FELINSKI, L. ROTENBERG, S.; BARAHOW-BARAHOWSKI, St.

Daily oscillations in motor activity of the rumen in sheep. Acta physical. polon. 10 no.3:365-374 May-June 59.

1. Z Katedry Fizjologii Zwierzat W. S. R. w Szczecinie.

(PERIODICITY) (STOMACH, physical.)

KIRKOR, W.; BARANOWICZ, J.

Cyclodiones-1,3 and their derivatives. Pt.l. Acta chim 8:69-82 162.

1. Department of Chemistry, University, Lodz. Presented by W.Kirkor.

Extraction, A.: Karens, C.

Contentioned and Schemic Theory of the Last Contents of the Process of the Process

BARANOWICZ, L.

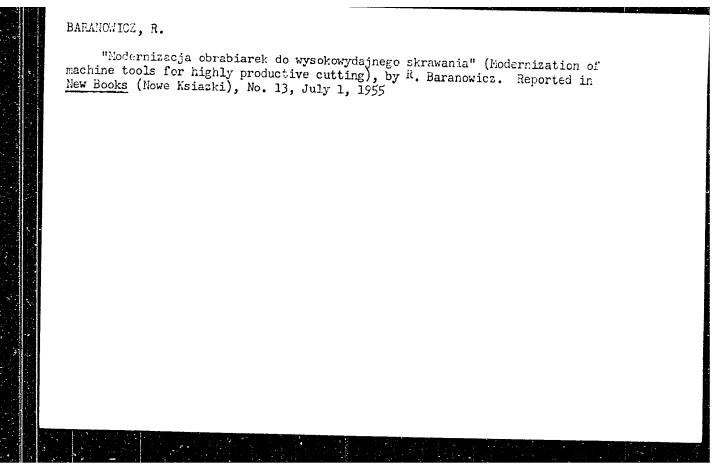
"A school's tailless model aeroplane" p. 138 (Skrzydla I Motor, Vol. 8, no. 9, Mar 53, Warszawa)

SO: Monthly List of East European Accessions, Vol 2 No 9 Library of Congress Sept 53 Uncl

BARANOWICZ, ROMAN.

Modernizacja obrabiarek do wysokowydajnego skrawania; tokarki, tokarki rewolwerowe, frezarki. (Wyd. 1) Warszawa, Panstwowe Wydawn. Techniczne, 1955. 160 p. (Modernization of cutting machines of high efficiency; lathes, circular lathes, milling machines. 1st ed. bibl., diagrs., graphs, tables)

SOURCE: East European Accessions List (EEAL), LC, Vol.5, no. 3, March 1956



KRASNIK, Witold; BARANOWSKA, Bozena

Electronhoretic studies on blood proteins in malignant granuloma. Polskie arch. med. wewn. 29 no.4:443-446 1959.

1. Z II Kliniki Chorob Wewnetrznych A. M. w Poznaniu Kierownik: prof. dr med. J. Roguski (BLOOD PROTEINS) (HODGKIN'S DISEASE, blood)

Electrophoretic changes of serum proteins during the course of malignant gramuloma. Polskie arch.med.wewnetrz. 29 no.10: 1365-1372 '59.

1. Z II Kliniki Chorob Wewnetrznych A. M. w Poznaniu Kierownik: prof. dr med. J. Roguski.

(HODGKIN'S DISEASE blocd)

(BLOOD PROTEINS)

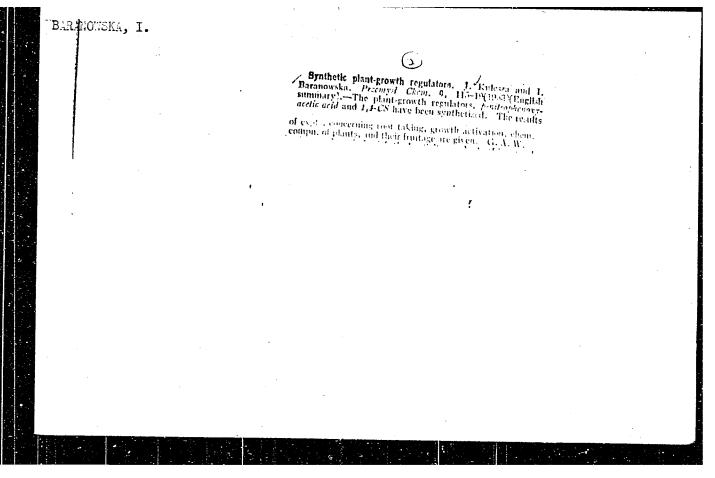
ROSNER, Julian; BAHANOWSKA, Bozena

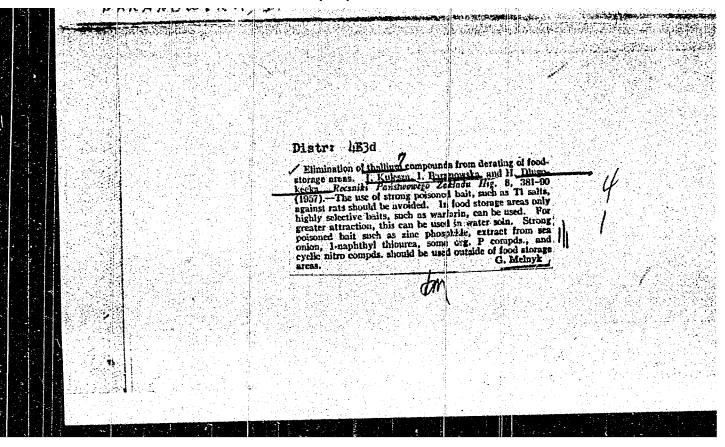
Chromatography of amino acids in psoriasis. Przegl. derm. 50 no.5:399-409 '63.

1. Z Kliniki Dermatologicznej AM w Poznaniu Kierownik: prof. dr A. Straszynski.

(AMINO ACIDS) (CHROMATOGRAPHY) (PSORIASIS)

(URINE) (BLOOD CHEMICAL ANALYSIS)





# "APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103520011-8 Darnowing State Inst. Hys., Warney Bull. ording and J. Barnowing (State Inst. Hys., Warney). Bull. ording pages 17. J. Classe II, 2, 3-7(1954).—Treatment of taline washed gram-neg. Richsilla presental, Reissiria catarykalis, Established with a combination of 4% Institute of 1. Profits and 0.4%; protamine, tryst. Hysocyme, or cryst. adolase at. pii 1. In charge them to be to was not exact tal. Gram-pos. Application of 1. Charge of the protain and endered gram-neg, by extn. could be restored to being gram-pos, by the above procedure. Neither HCHO no prota nation was elective. The findings are interpreted as evidence against the Mg Homouclocide theory of gram-pos, staning (Henry and Stacey, C.A. 41, 2450c). J. A. Bain

POLAND / Microbiology. General Microbiology. Investigatory Methods and Techniques. F

Abs Jour

: Ref Zhur - Biologiya, No 5, 1959, No. 19393

Author

: Shugar, D.; Baranowska, J.

Inst

Title

: Polish Academy of Sciences : Application of I131 to Quantitative Studies on

Gram Staining

Orig Pub

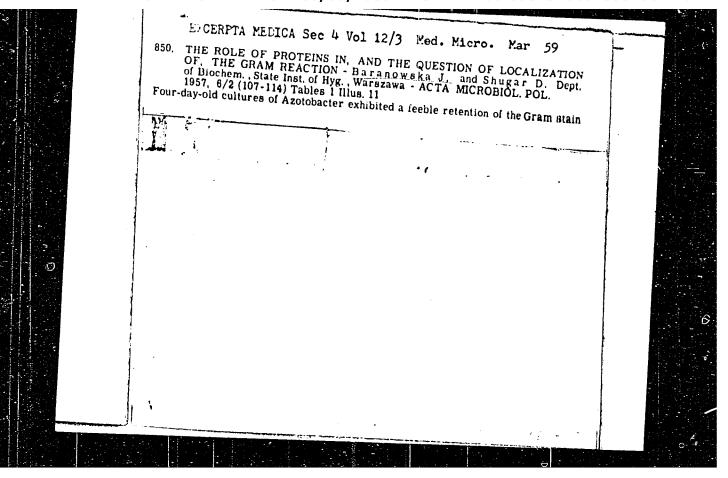
: Bull. Acad. polon. sci., 1957, cl. 2, 5, No 5-6,

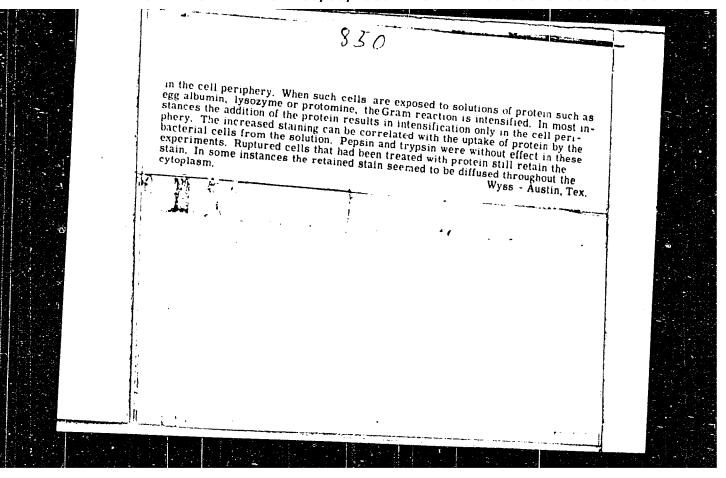
165-168

Abstract

: No abstract given

Card 1/1





BARANOWSKA, Janina

Mechanism of Gran's coloring method. Postepy mikrobiol 2 no. 3: 397-415 '63.

