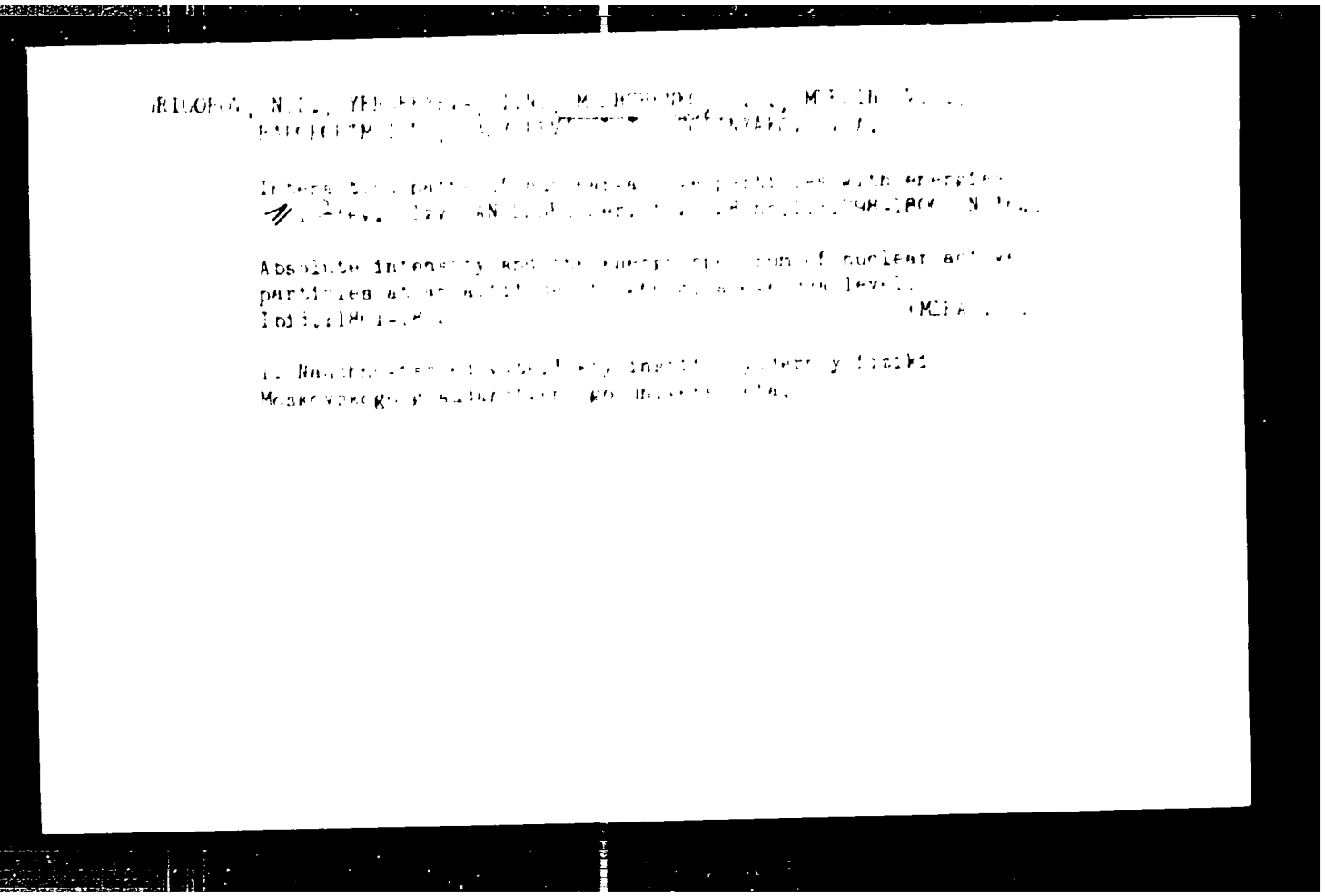

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

POPOV, I.S., prof.; ZADOROZHNYY, B.A., dotsent; MISHCHENKO, L.I.

Stroke method for the isolation of unicellular cultures of yeast and yeastlike fungi free from bacteria. Vest.derm.i ven. no.8:39-41 '62. (MIRA 15:8)

1. Iz kafedry dermatologii (zav. - prof.I.S. Popov) Khar'kovskogo meditsinskogo instituta (dir. - dotsent B.A. Zadorozhnyy).

(YEASTS) (FUNGI)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

POPOV, I.S., prof.; MISHCHENKO, L.I., starshiy laborant.

Method of isolating fungus cultures free of bacteria. Vest. derm. i ven. 36 no.10:44-46 O'62 (MIRA 16:11)

1. Iz kafedry dermatologii (zav. - prof. I.S.Popov) Khar'kovskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

POPOV, I.S., prof.; MISHCHENKO, L.I.; BONDAR', Z.S.; TSISINA, G.V.; NOSATENKO, V.Ye.

Candidiasis consecutive to the use of antibiotics. Vest. derm. i ven. 38 no.6:37-40 Je '64. (MIRA 18:6)

1. Kafedra dermatologii (zav. - prof. I.S.Popov) i kafedra fakul'tetskoy i gospital'noy terapii (zav. - prof. M.P.Kozlovskaya) Khar'kovskogo meditsinskogo instituta.

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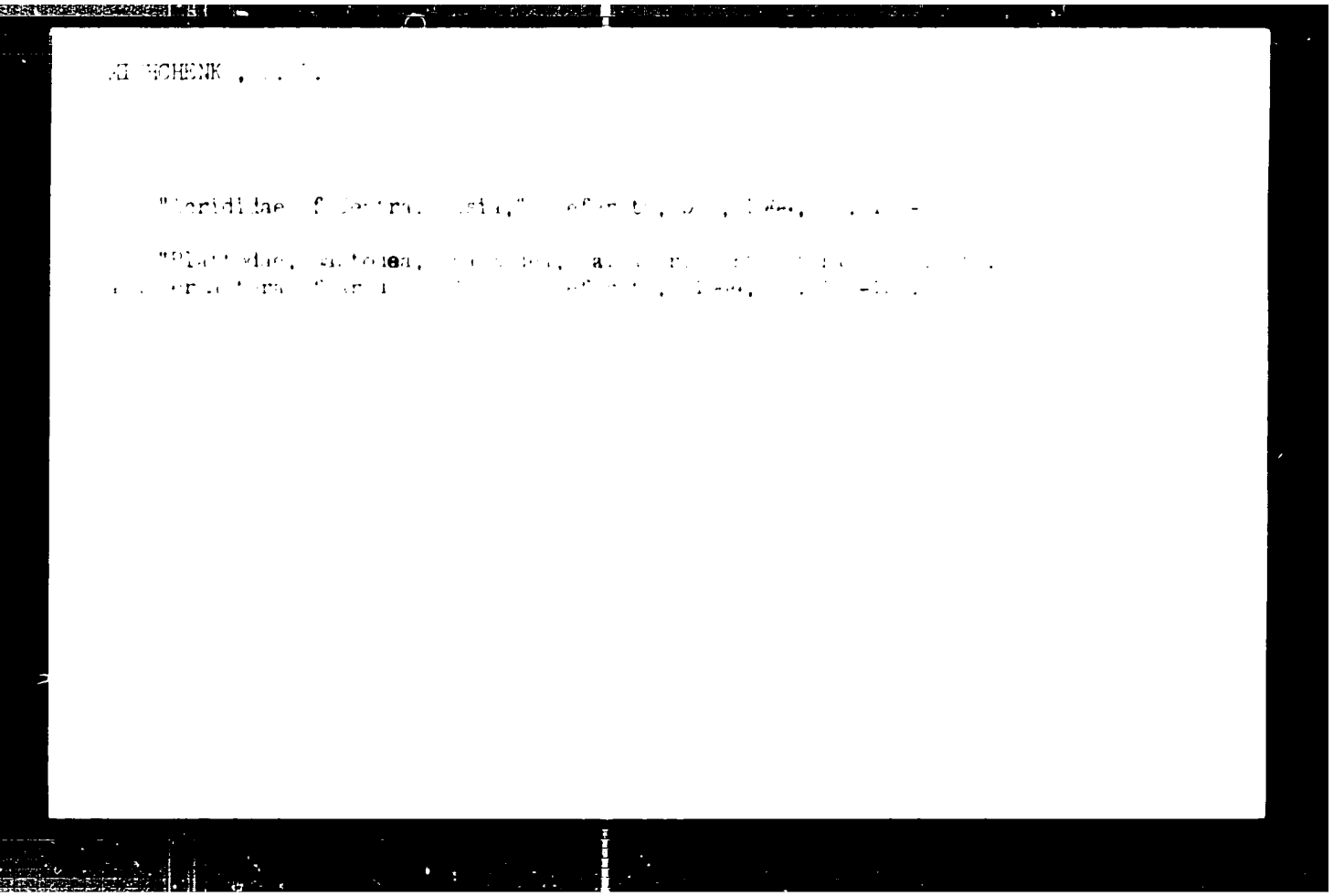

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

USSR/Medicine - Insects
Medicine - Geography

Mar 1945

"Geographical Distribution of the Subfamily Catantopinae (Saltatoria Orthoptera sens. str. Acridodea)," Lev Mishchenko, Inst Zool, Acad Sci USSR, Leningrad, 5 pp

"Entomologicheskoye Obozreniye" Vol XXVIII, No 3/4

Gives geographical distribution of the subfamily Catantopinae according to zoogeographical regions.

52T65

LC

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, L. L.

"Dermatoptera, Blattodea, Mantodea, Phasmatodea and Saltatoria [illegible] of the Gissarskiy Valley, Tadzhik SSR," data [illegible] expedition of Tadzhik Affl., Acad. Sci. USSR, with [illegible] Mishchenko, [illegible] N. G. Bregetova, A. I. Ivanov and [illegible] A. Mishchenko among others.

Trudy [illegible] Inst., VIII, [illegible].

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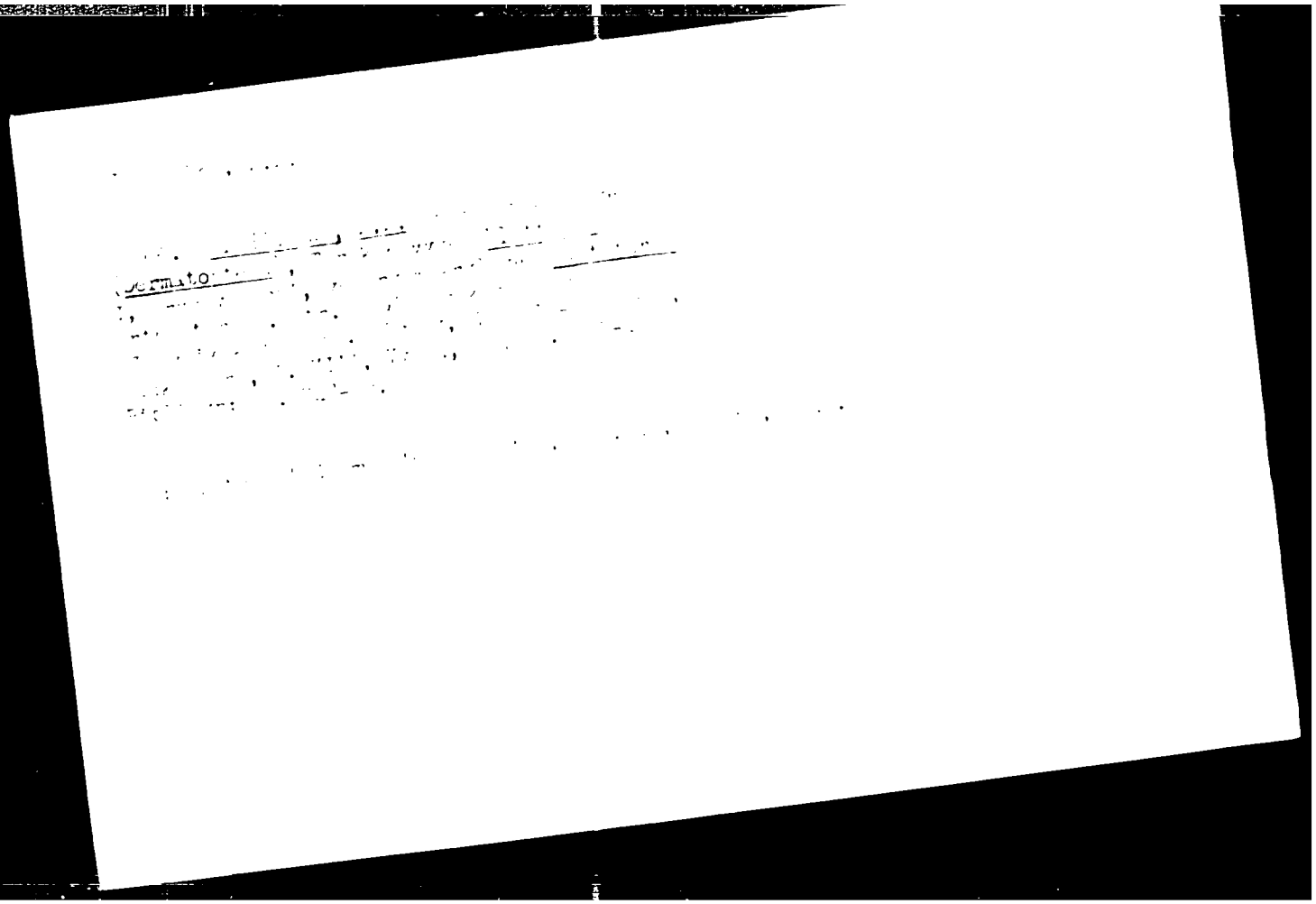
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6



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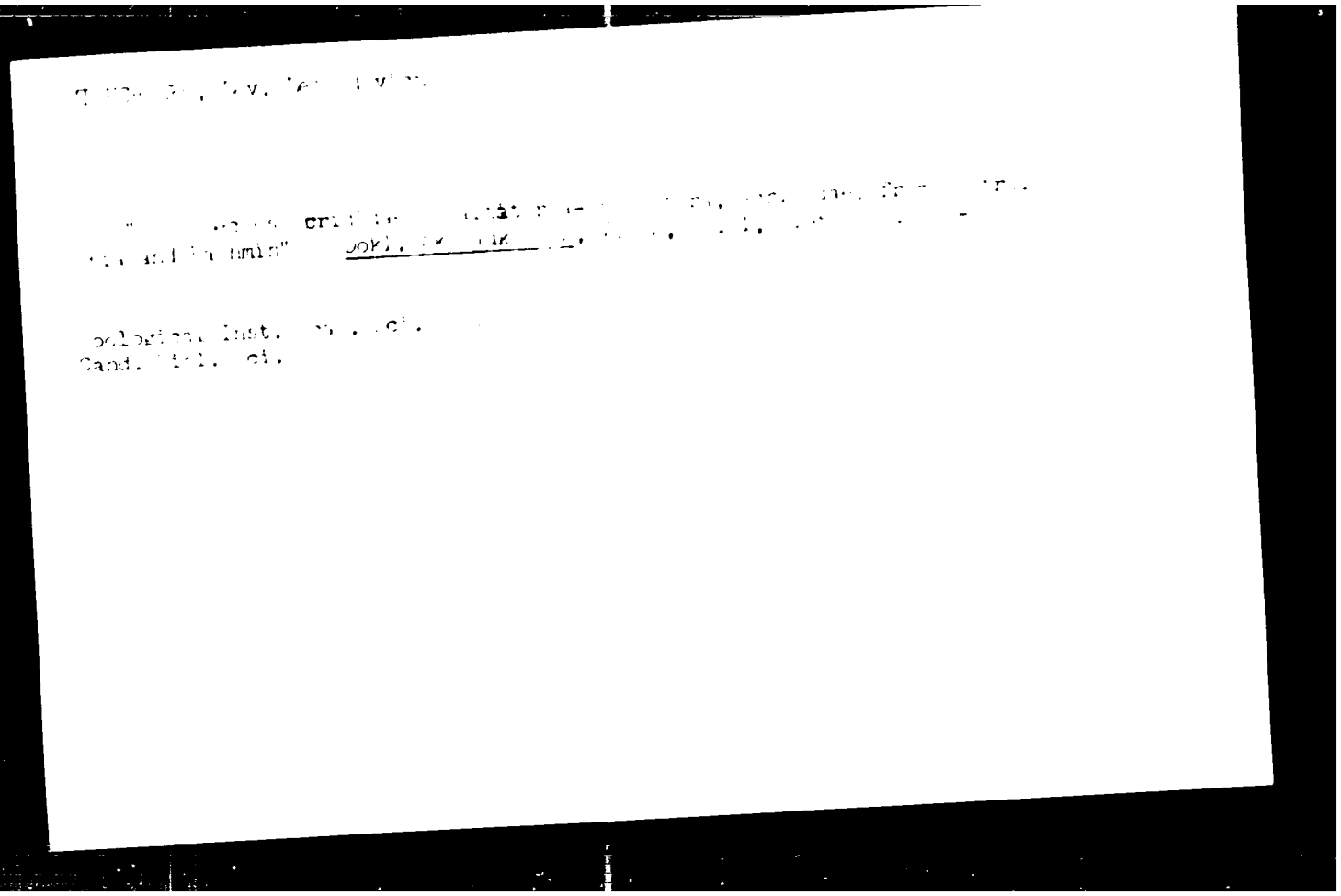

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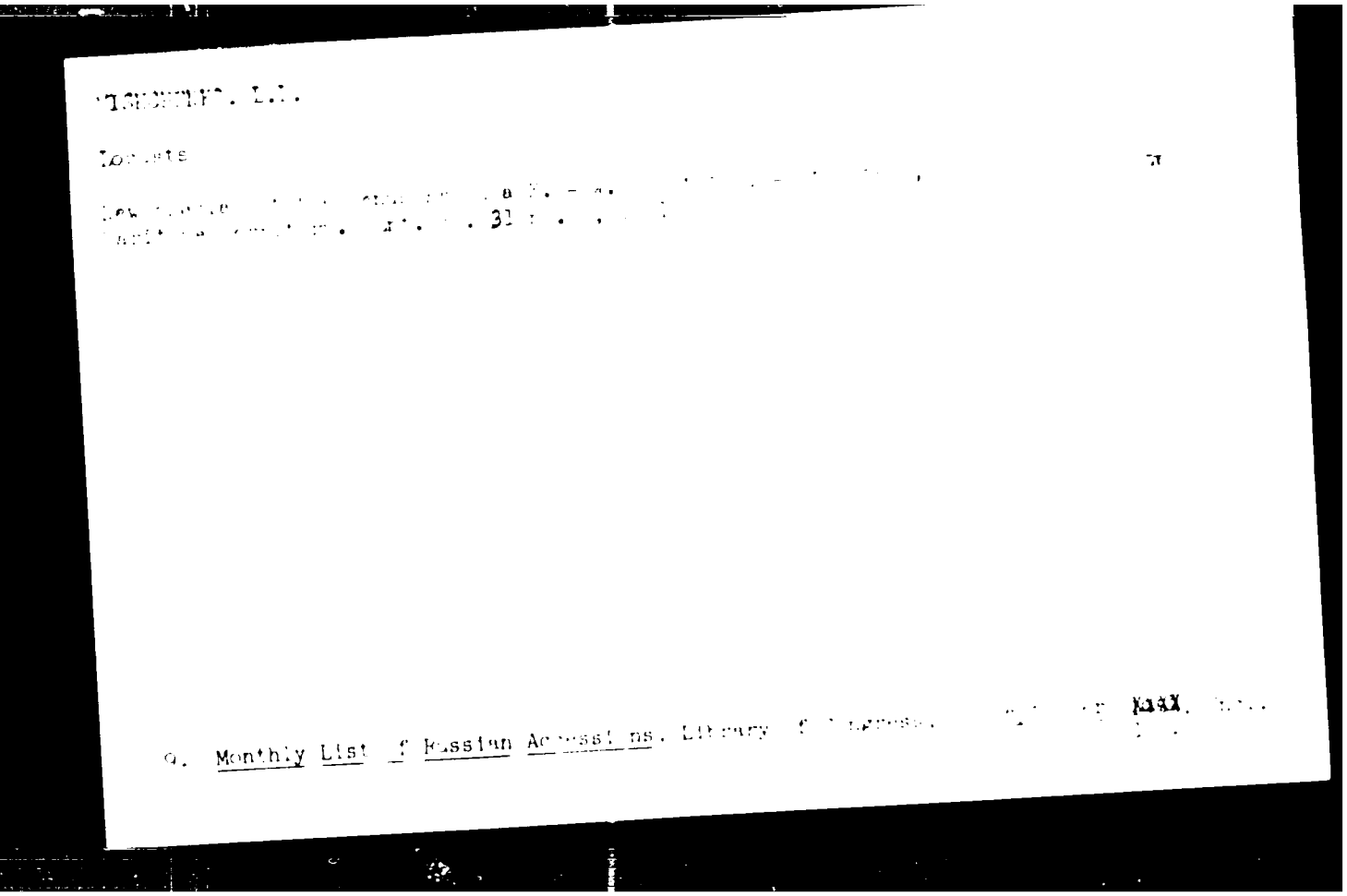

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, L. L

BEY-BIYENKO, G. YA.; MISHCHENKO, L. L.

Locust

Locustidae of the U.S.S.R. and of adjoining countries; part 1. Opr. po faune no. 39, 1951.

9. Monthly List of Russian Accessions, Library of Congress, September 2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, L. L.

Author: Mishchenko, L. L.

Title: Revision of [illegible] I Bol.
(Saltatoria - Orthoptera, [illegible] and their nearest relatives.

Journal: Doklady Akademii Nauk [illegible], Vol. [illegible], No. 3, p. 517

Subject: Zoology

[illegible]: B.S.I.R. [illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, L.L.

New species of grasshoppers (Orthoptera, Tettigoniidae) in Tajikistan. Ent.obozr. 32:254-260 '52. (MLRA 7:1)

1. Zoologicheskiy institut Akademii nauk SSSR, Leningrad.
(Tajikistan--Locusts) (Locusts--Tajikistan)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, L.L.

New representatives of the tribe Podismini (Orthoptera, Acrididae) from eastern Asia. Trudy Zool. inst. 15:27-34 '54. (MLRA 7:7)
(Far East--Locusts) (Locusts--Far East)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

USSR/General and Special Zoology. Insects P

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25589

Author : Mishchenko L.L.
Inst : Not Given
Title : The Praying Mantis on the Southern Slopes of the Hissar Mountain Range (Tadzhikistan).

Orig Pub : Entomol. Obozreniye, 1956, 35, No 3, 652-658

Abstract : New species of the praying mantis from Tadzhikistan were described: Armenear Susta, Iris insolita and Rivetina montic Ln (all these species were from the southern slopes of the Hissar range.)

Card : 1/1

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

ARNOL'DI, L.V.; BORKHSENIUS, N.S.; GUR'YEVA, Ye.L.; DERBENEVA, N.N.; YEMEL'YANOV, A.F.; KERZHNER, I.M.; KUZNETSOV, V.I.; LISINA, L.M.; MISHCHENKO, L.L.; NARCHUK, E.P.; SHAPIRO, I.D.; SHAPOSHNIKOV, G.Kh.; SHTAKEL'BERG, A.A.; PUKHAL'SKAYA, L.F., red.izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Insect pests of corn in the U.S.S.R.; reference book] Nasekomye, vrediashchie kukuruze v SSSR; spravochnik. Moskva, 1960. 227 p. (MIRA 13:3)

1. Akademiya nauk SSSR. Zoologicheskiy institut. 2. Zoologicheskiy institut AN SSSR (for Arnol'di, Borkhsenius, Gur'yeva, Derbeneva, Yemel'yanov, Kerzhner, Kuznetsov, Mishchenko, Narchuk, Shaposhnikov, Shtakel'berg). 3. Vsesoyuznyy institut zashchity rasteniy Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Lisina, Shapiro).

(Corn (Maize)--Diseases and pests)
(Insects, Injurious and beneficial)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

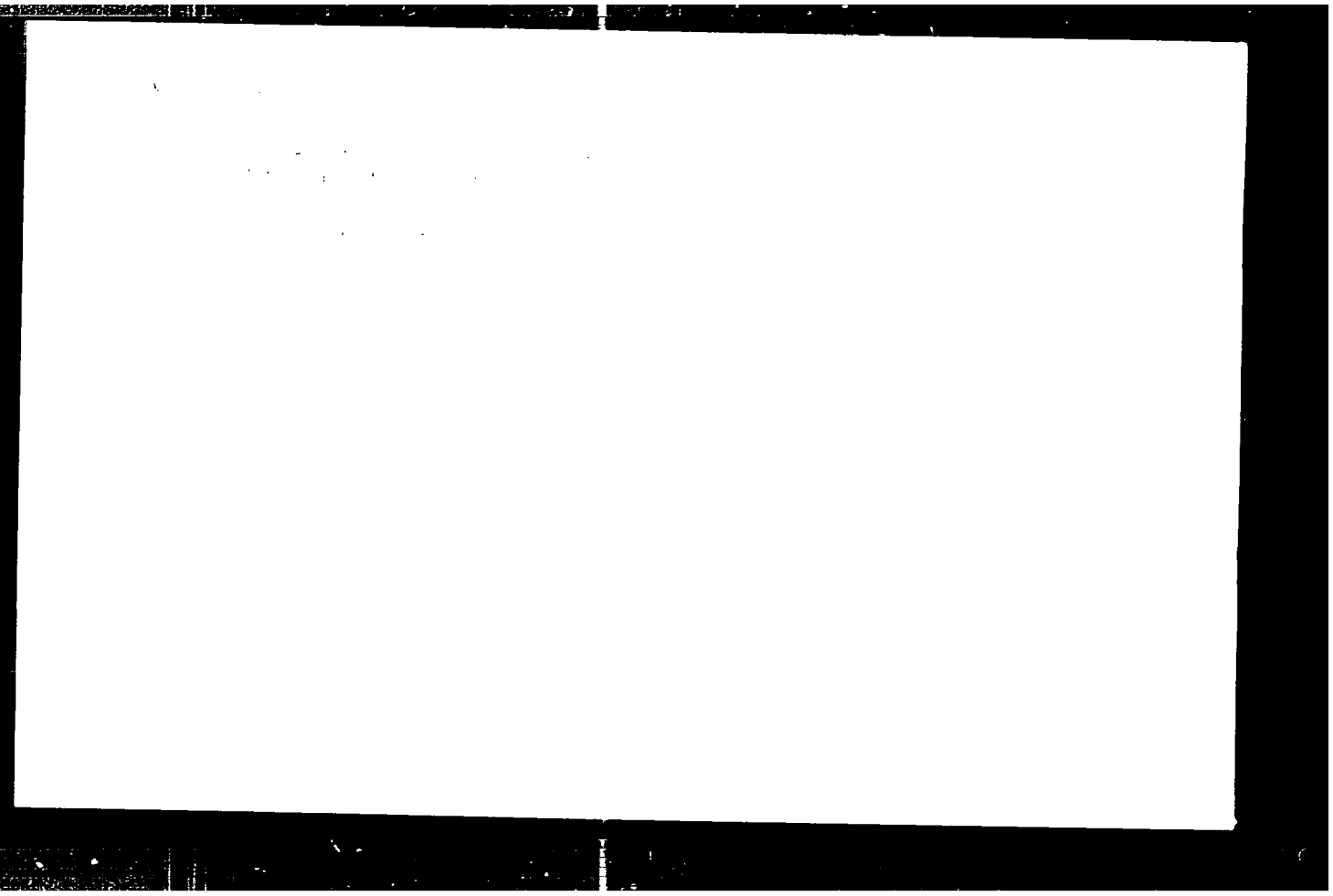
MISHCHENKO, L.L.

What is the genus Thaumatobyma Rme. (Orthoptera, Tettigoniidae, Catantopinae)? Ent. obozr. 40 no.2:351-358 '61. (MIRA 14:6)

1. Zoologicheskiy institut AN SSSR, Leningrad.
(Locusts)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6



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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

ACC NR: AR6014362 (A, N) SOURCE CODE: UR/0277/65/000/011/0064/0064

AUTHOR: Mishchenko, L. P.

TITLE: Investigation of the breaking strength of dual M. L. Novikov gearing

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 11.48.555

REF SOURCE: Sb. rabot Rostovsk.-n/D. n.-i. in-ta tekhnol. mashinostr., vyp. 10, 1964, 214-228

TOPIC TAGS: transmission gear, gear geometry, gear strength, mechanical power transmission, gear

ABSTRACT: The methodology and results of investigations of transmissions with Novikov gearing are presented. The breaking strength of dual Novikov engagement is higher than for the single engagement and higher than for the adjusted evolute case. The load capacity of a drive with a contour $\ell = \frac{1}{4} t$ is approximately 40% higher than the evolute of the same proportions (ℓ - radius of profile, t - pitch). 9 illustrations. Bibliography of 5 titles. [Translation of abstract]

SUB CODE: 13
Card 1/1 UDC: 621.833.001.5

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

L 50212-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GS

ACCESSION NR: AT5008404 S/0000/64/000/000/0055/0059

AUTHOR: Songina, O. A.; Mishchenko, L. V. 18 B+1

TITLE: Polarographic determination of indium in the presence of tin in sulfosalicilate and fluoride-sulfosalicilate supporting electrolytes

SOURCE: AN SSSR. Sibirskoye otdeleniye. Khimiko-metallurgicheskiy institut. Khimicheskiy analiz tsvetnykh i redkikh metallov (Chemical analysis of nonferrous and rare metals). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 55-59

TOPIC TAGS: indium, chemical analysis, polarographic analysis

ABSTRACT: A polarographic method was developed for determining indium in the presence of very large amounts of tin in a sulfosalicilic acid supporting electrolyte. A Heyrovsky polarograph was used. The maximum sensitivity of the galvanometer was $2 \cdot 10^{-9}$ a/mm. The capillary characteristics were $m^{2/3}t^{1/6} = 3.19$. Saturated calomel electrodes were used as the anode. Indium polarograms were taken in sulfosalicilic acid with concentrations from $5 \cdot 10^{-2}$ to 1 M in a pH range of 2-6. It was found that under these conditions indium gives well defined waves which could be analytically useful. Above pH 6 indium gives no wave. Within a pH range of 3-5 sulfosalicilic acid shifts $E_{1/2}$ of indium toward negative values, but has essential-

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

L 50212-65
ACCESSION NR: AT5008404

ly no effect on the wave height. It was determined that in a 1 M sulfosalicilic acid solution at pH = 3.5-4.2 it is possible to determine as little as 2 µg/ml of indium in the presence of large quantities of tin. Here the pH of the solution must be rigorously controlled. The use of a mixed fluoride-sulfosalicilate supporting electrolyte consisting of 1 M sulfosalicilic acid and 0.2 M NH_4F solution enables the determination of indium in the presence of tin in 3.5-5.5 pH range. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 01Sep64 ENCL: 00 SUB CODE: GC

NO REF SOV: 008 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

SERGEYEVA, V.F.; MISHCHENKO, M.A.

Vapor pressure of the systems KCl - C_2H_5OH - H_2O, $CaCl_2$ - C_2H_5OH - H_2O and $CH_3OC_{10}H_7$ - C_2H_5OH - H_2O. Zhur.ob.khim. 32 no.3:676-683 Mr '62. (MIRA 15:3)

1. Kazakhskiy gosudarstvennyy universitet imeni S.M.Kirova.
(Systems (Chemistry)) (Vapor pressure)

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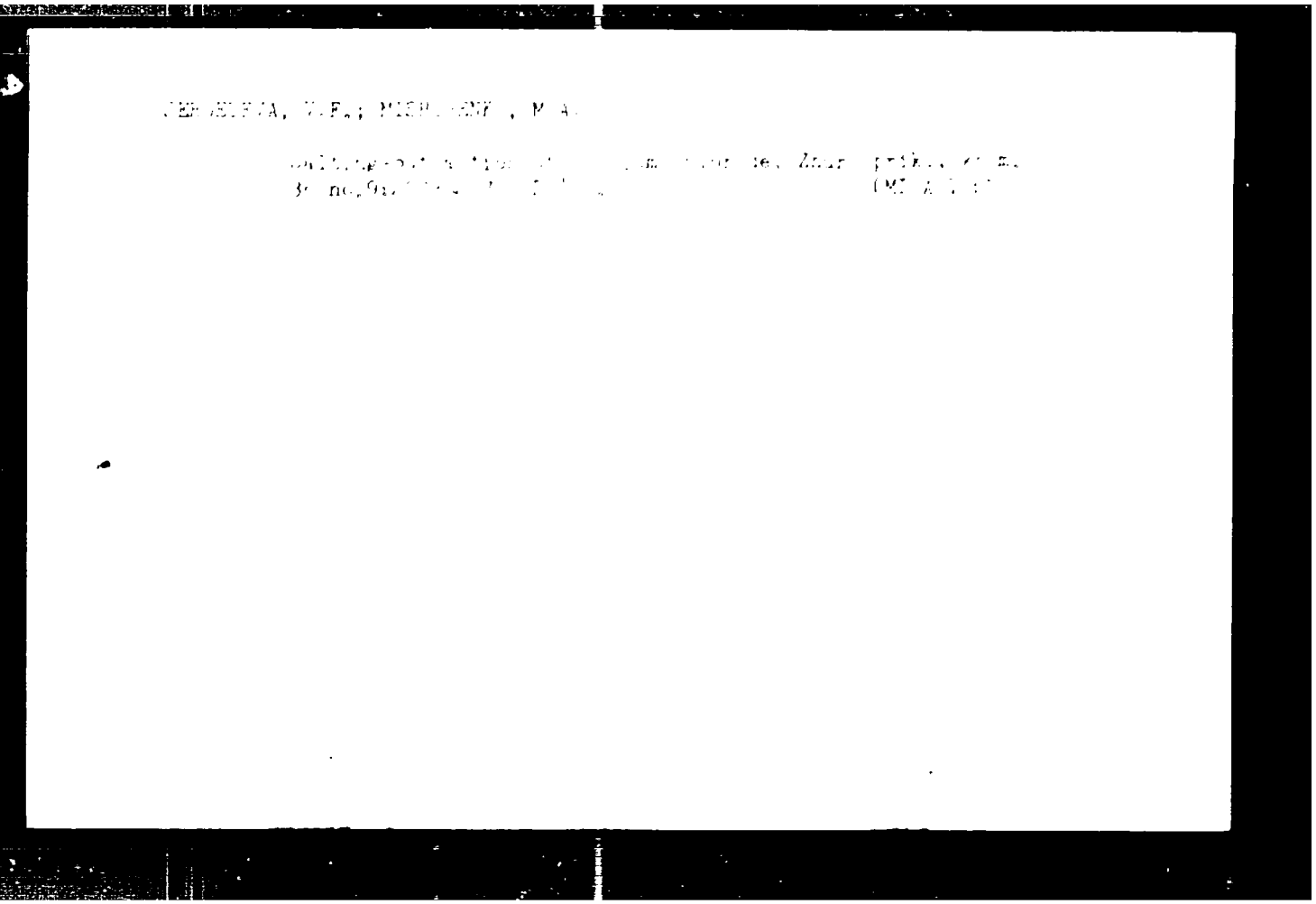

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MIRCHENKO, I. I., Prof. (Samarkand)

"Experimental Data on Acute Radiation Sickness," a report presented at the First Conference of Pathologists of Central Asia and Kazakhstan held in Stalingrad, 12-17, Feb 1955, Ark. Patol., 17, No. 3, 83-87, 1955

Abstract Sum. 1003, 20 Jul 56.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

USSR Pharmacology. Pharmacognosy. Toxicology - Medicinal Plants. T-5

Abs Jour : Referat Zhur - Biologiya, No 16, 195 , [illegible]

Author : Mishchenko, I.P.
Inst :
Title : The Effect of Trichodesma Incanum on Paramecia.

Orig Pub : Sb. nauch. tr. samarkands. med in-ta, 1956, 11, 131-134

Abstract : The influence of a 1.5% infusion from the seeds of Trichodesma incanum, 1% solutions of trichodesma alkaloids (incanine and trichodesmine), and also washings of leweeded wheat seeds on the infusion Paramaecium caudatum was investigated. It was found that the incanine contained in the Trichodesma seeds in 1.5%, shows a much more pronounced plasma action (PA) than the trichdesmine contained in the seeds in 0.025 percent. The seed infusion shows a weak PA, and the 24 hour washing from wheat has no PA at all.

Card 1/1 - 18 -

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, I.P.; PASTERNAK, N.I.; IKRAMOVA, R.M.

Using wheat contaminated by the weed Trichodesma incanum. Gig. i san. 21 no.11:81-82 N '56. (MLRA 10:2)

1. Iz kafedry patologicheskoy fiziologii Samarkandskogo meditsinskogo instituta.
(WHEAT--DISEASES AND PESTS) (BORAGE)

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MISHCHENKO, I.P., prof

Is croupous pneumonia an allergic process? Med. zhur. Uzb. no.3: 3-5 Mr '60. (MIRA 13:7)

1. Iz kafedry patologicheskoy fiziologii Samarkandskogo meditsinskogo instituta imeni I.P.Pavlova.
(PNEUMONIA) (ALLERGY)

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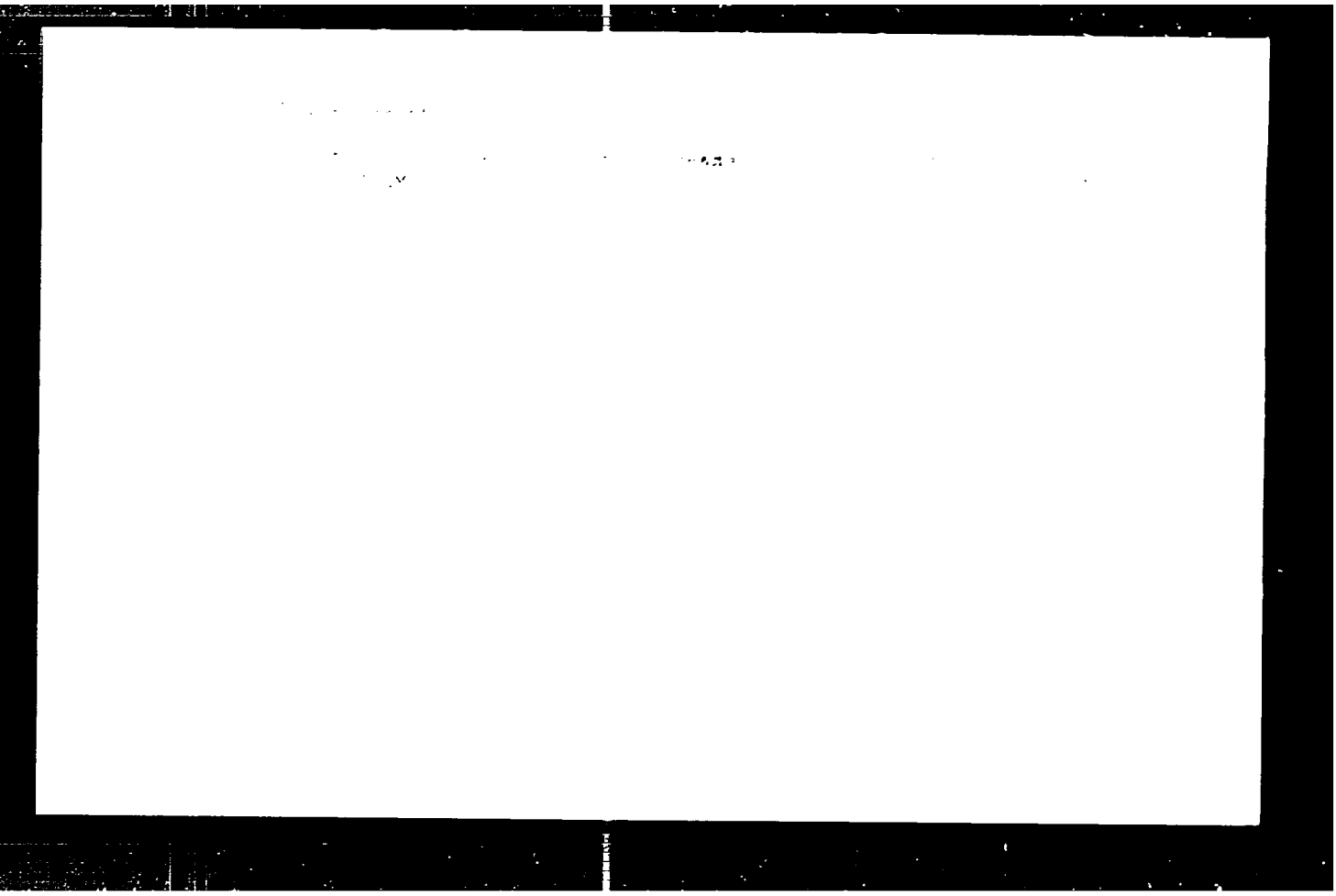

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USSR/Medicine - Brucellosis Apr 50
Vaccine Therapy

"Tests of Inoculation in Cases of Brucellosis of Agricultural Animals," I. S. Mishchenko, State Pedigreed Cattle Breeding Farm

"Dok v-s Ak Selkhoz Nauk" No 4, pp, 47, 48

After outbreak of brucellosis in spring 1948, inoculated 65 head of cattle at dairy farm, and 144 head of cattle and 930 head of sheep at other points with Acad Muromtsev's sterile semiliquid formol vaccine at end of year. After inoculation no new cases appeared and no evidence of the disease appeared at calving time in 1949. No positive reactions to [redacted]

17lT69

USSR/Medicine - Brucellosis (Contd) Apr 50

brucellosis in the cattle of the farm were found and the 6 head with positive reaction in the other group subsequently showed no indications of the disease 6½ months after treatment. Concludes use of subject vaccine permits elimination of brucellosis among animals in short time. Submitted 2 Jan 50, by Acad S. N. Muromtsev.

17lT69

MISCHENKO, I. S. [redacted]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

YASINSKIY, V.S., kandidat tekhnicheskikh nauk; PETRUSHA, A.K., kandidat tekhnicheskikh nauk; MISHCHENKO, I.S., inzhener.

Automatic machine-tool line for the production of crate boards. Der.prom. 5 no.2:6 F '56. (MLRA 9:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny (for Yasinskiy, Petrusha). 2. Kiyevskiy derevoobrabatyvayushchiy kombinat (for Mishchenko)
(Container industry) (Assembly line methods)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

PROKHA, Fedor Moiseyevich; MISHCHENKO, Ivan Stepanovich; TIKOFEYEV, V.A., red.; AZAROVA, V.G., red.izd-va; KORNYUSHINA, A.S., tekhn.red.