1. Katedra Biochemii, Panstwowy Taklad Hgieny, Warszawa.

Photochemistry of model oligo- and poly-nucleotides. III. Cross-linking and staining properties of ultraviolet irradiated films of nucleic acids and eligonucleotides. Acta biochim.polon. 7 no.4:

505-520. 60.

1. Department of Biochemistry, State Institute of Hygiene, Warsaw. (NUCLEOSIDES AND NUCLEOTIDES chem)

(ULTRAVIOLET HAYS)

(NUCLEIC ACIDS chem)

BARANOWSKA, Krystyna B. (Sopot)

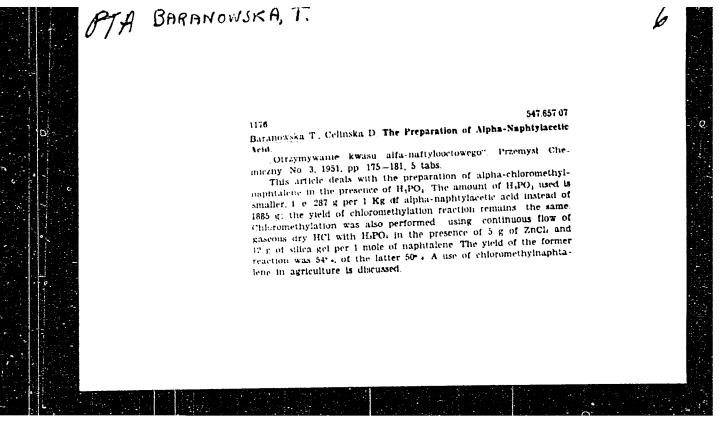
"Seaway distance tables to Polish seaports" by J.Zaleski, L.
Nowakowski. Reviewed by Krystyna B.Baranowska. Czasop geograf

33 no.2:276-277 '62.

### BARANOWSKA, Krystyna B., mgr

"Icing phenomena on the Polish shores of the Baltic Sea" by Jozef Baczyk, Maria Czekanska. Reviewed by Krystyna B. Baranowska. Tech gosp morska 13 no.4:112-113 Ap '63.

1. Wyzsza Szkola Ekonomiczna, Sopot.



### BARANOWSKA, Teresa

Effect of atropine and pilocarpine on the equilibrium of external muscles of the eye. Klin. oczna 24 no.1:23-28 1954.

1. Z Kliniki Ocznej Akad. Med. im. Gen.Karola Swierczewskiego
w Szczecinie. Kierownik: prof. dr W. Starkiewicz.

(MUSCLES, OCULOMOTOR, effect of drugs on,

\*\*tropine & pilocarpine, on equilibrium)

(AMROPINE, effects,

\*on oculomotor muscles, on equilibrium)

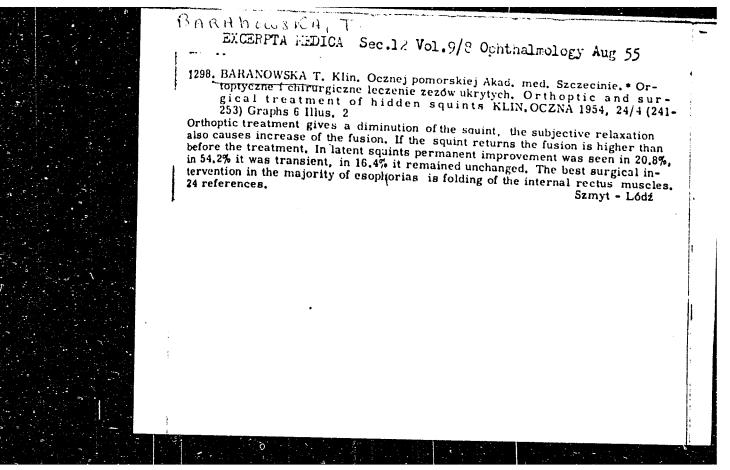
(PILOCARPINE, effects,

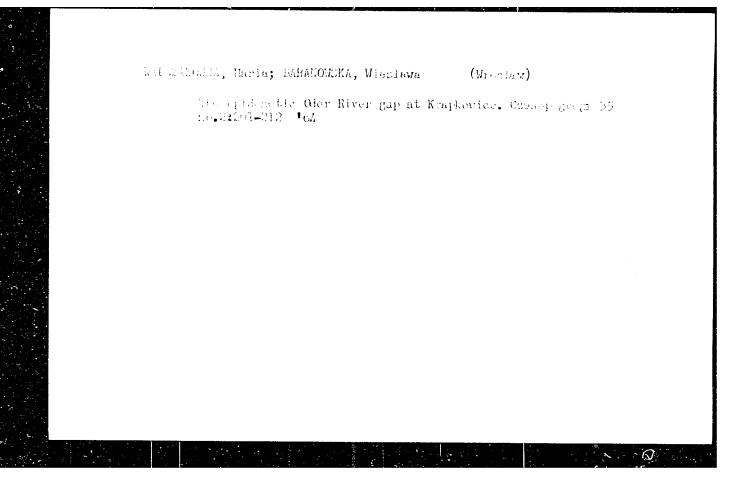
\*on oculomotor muscles, on equilibrium)

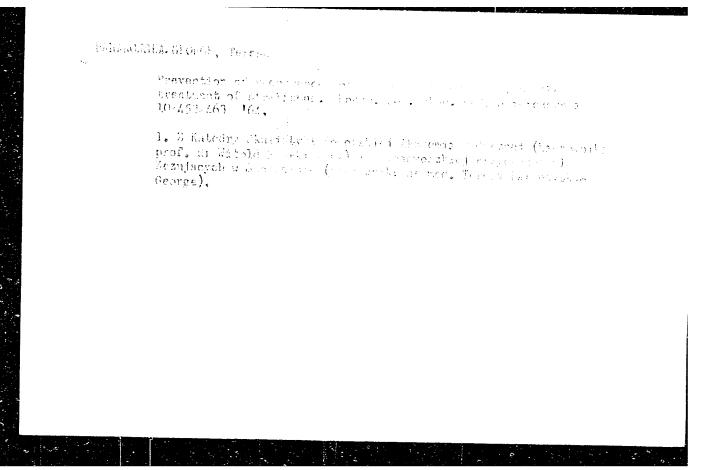
BARANOWSKA, Teresa

On the conditioned reflex nature of visual impressions with special reference to visual acuity. Roczn. pom. akad. med. Swierczewski 9:271-291-463.

1. Z Kliniki Ocznej Pomorskiej Akademii Medycznej Kierownik: prof. dr W. Starkiewicz.
(REFLEX, COMDITIONED) (VIOUAL PERCEPTION)
(REFRACTION, OCULAR)







BARANOWSKA-GEORGE, Teresa

The problem of distribution of prismatic correction in both eyes in the treatment of strabismus with excentric fixation. Rocan. pom. akad. med. Swierczewski 11:563-561 165.

1. Z Katedry Okulistyki Pomorskiej Akademii Medycznej (Kierownik: prof. dr. M. Starkiewicz) i z Wojewodzkiej Przychodni dla Zezujacych w Szczecinie (Kierownik: dr. med. T. Baranowska-George).

BARANOWSKA-STOKWISZEWSKA, Bozena

Stility evaluation of some protective creams against carbon disulfide absorption through the skin. Farmacja Pol 20 no. 8: 286-288 | 25 Ap 164.

1. Department of Toxicological Chemistry and Industrial Toxicology, School of Madicine, Lodz. Head: Doc. dr T. Dutkiewicz.

(EEAI 10:7)

# Aspects of soil geology concerning the suitability of the RS<sup>3</sup> soil for apple fruit cultures. Rocz nauk roln rosl 82 no.1:91-118

(Soils) (Apple)

S/137/62/000/001/129/237 A052/A101

AUTHOR:

Baranowski, B.

TITLE:

Statistical processing of fatigue test results of metals

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 23-24, abstract 11155 ("Wytrzymalosc zmeczeniowa tworzyw i elementow metalowych."

Warszawa, 1961, 141-149; Polish)

TEXT: The usefulness of application of mathematical statistics methods for determining the durability and w of metals is shown on concrete examples. Various methods of statistical processing of data for determining durability are considered. It is proposed to represent the fatigue test data in the form of the Wöhler curve with the subsequent processing of results by computing durability for each value of the stress amplitude within the adopted interval of reliability, using for this purpose Student's criterion. For determining w it is practicable to process the test results by the statistical step method. (W. Dixon, A. M. Mood. J. Amer. Statist. Assoc., no. 40, 1948). There are 20 references.

[Abstracter's note: Complete translation]

Card 1/1

### "APPROVED FOR RELEASE: 06/06/2000 CI

### CIA-RDP86-00513R000103520011-8

37865

S/123/62/000/009/007/017 A052/A101

AUTHOR:

Baranowski, B.

TITLE:

The effect of tempering at 250 - 400°C on the fatigue strength of

wir

PERIODICAL:

Referativnyy zhurnal, Mashinostroyeniye, no. 9, 1962, 36, abstract 9B160 ("Wytrzymalość zmęczeniowa tworzyw i elementów metalowych."

Warszawa, no. 56, Dyskus., 64, 1961, Polish)

TEXT: The effect of tempering in the 250 -  $400^{\circ}$ C range on  $6_{\rm W}$  of colddrawn carbon steel wire (0.58% C) 2.5 mm in diameter was investigated statistically. In the initial state  $6_{\rm W}$  was 138.5 kg/mm<sup>2</sup>.  $6_{\rm W}$  was determined on Schenk machines (bending during rotation) on the basis of 5 x 106 cycles. To plot each fatigue curve 85 - 100 samples were tested. It is established that an hour tempering at 250°C in an oil bath raises  $6_{0.01}$  from 72.5 kg/mm<sup>2</sup> (in the initial state) to 127.2 kg/mm<sup>2</sup>. At the same time  $6_{\rm W}$  practically does not change. After 3-hour tempering at 370°C in a salt bath  $6_{0.01}$  increases to 108 kg/mm<sup>2</sup> and  $6_{\rm W}$  from 45 kg/mm<sup>2</sup> (in the initial state) increases to 53.2 kg/mm<sup>2</sup>. The relationship between the statistical value of  $6_{\rm W}$  and the index 0.5 ( $6_{0.2} + 6_{0.0}$ ) x0 has been

Card 1/2

### "APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000103520011-8

The effect of tempering ...

3/123/62/000/009/007/017 A052/A101

confirmed. The positive effect of tempering on the service life of wire ropes manufactured from tempered wire must be checked experimentally.

M. Shapiro

[Abstracter's note: Complete translation]

Cara 2/2

BARANGWSKI, Boleslaw, doc. mgr inz.

The Polish Standard PN-62/H -04310: Static tensile test of metals. Hutnik P 30 no.12:387-391 D 163.

1. Instytut Metalurgii Zelaca, Gliwice.

BARANCUSKI, Boleslaw, doc. mgr inz.

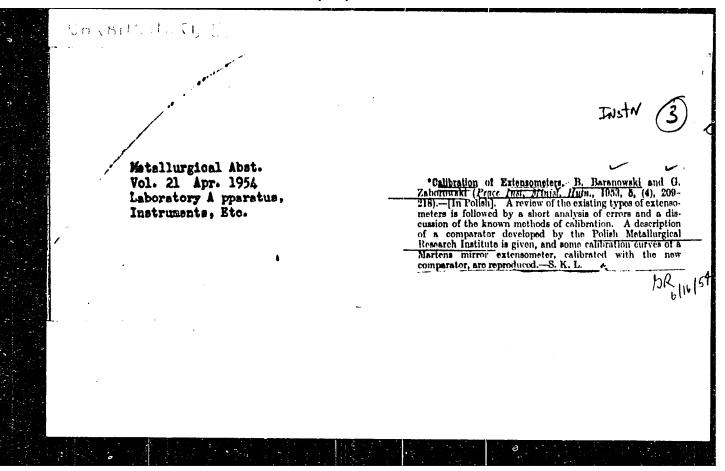
Statistical interpretation of impact strength tests. Hutnik P 29 no.2:53-59 F \$62.

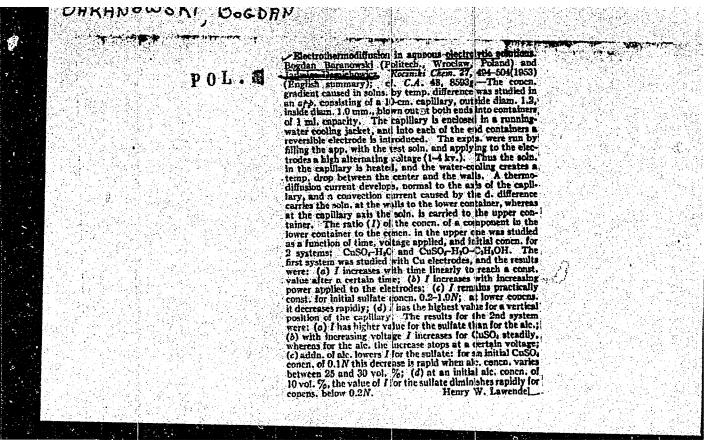
1. Instytut Metalurgii Zelaza, Gliwice.

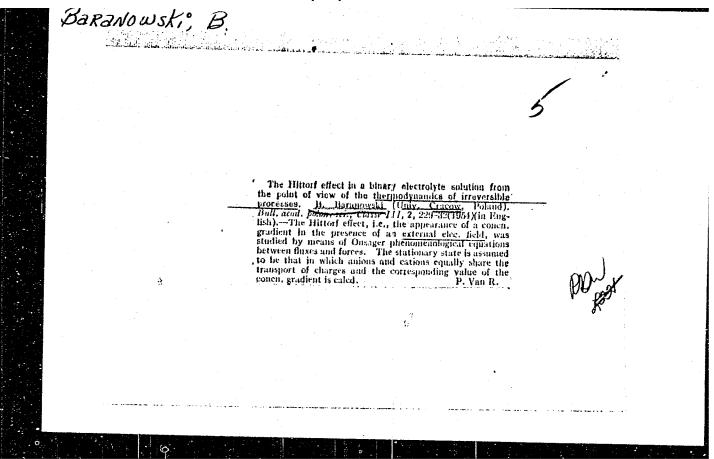
BARANCWSKI, Boleslaw, doc. mgr inz.

Once more on Standard PN-60/H-04357. Rutnik P 29 no.4:128-130 Ap '62.