[Manufacture of baguette] Proizvodstvo bageta. Moskva, Goslesbumizdat, 1960. 41 p. (MIRA 14:4)
(Woodworking industries)

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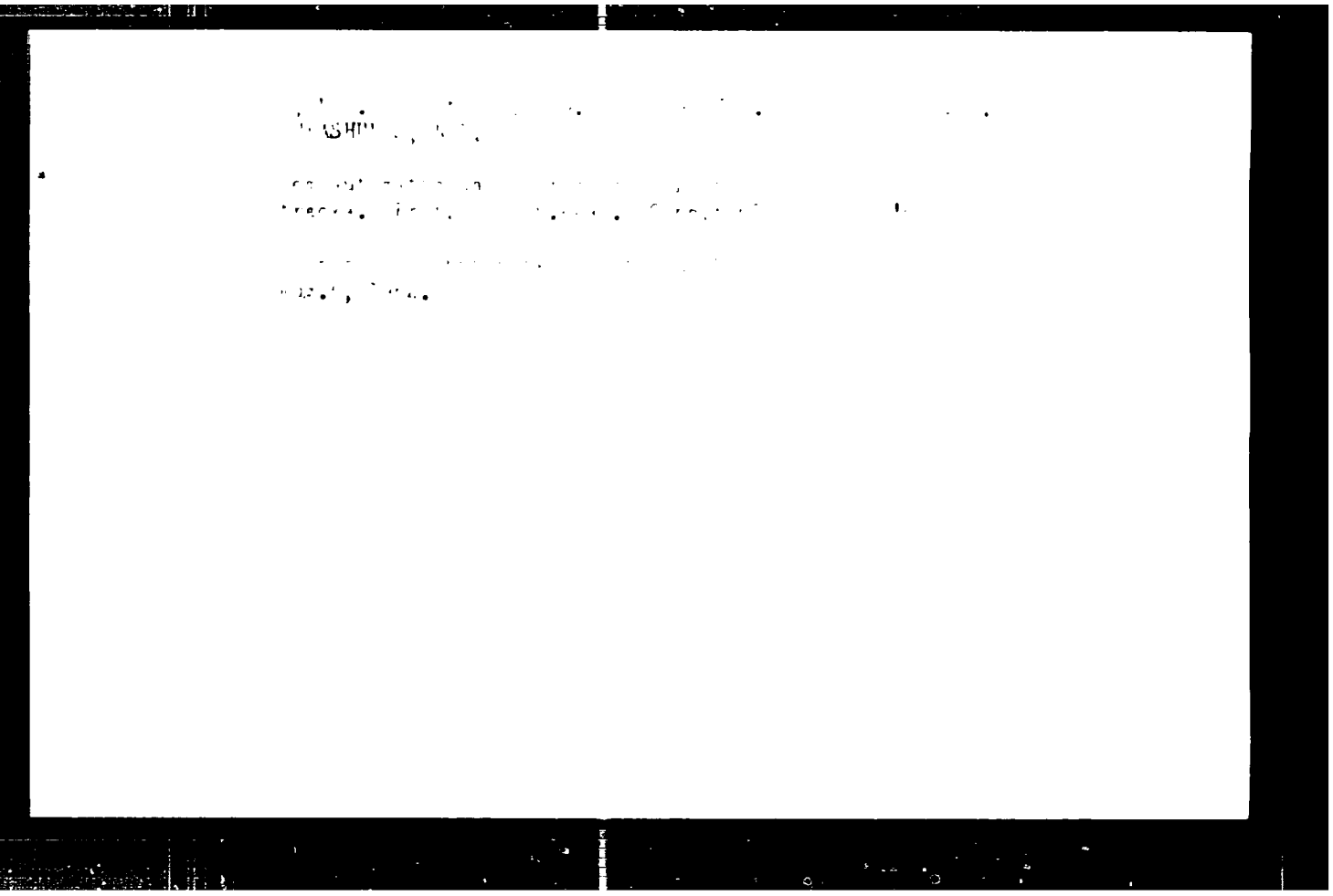

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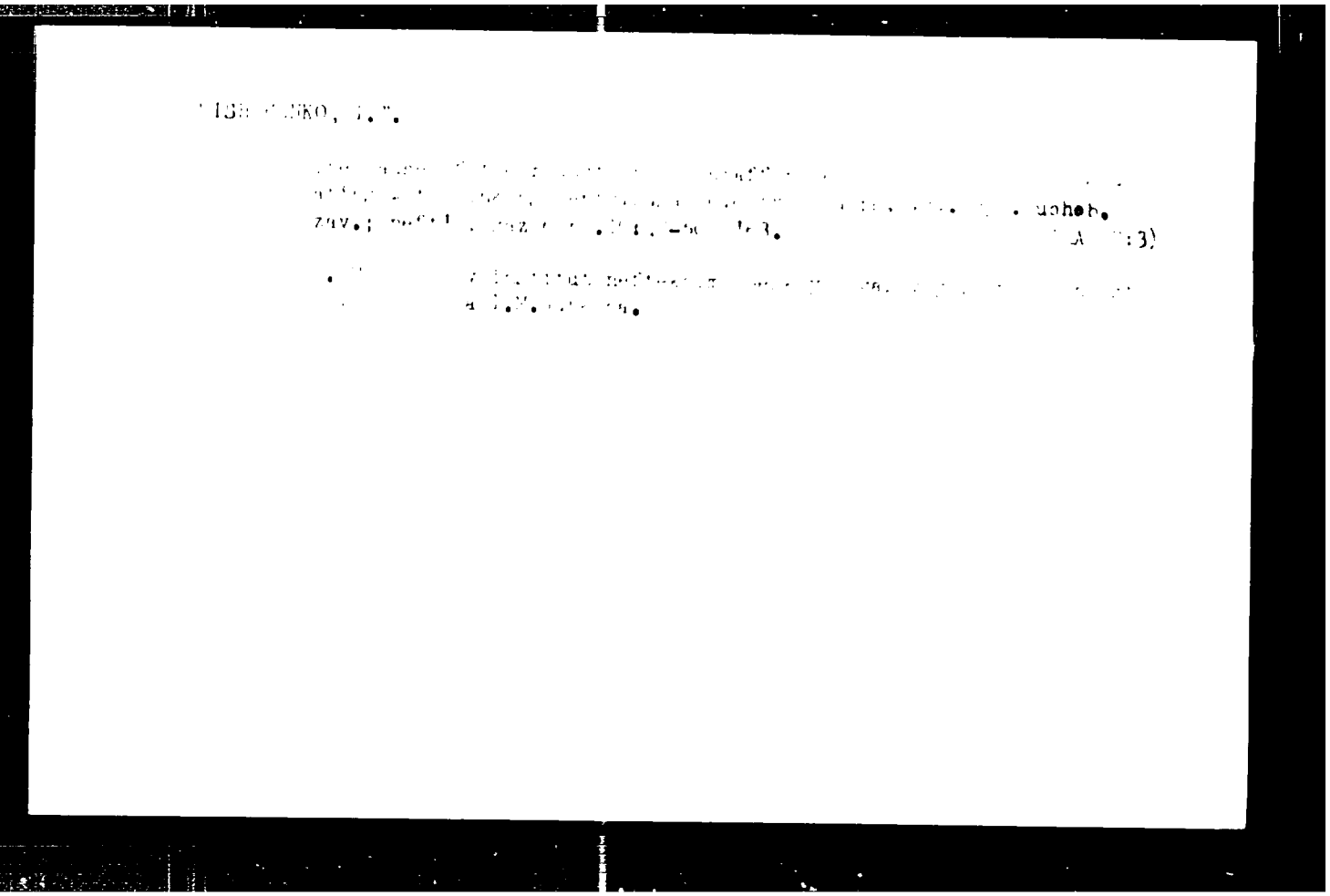

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MURAV'YEV, I.M.; [illegible], I.T.

Determining the [illegible] by a sinking centrifugal electric [illegible] '64.

[illegible]

1. Moskovskiy ordena [illegible] Znameni [illegible] neftekhimicheskoy i gazovoy [illegible].

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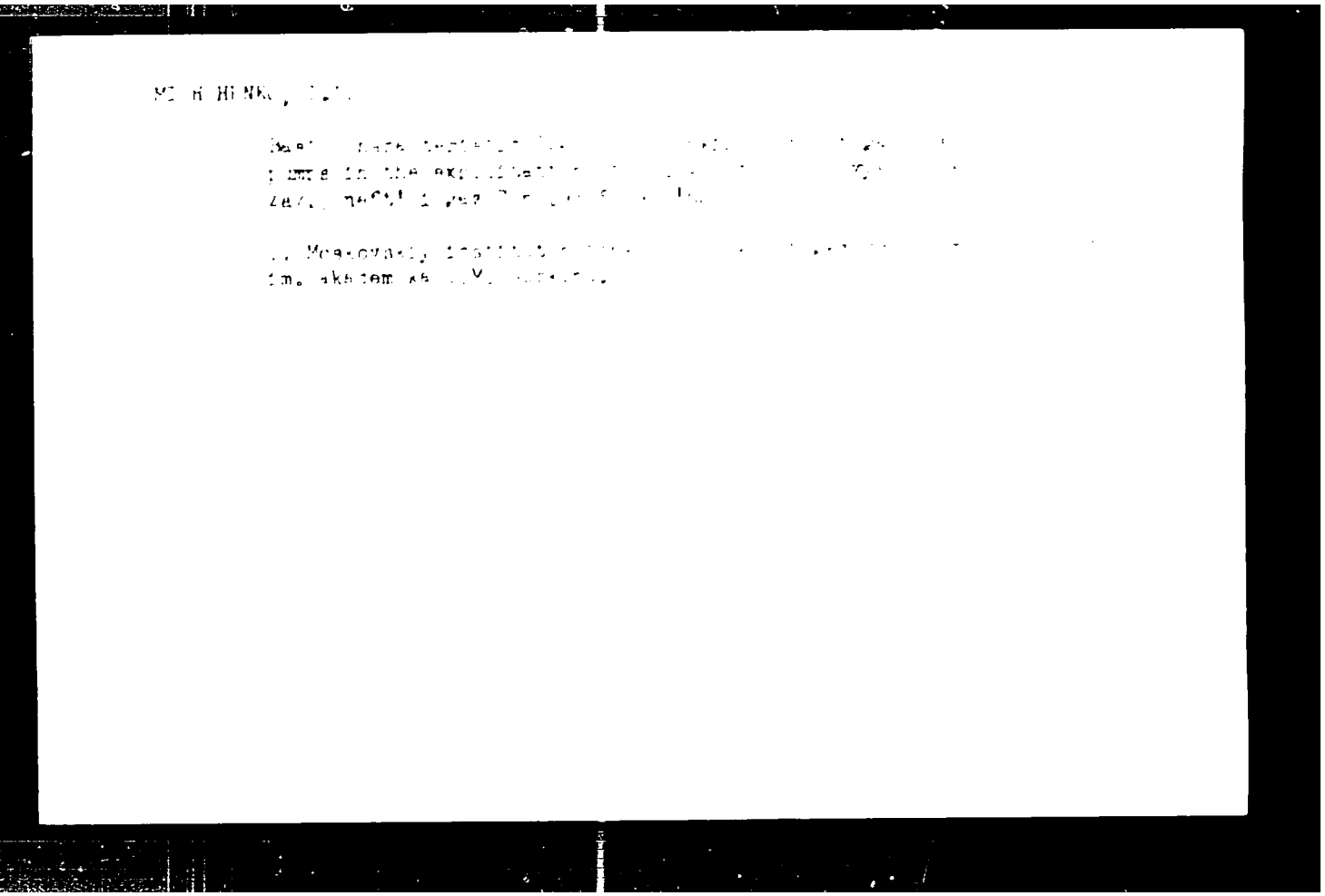

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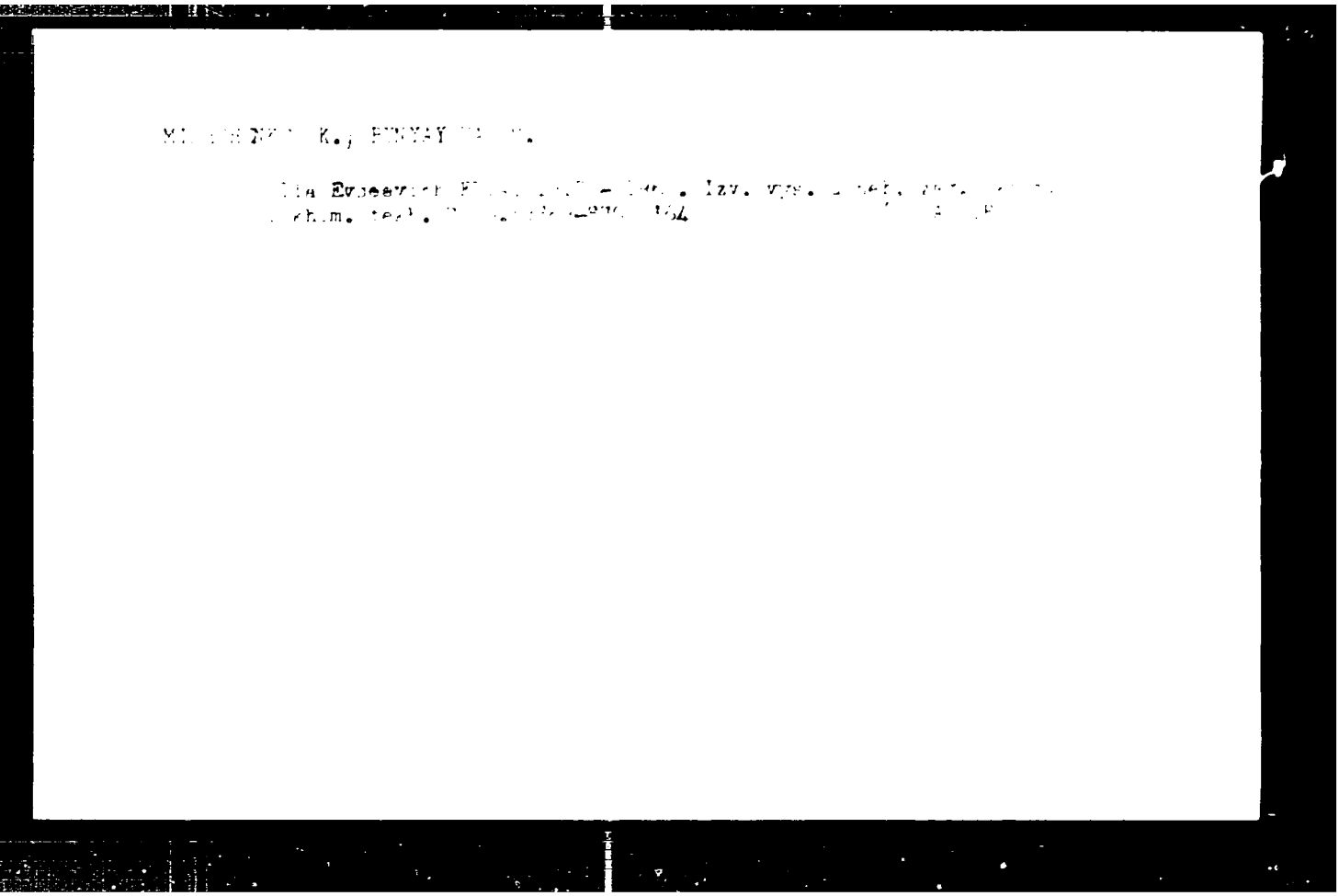

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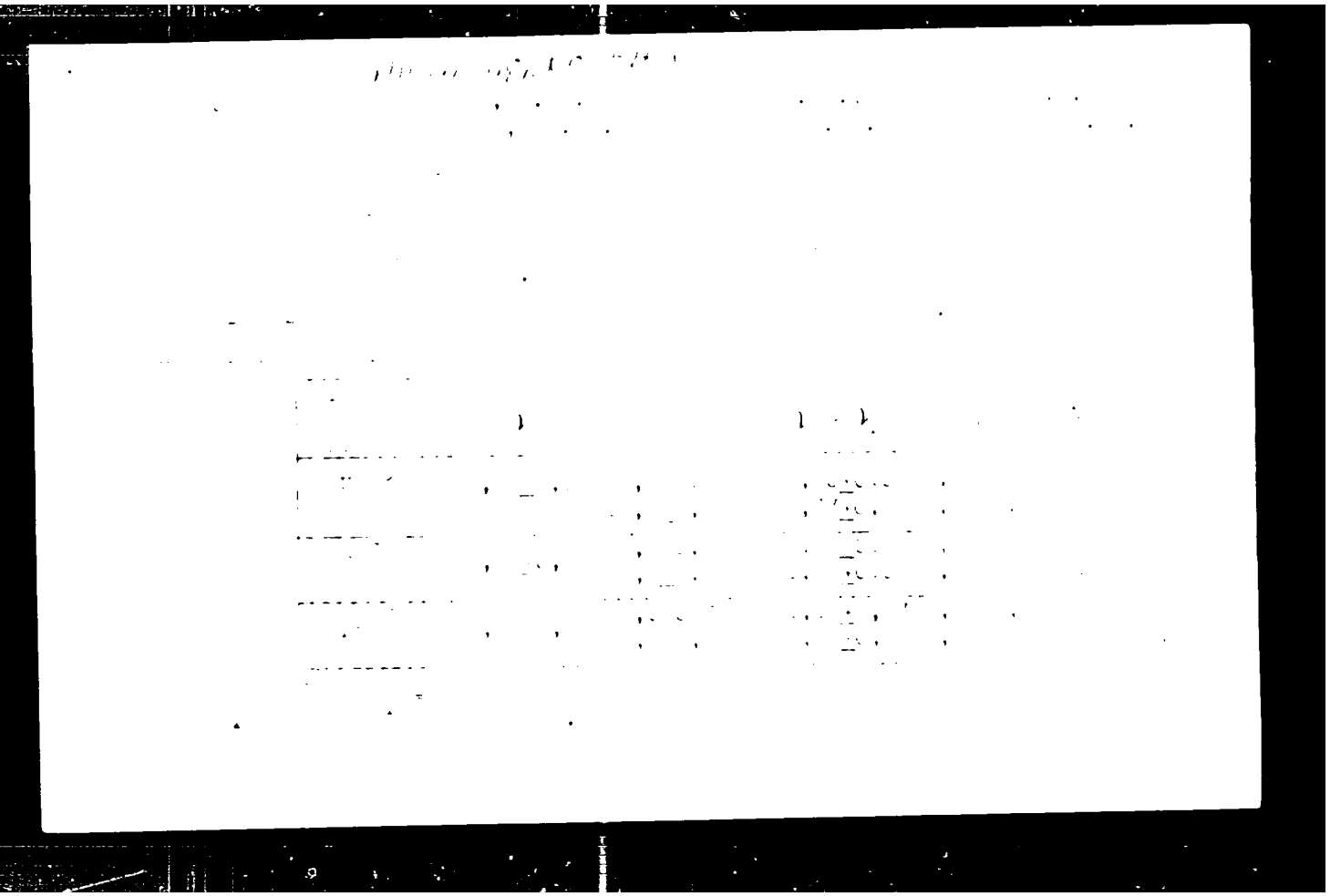

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1. Neutrons-Energy Measurement 2. Uranium 233 fission-Measurement 3. Uranium 235 fission-Measurement 4. Plutonium-239 fission-Measurement

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, K. N.

Bessstykvoyi rel'sovyi put'. [The jointless rail track]. Moskva, Gos. transp. zhel-dor, izd-vo, 1952. 87 p. diagrs.

DLC: TF 258. M'

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

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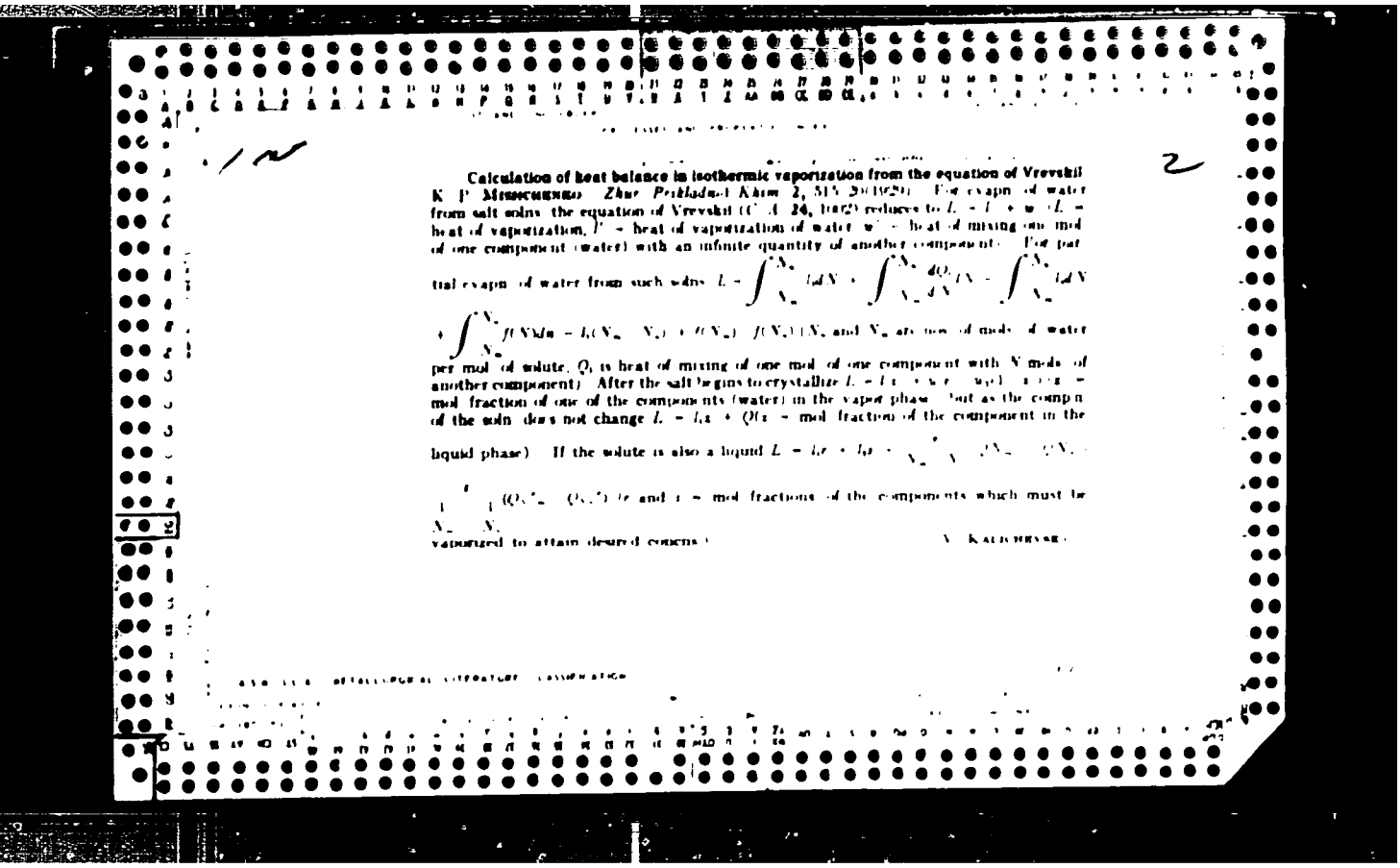
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6



Calculation of heat balance in isothermic vaporization from the equation of Vrevskii

K. P. Mishchenko. *Zhur. Prikladnoi Khim.* 2, 515-20(1929). For evapn. of water from salt solns. the equation of Vrevskii (C. A. 24, 1002) reduces to $L = l + w$ (L = heat of vaporization, l = heat of vaporization of water, w = heat of mixing one mol. of one component (water) with an infinite quantity of another component). For partial evapn. of water from such solns. $L = \int_{N_m}^{N_n} l_1 dN + \int_{N_m}^{N_n} \frac{dQ_1}{dN} dN = \int_{N_m}^{N_n} l_1 dN + \int_{N_m}^{N_n} f(N) dn = l_1(N_m - N_n) + f(N_m) - f(N_n)$ (N_n and N_m are nos. of mols. of water per mol. of solute, Q_1 is heat of mixing of one mol. of one component with N mols. of another component). After the salt begins to crystallize $L = l_1 x + w_1 x + w_2(1 - x)$ (x = mol. fraction of one of the components (water) in the vapor phase, but as the compn. of the soln. does not change $L = l_1 x + Q(x$ = mol. fraction of the component in the liquid phase). If the solute is also a liquid $L = l_1 r + l_2 s + \frac{r}{N_m - N_n}(Q_1 N_m - Q_1 N_n) + \frac{s}{N_m - N_n}(Q_2 N_m - Q_2 N_n)$ (r and s = mol. fractions of the components which must be vaporized to attain desired concns.).