1. Instytut Metalurgii Zelaza, Gliwice.

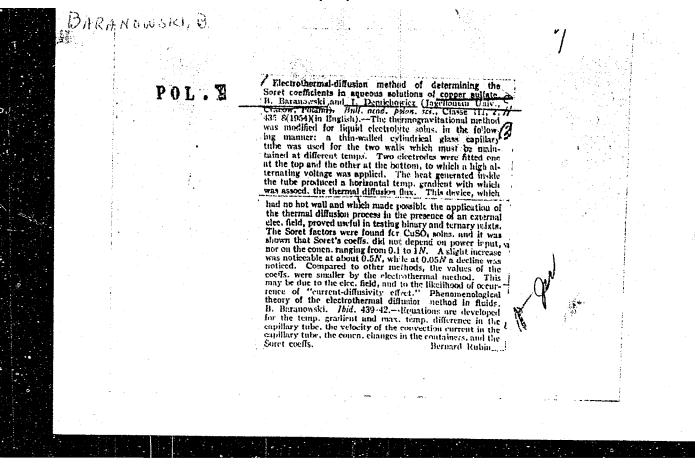






#### "APPROVED FOR RELEASE: 06/06/2000

#### CIA-RDP86-00513R000103520011-8

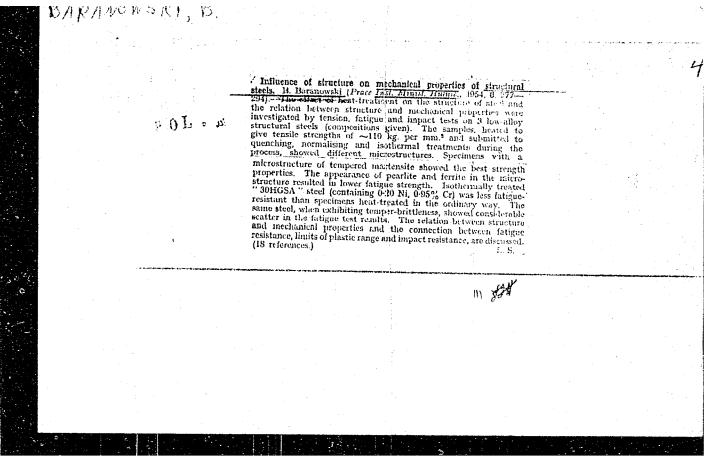


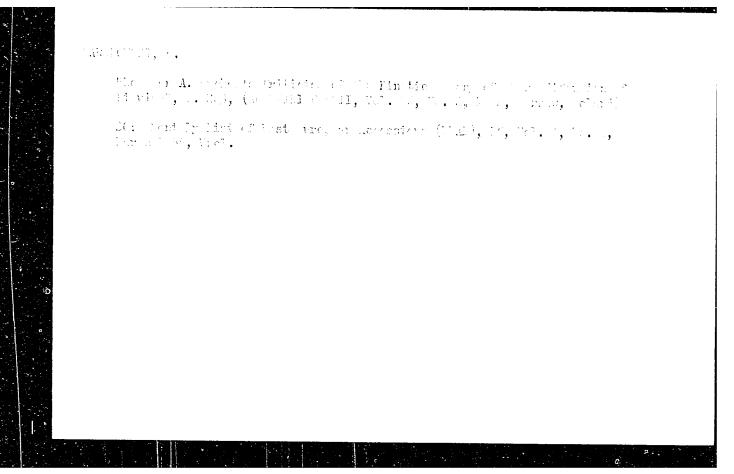
#### BARANOWSKI, B.

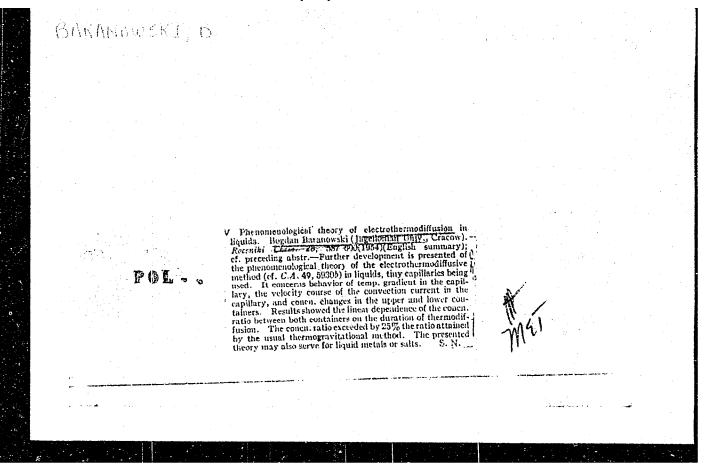
Bulletin - Vol. 2, no. 9, 1954.

Phenomenological theory of the electrothermal diffusion method in fluids. In English. p.~439.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.







#### 

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 19/27

Authors : Baranovski, Bogdan

Title : Comments on the work of S. I. Drakin entitled, "Transfer and Distribution

of Components of Metal Alloys in an Electrical Field".

Periodical: Zhur. fiz. khim. 28/9, 1676-1677, Sep 1954

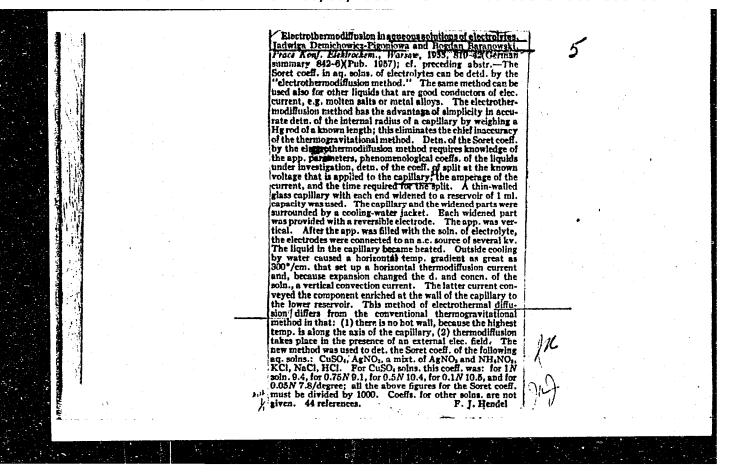
Abstract : Comments on the report by S. I. Drakin (Zhur. fiz. khim. 27, page 1586, 1953)

dealing in the phenomena of transfer and distribution of components of metal alloys in a constant electrical field, are presented and analyzed. Eight

references: 1-USSR; 6-German and 1-Holland (1854-1953).

Institution: The Yagellon University, Faculty of Theoretical Physics, Cracov, Poland

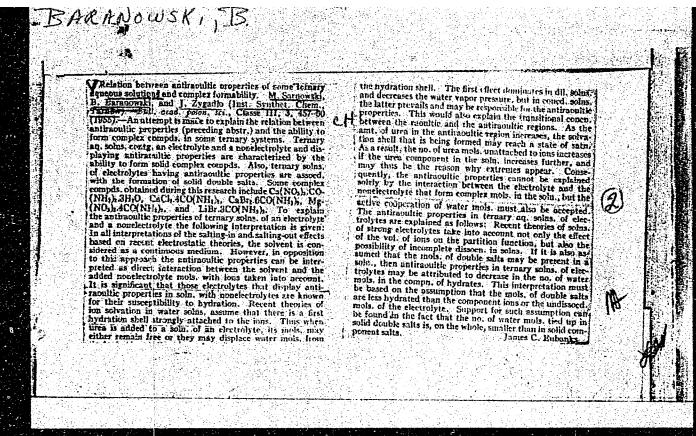
Submitted : April 8, 1954



BARANOWSKI B.

Migration of Components of Binary Liquid Metality Alloys in the Electric Field from the Point of View of Thermodynamics of Irreversible Processes. B. Raranowski (Bull. Acad. Polon. Sci., 1955, [iii], 3, (2), 117-120).—[In English]. Theoretical. The equations deduced are the same as those derived by Schwarz (Z. physikal. Chem., 1933, [A], 164, 223; Met. Abs. (J. Inst. Metals), 1933, 53, 449).—J. L.

DIP



EMMANUMENT, B.; DEMICHOWICZ, J.,

B. BRANAMOMERI, "Thermal diffusion in the liquid phase."

No. 7-8, July-August 1957

	<del></del>		The ski an Wiado referen	mal diffi d <u>ladw</u> mości C ices.	usion va D kem. S	in the House emichowic ), 379–403	id phase. z (Univ. (1955).—	Bogann B Kraków, I A review w A, Kregl	atanow- oland). rith 129 cuski	Alys	<u></u>		<b>}</b>
										***************************************	All	•	
	- 											•	:
													:
:									• .				;

PARANOWSKI, F.: ZYGADLO, J.: SARNOWSKI, M.

Inbestigation of vapor pressure in three-component aqueous solutions. III. Interpretation. p. 425.

PRZEMYSL CHEMICZNY

Warszawa

Vol. 11, no. 8, Aug. 1955

SOURCE: Monthly List of East European Accessions (EEAL), IC, Vol. 5, no. 2, Feb. 1956

Category : FOIAND/Atomic and Molecular Physics - Liquids

D-8

Abs Jour: Ref Zhur - Fizika, No 1, 1957, No 947

Author : Baranawski, B.

Title : Thermodynamic Theory of Separation of Components in Binary Liquid Alloys in

an Electric Field

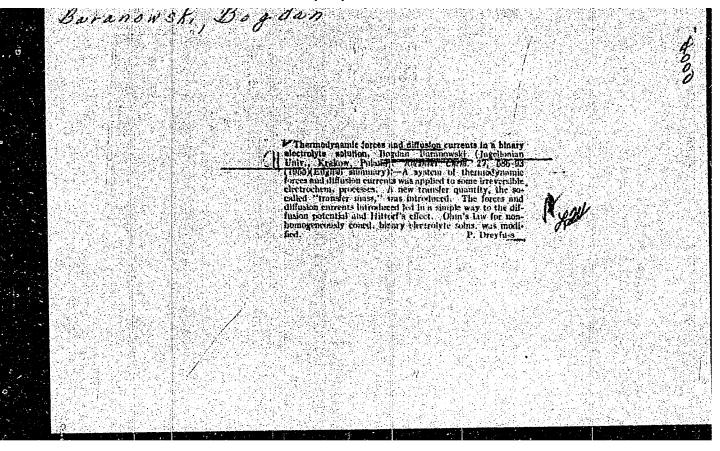
Orig Pub: Roczn. shem., 1955, 29, No 1, 129-131

Abstract : Report on preliminary results of the use of the thermodynamics of irreversible

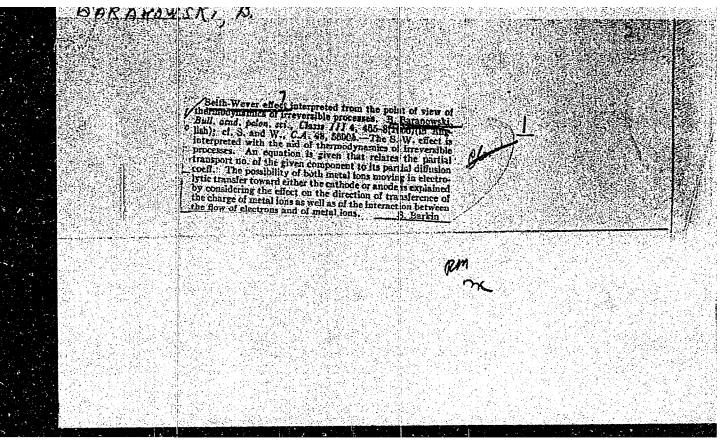
prepesses to the problem of separating metallic components in binary liquid alloys in an electric field, obtained on the basis of Drakins work. (Referat.

Zhurnal Kimiya, 1954, 47871).

Card : 1/1



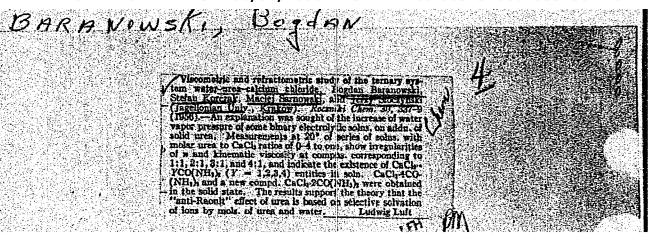
```
Think the Article of Multi-Direction Records to, (tab), in, Vol. 2, i.e. 1, 201. 2025, their
```

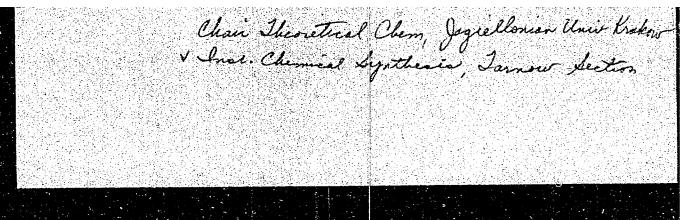


```
BARANOWEKI, B.

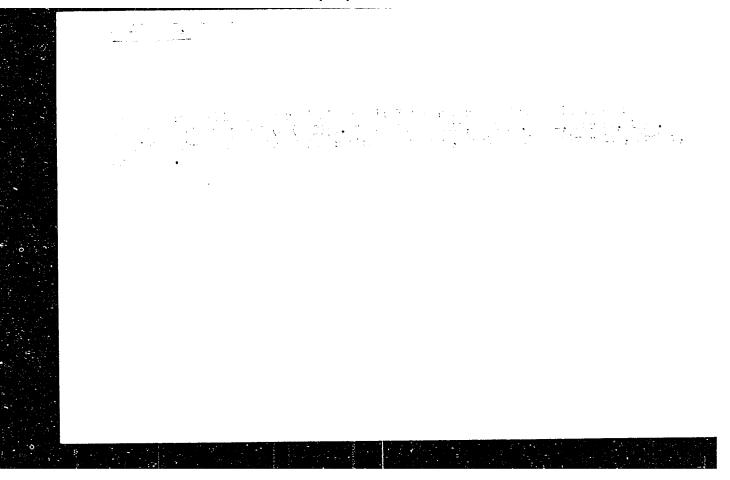
Thermodynamics of irreversible processes. p. 635.
(WIADCYCSCI CHETCEME. Vol. 10, no. 12, Dec. 1936, Poland)

50: Monthly List of Sast Suropean Accessions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.
```





# 



BARANOWSKI BOSDAN
FOLAND/Atomic and Malocular Physics - Liquids

D-8

Abs Jour : Ref Zhur - Fizike, No 11, 1958, No 25076

Author

: Berenowski Bogden

Inst

: Not Given

Title

: Migration of Components of Liquid Metallic Alleys in Electric Field From the Feint of View of Thormodynamics of Irreversible

Frecessos.

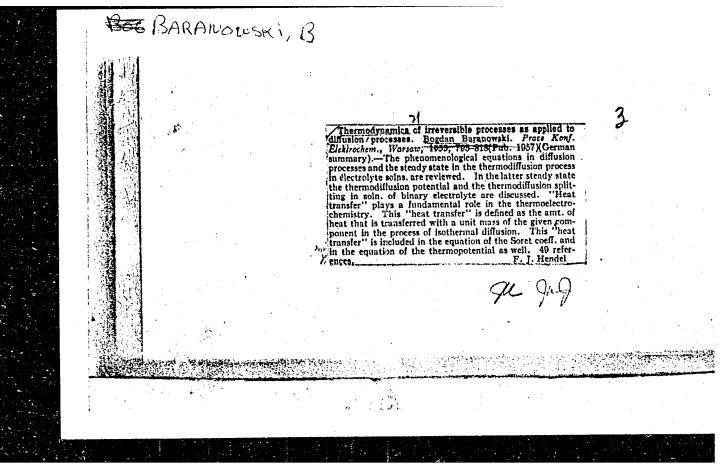
Orig Fub: Rocan. cham. 1956, 30, No 3, 841-853

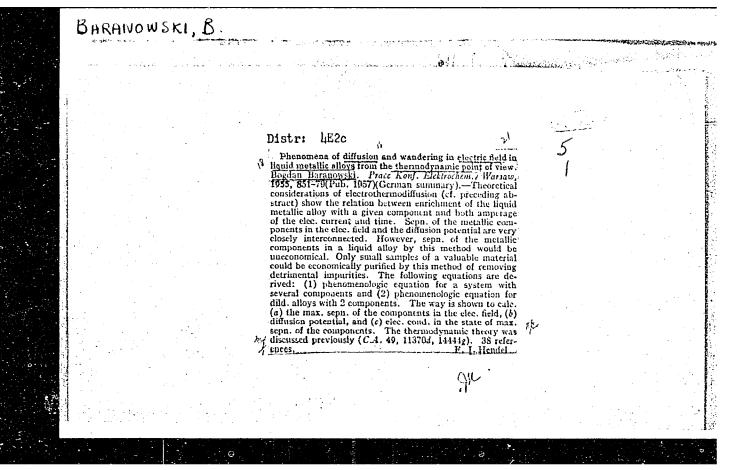
Abstract: With the mid of the theory of them odynamics of irroverabile processes, the author describes the digration of components of liquid motallic alboys under the influence of an external electric field. An isother of liquid alloy is considered in which no chemical reaction takes place. It is assumed that each element of the system retains its value. The case of a two-component alloy is exemined in detail. Fermulas are derived for the maximum separation of the components of a twi-component elloy in analoctric field and for the diffusion

potnntial.

Cord

pulse, from Therenesses, but Prope Inter, 180 : 1/1





EARDANN TIN

POLAND / Physical Chemistry, Solutions. Theory of B Acids and Bases.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 66938.

Author : Stroka A., Baranowski B., Sarnowski M.

Inst : Not given.

Title : Ebulimentrical Studies of Concentrated Solutions

of  $H_2O-Ca (NO_3)_2-KNO_3$ .

Orig Pub: Roczn. chem., 1957, No 3, 1025-1028.

Abstract: The dependence of boiling points (B.P.) on the quantity of introduced dry  $KNO_3(II)$  in the 50.0, 59.9, and 69.4% aqueous solutions of  $Ca(NO_3)_2(I)$  was investigated. The ratio of molar concentrations of II and I (a) in the investigated solutions

Card 1/3

В

POLAND / Physical Chemistry. Solutions. Theory of Acids and Bases.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 66938.

Abstract: was varied from 0 to 2. Introduction of II into the 50 and 59.9% solutions of I was accompanied by an increase in B.P. With a < 1, B.P. of the 59.9% solution of I was found lwer than B.P. of the 50% solution of I. With a > 1 an opposite of fect was noticed. Introduction of II into the 69.4% solution of I caused lowering of the B.P. A minimum is observed at a = 0.5. Further increase in the concentration of II causes gradual increase in the B.P. of the solution. When a = 1, B.P. of the solution is found to be slightly higher than when a = 0. The authors assume that the deviations from the Raoult's law of a given solution serve as criteria for the formation of Ca(NO<sub>3</sub>)<sub>2</sub>. KNO<sub>3</sub>. 3H<sub>2</sub>O complex (III) in this solution (Ref.

Card 2/3

8

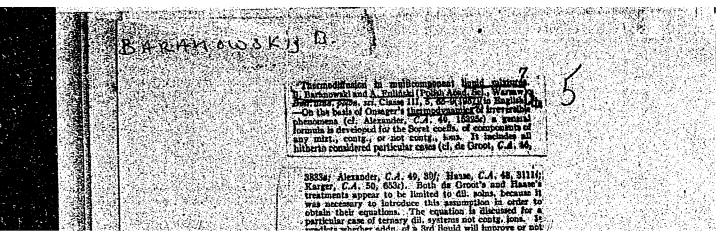
14.5-42.