V. Kalichevsky.

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Ca

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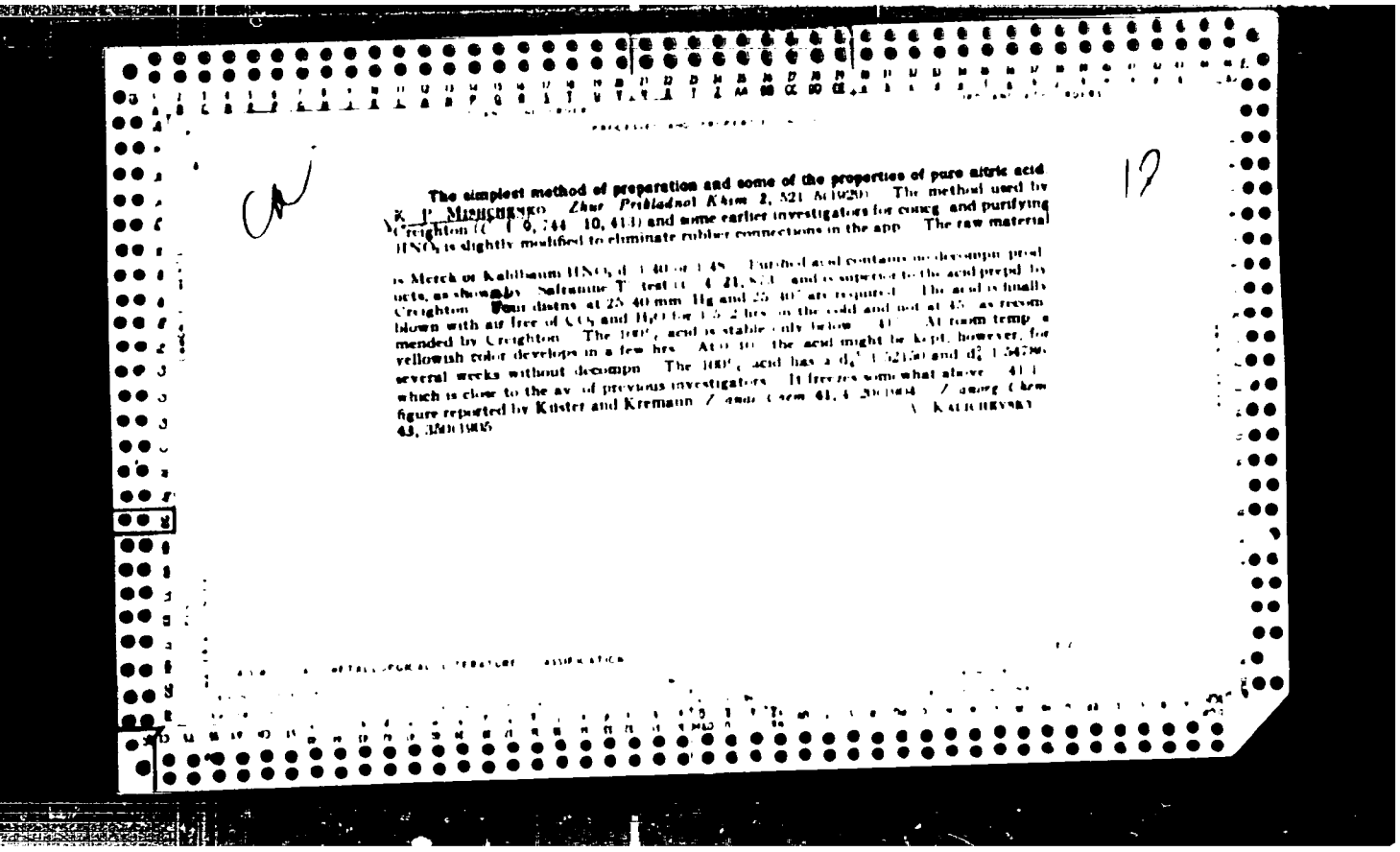

The simplest method of preparation and some of the properties of pure nitric acid. K. P. Mishchenko. *Zhur. Prikladnoi Khim.* 2, 521-5(1929). The method used by Creighton (C. I. 9, 744; 10, 413) and some earlier investigators for concg. and purifying HNO_3 is slightly modified to eliminate rubber connections in the app. The raw material is Merck or Kahlbaum HNO_3 d. 1.40 or 1.48. Purified acid contains no decompn. products, as shown by Safranine T test (C. 4, 21, 873) and is superior to the acid prepd. by Creighton. Four distns. at 25-40 mm. Hg and 25-40° are required. The acid is finally blown with air free of CO_2 and H_2O for 1.5-2 hrs. in the cold and not at 45° as recommended by Creighton. The 100% acid is stable only below 41°. At room temp. a yellowish color develops in a few hrs. At 0-10° the acid might be kept, however, for several weeks without decompn. The 100% acid has a d_4^{15} 1.52150 and d_4^{20} 1.54786, which is close to the av. of previous investigators. It freezes somewhat above 41°. A figure reported by Küster and Kremann (*Z. anal. Chem.* 41, 4, 20(1904); *Z. anorg. Chem.* 43, 350(1905). V. Kalichevsky

A.S.M. - A METALLURGICAL LITERATURE CLASSIFICATION

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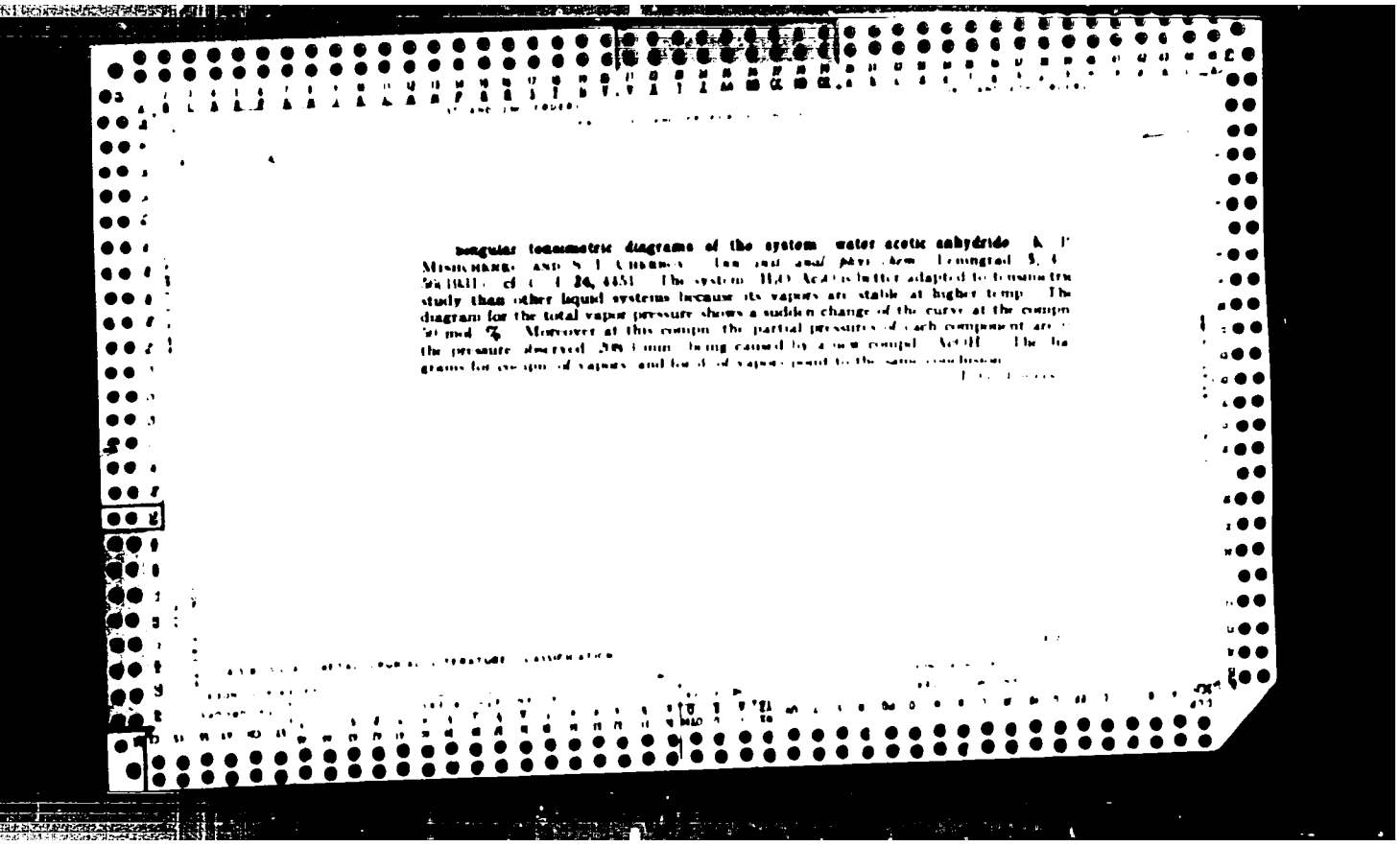

Singular tonsimetric diagrams of the system water acetic anhydride K. P. MISHCHENKO AND S. I. CHERBOV. *Tan inst anal phys chem* Leningrad 5, 4 (1931) cf C 1 24, 4451. The system H_2O-Ac_2O is better adapted to tonsimetric study than other liquid systems because its vapors are stable at higher temp. The diagram for the total vapor pressure shows a sudden change of the curve at the compn 50 mol %. Moreover at this compn the partial pressures of each component are the pressure observed 208 mm being caused by a new compd Ac_2OH. The diagrams for compn of vapors and for d of vapors point to the same conclusion.

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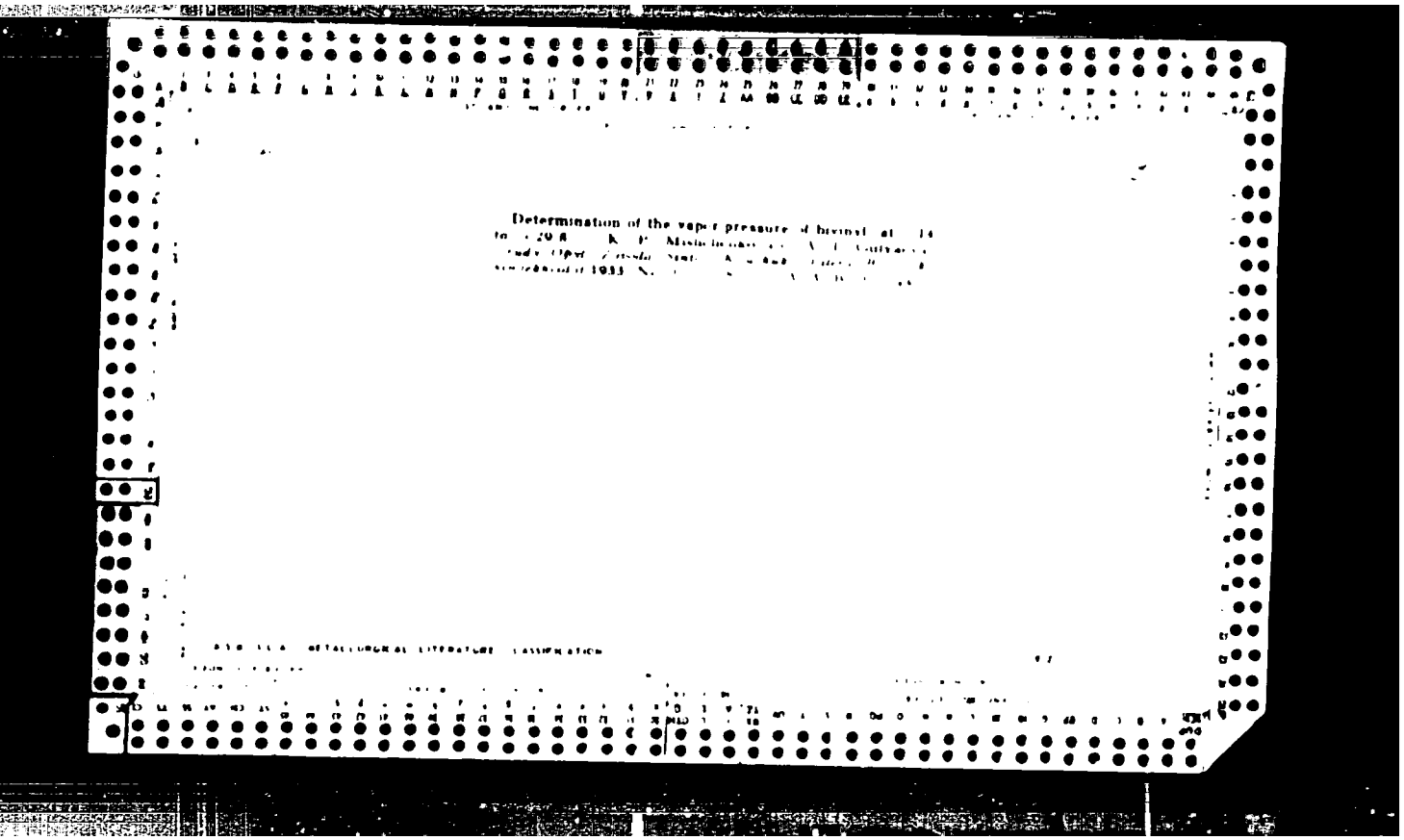

Determination of the vapor pressure of bismuth at

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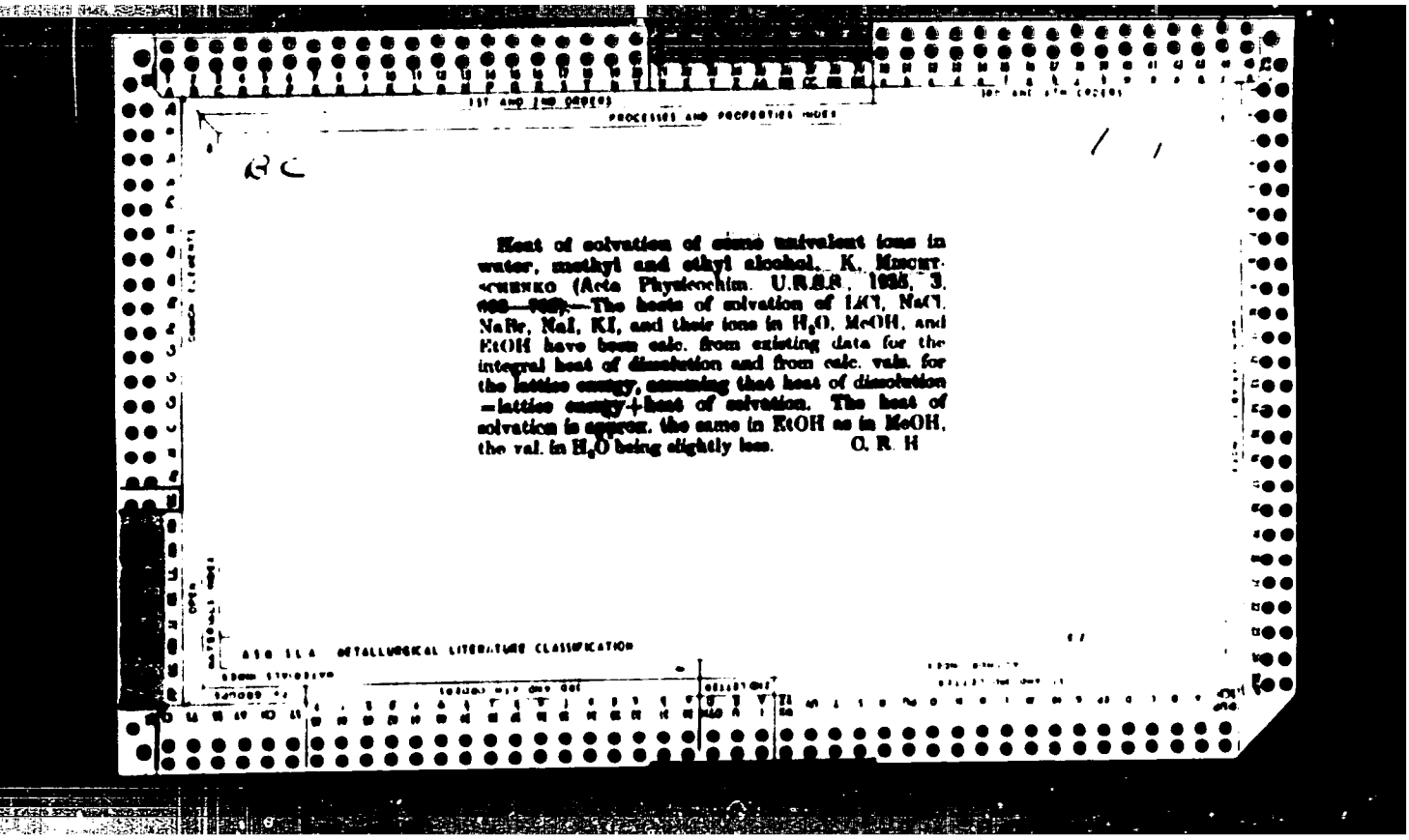

Heat of solvation of some univalent ions in water, methyl and ethyl alcohol. K. Mischtschenko (Acta Physicochim. U.R.S.S., 1935, 3, 699—702).—The heats of solvation of LiCl, NaCl, NaBr, NaI, KI, and their ions in H_2O, MeOH, and EtOH have been calc. from existing data for the integral heat of dissolution and from calc. vals. for the lattice energy, assuming that heat of dissolution = lattice energy + heat of solvation. The heat of solvation is approx. the same in EtOH as in MeOH, the val. in H_2O being slightly less. O. R. H

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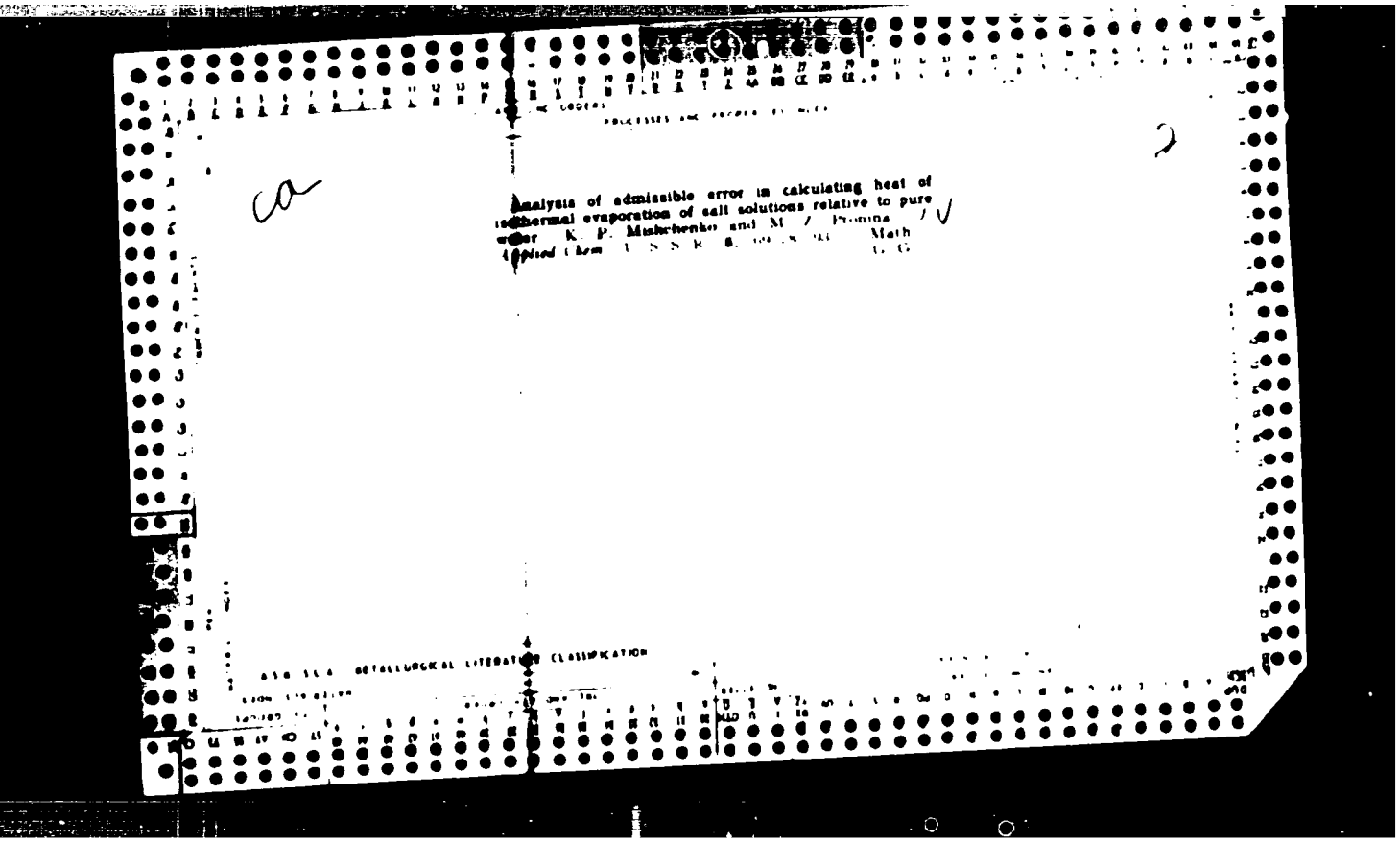

Analysis of admissible error in calculating heat of isothermal evaporation of salt solutions relative to pure water K. P. Mishchenko and M. Z. Pronina Math Applied Chem U.S.S.R. 8, [illegible] G. G.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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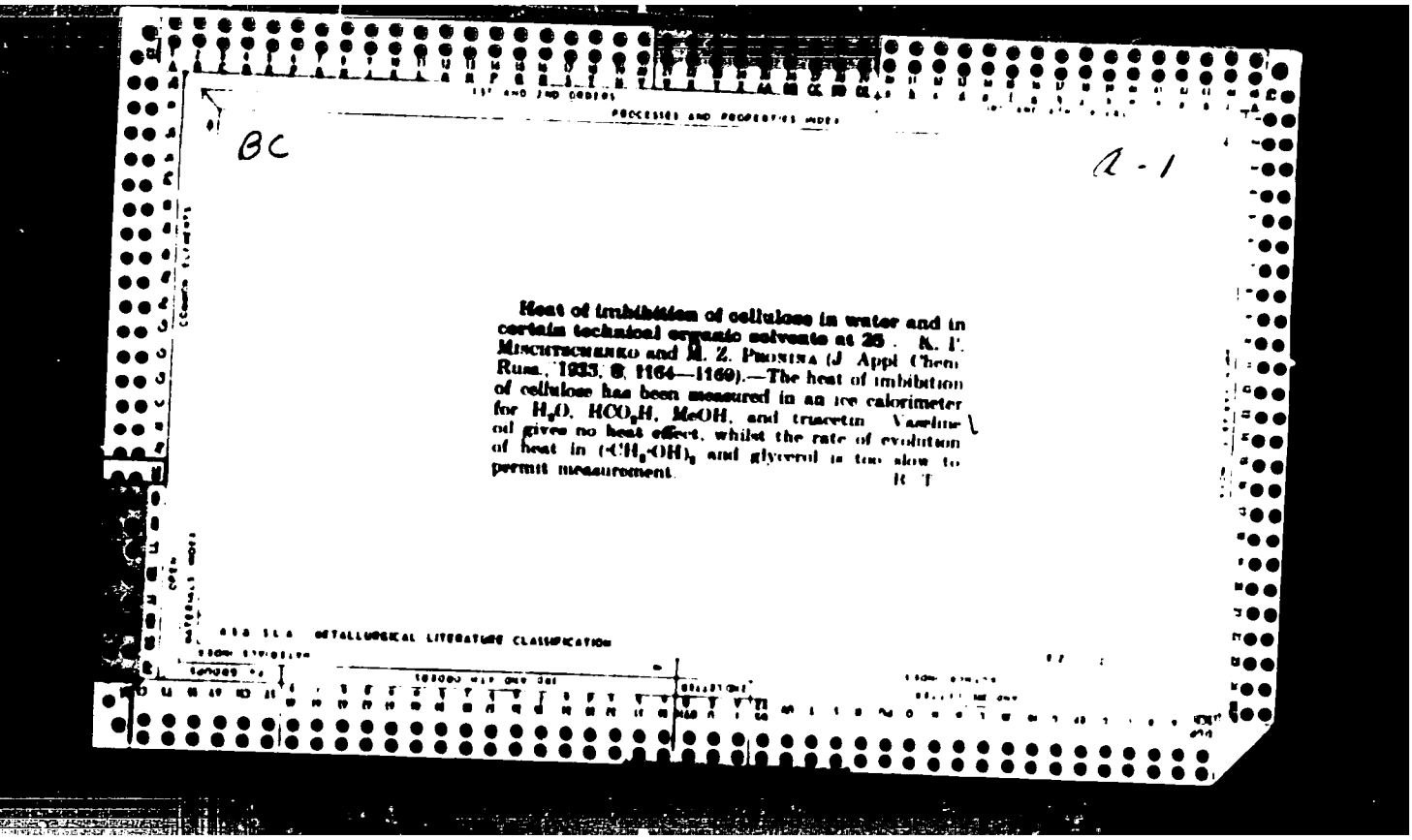

BC

A-1

Heat of imbibition of cellulose in water and in certain technical organic solvents at 25°. K. F. Mischtschenko and M. Z. Pronina (J Appl Chem Russ., 1935, 8, 1164—1169).—The heat of imbibition of cellulose has been measured in an ice calorimeter for H_2O, HCO_2H, MeOH, and triacetin. Vaseline oil gives no heat effect, whilst the rate of evolution of heat in $(CH_2OH)_2$ and glycerol is too slow to permit measurement. R. T.