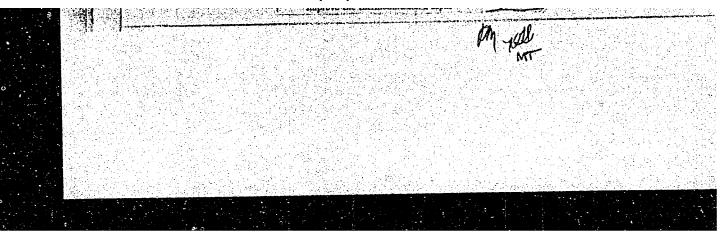
POLAND / Physical Chemistry. Solutions. Theory of Acids and Bases.

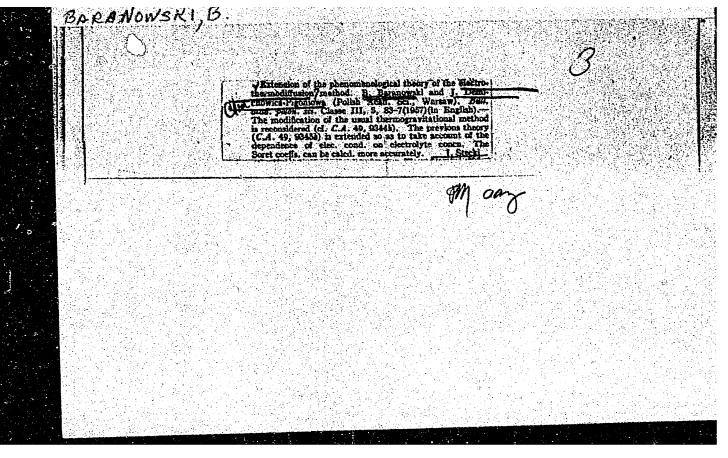
Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 66938.

Abstract: Zhur-Khimiya 1956, 3405). The relationship of B.P. of the first two solutions and of concentration of II is also explained by the formation of III.

Card 3/3







BARHNOWSKI, B.

POLAND/Physical Chemistry - Electrochemistry.

B-12

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7313.

Author: B. Baranowski, Z. Szklarska-Smialowska, M. Smialowski.

: Academy of Sciences of Poland. Inst

: Diffusion Constant of Hydrogen in Iron Cathodes. Title

Orig Pub: Bull. Acad. polon. sci., 1957, Cl. 3, 5, No 2, 191-196,

Abstract: The diffusion constant in iron at 20° was determined from the liberation rate (LR) of H2 from Fe wire, which had been preliminarily saturated with hydrogen by cathode polarization in 1 n.  $H_2SO_4 + As_2O_3$ . LR was determined volumetrically, Fe being immersed in water. Two stages of  $H_2$  desorption from Fe with  $D_I = 5.0 \cdot 10^{-7}$  and  $D_{II} = 0.6 \cdot 10^{-8}$  sq.cm per sec were revealed.  $D_I$  and  $D_{II}$  computed from the time necessary for the maximum stationary elongation of the Fe wire at the cathod polarization in 1 n.  $H_2SO_4 + As_2O_3$  (RZh-Khim, 1955, 31330) are magnitudes of

: 1/2 Card

-10-

## BARANDWSKI, B.

POLAR / Physical Chemistry. Solutions, Theory of Leids and Basos.

B-11

: Rof Zhur - Whim., No 10, 1958, No 31837 Abs Jour

Author

: B. Baranowski, A. Fulinski : Acadomy of Sciences of Poland

Inst Titlo : Electrogravitational Separation of Binary Solutions of Electrolytes at a Small Distance Between the Electrodes.

Orig Pub

: Bull. Acad. polon. sci., 1957, cl. 3, 5, No 8, 821-825.

bstract

: A theory of electrogravitational separation (Murphy G.W., J. Electrochem. Soc., 1950, 97, 405) of binary solutions of electrolytes is proposed. Expressions of the course of the electrolytes is proposed. Expressions of the course of the electric potential, the concentration and the convoction current in the space between the electrodes, as well as of the relations between the concentrations in the top and bottom reserve vessels depending on the macroparameters

card 1/2

PCLAND/Physical Chemistry - Solutions. Theory of Acids and Bases.

В.

Abs Jour

: Ref Zhur - Khimiya, No 9, 1958, 28033

Author

: Raranowski, B. and Sarnowski, M.

Inst Title : A Semi-Empirical Treatment of the Properties of Nonideal Thrac-Component Solutions Containing an Electrolyte and

a Nonvolatile Nonelectrolyte.

Orig Pub

: Przemysl Chem, 13, No 5, 270-272 (1957) (in Polish with

summaries in English and Russian)

Abstract

: Using the adsorption-based conception of the solvation process, the authors have introduced an equation relating the amount of solvent (A m) to the concentrations of the components of the solution and to three empirical parameters. One of the parameters depends on the temperature, the time of the isobaric experiment, etc.; the second parameter characterizes the effective number of

Card 1/2

APPROVED FOR RELEASE: 06/06/2000

15 James Clark

CIA-RDP86-00513R000103520011-8"

#### "APPROVED FOR RELEASE: 06/06/2000

#### CIA-RDP86-00513R000103520011-8

THARAMONIAKI, B.

POLAND/Inorganic Chemistry - Complex Compounds.

C.

Abs Jour

: Ref Zhur - Khimiya, No 10, 1958, 31974

Author

: A. Baranski, B. Baranowski, M. Sarnowski

Inst

. ..

Title

: On the Formation of Complex Compounds of Calcium Chloride

with Urea in Aqueous Solutions.

Orig Pub

: Przem. chem., 1957, 13, No 9, 505-506

Abstract

The presence of complex compounds in the system  $\rm H_2O$  -  $\rm CaCl_2$  -  $\rm CO(NH_2)_2$  was established by studying it by the viscosimetric method. A lesser capacity of producing the  $\rm CO(NH_2)_2$ .2CaCl<sub>2</sub>,  $\rm CO(NH_2)_2$ .2CaCl<sub>2</sub>,

200(NH<sub>2</sub>)<sub>2</sub>.CaCl<sub>2</sub>, 500(NH<sub>2</sub>)<sub>2</sub>.2CaCl<sub>2</sub>, 300(NH<sub>2</sub>)<sub>2</sub> and

4CO(NH<sub>2</sub>)<sub>2</sub>•CaCl<sub>2</sub>• complexes is observed at higher tempera-

tures.

Card 1/1

Ind . Them Lighthacia, Esimena

POLAND / Physical Chemistry. Solutions. Acid and Base Theory.

Abs Jour: Ref Zhur-Khimiya, No 17, 1958, 56845.

Author : Baranowski Bogdan, Baranski A., Fulinski Andrzej.

Inst : Not given.

Title : Heat Transfer of Hydrochloric Acid, Sodium

Chloride and Potassium Chloride in Aqua Sol-

utions.

Orig Pub: Roczn. chem., 1957, 31, No 1, 229 - 240.

Abstract: The Soret coefficient (SC) in aqua solutions of HCl, KSl and NaCl in a concentration range of 1 - 0.05 n., correct to 10 percent, was determined by the electric thermo-diffusion method. The SC versus initial solution concentrations are presented on graphs. The SC values are prac-

are presented on graphs. The SC values are practically constant at concentrations of l - 0.3 n.,

Card 1/2

Unio Backen, Poland

Comment on the article "Suggestion Concerning Classification and Definition of Systems of Chemical Thermodynamics" by Tomassi; also, remarks by W. Tomassi.

p. 361 (Roczniki Chemii) Vol. 31, no. 1, 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) IC, VOL. 7, NO. 1, JAN. 1958

BARANOWSKI, BOEDAN

FOLAND/Atomic and Molecular Physics - Liquids

D-8

Abs Jour: Ref Zhur - Fizika, No 11, 1958, No 25050

: Baranewski Bogdan, Demichowicz-Figoniowa Jadwiga

Inst

: Not Given

Title

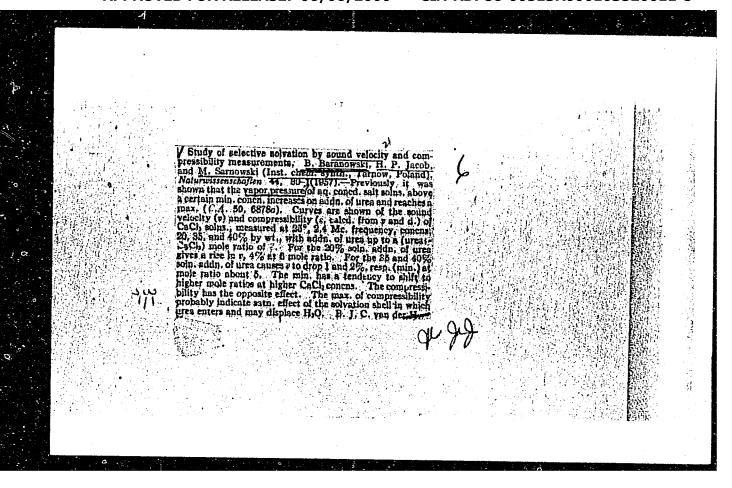
: Extension of the Phenomenological Theory of Electrothermodif-

Orig Fub : Roczn. chem., 1957, 31, No 3, 927-935

Abstract: A phonomonological theory of the electrothermodiffusion method has been developed with ellowence for the influence of thermodiffusion segeration on the establishment of the temperature gradient in a capillary. A new approximation is given for the value of the mass transfer between spare reservoirs. The results of the theory are used to calculate the Sauret ocof-

ficients of equecus solutions of CuSC4

Card : 1/1



BARANOMJAY, B

POLAND / Physical Chemistry. Solutions. Theory of Acids and Bases.

В

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 66930

Author : Baranowski B., Sarnowski M.

Inst : Not given.

Title : Application of Theory of the Debye's Salt Effects.

Orig Pub: Roczn. Chem., 1958, No 1, 135-138.

Abstract: Use of a specific expression for the osmotic pres-

sure of electrolytes and non-electrolytes (Ref. Zhur-Khimiya, 1957, 3890) is proposed for solutions that do not follow Raoult's law (Ref. Zhur-Khimiya, 1956, 50331, 77533). Use of the corrected expressions of the non-electrolyte concentration permits

Card 1/2

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

Abs Jour: Referat Zhur - Khim, No. 9, 1959, 30610

Author: Baranowski, B., Fulinski, A.

Inst : Not given

Title : The Electrothermodiffusion Method in Plane

Coordinates

Orig Pub: Roczniki Chem, 1958, No 3, 595-609

Abstract: The method of irreversible thermodynamics has

been applied to the investigation of steadystate electrothermodiffusion convective processes (ECP) in two dimensions under conditions of laminar flow. Phenomenological equations have been derived for the velocity distribution in the convective flow between two plates and

Card 1/3

36

B-12 : Poland Country Satogory : Electrochemistry 18656 abs. Jour. : Ref Zhur-Khimiya, No 6, 1969 : Baranowski, B.; Szklarska-Smialowska, 7.; \* nuthor : Polish Academy of Sciences : Kinetics of Hydrogen Desorption from Nickel Institut. Title at 20°. Orig. Pub. : Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 3, 179-186, XIV : A determination was made of the maximum amount Abstract of electrolytic hydrogen (I)  $V_{\rm H}$ , absorbed by a Ni wire (diameter d 0.015-0.2 cm) on cathodic polarization at i = 0.1 a/cm<sup>2</sup>, in 1 N H<sub>2</sub>SO<sub>h</sub> + 0.05 g/liter As<sub>2</sub>O<sub>3</sub>, within 2-5 hours, and on the basis of kinetics of desorption of I, dv/dt, at room temperature, an attempt was made to calculate the coefficient of diffusion D, of 1 in Ni. It was found that V<sub>H</sub> drops sharply with increase of d. On the curve of log(dv/dt) as a function of time t, were found two rectilinear portions of large angle of inclination at low values

\* and Smialowski, M.

dard: 1/2

B-20

of t; according to the law of Fick they correspond to two

AUTHOR TEST. TITLS	<ul> <li>and bases.</li> <li>AZKhim., No. 21 1959, No. 74327</li> <li>Saratowski, A. and Fulinski, A.</li> <li>Folian Academy of Scrences Zoof of Physical Chem 19</li> <li>Influence of Thermodiffusion on Electrical Conductivity of a Folythermic Solution of Binary Liectrolytes</li> </ul>
TY DY. TITLE	: Folian Academy of Sciences Inst Grant Con- influence of Thermodiffusion on Electrical Con- ductivity of a Folythermic Solution of Binary
oard. Pus.	(lectrolytes
	: Rull Acad Polon Aci, Ser Sci Chim Geol et Geo- graph, 6, No 10, 625-031 (1953)
ABBERACT	The mothods of the thermodynamics of irreversible grocesses (RZhKhim, 1950, no 18, 57000) were used in deriving equations for the current density (i) and electrical conductivity (X) of an ideal golution of a binary electrolyte in the initial stage and in the steady state of thermodiffusion. In the latter case i and X depend on the external field gradient, the temperature gradient, and the concentration gradient. The equitions obtained can be applied to the conductometric determination of thermodiffusion coefficients.  B. Kaplan

. POLAND / Physical Chemistry. Electrochemistry.

B-12

Abs Jour

: Ref Zhur - Khimiya, No 3, 1959, No. 7638

Author

: Baranowski, Bogdan; Fulinski, Andreoj

Inst

: Not given

Title

: Theory of Electrogravitational Separation of Solutions

of Binary Electrolytes

Orig Pub

: Roczn. chem., 1958, 32, No 2, 303-313

Abstract

: A theoretical analysis of the process of electrogravitational separation of solutions of binary electrolytes in the case of two parallel, plane, reversible electrodes, disposed vertically at a short distance from each other. Above and below the electrodes are located reservoirs

containing the solution. On resorting to certain simplifying assumptions, equations are derived for the distribution of concentration, the concentration gradient and

potential within the space between the electrodes, and also

Card 1/2

POLAND / Physical Chemistry. Electrochemistry.

B-12

Abs Jour : Rof Zhur - Khimiya, No 3, 1959, No. 7638

for the ratio of concentrations in the reservoirs depending upon the ratio of steady-state current flowing through the system to the limit current. -- Yu. Pleakev

Card 2/2

23

The electrothermodiffusional method in a flat set-up. Bogdan Baranowski and Andrzei Pulifiski (Polish Acad. Sci., Warsaw). Rozsniki Chem. 32, 595-609(1958) English summary)—The elec. thermodiffusional method applied heretofore in a cylindrical system for detns. of Soret coeff. (C.A. 52, 6897g) is proposed for a flat set-up, useful for practical applications. The soln, to be sepd. should be placed between 2 parallel, flat walls, consisting of thin sheets of an insulator, with electrodes at the upper and lower ends of the walls, A general phenomeasological theory is worked out for such system. The temp. gradlent is given by:  $dI/dt = -(\lambda Mx_1/2bhk) - [(sin A t)/sin A]$ . These equations can be simplified by neglecting the dependence of elec. cond. on temp. The changes of concn. in the reservoirs, expressed for the case c = 0, only, are given by:  $n_A/n_B = \frac{1}{1} + \tanh o(1 - e^{-rowhe})/(1 - \tanh o(1 - e^{-rowhe}))$ . The max. temp. difference is given by:  $dI = \lambda Mx_2(1 - \cos A)/(2bhk \sin A)$ . The convection velocity is expressed for the case c = 0, only, are given by:  $n_A/n_B = \frac{1}{1} + \tanh o(1 - e^{-rowhe})/(1 - \tanh o(1 - e^{-rowhe}))$ . The results obtained  $\frac{1}{2} + \frac{1}{2} + \frac{1}{$ 

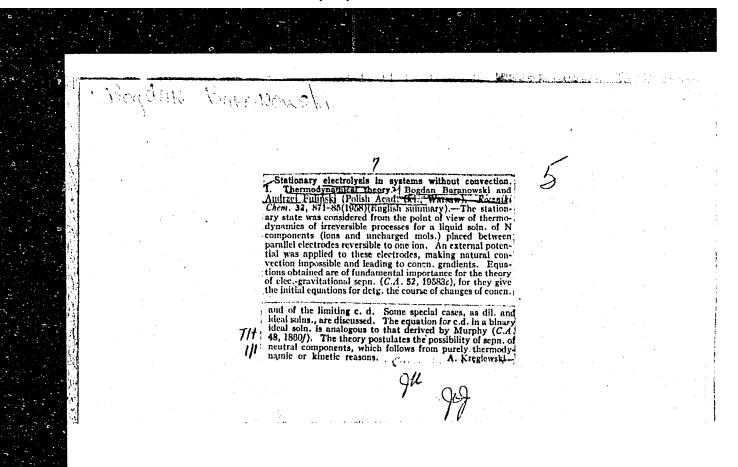
かなる

SCIENCE

PERIODCIAL: ROCZNIKI CHEMII, Vol. 32, No. 4, 1958

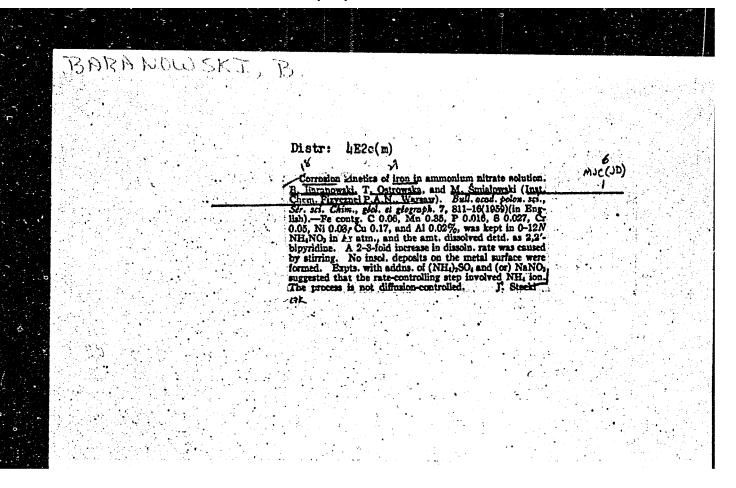
PARANOWSKI, B. Stationary electrolysis in systems without convection. I. Thermodynamic theory: p. 863