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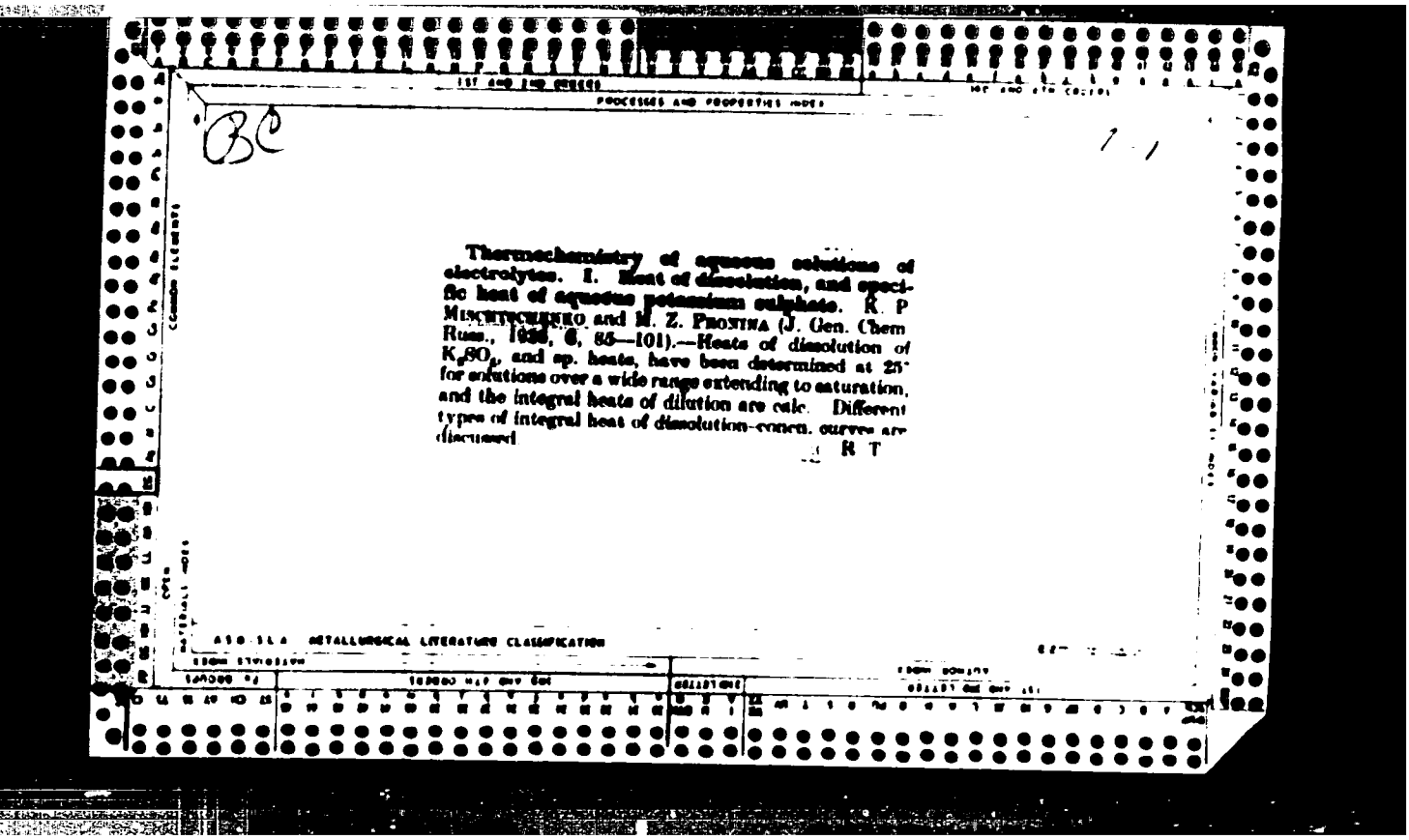

Thermochemistry of aqueous solutions of electrolytes. I. Heat of dissolution, and specific heat of aqueous potassium sulphate. R. P Mischtschenko and M. Z. Prostina (J. Gen. Chem Russ., 1935, 5, 85—101).—Heats of dissolution of K_2SO_4, and sp. heats, have been determined at 25° for solutions over a wide range extending to saturation, and the integral heats of dilution are calc. Different types of integral heat of dissolution-concn. curves are discussed.

R T

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

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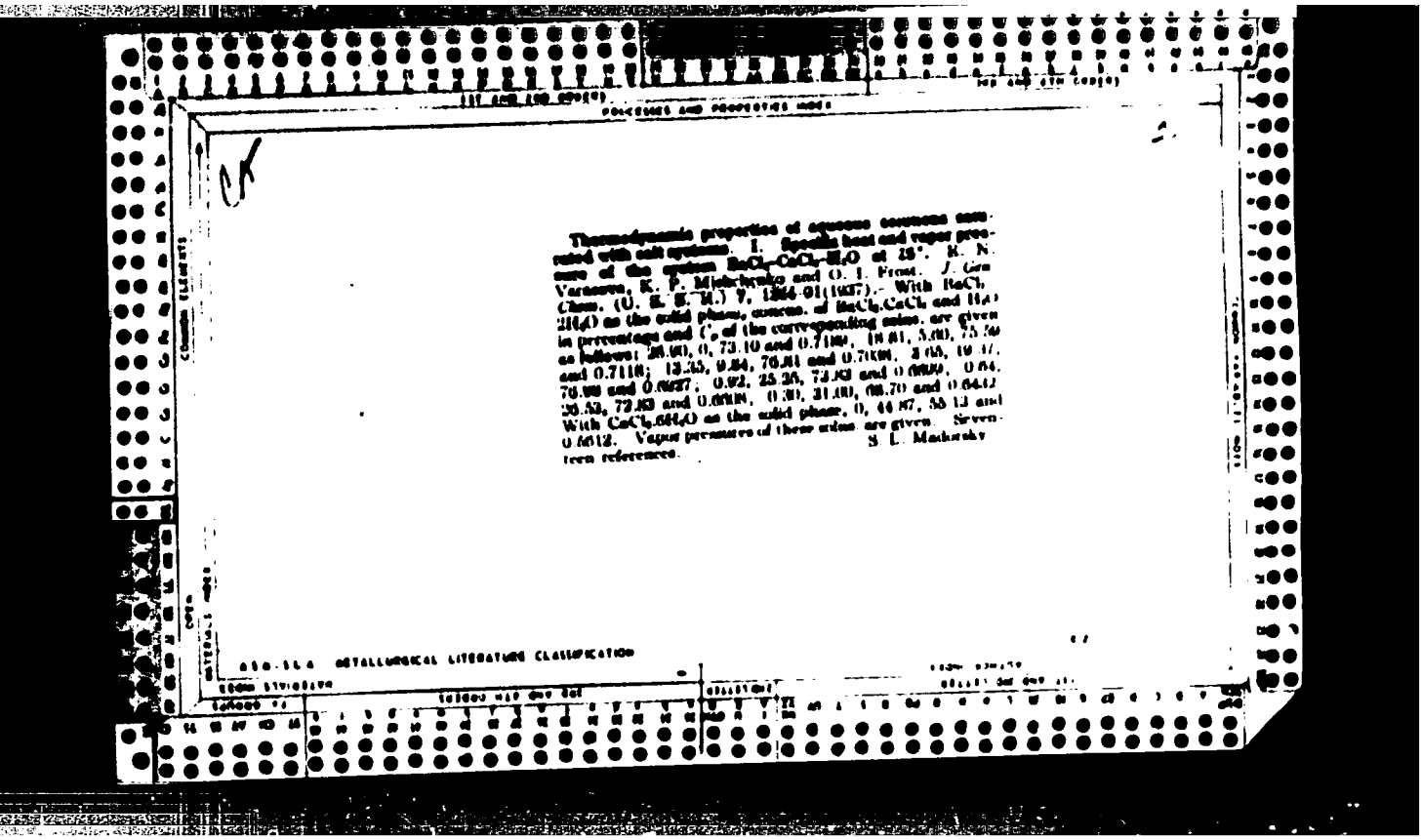

Thermodynamic properties of aqueous solutions saturated with salt systems. I. Specific heat and vapor pressure of the system $BaCl_2$-$CaCl_2$-H_2O at 25°. R. N. Varasova, K. P. Mishchenko and O. I. Frost. J. Gen. Chem. (U. S. S. R.) 7, 1364-91(1937).- With $BaCl_2$-$2H_2O$ as the solid phase, concns. of $BaCl_2$,$CaCl_2$ and H_2O in percentage and C_p of the corresponding solns. are given as follows: 26.90, 0, 73.10 and 0.7189; 18.81, 5.00, 75.50 and 0.7118; 13.35, 9.84, 76.81 and 0.7098; 3.65, 19.37, 76.98 and 0.6927; 0.92, 25.25, 73.83 and 0.6899; 0.64, 26.53, 72.83 and 0.6808; 0.30, 31.00, 68.70 and 0.6432. With $CaCl_2$,$6H_2O$ as the solid phase, 0, 44.87, 55.13 and 0.5612. Vapor pressures of these solns. are given. Seventeen references. S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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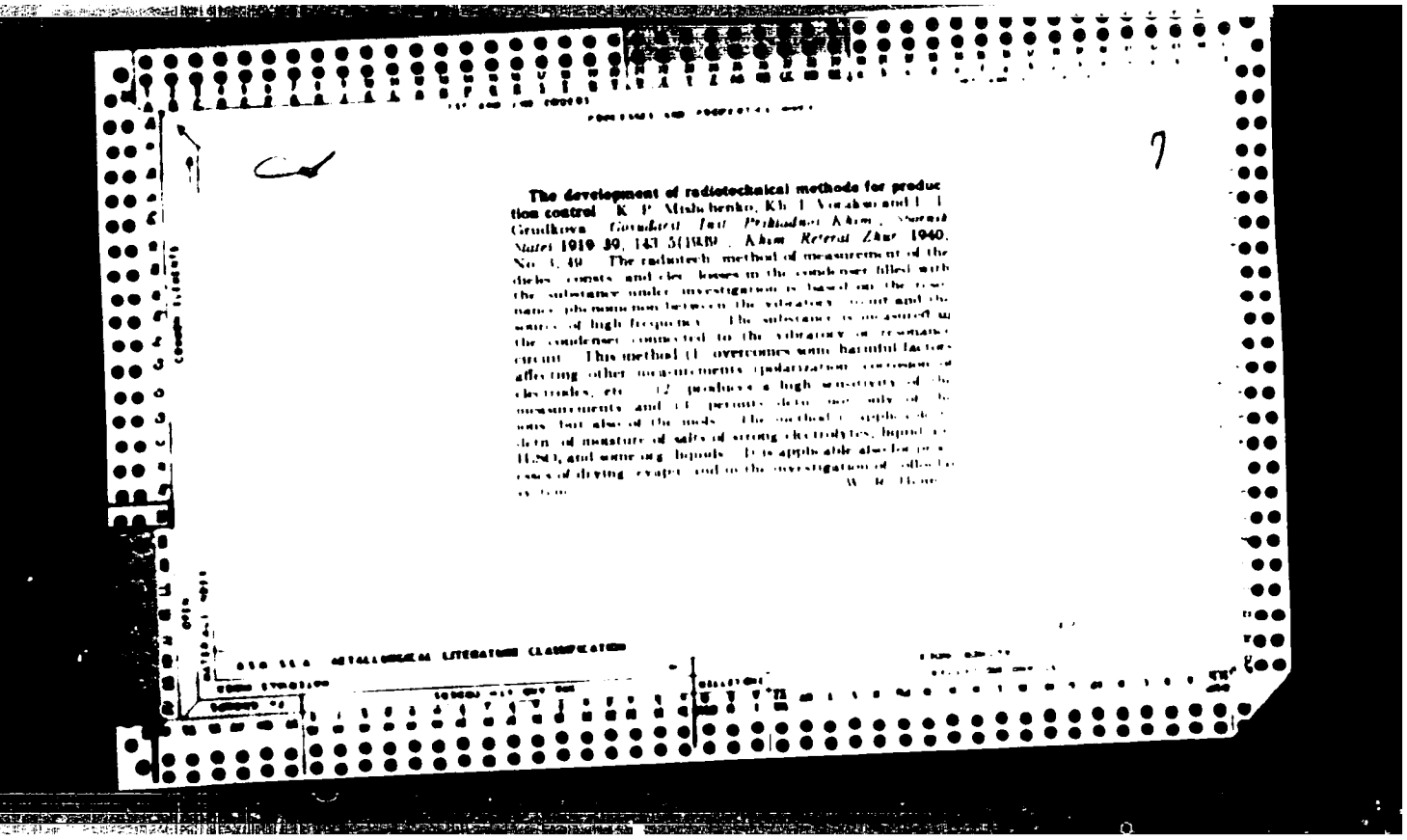

The development of radiotechnical methods for production control. K. P. Mishchenko, Kh. I. Voraksa and I. I. Grudkova. *Gosudarst. Inst. Prikladnoi Khim., Sbornik Statei* 1919, 39, 143-5(1939). *Khim. Referat. Zhur.* 1940, No. 3, 49. The radiotech. method of measurement of the dielec. consts. and elec. losses in the condenser filled with the substance under investigation is based on the resonance phenomenon between the vibratory circuit and the source of high frequency. The substance is measured in the condenser connected to the vibratory or resonance circuit. This method (1) overcomes some harmful factors affecting other measurements (polarization, corrosion of electrodes, etc.); (2) produces a high sensitivity of the measurements and (3) permits detn. not only of the ions but also of the mols. The method is applicable to detn. of moisture of salts of strong electrolytes, liquid H_2SO_4, and some org. liquids. It is applicable also for processes of drying, evapn. and in the investigation of colloidal systems.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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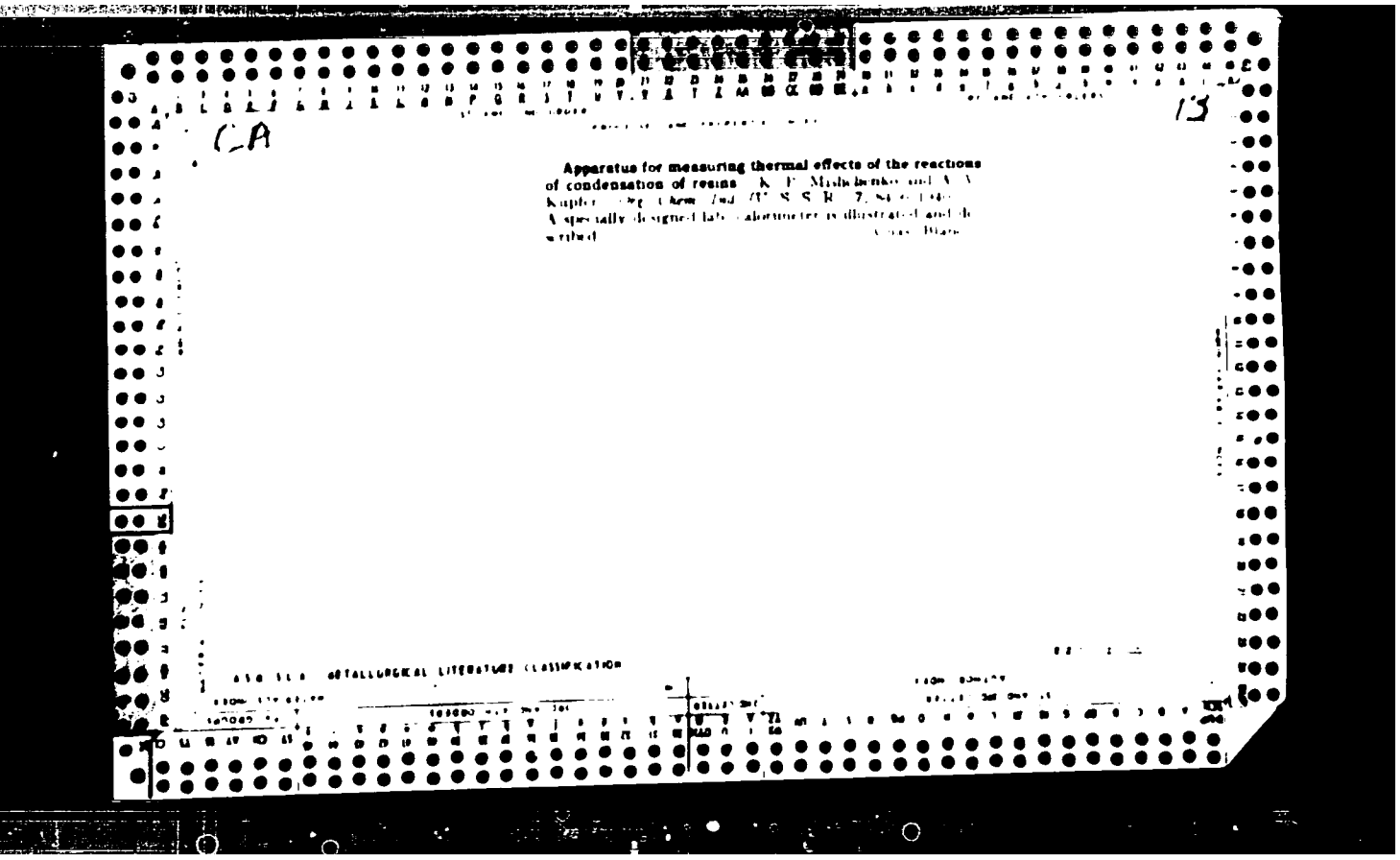

CA

13

Apparatus for measuring thermal effects of the reactions of condensation of resins K. P. Mishchenko and A. V. Kupfer. Org. Chem. Ind. (U. S. S. R.) 7, 84-6 (1940). A specially designed lab. calorimeter is illustrated and described. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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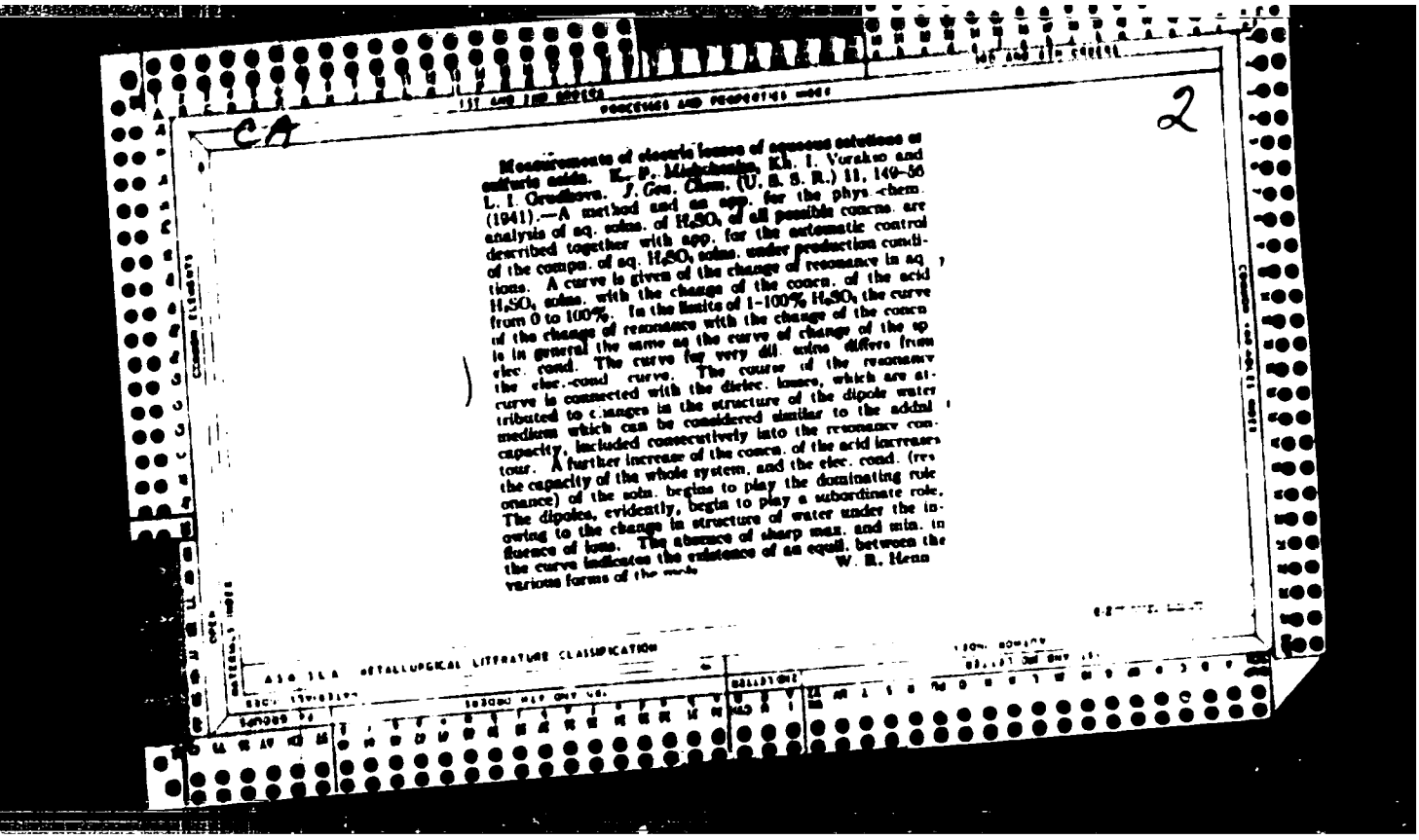
1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX



CA

2

Measurements of electric losses of aqueous solutions of sulfuric acids. K. P. Mishchenko, Kh. I. Vorakso and L. I. Grudkova. *J. Gen. Chem.* (U. S. S. R.) 11, 149-56 (1941).—A method and an app. for the phys.-chem. analysis of aq. solns. of H_2SO_4 of all possible concns. are described together with app. for the automatic control of the compn. of aq. H_2SO_4 solns. under production conditions. A curve is given of the change of resonance in aq. H_2SO_4 solns. with the change of the concn. of the acid from 0 to 100%. In the limits of 1-100% H_2SO_4 the curve of the change of resonance with the change of the concn. is in general the same as the curve of change of the sp. elec. cond. The curve for very dil. solns. differs from the elec.-cond. curve. The course of the resonance curve is connected with the dielec. losses, which are attributed to changes in the structure of the dipole water medium which can be considered similar to the addnl. capacity, included consecutively into the resonance contour. A further increase of the concn. of the acid increases the capacity of the whole system, and the elec. cond. (resonance) of the soln. begins to play the dominating role. The dipoles, evidently, begin to play a subordinate role, owing to the change in structure of water under the influence of ions. The absence of sharp max. and min. in the curve indicates the existence of an equil. between the various forms of the mole.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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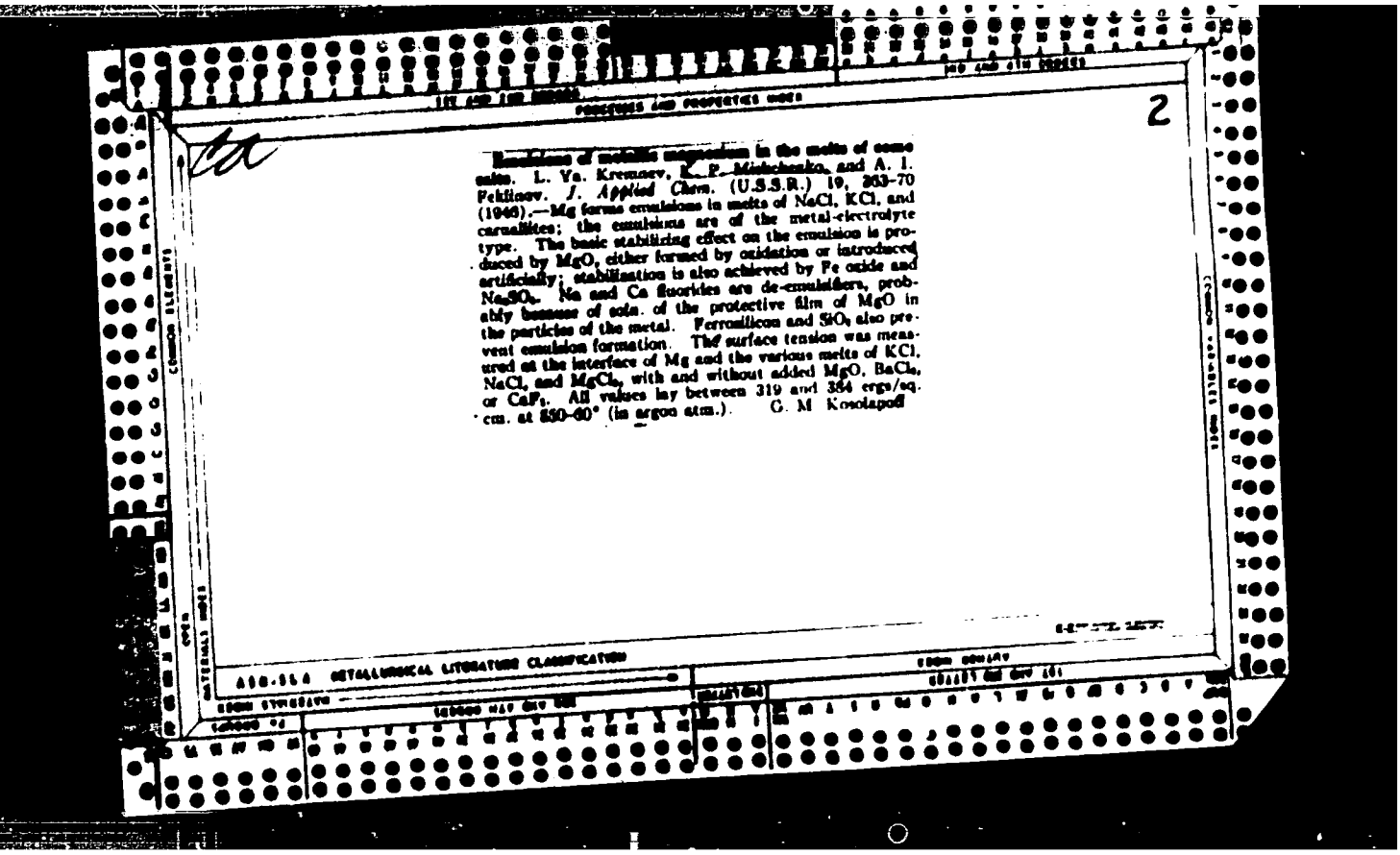

2

Emulsions of molten magnesium in the melts of some salts. L. Ya. Kremnev, K. P. Mishchenko, and A. I. Pekliasov. *J. Applied Chem.* (U.S.S.R.) 19, 263-70 (1946).—Mg forms emulsions in melts of NaCl, KCl, and carnallites; the emulsions are of the metal-electrolyte type. The basic stabilizing effect on the emulsion is produced by MgO, either formed by oxidation or introduced artificially; stabilization is also achieved by Fe oxide and Na_2SO_4. Na and Ca fluorides are de-emulsifiers, probably because of soln. of the protective film of MgO in the particles of the metal. Ferrosilicon and SiO_2 also prevent emulsion formation. The surface tension was measured at the interface of Mg and the various melts of KCl, NaCl, and $MgCl_2$, with and without added MgO, $BaCl_2$, or CaF_2. All values lay between 319 and 384 ergs/sq. cm. at 650-80° (in argon atm.). G. M. Kosolapoff

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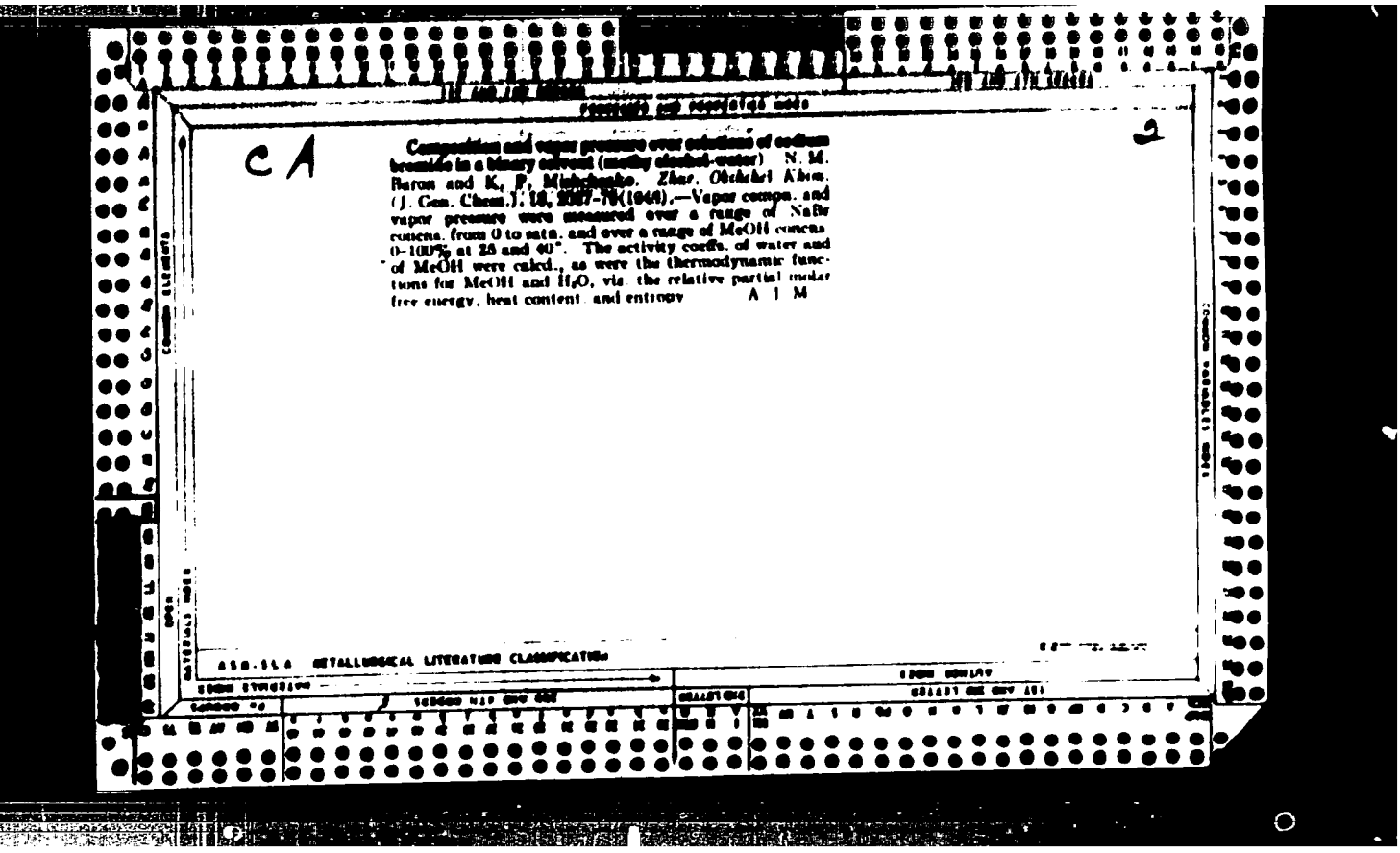

CA

Compositions and vapor pressures over solutions of sodium bromide in a binary solvent (methyl alcohol-water) N. M. Baron and K. P. Mishchenko. *Zhur. Obshchei Khim. (J. Gen. Chem.)* 18, 2067-76(1948).—Vapor compn. and vapor pressure were measured over a range of NaBr concns. from 0 to satn. and over a range of MeOH concns. 0–100% at 25 and 40°. The activity coeffs. of water and of MeOH were calcd., as were the thermodynamic functions for MeOH and H_2O, viz. the relative partial molar free energy, heat content, and entropy A I M

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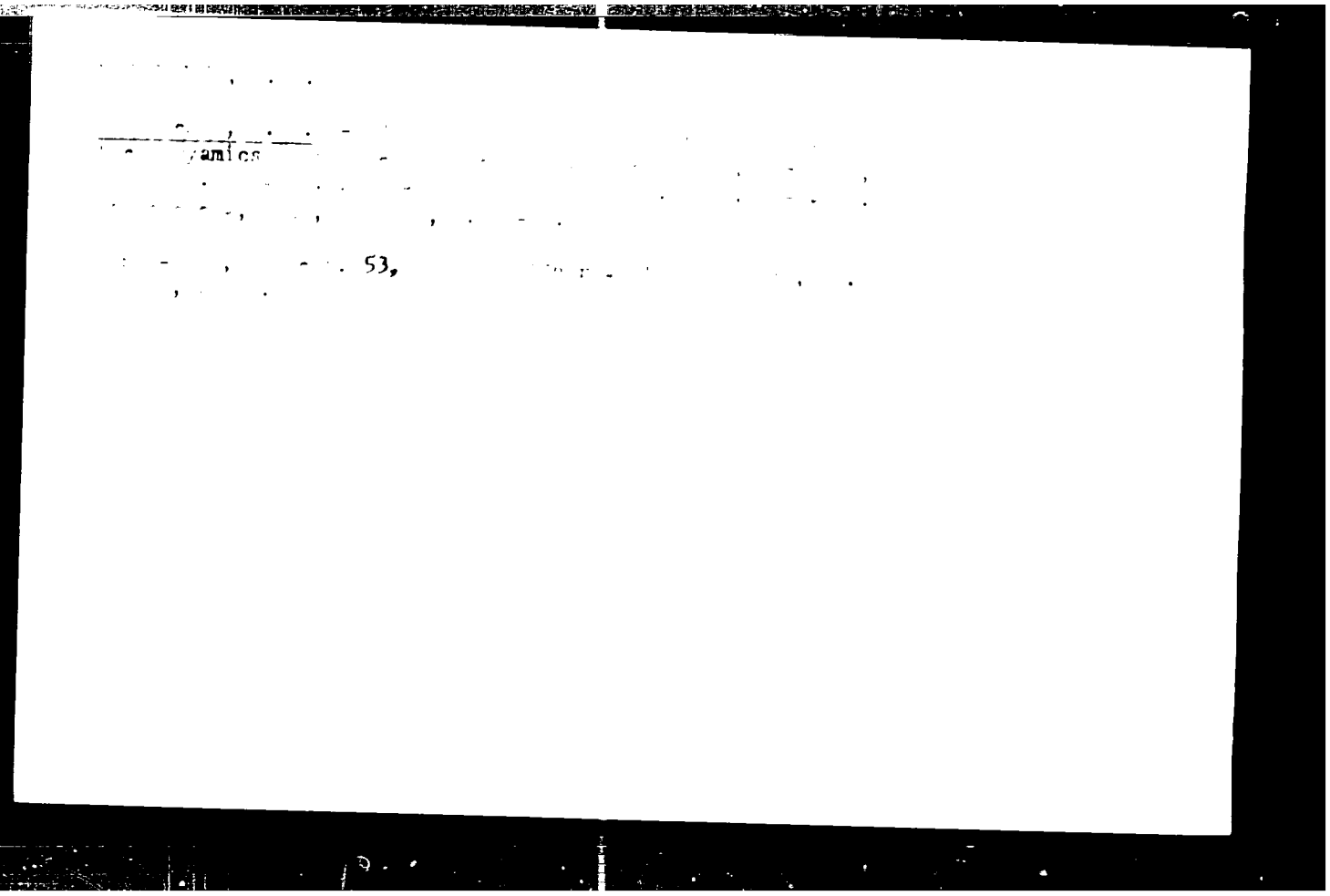

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DERTABUBAM, B.V.; MISHCHENKO, K.P.

Rate of crystallization for gypsum from aqueous solutions of certain salts. Probl.kin.i kat. 7:123-136 '49. (MLRA 9:9)

1.Laboratoriya mineral'nykh soley Gosudarstvennogo Ordena Trudovogo Krasnogo Znameni Instituta prikladnoy khimii.
(Crystallization) (Gypsum)

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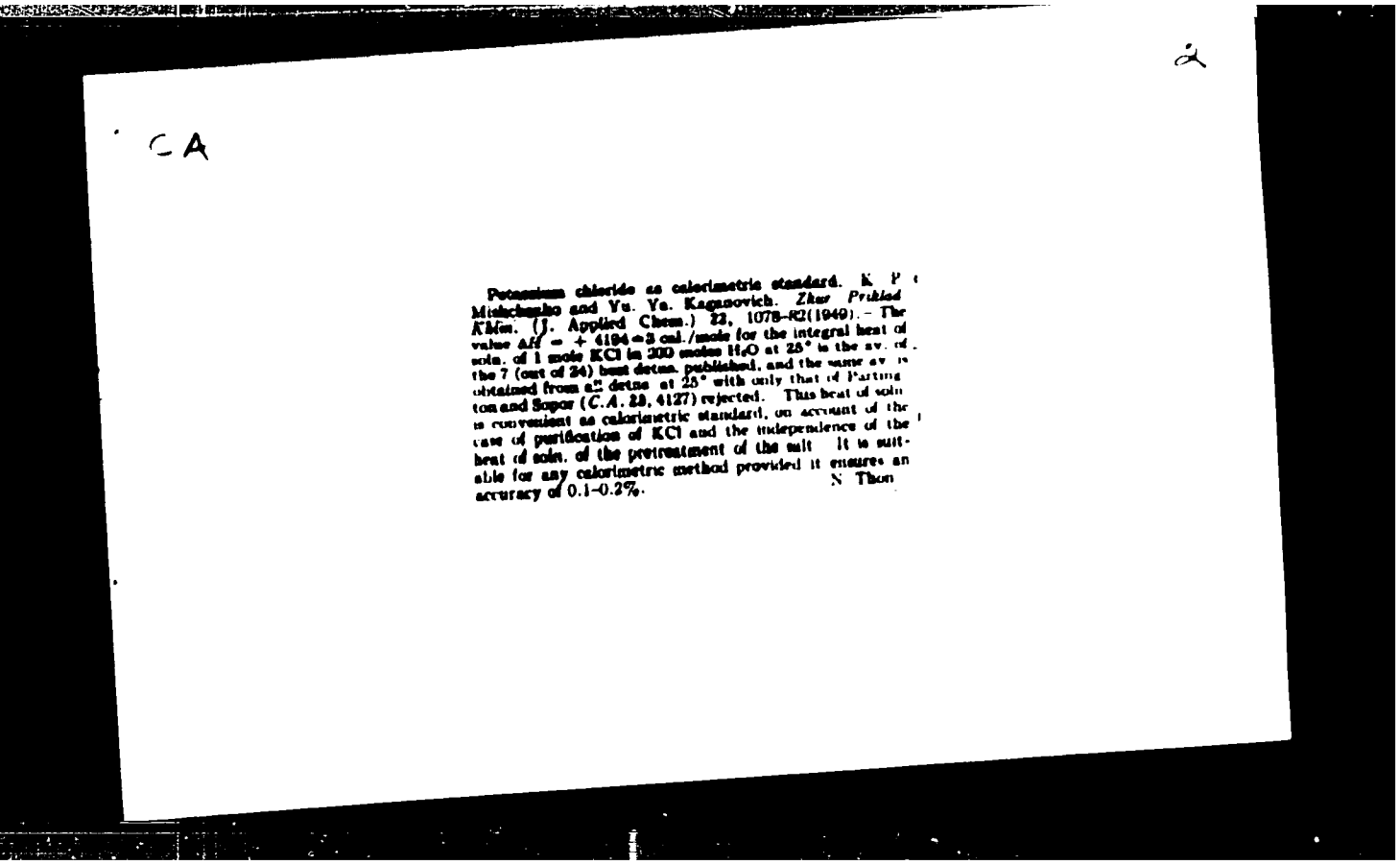

CA

2

Potassium chloride as calorimetric standard. K. P. Mishchenko and Yu. Ya. Kagramovich. *Zhur. Prikład Khim.* (J. Applied Chem.) 22, 1078–82(1949).—The value $\Delta H = +4194 \pm 3$ cal./mole for the integral heat of soln. of 1 mole KCl in 200 moles H_2O at 25° is the av. of the 7 (out of 24) best detns. published, and the same av. is obtained from all detns. at 25° with only that of Parting ton and Sopor (*C.A.* 23, 4127) rejected. This heat of soln. is convenient as calorimetric standard, on account of the ease of purification of KCl and the independence of the heat of soln. of the pretreatment of the salt. It is suitable for any calorimetric method provided it ensures an accuracy of 0.1–0.2%. N. Thon

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KIREYEV, Valentin Aleksandrovich; MISHCHENKO, K.P., prof., retsenzent; TSVETKOVA, N.F., red.; ZAZUL'SKAYA, V.F., tekhn.red.; POGUDKIN, P.V., tekhn.red.

[Short course in physical chemistry] Kratkii kurs fizicheskoi khimii. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1950. 599 p. (MIRA 12:4)
(Chemistry, Physical and theoretical)

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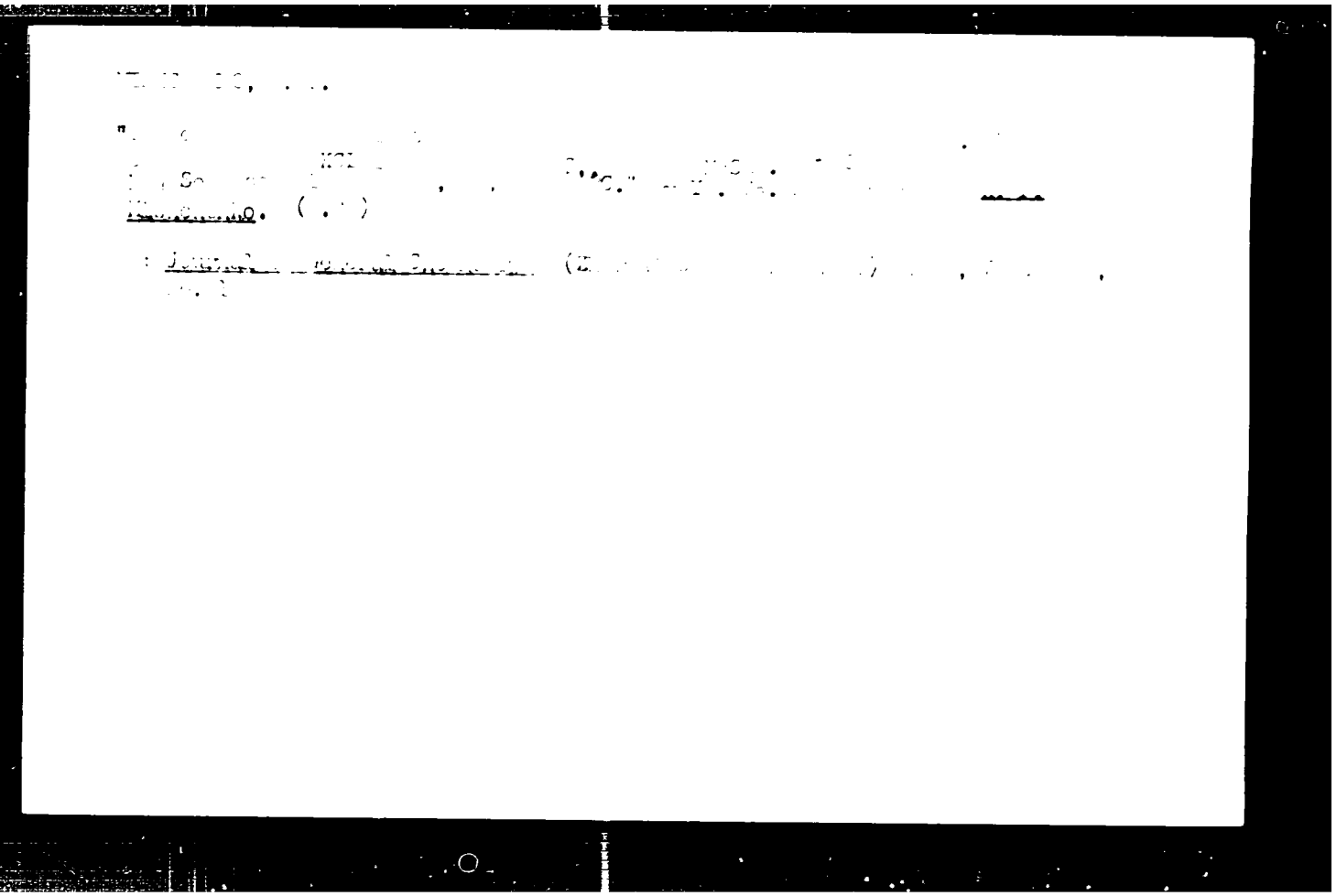

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USSR

The limit of full solvation and the structure of the concentrated solutions of electrolytes. K. P. Mishchenko and A. M. Sukhotin (Leningrad Leningrad Technol. Inst.). *Tsvet. Sektora Platiny i Drug. Blagorod. Metal., Akad. Nauk. S.S.S.R., Inst. Obshchei i Neorg. Khim.* No. 26, 203-7 (1961).—For 31 electrolytes the limit of full solvation (LFS) was found in concn. of 4.63 to 2.14 moles/1000 g. H_2O. The distance between the centers of the ions in solns. at LFS was calcd. from the d. of these solns. (r') and from the models of the solns. at LFS (r^0). For RbI these two values agreed completely, $r' = r^0 = 8.15$, and the greatest discrepancy was found for NaI, $r' = 7.70$, $r^0 = 7.16$. Also calcd. was the exothermic effect, when ions are brought from $m = 0$ to LFS; three classes of salts could be distinguished this way. For Li salts and KF the effect was +45, for Na salts + 42, and for K and Rb salts +39 kcal./mole. A general equation is furnished: $\Delta F_{hyd} = [A^+ + E^+_{ind.} + E^+_{disp.} + C^+] + [A^- + E^-_{ind.} + E^-_{disp.} + C^-] + (P_1 + P_2 + P_3) + (q_1 + q_2) + E^+_{repuls.}$, where A^+ = the effect of electrostatic action of the ions on the dipoles, $E^+_{ind.}$ = effect of mutual polarization, $E^+_{disp.}$ = dispersion interaction, C^+ = effect of mutual segn. of the mols. of water in the solvate film, P_1 = the effect of interaction of a given ion with the dipoles of the solvated film of the nearest 6 attached ions of the opposite sign, P_2 the same for the next ions, P_3 = same for the nearest 12 ions of identical sign, q_1 = the mutual effect of the solvate films of a given ion with the nearest dipoles of the solvated films of the attached 6 ions of the opposite sign, q_2 = same for the nearest 12 ions of the same sign. $E^+_{repuls.}$ is the sum of the effects of the mutual repulsion between the ions and the water mols. The calcd. values (according to this formula) for ΔF_{hyd} for KCl are −120 and for KBr −123, which compares favorably with the experimentally detd. values of −119 and −113 kcal./mole, resp. Werner Jacobson

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1. KAGANOVICH, Yu. Ya. and MISHCHENKO, K. P.

2. USSR (600)

4. Potassium Chloride

7. Thermal coefficients for the heat of solution of electrolytes. Heats of solution for KCl in solutions of $MgCl_2$ and $MgSO_4$ at 50° and 66°. Dokl. AN SSSR 87 No. 1, 1952.

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

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISCHENKO, K.P.; PONOMAREVA, A.M.

Heat capacities of individual ions in aqueous solutions at infinite dilution. Zhur.Fiz.Khim. 26, 998-1006 '52. (MLRA 5 9)
(CA 47 no.13:6240 '53)

1 Lensovet tekhnologicheskogo instituta, Leningrad.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, Z.P.

Solvation of ions in electrolyte solutions. I. Chemical heats of solvation of individual ions and approximate calculation of the energy of solvation. Zhur. Fiz. Khim. 26, 1736-60 '52. (MLR, 6/2)
(CA 47 no.13:6225 '53)

1. Lensovet tekhnologicheskogo instituta, Leningrad.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, K.P.

Solvation of ions in solutions of electrolytes. II. Calculation of the chemical energy of solvation taking into account the individual effects that comprise it. K. P. Mishchenko and A. M. Sukhotin (Lensovet Technol. Inst., Leningrad). *Zhur. Fiz. Khim.* 27, 25–40(1953); cf. *C.A.* 49, 2155i.—The energy of solvation was calcd. for the ions of the alkali metals and for the halogen ions in aq. soln. by means of the individual effects including certain details that have not been considered previously. The known solvation coördination nos. of the ions, the asymmetry of the dipole of H_2O, β = 0.25 A., and the theoretically detd. "effective" radius of the H_2O mol. r_0 = 1.03 A. were used in the calcn. The calcd. values of the solvation energies differ from exptl. values by 0–10%, which is considerably less than the deviation of earlier calcns. This indicates that either the conception of the solvation process must be changed radically or the value r_0 = 1.03 A., which could not be derived theoretically, must be established by a theoretical treatment. J. Rovtar Leach

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, K. P.

Chemical Abstracts
May 25, 1954
General and Physical
Chemistry

Thermodynamic characteristics of nitric acid. K. P. Mishchenko and A. A. Ravdel (Lensoviet Technol. Inst., Leningrad). *Zhur. Prikład. Khim.* 26, 343-4 (1953). — Standard reference books (Russian) continue to publish wrong data for HNO_3. Cor. values are compiled using all of the data given by Forsythe and Giauque (*C.A.* 36, 1233[3]) except those for the free energy of formation from the elements. The free-energy values cor. for "obvious errors" yield the following values, in cal per mole, at 298.16°K. and 1 atm: HNO_3 (*l*), $\Delta F^\circ = -19,032$; HNO_3 (*g*), $\Delta F^\circ = -17,556$. I. Bencowitz

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MISHCHENKO, K. P.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 147 - 12/21

Authors : Mishchenko, K. P., and Kvyat, E. I.

Title : Solvation of ions in electrolyte solutions. Part 3.- Drop in potential on the aqueous solution - gaseous phase boundary.

Periodical : Zhur. fiz. khim. 8, 1451-1457, Aug 1954

Abstract : The real free-energies of solvation of numerous ions in aqueous solutions were computed on the basis of a critical analysis. By comparing the real free solvation-energies with the chemical free solvation-energies, the authors calculated the drop in potential on the aqueous solution, gaseous phase boundary, which is - 0.3±0.1 v. Thirty-two references: 12-USSR; 12-USA; 6-German; 1-Australian and 1-French (1919-1953). Tables.

Institution : The Lensoviet Technological Institute, Leningrad

Submitted : November 13, 1953

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

MISHCHENKO, K. P.

USSR

An interface layer in cuprous oxide. A. T. Andrievskii and M. T. Mishchenko. *Zhur. Tekh. Fiz.* 24, 818–25 (1954).—When Cu is oxidized to Cu_2O at 1000°, a thin interface is formed between the Cu and Cu_2O contg. the impurities in the original Cu sample. This layer has a porous structure and is composed of fine grains. If the Cu plate is completely oxidized from both sides an interface layer will remain at the boundary between two Cu_2O layers. Further heating will destroy this layer partially by recrystn. of Cu_2O. Upon heating a 0.25-mm. thick Cu plate for 48 hrs. to 1000° the whole plate is transformed into large prismatic Cu_2O single crystals. The impurities travel to the edge of the sample and the interface layer behaves as if it were liquid at 1000°. The elec. cond. of the contact-layer material is higher than the elec. cond. of Cu_2O. S. P.

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Mishchenko, K. P.

1

A simple microcalorimeter for studies in nonaqueous solutions. K. P. Mishchenko, M. Z. Frenina, and A. M. Sukhotin (Leningrad Technological Inst., Leningrad). *Zhur. Prikład. Khim.* 37, 1003-6(1964).—The calorimeter consists of a small (20 ml.) test tube carrying the desired solvent and ampuls for the test substances which can be directly crushed into soln. The test tube is placed within a narrow-neck Dewar, filled with CCl_4 and H_2O, and closed with a tight stopper carrying a measuring capillary, which can be used to det. the temp. changes within the app. by the height of the sq. column in the capillary. The app. is immersed in the usual thermostatic bath for the expts. Accuracy of 0.5–1% is obtained. O. M. Kondepoli

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MISHCHENKO, K. P.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 27/44

Authors : Mishchenko, K. P., and Sukhotin, A. M.

Title : Integral heats of solution of certain alkali halide salts in anhydrous solvents at 25°.

Periodical : Dok. AN SSSR 98/1, 103-106, Sep 1, 1954

Abstract : The integral heat of solution of NaJ in acetone, methylethyl ketone, allyl alcohol, furfurole, pyridine, piperidine, acetonitrile and the heats of solution of NaCl, NaBr, NaJ and KJ in formamide, were investigated at 25° with the aid of a special micro-calorimeter. The results obtained are given in tables. The accuracy of the obtained integral heats of solution was established at ~ 1%. Eleven references: 2-USSR; 6-USA; 1-French and 1-German (1888-1954). Tables; graphs.

Institution : The Lensoviet Technological Institute, Leningrad

Presented by : Academician A. N. Frumkin, April 26, 1954

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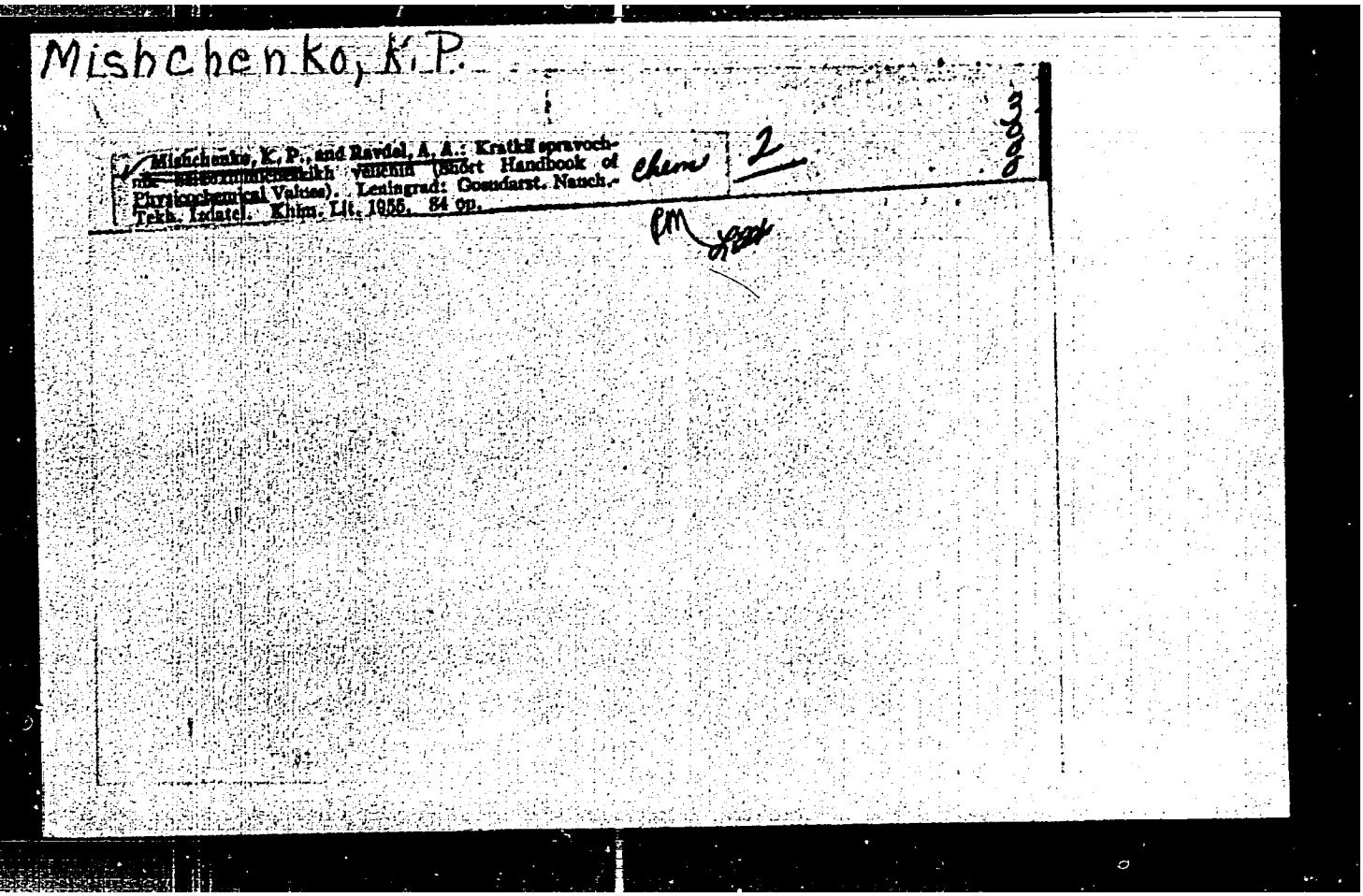

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MISHCHENKO, K. P.

5

2

A thermodynamic investigation of aqueous solutions of electrolytes. IV. Thermochemistry of aqueous solutions of ammonium chloride. K. P. Mishchenko and A. M. Ponomareva (Lensovet Technol. Inst., Leningrad). *Zhur. Obshchei Khim.* 26, 1296-310(1956); cf. *C.A.* 47, 5241h.—The integral heats of soln. of NH_4Cl in water were measured at 25, 50, and 75° in concn. ranges from 0.01 molal to satn. Heat capacities were measured at the same temp. from 0.02 molal to satn. The partial molal thermodynamic quantities were calcd. The temp. coeff. of heat capacity, dC_p/dt, is approx. 0.00017 cal./g. degree². Thermochem. classification of electrolytes can be based on the temp. zone of transition from one type of isotherm to another. In NH_4Cl solns. the ions are weakly solvated, and at lower temp. the isothermic effect of the gradual approach of ions is dominant. With increase in temp. the energy of interionic interaction does not change much, but the endothermic effects of desolvation change. Thus the slope of the isotherms decreases and at high enough temp. changes sign.

Ariadna S. Ocone

Chem

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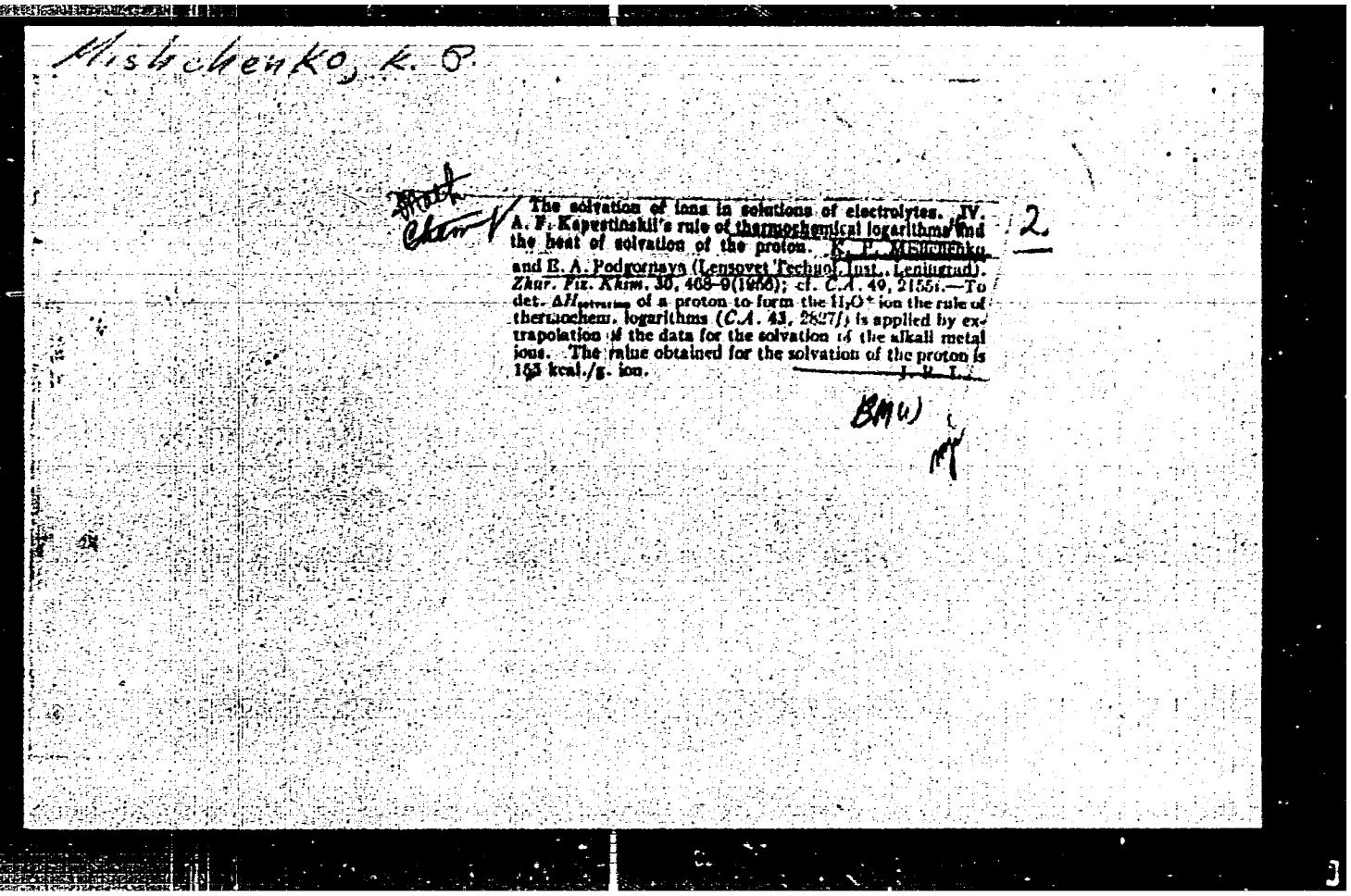

Mishchenko, K. P.

Phys Chem

The solvation of ions in solutions of electrolytes. IV. A. F. Kapustinskii's rule of thermochemical logarithms and the heat of solvation of the proton. K. P. Mishchenko and E. A. Podgornaya (Lensovet Technol. Inst., Leningrad). *Zhur. Fiz. Khim.* 30, 468–9(1956); cf. *C.A.* 49, 2155i.—To det. $\Delta H_{solvation}$ of a proton to form the H_3O^+ ion the rule of thermochem. logarithms (*C.A.* 43, 2827f) is applied by extrapolation of the data for the solvation of the alkali metal ions. The value obtained for the solvation of the proton is 153 kcal./g. ion. J. R. L.

BMW

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5(4) PHASE I BOOK EXPLOITATION SOV/1428

Baron, N.M., Ye. D. Volova, I.M. Yegorov, E.I. Kvyat, K.P. Mishchenko, A.M. Ponomarev, A.A.Ravdel', and G.I. Semenov

Prakticheskiye raboty po fizicheskoy khimii (Practical Work in Physical Chemistry) Leningrad, Goskhimizdat, 1957. 263 p. 11,000 copies printed.

Eds. (Title page): K.P. Mishchenko, Professor, and A.A. Ravdel', Docent; Ed. (Inside book): N.K. Lobina; Tech. Ed.: Ye. Ya. Erlikh.

PURPOSE: This textbook was approved by the Ministry of Higher Education as a manual for students of vuzes specializing in chemistry.

COVERAGE: The text covers the theoretical and practical aspects of experimental physical chemistry. It is the aim of the authors to aid the student in his laboratory work by preceding each experiment with a theoretical introduction, a description of the apparatus, and the order of the determination and computation of results. Much attention is given to the fundamentals of chemical thermodynamics, reaction kinetics, and equilibrium. The basic techniques of

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USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria.
Physical-Chemical Analysis, Phase Transitions.

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3754.

Author : I.Ye. Flis, K.Yu. Salnis, K.P. Mishchenko.
Inst :
Title : Thermochemical Study of Interaction of Chlorine and Hydrogen Peroxides.

Orig Pub: Zh. neorgan. khimii, 1957, 2, No 7, 1471-1473.

Abstract: The thermal effect of the interaction of ClO_2 with H_2O_2 with the formation of chlorites was measured at 10 to 35°. H_2O_2 dissociates in an alkaline medium with the formation of HO_2^- perhydroxyl ion and the reaction proceeds according to the mechanism $2ClO_2$ (solution) + H_2O^- + OH^- = $2ClO_2^-$ + H_2O (liquid) + O_2 (gas). LogK = -98840/T - 1669logT + 1.27T + 4099.8 was derived based on experimental data. The enthalpy, isobaric potential and entropy changes at this reaction at

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SALNIS, K.Yu.; MISHCHENKO, K.P.; FLIS, I.Ye.

Thermodynamics of the dissociation of hydrogen peroxide in aqueous solutions. Zhur.neorg.khim. 2 no.9:1985-1989 S '57. (MIRA 10:12)

1.Leningradskiy tekhnologicheskiy institut.
(Dissociation) (Hydrogen peroxide)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134620008-6

TUMANOVA, T.A.; MISCHENKO, K.P.; FLIS, I.Ye.

Dissociation of hydrogen sulfide in aqueous solutions at different temperatures. Zhur.neorg.khim. 2 no.9:1990-1997 S '57. (MIRA 10:12)

1.Leningrad nauchno-issledovatel'skiy institut po pererabotke nefti i Leningradskiy tekhnologicheskiy institut, kafedra fizicheskoy i kolloidnoy khimii.
(Dissociation) (Hydrogen sulfide)

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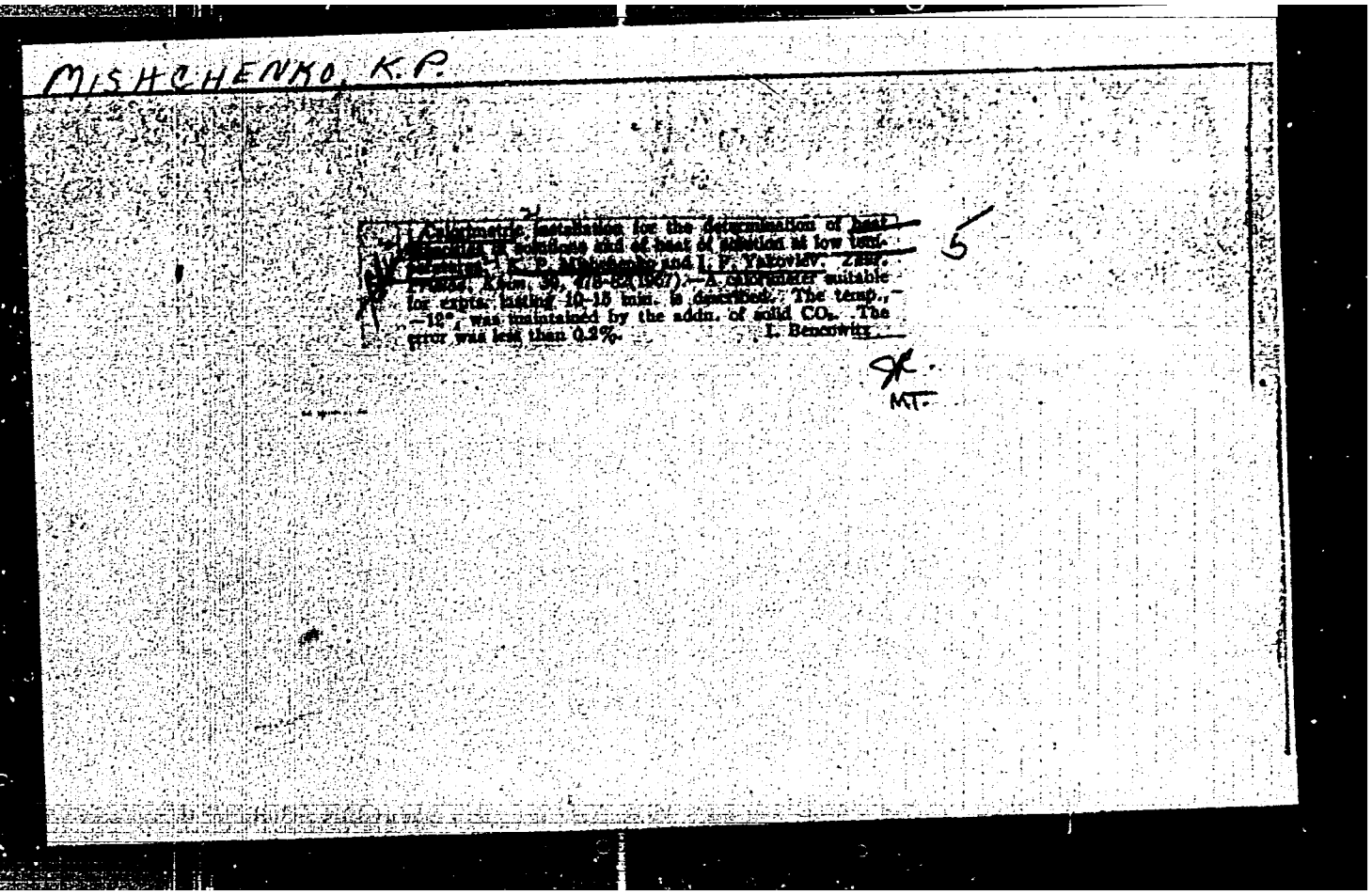

MISHCHENKO, K.P.

Calorimetric installation for the determination of heat capacities in solutions and of heat of solution at low temperatures. K. P. Mishchenko and I. F. Yakovlev. Zhur. Prikl. Khim. 39, 478-82(1967).—A calorimeter suitable for expts. lasting 10-15 min. is described. The temp., −12°, was maintained by the addn. of solid CO_2. The error was less than 0.2%. I. Bencowitz

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MISHCHENKO, K.P.

USSR/Physical Chemistry - Solutions, Theory of Acids and Bases. B-11

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7280.

Author : K.P. Mishchenko, I.Ye. Flis.
Inst :
Title : Upon The Formation Possibility of Positive Halogen Ions in Aqueous Solutions.

Orig Pub: Zh. prikl. khimii, 1957, 30, No 5, 665-674.

Abstract: The changes of thermodynamic potentials and the equilibrium constants of formation reactions of Cl^+, Br^+ and I^+ in aqueous solutions were computed by the method of thermodynamic cycles. A little thermodynamic probability of the existence of these cations in aqueous solutions was established, their formation capability decreasing from iodine the chlorine; the most probable processes of such cation formation are interaction reactions of hypohalites with corresponding acids. The computations carried out for hypochlorite solutions, as well as

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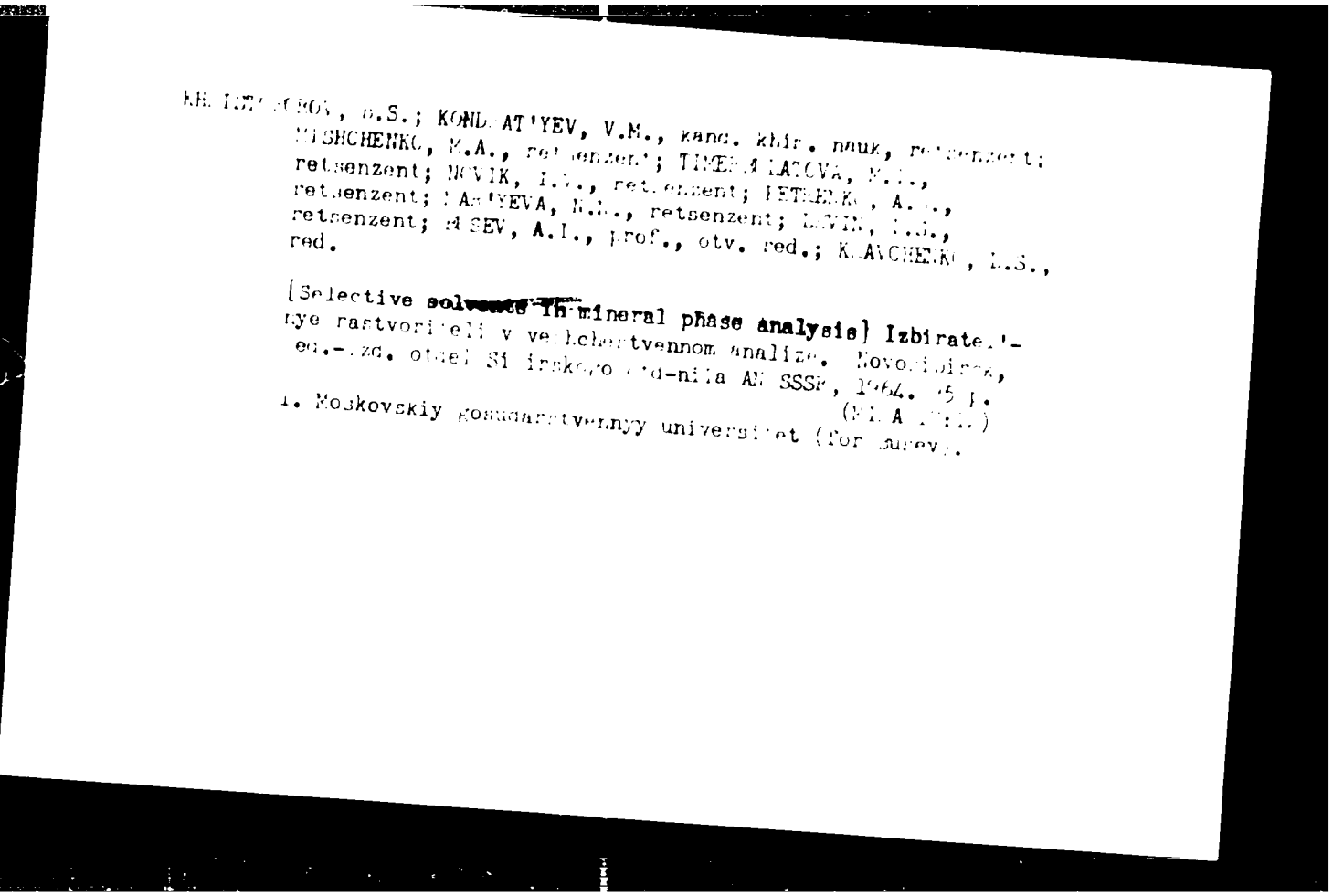

KH[illegible], B.S.; KONDRAT'YEV, V.M., kand. khim. nauk, retsenzent; MISHCHENKO, M.A., retsenzent; TIMERBULATOVA, M.[illegible], retsenzent; NOVIK, I.V., retsenzent; PETRENKO, A.[illegible], retsenzent; MAR'YEVA, N.N., retsenzent; LEVIN, [illegible], retsenzent; BUSEV, A.I., prof., otv. red.; KRAVCHENKO, L.S., red.

[Selective solvents in mineral phase analysis] Izbiratel'nye rastvoriteli v vesh[illegible]chestvennom analize. Novosibirsk, red.-izd. otdel Sibirskogo otd-nila AN SSSR, 1964. [illegible] p. (MIRA [illegible])

1. Moskovskiy gosudarstvennyy universitet (for Busev).

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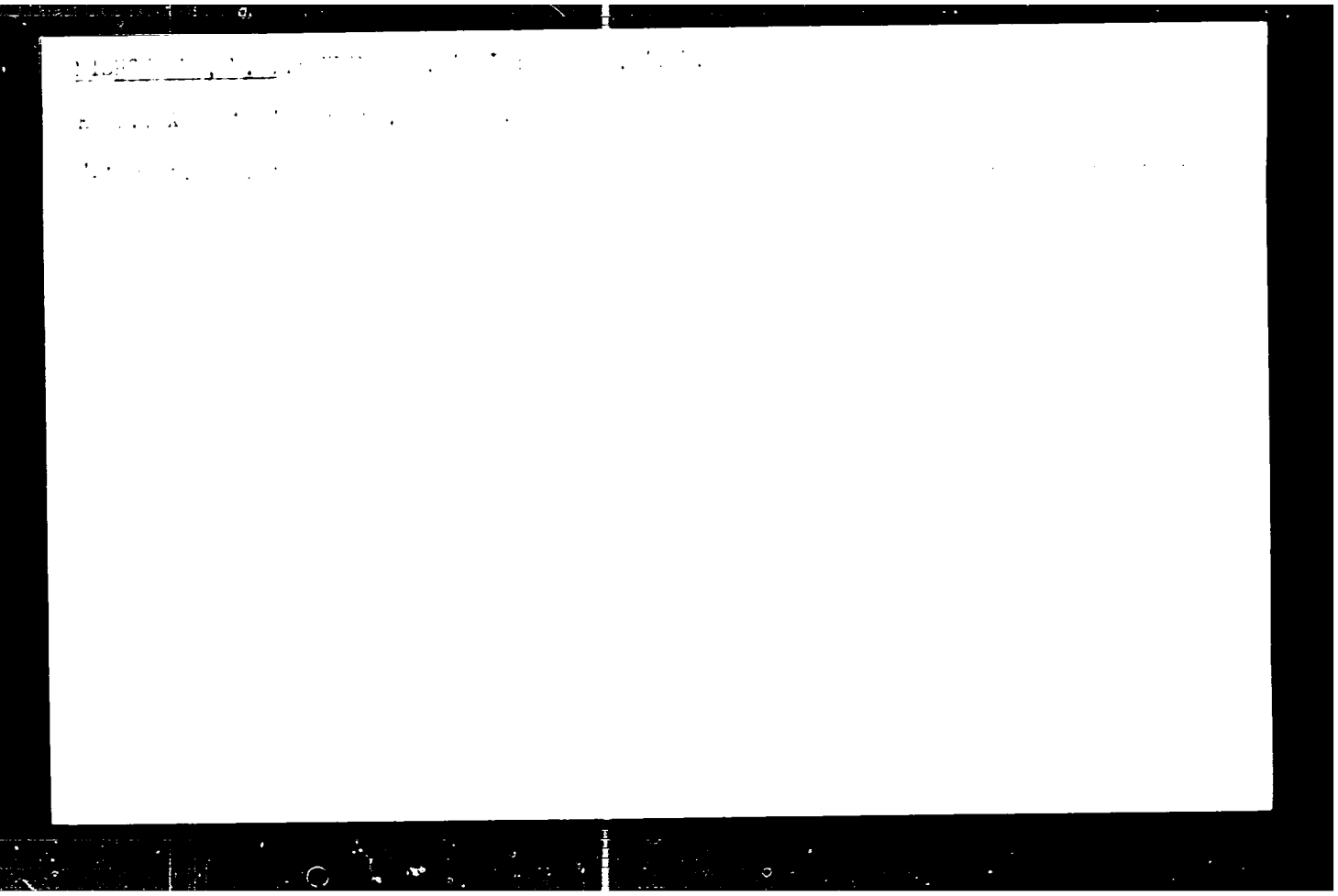

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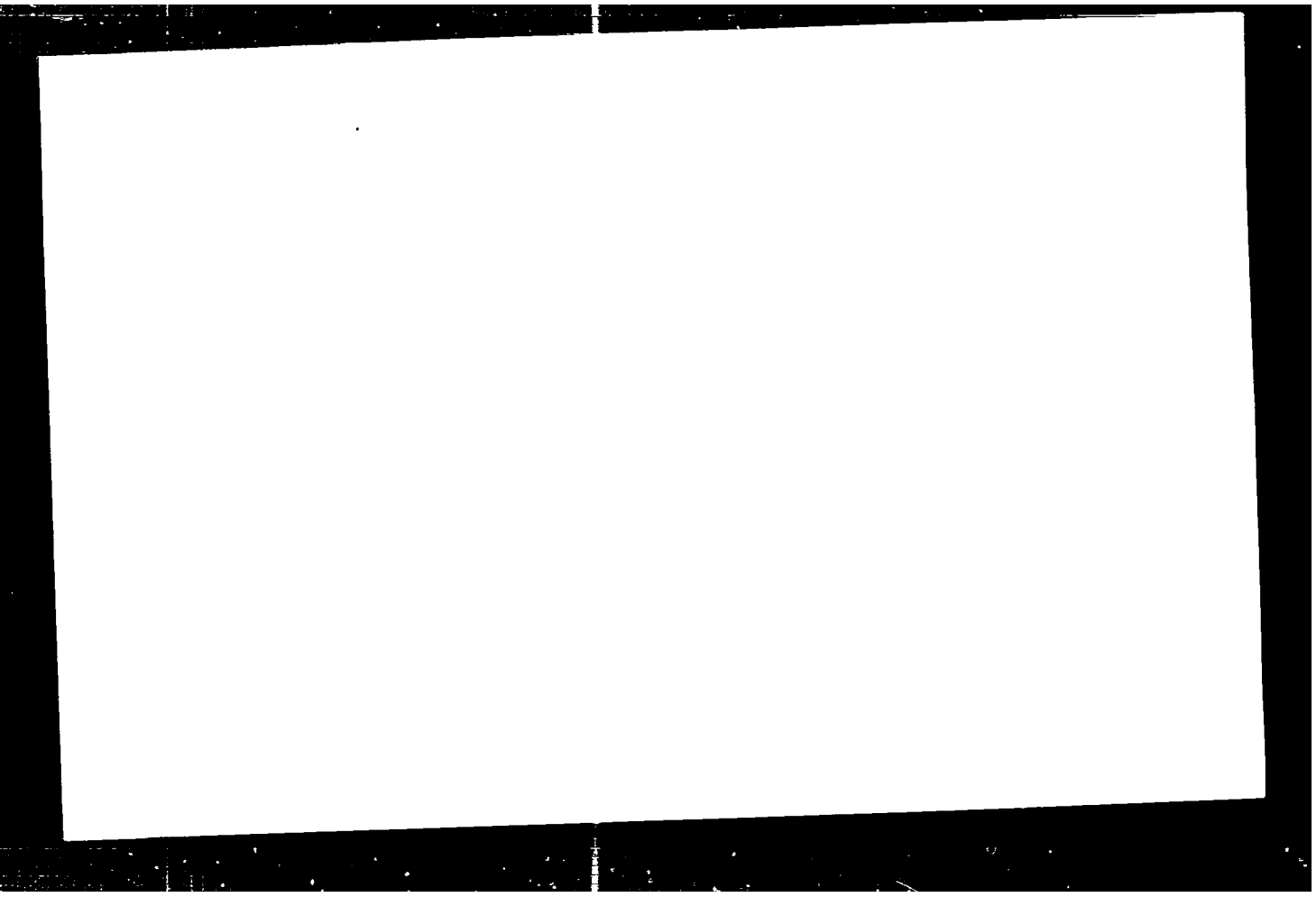

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MISHCHENKO, M.I.

N.W machines and equipment for processing plastics and their trend of development. Zhur. VKHO [illegible] no. 2:133-143 '65. (MIRA 18:6)

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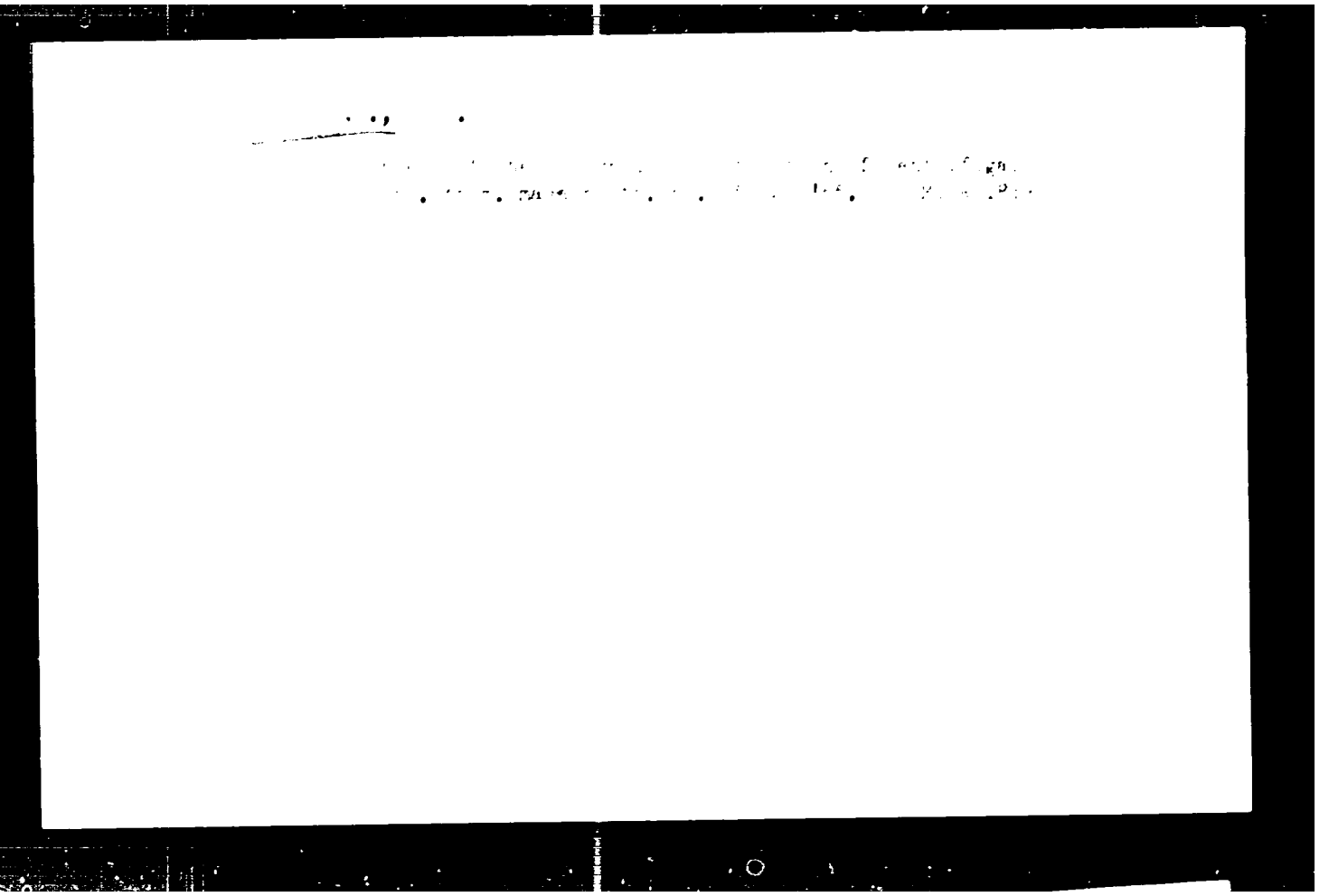

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L 15204-65 EWT(m)/EPF(c)/EPR/EWP(j)/T-2 Pa-4/Pc-4/Pr-4/Pa-4 ASD(m)-3
ACCESSION NR: AT4048187 S/0000/64/000/000/0012/0016

AUTHOR: Kiselchenko, M. I.; Farberov, I. L. (Doctor of technical sciences, Professor); Bogdanov, I. F.

TITLE: Investigation of the pyrolysis of linear polymers under the influence of flash heating

SOURCE: AN SSSR. Institut goryuchikh iskopayemykkh. Gazifikatsiya i piroliz topliv (Gasification and pyrolysis of fuel); sbornik statey. Moscow, Izd-vo Nauka, 1964, 12-16

TOPIC TAGS: pyrolysis, linear polymer, polystyrene, polyethylene, synthetic rubber, coke, flash heating

ABSTRACT: The pyrolysis of linear polymers such as polystyrene, polyethylene and synthetic rubber under the influence of flash heating was investigated and the typical analytical data for an emulsion polystyrene, type S, obtained at 600-1200C are tabulated. The yield in coke residue of pyrolysis increases with an increase in the temperature of flash heating. This is especially clear at 1200C, at which the coke residue yield increased to 65%, and the liquid resin yield decreased to 18% by weight. The rate of gas evolution during pyrolysis of polystyrene is constant at 800-1200C or higher, and the amount of evolving gas increases propor-

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tionally with the temperature. In order to establish the relationship between the specific rate of gas evolution and the weight of the sample, pyrolytic experiments were carried out at 1000 and 1200C for 0.2 and 2.5 g samples. It was found in both cases that the rate of gas evolution decreased uniformly with increasing weight of sample. Equations are given for processing the experimental data. The calculated and experimental gas evolution rates for both temperatures are tabulated. The proposed equations permit calculation of the total amount of gas for samples of different weight during pyrolysis by flash heating at 1000 and 1200C. The pyrolysis of polyethylene differs considerably from that of polystyrene in that marked gas evolution is already found at 600C. With a further increase in temperature, the gas evolution increases. The data obtained here also show that the yield in coke residue during the thermal decomposition of an organic substance depends on the heating conditions. Concerning the reactions during the pyrolysis of synthetic rubber, the variation in the yield of the main gas components with increasing temperature of flash heating is important. The tabulated data show that with increasing temperature the amount of unsaturated compounds passes through a maximum while the hydrogen content of the gas steadily increases, especially after 1000C. The composition of the pyrolysis gases for these three polymers as determined by gas chromatography is tabulated. "I. V. Romanova also took part in the work." Orig. art. has: 6 tables.

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