Monthly List of East Europ an Accessions (EEAI) LC Vol. 8, No.4
April 1959, Unclass



The rate-determining step in desorption of gases from solid specimens. Bul.Ac.Pol.chim. 7 no.12:887-890 '59. (EEAI 9:5)

1. Institute of Physical Chemistry, Polish Academy of Sciences. (Gases) (Description) (Solids)





Description kinetics of cathodic hydrogen from thin nickel layers.
Bul.Ac.Pol.chim. 7 no.12:891-896 '59. (EEAI 9:5)

1. Institute of Physical Chemistry, Polish Academy of Sciences. (Desorption) (Cathodes) (Hydrogen) (Nickel)

The dependence of the cathodic hydrogen content in thin nickel layers on the current density and saturation temperature. Bul.Ac.Pol.chim. 7 no.12:897-905 159. (EEAI 9:5)

1. Institute of Physical Chemistry, Polish Academy of Sciences.
(Cathodes) (Hydrogen) (Nickel)

The kinetics of saturation of electrolytic nickel layers with cathodic hydrogen. Bul.Ac.Pol.chim. 7 no.12:907-910 159.

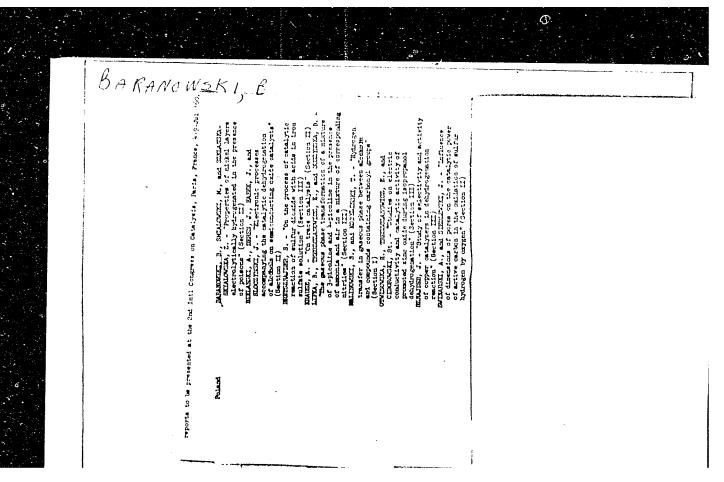
(EEAI 9:5)

1. Institute of Physical Chemistry, Polish Academy of Sciences.
(Nickel) (Cathodes) (Hydrogen)

BARANOWSKI, B.; FULINSKI, A.

Mass and energy transfer in a polythermic many-component two-phase system. Bul.Ac.Pol.chim. 7 no.12:911-916 '59. (EEAI 9:5)

1. Institute of Physical Chemistry, Polish Academy of Sciences.
(Systems (Chemistry))



BARANCWSKI, Bogdan; FULINSKI, Andrzej

Electrogravitational enrichment of water solutions of cupric sulfate at a small distance between electrodes. Rocz chemii 34 no.2:587-600 60.

 Instytut Chemii Fizycznej Polskiej Akademii Nauk, Warszawa. (Copper sulfate) (Water) (Solutions)

Irreversible processes within the surface-phase treated thermodynamically. Bul chim PAN 9 no.3:159-162 [6].

1. Institute of Physical Chemistry, Polish Academy of Sciences. Presented by  $M_{\bullet}$  Smialowski.

(Surphase chemistry) (Thermodynamics)

24.5100

Baranowski, Bohdan, Doctor, Locent

TITLE:

AUTHOR:

The thermodynamics of irreversible processes in

physical chemistry

FELIODICAL:

Wiadomości chemiczne, no. 9, 1961, 553-564

This article was originally a lecture delivered at a meeting of the theoretical group of the Instytut chemii fizycznej PAN (Physical Chemistry Institute, PAS, Warsaw) on May 28, 1960. A short description TEXT: is given of the derivation and extension of known phenomenological equations concerning irreversible effects from the thermodynamics of irreversible processes. The author discusses the problems of 1) derivation of these laws on a macroscopic scale; 2) determining their ranges of validity; 3) their mutual relationship and 4) their connection with classical thermodynamics. It is shown that equilibrium thermodynamics can give car thermoughamits. It is shown that the relationship of the

The thermodynamics of ...

the connecting factor. Entropy is regarded as a scalar quantity having positive sources, and its change with time, in any given element of volume, is given by

$$\frac{\partial s}{\partial t} = -\operatorname{div} J_s + \sigma \tag{1}$$

where s is the entropy of the volume element, t is the time,  $\mathbf{J}_s$  the entropy flow and  $\sigma$  a so-called "entropy source" which originates from all irreversible processes occurring in the system under consideration.  $\sigma$  is also closely connected with classical thermodynamics through the Gibbs equation relating entropy to other internal and external properties of the system. It is shown (non-mathematically) that  $\sigma$  can always be expressed as a sum of the products of various macroscopic, time dependent processes (flows), and property, (e.g. concentration) gradients which may be regarded as "thermodynamic forces"  $\mathbf{X}$ . In general, therefore,  $\sigma = \sum_i \mathbf{J}_i \mathbf{X}_i$  (4)

Eq. (4) may be written as a family of "phenomenological equations" which describe the course of irreversible processes by introducing a set of Card 2/5

The thermodynamics of ...

coefficients, L, such that  $J_i = \sum_k L_{ik} X_k$  (5) Analysis of

Eq. (5) provides the full phenomenological theory of irreversible processes. The laws of Fick, Ohm, Fourier and Newton quoted above represent special cases of this equation and may, therefore, be derived from the consideration of the entropy source. Thus, e.g., Fick's law, stating that transfer of a certain constituent equals the product of a diffusion coefficient and a concentration gradient, may be written as  $J = D \times gradient c$ The range of validity of Fick's law depends on the ideal state of the system which may be determined from classical thermodynamics by introducing activity coefficients and on the effects of other components taking part in the transfer. Traditional forms of phenomenological equations are only approximate since the mutual interactions of components and their activity coefficients are not known precisely, and the laws apply only where the departures from equilibria are not pronounced. The role of the thermodynamics of irreversible processes does not solely consist of the derivation of all known laws describing irreversible effects, but also of elucidating problems which cannot be solved by the application of the simple laws. This is illustrated by considering 1) the isothermal transference of metals Card 3/5

The thermodynamics of ...

in a constant electric field towards the anode, and 2) the problem of isothermal self-diffusion and electrical conductivity in simple salts, such as liquid or solid NaCl. Thermodynamics of irreversible processes may also solve theoretical problems and suggest methods of experimental confirmation of the results. This is exemplified by the discussion of phase transfer in an isothermal 2 phase system, leading to a more correct value of the partition coefficient. Many applications for the method exist in the fields of, for example, electrochemistry, chemical kinetics, relaxation processes and catalysis. Thermodynamics of irreversible processes should thus fulfill a function analogous to that of thermodynamics dealing with reversible effects, by providing a common theoretical origin to experimental laws and yielding the maximum information about an examined system with the minimum of effort. There are 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: A.Z. Borucka, J.O.M. Bockris, J.A. Kitchener, J. Chem. Phys. 1956, 24, 1282.

ASSOCIATION: Instytut chemii fizycznej, PAN Warszawa (Physical Chemistry Card 4/5



BARANOWSKI, B.; CUKROWSKI, A. S.

The general equation of marker velocity in transfer processes. Bul chim PAN 9 no.4:253-256 '61.

1. Institute of Physical Chemistry, Polish Academy of Sciences. Presented by M. Smialowski.

(Equations) (Temperature) (Isobars) (Chemical reaction, Rate of)

BARANOWSKI, Bogdan; FULINSKI, Andrzej

Thermodynamics of irreversible processes of two-phase systems. I. Iso-thermal many component systems without chemical reactions. Rocz chemii 35 no.4:1103-1116 '61.

1. Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw.