KON,Mirko; JEVRIC,Sava; VIATKOVIC,Vida

Sedimentation of the erythrocytes (SE) in pulmonary tuberculosis after a load. Tuberkuloza,Beogr. 11 no.4:538-540 O-D '59.

1. Institut za tuberkulozu JNA, nacelnik: san. pukovnik prof. dr J. Studic.
(TUBERCULOSIS PULMONARY blood)
(BLOOD SEDIMENTATION)

VLATKOVIC, V.

BOZOVIC, Sasa, San. pukovnik dr.; VLATKOVIC, V., san. kapetan dr.

Case of balooned cavern. Voj. san. pregl., Beogr. 14 no.3: 143-146 Mar 57.

1. Grudna klinika VMA.
(TUBERCULOSIS, PULMONARY, case report
balooned cavern (Ser))

Country : YUGOSLAVIA
Category : Farm Animals. Q-5
The Honey Bee.
Abs. Jour : Ref Zhur-Biol., No 16, 1958, 74156

Author : Vlatkovich, B. D.
Institut. : -
Title : Bees of the Sjenica Dale and Pestera Plateau and the Conditions Prevailing in Apiculture.
Orig Pub. : Acta veterin., 1957, 7, No 2, 3-18

Abstract : Data are presented on the biometry of local bees (Serbia) as well as a list of honey plants.

Card: 1/1

VLAYAKHER, L. Ya.

VLAYAKHER, L.Ya.; DOBROKHOTOV, V.N.

Further investigations on the topography of mitosis of mouse carcinoma; structure of mitotic foci. Doklady Akad. nauk SSSR 81 no.6:1143-1145 21 Dec 51. (CIML 21:5)

1. Presented by Academician A.I. Abrikosov 30 October 1951.
2. Institute of Experimental Biology, Academy of Medical Sciences USSR.

L 62746-65 EWT(d)/EWT(m)/EA/FA(b)/T-2/EWP(t) BU/0010/65/000/003/0002/0002

ACCESSION NR: AP5010395

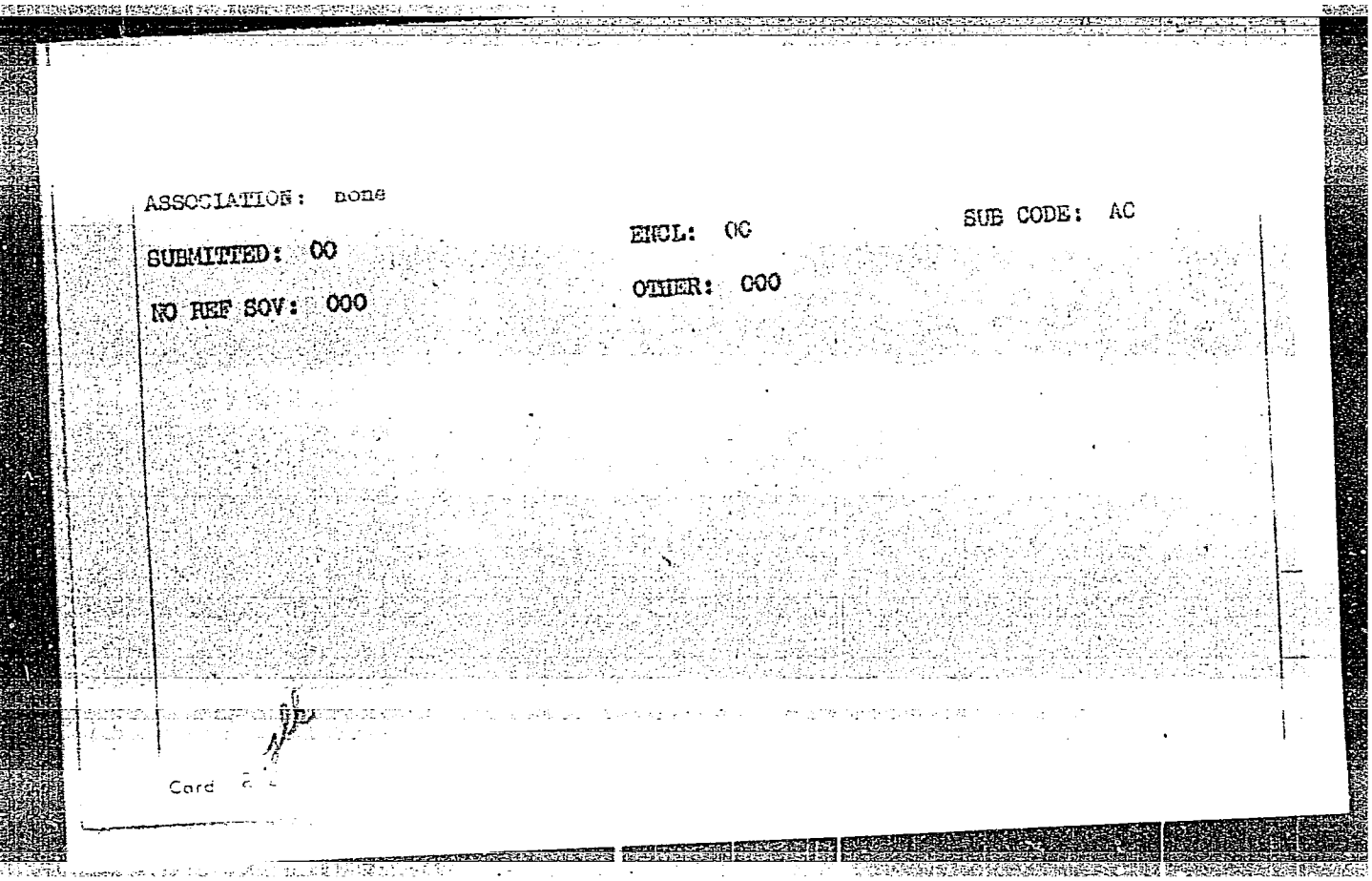
AUTHOR: Vlaychev, A. (Engineer)

TITLE: "Kometa-3" - standard [new Bulgarian glider]

SOURCE: Aviatsiya i kosmonavtika, no. 3, 1965, 2

TOPIC TAGS: glider, aircraft performance, aircraft specification

ABSTRACT: During 1957 the Central Committee of DOSO announced a contest for the designing of a single-seater glider of high performance. Docent Lyuben Panov and docent Dimit"r Panchovski won the competition. Based on this design, the design-office personnel (Lyuben Panov, Dimit"r Panchovski, Rashko Radomirov, and Andrey Vlaychev) came up with a final design of the "Kometa-standart," on which was based the next version, the Kometa-2. Finally, in 1963 the last type, the Kometa-3, was produced. It has the following main characteristics: wingspan, 14.95 m, fuselage 6.65 m, wing lifting surface 12.25 m, wing load 30.02/m^2, maximum speed 200 km/hr, [illegible] flaps 120 km/hr, maximum towing speed with an airplane [illegible] The glider is approved [illegible] safety [illegible] aerobatics.



ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 000

ENCL: 0C

OTHER: 000

SUB CODE: AC

Card

VLAYKOV, G. G.

"Stability of Plant Bending in an I-Beam Under Complex Loads." Cand Tech Sci, Kiev Construction Engineering Inst, 26 Nov 54. (PU, 14 Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

VLAYKOV, G.G.

Application of the principle of superposition (additivity) in problems involving the stability of plane deformation. Tekh.molod. 22 no.1:436-441 Ja '54. (MLRA 7:1)

1. Kiivs'kiy inzhenerno-budivel'niy institut. Predstaviv diysniy chlen Akademii nauk Ukrains'koi RSR.

(Deformations (Mechanics)

VLAYUK, P.A., akademik

Contribution of Ukrainian scientists to agriculture. Nauka i zhyttia 11 no.8:27-30 Ag '61. (MIRA 14:12)

1. AN USSR; Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina; Ukrainskaya akademiya sel'skokhozyaystvennykh nauk; prezident Ukrainsk›y akademii sel'skokhozyaystvennykh nauk.
(Ukraine--Agricultural research)

VLAZHEVICH, I. V., Cand. Veterinary Sciences
Central Scientific Research Lab. for the Search of New Medicinal Substances, Ministry of Animal Husbandry, (RSFSR).
"About the role of sheep in transmission of malignant catarrhal fever of cattle."
SO: Veterinariia 24(2). Feb. 1947 p. 20

25(7) PHASE I BOOK EXPLOITATION SOV/2454

Vlaznev, Yevgeniy Ivanovich, Sergey Vasil'yevich Podgornov, Valeriy Mikhaylovich Chernyshev, and Petr Gavrilovich Shalashov

Normalizovannyye stanochnyye prisposobleniya; spravochnik konstruktora (Standard Machine Tool Fixtures; Designer's Manual) Moscow, Oborongiz, 1959. 439 p. 12,000 copies printed.

Reviewer: Kh.L. Bolotin, Candidate of Technical Sciences; Ed.: V.V. Kuz'min, Engineer; Ed. of Publishing House: I.A. Suvorova; Tech. Ed.: N.A. Pukhlikova.

PURPOSE: This manual is intended for designers of machine tool fixtures and engineers and technicians. It may also be useful to students of machinery-construction vuzes and tekhnikums.

COVERAGE: The manual presents data on the standard structural design of machine tool fixtures. Reference material, materials used in manufacturing fixture components, standard types of fixture components, basic elements of fixture components, standard fixtures, hydraulic and air-operated actuating

Card 1/13

VLAZNEV, Yevgeniy Ivanovich; PODGORNOV, Sergey Vasil'yevich; CHERNYSHEV, Valeriy Mikhaylovich; SHALASHOV, Petr Gavrilovich; GLIKMAN, G.S., inzh., retsenzent; BOGOMOLOVA, M.F., red.izd-va; PUKHLIKOVA, N.A., tekhn. red.

[Standardized machine-tool attachments] Normalizovannye stanochnye prisposobleniia; spravochnik konstruktora. Izd.2. perer. i dop. Moskva, Oborongiz, 1963. 504 p. (MIRA 16:4)
(Machine tools--Attachments)

LITVIN Grigoriy Il'ich; VLAZNEVA, Tat'yana Grigor'yevna; KHINEVICH, V.N., kand. tekhn. nauk, dots., otv. red.; NESTERENKO, A.S., red.

[Collection of problems on construction machines] Sbornik zadach po stroitel'nym mashinam. Khar'kov, Izd-vo Khar'kovskogo univ., 1965. 50 p. (MIRA 18:7)

USSR/Diseases of Farm Animals. Diseases Caused by Viruses and Rickettsiae R-1

Abs Jour : Ref Zhur-Biol., No 1, 1958, 2735

Author : Bogach I., Rednarzh B., Vlaznichka F.
Inst : Not given
Title : Nonbacterial Infectious Diseases which Comprise the Complex of the so-called "Grippe" in Hogs.

Orig Pub : Za sots. s-kh nauku, 1956, A5, No 4, 385-396

Abstract : Piglet diseases which are clinically manifested by retarded development, exhaustion, and infection of the organs of respiration and blood circulation were studied. Occasionally there was an affection of the nervous system manifested by atypical epileptiform attacks. Greatest morbitity was observed in piglets during the weaning period

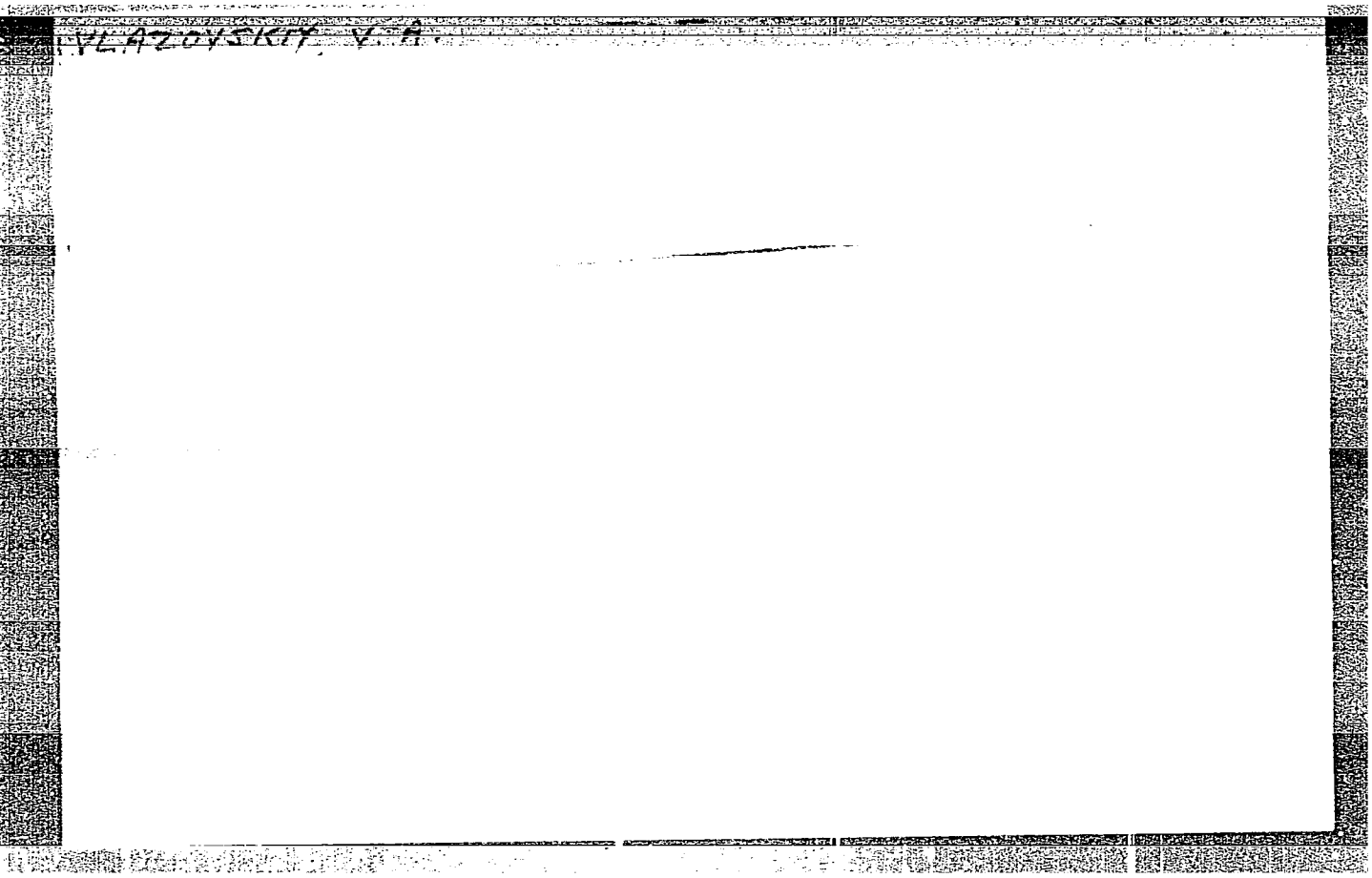
Card 1/3

VLAZNEV, Yevgeniy Ivanovich; PODGORNOV, Sergey Vasil'yevich; CHERNYSHEV, Valeriy Mikhaylovich; SHALASHOV, Petr Gavrilovich; BOLOTIN, Kh.L., kand.tekhn.nauk, retsenzent; KUZ'MIN, V.V., inzh., red.; SUVOROVA, I.A., izdat.red.; PUKHLIKOVA, N.A., tekhn.red.

[Standardized machine-tool attachments; manual for designers] Normalizovannye stanochnye prisposobleniia; spravochnik konstruktora. Moskva, Gos.izd-vo obor.promyshl., 1959. 439 p. (MIRA 12:5)
(Machine tools--Attachments)

MACAT, Josef, inz.; VLAZNY, Antonin

Technical development in repairing railway rolling stock. Zel dop tech 10 no.2:33-34 '62



PROCESSES AND PROPERTIES INDEX

Ca

The composition and evaluation of enzyme bates. A. Vlček. *Gerber* 55, 207-9, 219-21(1929).—A discussion. J. G. Niederkorn

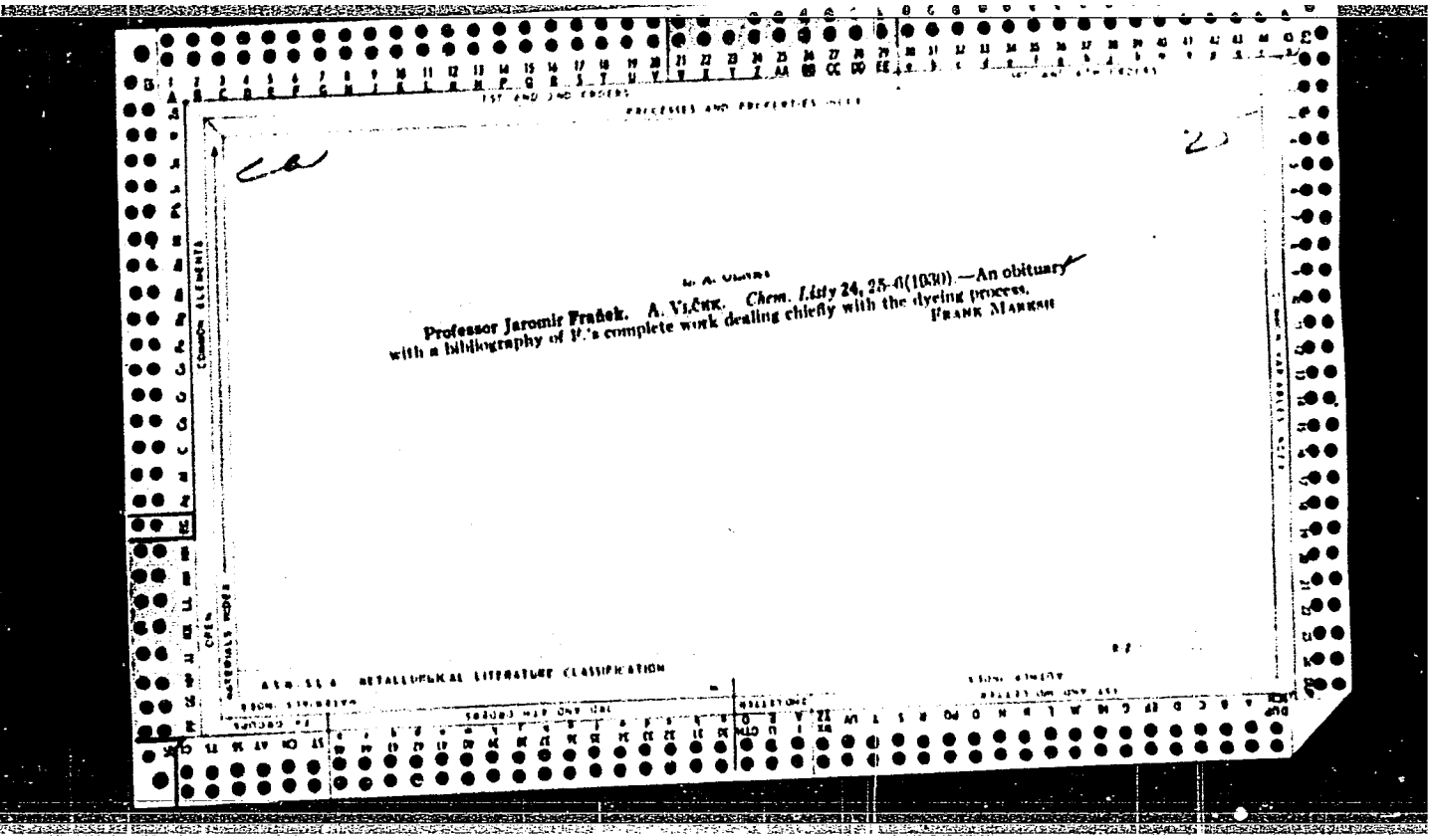
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

27

The composition and evaluation of enzyme bates. A. Vlček. *Cuir tech.* 19, 30-5 (1930): cf. *C. A.* 24, 1246.—A bibliography is included. J. G. Niederkorn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Professor Jaromir Pražek. A. Vlček. *Chem. Listy* 24, 25-40(1930).—An obituary with a bibliography of P.'s complete work dealing chiefly with the dyeing process.
FRANK MARKUS

PROCESSES AND PROPERTIES INDEX

BC

A-1

Two co-existent phases. A. V[illegible] and K. Treon (Chem. Listy, 19[illegible], [illegible], 65—[illegible], 89—90, 110—120, 161—164, 165—167, [illegible]—[illegible]0, 281—285, 566—572, 597—600, [illegible]—[illegible]; 1933, 27, [illegible]—13).—A relation is deduced which is valid to determine the conditions for homogeneity in ternary liquid mixtures. This rule is shown to hold for the systems H_2O–C_6H_6–$COMe_2$, H_2O–$CHCl_3$–AcOH, and H_2O–C_5H_{11}·OH–EtOH, MeOH, or $COMe_2$. R. T.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca

24

Aging of enzymic tannery bates. A. Vlček. *Technická Hlídka koželuská* 1932, 89-92; *Chem. Obzor* 8, *Abstract sect.*, 191-2; cf. *C. A.* 27, 5214.—The theory and mechanism of aging of enzymic tannery bates are given.

J. Kučera

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

29

Tannery bates. II. The combination of pancreatin with hide substance. A. Vlček and J. Pospíšil. *Gerber.* 59, 99-100, 111-14(1933); cf. *C. A.* 27, 6214.—The ability of hide powder to remove pancreatin from aq. soln. was studied. It was found that the enzymic action on casein of salt-free, aq. pancreatin solns. was greatly decreased by allowing 200 cc. of the latter to stand in contact with 0.25-8.0 g. of hide substance for 35 min. at lab. temp. This was taken to indicate that the pancreatin was in some way bound by the hide substance. Since the decrease in enzymic activity was not, however, directly proportional to the amt. of hide powder used, it was concluded that certain fractions of the pancreatin combined more readily with the hide substance. No one method appears adequate for detg. the strength and suitability for practical use of enzyme prepns. used as tannery bates.

J. W. Perry

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Polarographic studies in leather chemistry. I. Polarograms of aqueous quebracho extracts. A. K. Vřek, Viktor Mansfeld, and Dagmar Krkošková. *Tech. Hlídka Koželužská* 19, 111-21(1943). **II. Polarograms of aqueous solutions of pyrocatechol.** *Ibid.* 123-6.—See C.A. 40, 6270[9]. **III. Polarograms of aqueous solutions of pyrogallic acid and phloroglucinol.** A. K. Vřek and E. Spalek. *Ibid.* 165-7.—Dilute (0.00004-0.0002 *M*) and buffered solns. of pyrogallic acid yielded an anodic oxidation wave which runs parallel to the first stage of oxidation of pyrogallic acid. The half-wave potential was a linear function of the pH and followed the equation $\varepsilon_{1/2} = -0.062\,pH + 0.50$. The half wave crest rose linearly with the concn. of pyrogallic acid and may be used for quant. detns. Although phloroglucinol reduces Fehling's soln. and absorbs O from the air, its solns. did not show any polarographic activity. Frank Maresh

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

CA

7

Polarographic determination of traces of iodide in common salt. A. A. Vlček (Charles Univ., Prague). *Collection Czechoslov. Chem. Communs.* 15, 833-8(1950)(in English); *Chem. Listy* 44, 77(1950).—Traces of I^- in NaCl are detd. by oxidizing the I^- to IO_3^- with Br in dil. H_2SO_4, adding excess NaOH, and recording the polarogram of the soln. The drop time must be at least 4 sec. to eliminate the "water wave" (Orlemann and Kolthoff, *C.A.* 36, 3105[1]; Hans and von Stackelberg, *C.A.* 44, 5232*f*); if it is not, 0.01–0.02% gelatin may be added. The analysis is made by a standard addn. technique by using the smallest possible amt. of added iodate to avoid significant changes in the character of the supporting electrolyte. Results are 2–8% lower than by a similar iodometric method; this is ascribed to the error in the latter caused by traces of residual Br, which does not interfere in the polarographic measurements. L. M.

CA

Polarographic determination of traces of iodide in common salt. A. Vlček (Charles Univ., Prague). *Chem. Listy* 44, 77–9(1950).—Iodide is oxidized with Br in an acidic soln. to iodate, which is detd. polarographically in weakly alk. soln. In concd. (20%) solns. of NaCl, an anomalous wave (water wave) occurs, which interferes. It can be suppressed by using a low flow rate of Hg (t = 4.5 sec., m = 1.26 mg./sec.), or by adding 6 drops 0.5% soln. of gelatin in a 10-ml. sample. Dissolve 10 g. of common salt in 40 ml. boiling water, add 1–2 ml. 0.1 *N* H_2SO_4 to slightly acid reaction, and 3 drops Br. Remove excess Br by boiling. Make alk. with 1 ml. 1.6 *N* NaOH, filter, and make up to 50 ml. Polarograph a 10-ml. sample after removing O by a stream of N. Add 0.01–4 ml. 0.05% aq. KIO_3, and register the standard curve. About 0.4–7 mg. KI/kg. NaCl can thus be detd.

M. Hudlický

VLCEK, A. A.

24(2,4) PHASE I BOOK EXPLOITATION CZECH/2433

International Polarographic Congress. 1st, Prague, 1951

Sborník I. Mezinárodního polarografického sjezdu. Díl 3: Hlavní referaty prednesene na sjezdu. Proceedings...Vol 3: Reviews Read at the Congress. Praha, Přírodovědecké vyd-ví [1952] 774 p. 2,000 copies printed.

Resp. Ed.: Jiří Koryta, Doctor; Chief Ed. of Publishing House: Milan Skalník, Doctor; Tech. Ed.: Oldřich Dunka.

PURPOSE: The book is intended for chemists, chemical engineers, and physicists.

COVERAGE: The book is a collection of reviews and original papers read at the International Polarographic Congress held in Prague in 1951. Uses of polarography in organic and inorganic analysis, biochemistry, medicine, and industrial chemistry are discussed. In the section, Reviews Read at the Congress, Russian and either German or English translations of each review are presented. In the section, Original Papers Read at the Congress, only those translations in Russian, German, and English which have not been published in Volume I are presented. The following scientists participated in the opening of the Congress: Professor Wiltor Kemula, Dean of the Faculty of Sciences, Warsaw; Doctor Jaromír Dolanský, Minister of Planning; Professor Jaroslav Heyrovský, Chairmen of the Congress; and Professor Jaroslav Pukatko, Chairman of the Center for Scientific Research and Technical Development. References follow each paper.

Card 3/14

ORIGINAL PAPERS READ AT THE CONGRESS

VLČEK, A. A. Czech CA: 47:11030

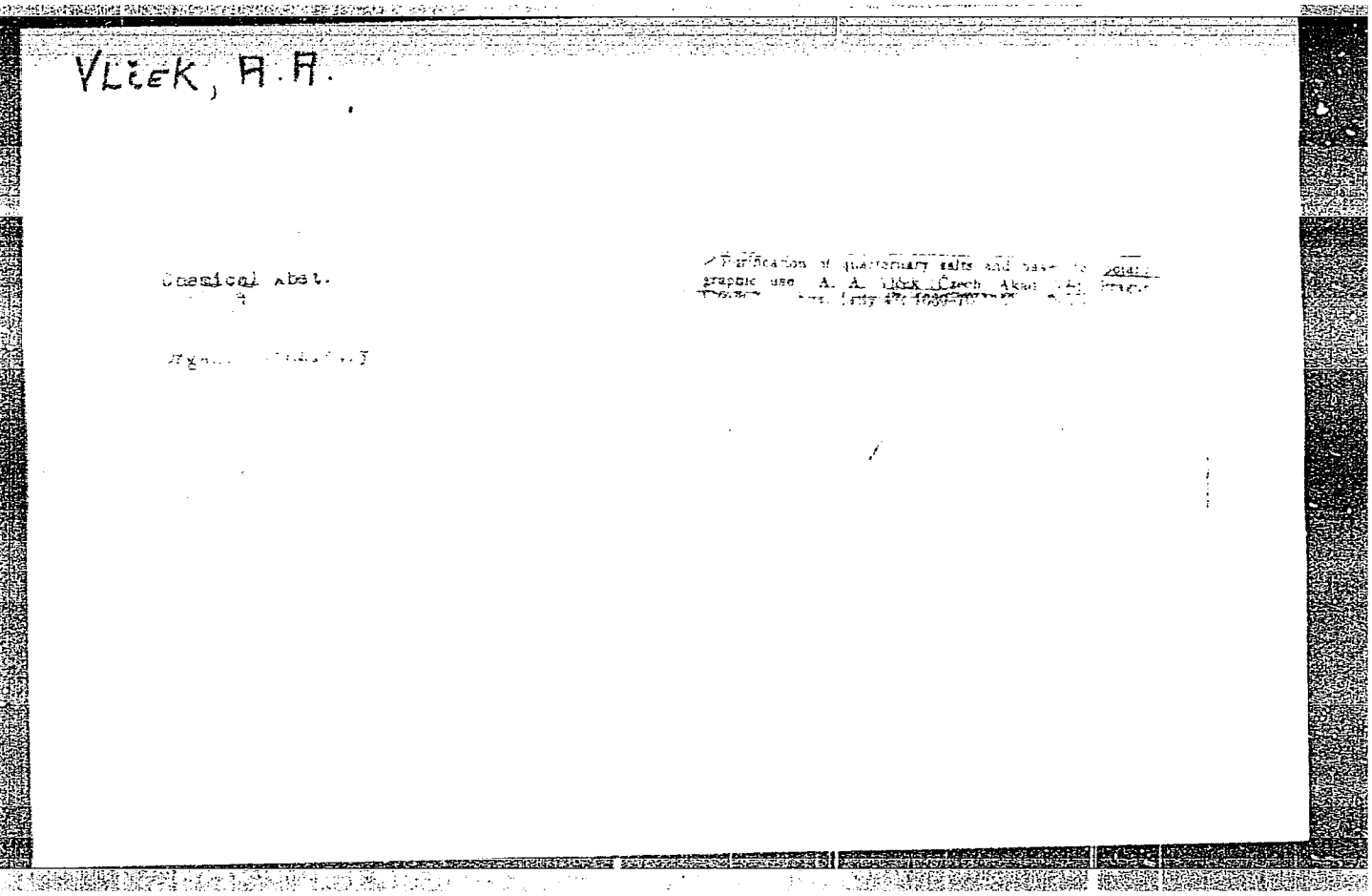
Central Polarographic Inst., Prague, Czech.

"Polarography in concentrated sulfuric acid."

Sborník Mezinárod. Polarog. Sjezdu Praze, 1st Congr. 1951, Pt. III, Proc., 366-9 (in Czech), 370-3 (in Russian), 373-6 (in English).

VLCEK, Antonin A.

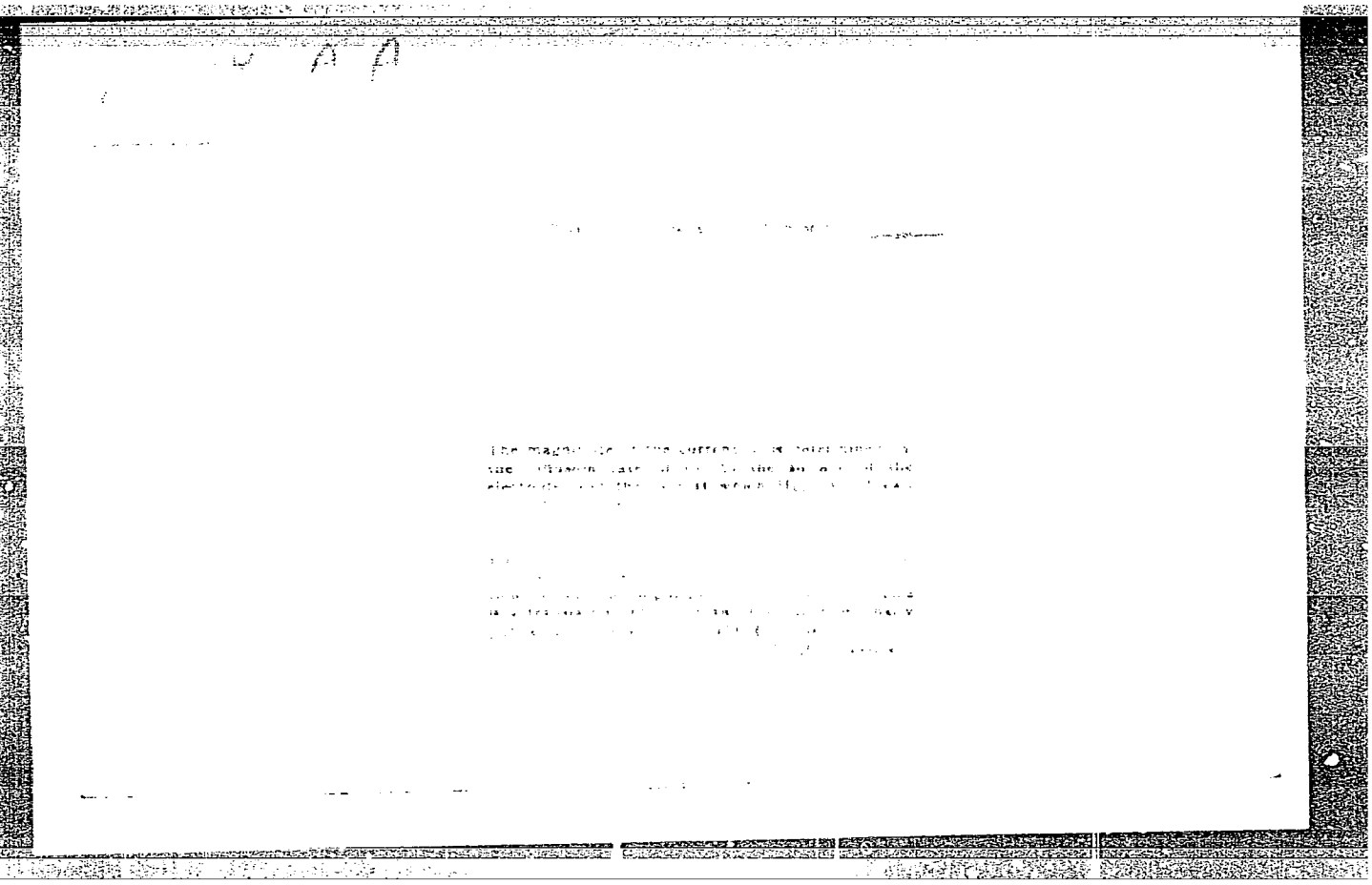
Polarography in concentrated sulfuric acid. II. Capacity of the electrode double layer on the dropping-mercury electrode. Antonín A. Vlček (Central Polarographic Inst., Prague, Czech.). *Chem. Listy* 45, 87-94 (1951); cf. *ibid.* 305.—The capacity of the electrode double layer in concd. H_2SO_4 was found to be 25% higher than in aq. solns., viz., 52.5 μ farads cm.$^{-2}$. M. Hudlický



VLČEK, A. A.

Chemical Abst.

Purification of quaternary salts and [illegible] graphic use. A. A. VLČEK (Czech. Akad. [illegible]



VLCEK, Antonin A.

CZECH

Polarographic half-wave potentials. I. Method of measurement; half-wave potentials of thallium. Antonín A. Vlček. *Collection Czechoslov. Chem. Communs.* 19, 802-7 (1954) (in German). See *C.A.* 48, 6285h. E. J. C.

Vlček, Antonín, M.

CH V The validity of the Ilkovič equation for polarographic diffusion currents. Antonín A. Vlček (Československ. akad. věd, Prague). *Chem. Zvesti* 5, 681–7 (1951).—It was assumed that these conditions were fulfilled: (1) perfect mobility equil., (2) a soln. completely free of surface-active substances, (3) sufficient excess of the indifferent electrolyte, (4) moderate concn. of the depolarizer, (5) an application of the max.-free system, and (6) use of a capillary of diam. 0.04–0.08 mm. If that assumption was true, the deviations from Ilkovič's equation could be caused by 3 factors: (1) variable current rates during the Hg drop time; (2) neglect of the curvature of the electrode surface, and (3) insufficient exclusion of the turbulent currents. At small dropping speeds, the deviations were caused by the change of the dropping speed during the Hg drop time and by a transfer of the concn. polarization from one drop to the other. This transfer began at the start of the drop formation. At high dropping speeds the disturbing factor was due to the turbulent currents. The development of the current was independent of the drop time. In the presence of the gelatin, the deviations were greater because the concn. polarization transfer was more intensive. Gelatin was disturbing when surface-active substances were present. All the deviations were much higher than assumed if spheric diffusion was neglected. After correcting for the change of dropping speed, the exptl. i vs. t curves for $t > 0.1$ were in agreement with the theoretical curves of the Ilkovič equation.

Jan Micka

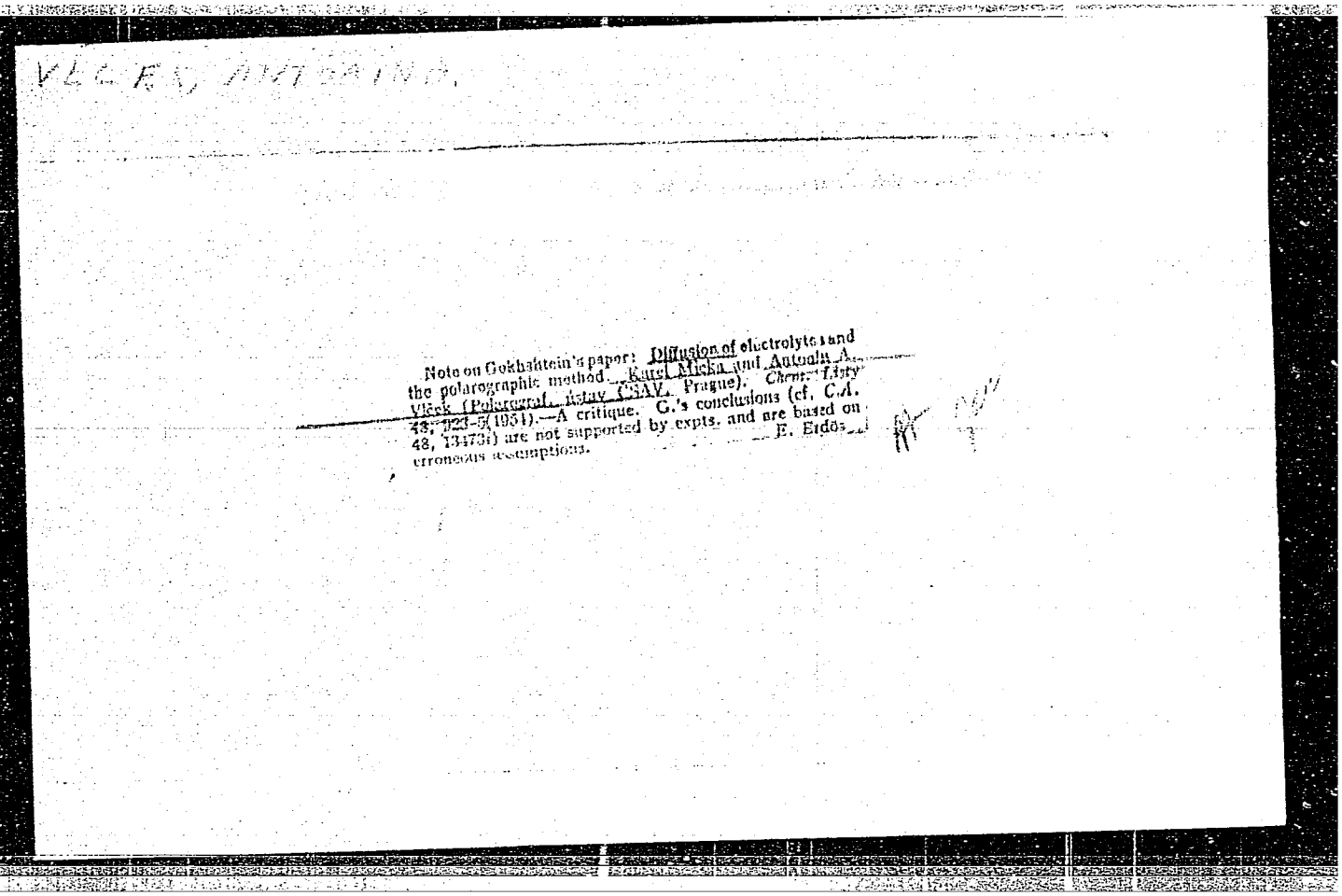
VLCEK, ANTONIN A.

5

(2)

Polarographic half-wave potentials. I. Method of measurement; half-wave potentials of thallium. Antonín A. Vlček (Polarografický ústav ČSAV, Prague, Czech.). *Chem. Listy* 48, 180–93(1954).—By means of the 3-electrode system with a compensating circuit, the half-wave potentials of the Tl^+ ion in 4 media were detd. with an accuracy of ±1 mv.: in 0.1*M* KCl −494.0 mv., in 0.1*M* $NaNO_3$ −493.0 mv., in 0.1*M* Na_2SO_4 −503.6 mv., and in 0.1*M* NH_4Cl, NH_4OH −501.0 mv. against a normal Hg_2Cl_2 electrode at 25°. E. Erdős

12/16/54



VLEK, ANTONIN.

Note on Gokhshtein's paper: Diffusion of electrolytes and the polarographic method. Kurt Micka and Antonin A. Vlcek (Polarograf. Ustav CSAV, Prague). *Chem. Listy* 48, 923-5(1954).—A critique. G.'s conclusions (cf. C.A. 48, 13473i) are not supported by expts. and are based on erroneous assumptions. E. Erdős

VLCEK, ANTONIN, A.

Polarographic half-wave potentials. II. Effect of the supporting electrolyte, the extrapolated half-wave potential, and the normal oxidation-reduction potential. Antonín A. Vlček (Polarograf. ústav ČSAV, Prague, Czech.). *Chem. Listy* 48, 1471-84(1954); cf. *C.A.* 48, 9259*h*.—The dependence of the half-wave potentials $E_{1/2}$ of the Tl^+ and Pb^{++} ions on the concn. and nature of the support electrolyte was detd. At low concns. of the support electrolyte the dependence of $E_{1/2} - \sqrt{\mu}$ (μ was the ionic strength) was linear and could be extrapolated to $\mu = 0$. A normal oxidation-reduction potential under current-flow E_{ORP} was defined, and the difference $(E_{1/2})_{\mu=0} - E_{ORP}$ characterized the kinetics of the electrode process. From the $(E_{1/2})_{\mu=0}$ values of the free and complex ions, the thermodynamic consts. of complexity could be detd. The $(E_{1/2})_{\mu=0}$ values (against a normal calomel electrode) were: Tl^+ −483 mv., free Pb^{++} −406 mv., and plumbate ions −810 mv. From these values for the plumbate, pK = 13.95. The normal potential of Pb in plumbate soln. was calcd. from these values as −537 mv. against a normal H electrode. All values were at 25°. III. Alkali metals and their amalgams. *IV.* [illegible]—The polarographic and oscillographic behavior of alk. metals [illegible] amalgams was studied. The system alk. metal-amalgam gave a reversible oxidation-reduction wave and was oscillographically reversible. The oscillographic reversibility of NH_4^+ ion was proved. The half-wave potentials of alk. metals in 0.1*M* $(CH_3)_4NOH$ soln. at 25° against a normal H_2Cl_2 electrode were: Li^+ −2.38$_8$ v.; Na^+ −2.142$_5$ v.; K^+ −2.106$_8$ v.; Rb^+ −2.160 v.; Cs^+ −2.13$_8$ v. The extrapolated half-wave potentials $(E_{1/2})_{\mu=0}$ were identical with the normal oxidation-reduction potentials under current flow within the limits of exptl. error. E. Erdős

VLCEK, A.

Polarographic half-wave potentials. IV. Procedure for comparing half-wave potentials in different solvents. p. 1863

Vol. 48, no. 12, Dec. 1954
CHEMICKE LISTY
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, 1956

VLCEK, A.

7

Relation between the electronic structure and polarographic behavior of inorganic depolarizers. I. Basic rules. Antonín A. Vlček (Fysikální ústav CSAV, Prague). *Collection Czechoslov. Chem. Communs.* 20, 894-900(1955)(in English).--See *C.A* 49, 10092*f*.

E. J. C.

VLCEK, A.A

2

Polarographic half-wave potentials. IV. A procedure for comparing half-wave potentials in different solvents. J. A. Vlček. *Collection Czechoslov. Chem. Communs.* 20, [illegible] (in German).—See *C.A.* 49, 5153*i*. E. J. C.

VLČEK, ANTONÍN A.

CH Polarographic reversibility of the system europium^{++}-europium^{+++}. Preliminary communication. Antonín A. Vlček. *Collection Czechoslov. Chem. Communs.* 20, 1507-8 (1955) (In German).—See *C.A.* 49, 10092*h*. B. J. C.

VLEEK, ANTOUIN, A.

CZECH

Polarographic behavior of hydrogen in nonaqueous solvents. II. Solutions of strong acids in ethanol. Antonín A. Vlček (Polarografický ústav ČSAV, Prague). Chem. Listy 49, 28-31(1955); cf. preceding abstr.—With increasing concn. of EtOH, the half-wave potential of H^+ was shifted toward more pos. values. The total change represented 0.27 v. as shown on the polarographic curves of the system: EtOH + H_2O + HCl($HClO_4$) and in presence of Me_4NCl or LiCl. This value was calcd. from the "K potential scale," the values of which were independent of the concn. of EtOH. The height of H wave in solns. contg. different amts. of EtOH varied in the same manner as the mobility of H^+ in these solns. From the change of the half-wave potential and from the normal potential of H electrode in EtOH, +0.1 v. was detd. as the H overvoltage in EtOH. Comparison of known values in various solvents showed the H overvoltage to be related to the promptness with which the "lyonium" complex was giving off the proton. The speed of this proces increased proportionally to the changes in H overvoltage and depended rather on the constitution of the lyonium ion than the phys. properties of the solvent. P. Štráfelda

VLCEK, A. A.

CZECH

Polarographic behavior of tantalum in solutions of fluoride. A. A. Vlček (Polarografický ústav ČSAV, Prague). Chem. Listy 49, 260(1955).—A soln. of Ta_2O_5 in HF, polarographed in a supporting electrolyte that is satd. with NaF and contg. $5 \times 10^{-3}M$ HF at least, gives a well developed wave of a height directly proportional to the concn. of Ta. The half-wave potential is −0.95 v.

F. Stráfelda

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320006-5"

Vleck, A.A.

6

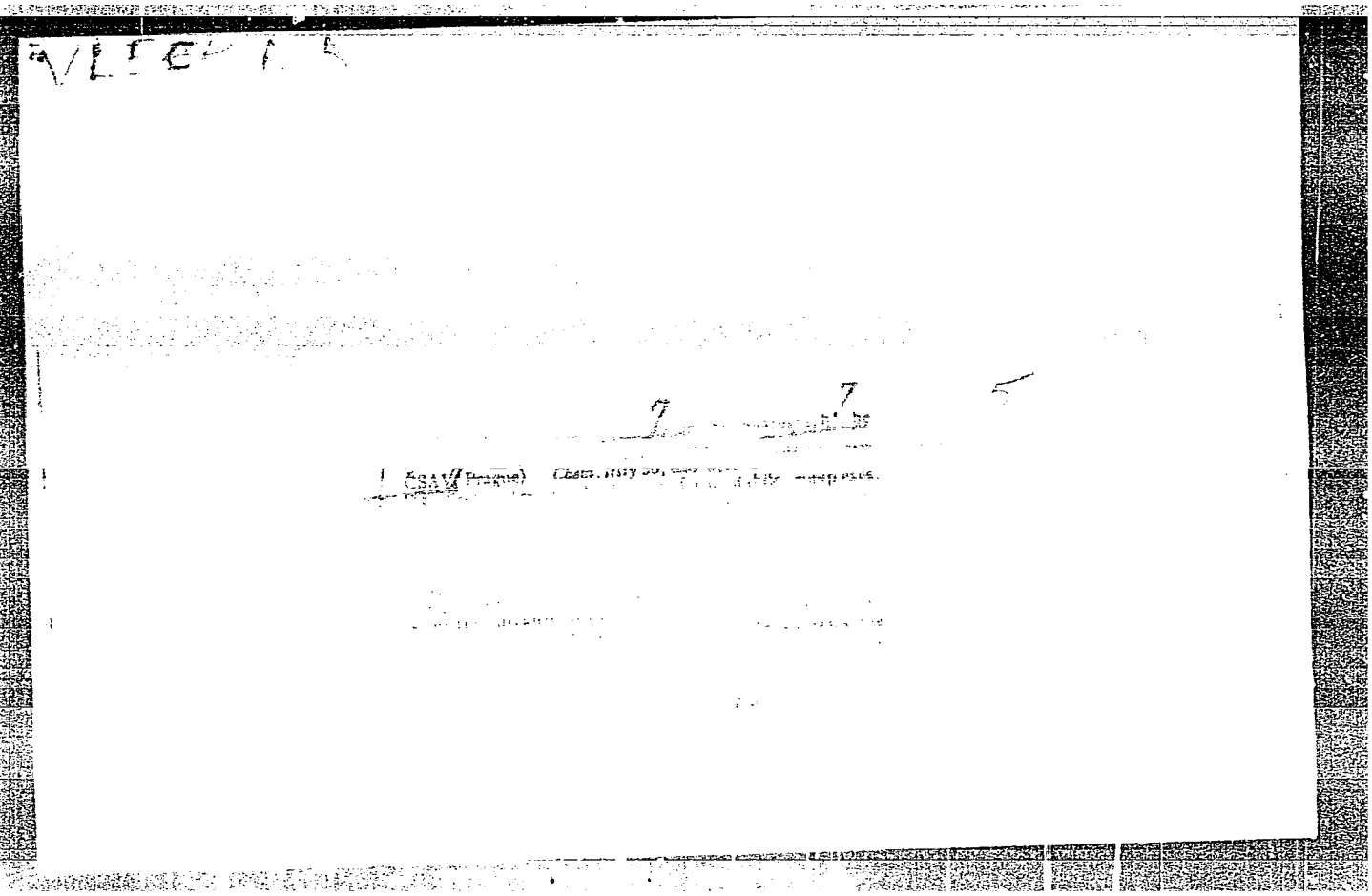
1445. The absorption spectrum of the $AuCl_4^-$ ion.
A. A. Vleck and [illegible]

sive asymmetric absorption zone having the maximum at 311 mμ. Its structure and properties are discussed. J. Zyk.

VLCEK, A.A.

"Advances in inorganic chemistr" nd radiochemistry" edited by H.J.Emeleus, A.G.Sharpe. Vol. 3. Reviewed by A.A.Vlcek. Chem listy 57 no. 5:547-548 My '63.

"Progress in inorganic chemistry" edited by F.A.Cotton. Vol. 3. Reviewed by A.A.Vlcek. Ibid.:548-549



VLCEK, A.

"Effect of basic electrolytes on the polarographic behavior of nickel ions; a preliminary communication." p. 828

Institute of Applied Physics , (Czechsolovak Academy of Sciences.) Vol. 50, no. 5, May 1956.

EAST

SO: Monthly Index of European Accession (EEAI) LC, Vol. 7, No. 5 May 1958

VLCEK, A.

VLCEK, A. Tables of half-wave potentials of inorganic depoarizers. p. 400. Vol. 50, no. 3, Mar. 1956. CHEMICKE LISTY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

VLCEK, A. A.

Formation and reduction of zero-valent metal complexes studied polarographically. A. A. Vlček (Czech. Acad. Sci., Prague). *Nature* 177, 1042 (1956).—The complexes of +2 transition metals are polarographically reduced to a zero-valent complex (I). I may be stable, may decompose to the metal, or may be reoxidized to another complex. For example, $Ni(CN)_4^{--}$ in 0.1*M* NaCN is reduced to $Ni(CN)_4^{----}$; this with H_2O yields H and $Ni_2(CN)_6^{----}$, which is irreversibly oxidized at the anode. Complexes of Ni(II) with bipyridyl, $(NH_2CH_2)_2$, pyridine, NH_3, and Cl^- in 5*M* $CaCl_2$ showed the same behavior. $Fe(CO)_5$ in 0.3*M* $(CH_3)_4NCl$ in abs. EtOH is reduced at −1.7 v. *vs.* the HgCl electrode to $Fe(CO)_4^{--}$, which is oxidized in 2 successive steps to products other than $Fe(CO)_5$ and $Fe_3(CO)_{12}$. Observations were made by oscillographic polarography and a Kalousek commutator.

K. G. Stone

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VLČEK, A.A.

CZECHOSLOVAKIA/Physical Chemistry - Electrochemistry. B-12

Abs Jour : Ref Zhur - Khimiya, No 5, 1958, 13913

Author : A.A. Vlcek
Inst : --
Title : Relations between the Electronic Structure of Inorganic Depolarizers and Their Polarographic Behavior. II. Complex Cyanides of Nickel.

Orig Pub : Sb. chekhosl. khim. rabot, 1957, 22, No 3, 948-960

Abstract : See RZhKhim 1957, 40780.

Card 1/1

VLCEK, A.; HEYROVSKY, J.

Significance of the Ilkovic equation in electrochemistry. p. 3. (Matematicko-Fyzikalny Casopis, Vol. 7, No. 1, 1957, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

CZECHOSLOVAKIA/Physical Chemistry. Electrochemistry. B-12

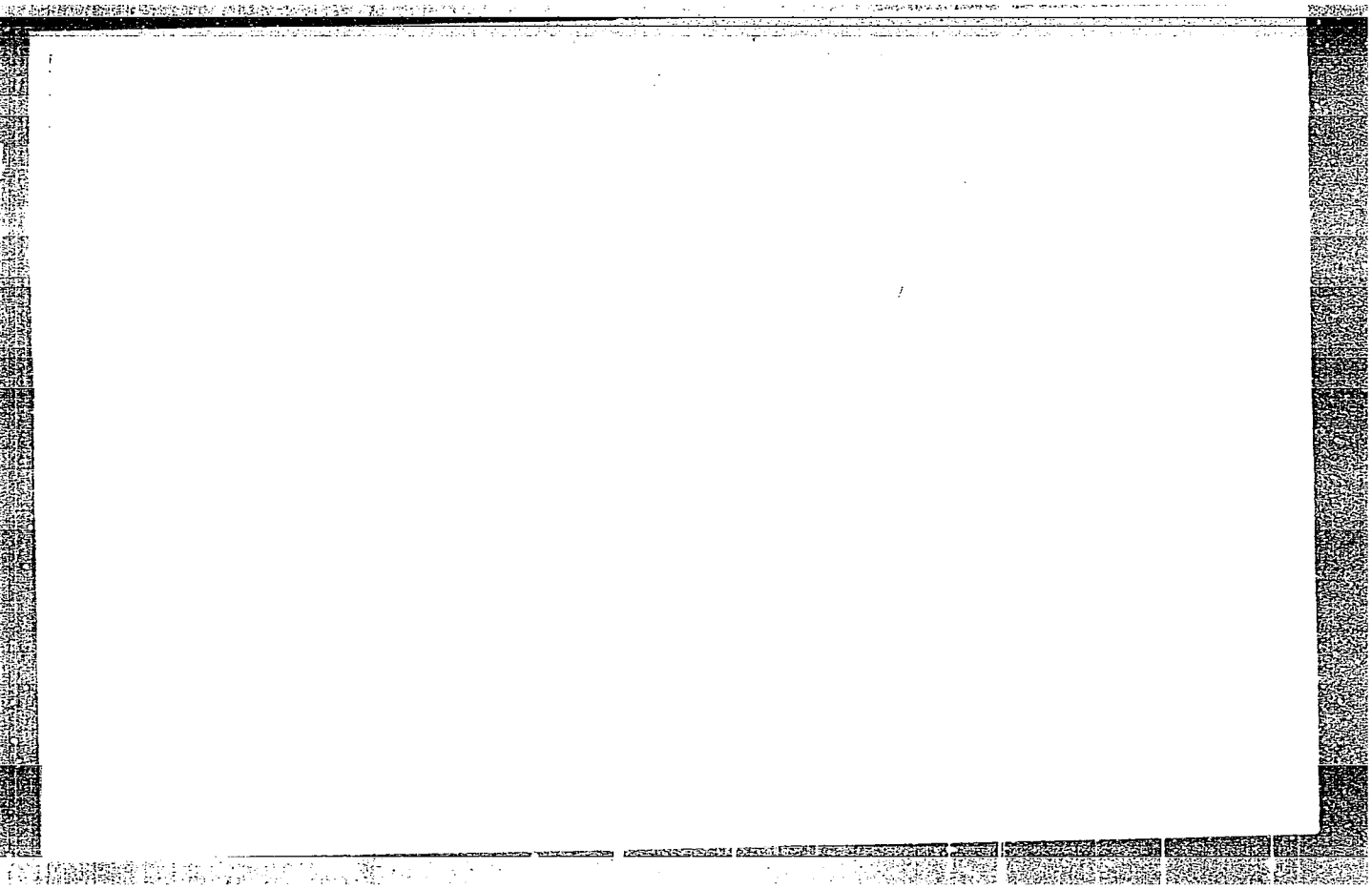
Abs Jour: Ref Zhur-Khim., No 13, 1958, 42705.

Author : Vlcek A. A.
Inst :
Title : Relations Between the Electronic Structure and Polarographic Behavior of Inorganic Depolarizers. III. Electrode Processes Involving Unstable Intermediates.

Orig Pub: Sb. chekhosl. khim. rabot, 1957, 22, No 6, 1736-1746.

Abstract: See RZhKhim, 1957, 44188.

Card : 1/1



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860320006-5"

VLCEK, A.

A symposium on rare elements.

p. 295 (Chemie, Vol. 9, no. 2, Apr. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

VLCEK, A.

Inorganic oxidation and reduction exchange reactions.

p. 305 (Chemie, Vol. 9, no. 3, June 1957, Praha, Czechoslovakia)

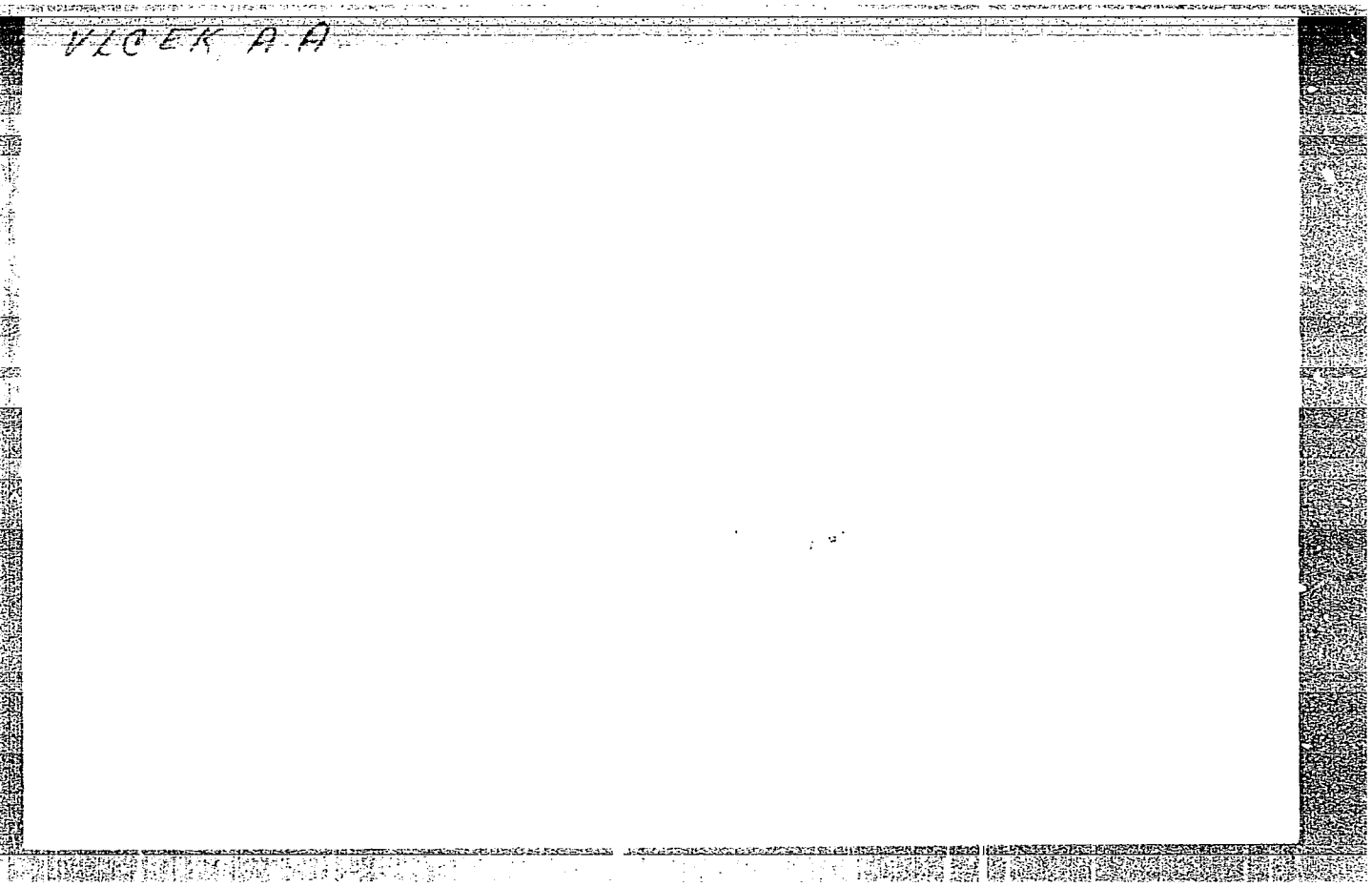
Monthly Index of East European Accessions (EEAI) LC. VOL. 7, no. 2, February 1958

VLCEK, A.

"Relation between the electron structure of inorganic depolarizers and their polarographic behavior. II. Complex nickel cyanides. In English."

p. 948 (Collection of Czechoslovak Chemical Communications. Sbornik Chekhoslovatskikh Khimicheskikh Rabot.) Vol. 22, no. 3, June 1957. Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958



A A VLCEK

Distr: 4E2c(j) 7

Polarography of the cobalt-bipyridine complex. A. A. Vlček (Polarographic Inst., Prague). *Z. physik. Chem.* (Leipzig) Sonderheft July, 1958, 143-51.—The polarography of the well-defined complex, $Co(dipy)_3(ClO_4)_2 \cdot 3H_2O$, disclosed 3 waves, whose behavior in 0.1*M* $NaNO_3$ is described in detail. The first wave, $E_{1/2} = +0.09$ v. *vs.* satd. calomel electrode (S.C.E.) and concn. independent, had a limiting current which showed 2 small adsorption waves at −0.85 and −1.03 v. *vs.* S.C.E., resp. It corresponds to the reduction of the $Co(dipy)_3^{+++}$ ion, to bivalent Co, and was not completely reversible. The second wave, $E_{1/2} = -1.16$ v. *vs.* S.C.E. for $10^{-3}M$ Co and shifting to more pos. potentials with increasing Co concn., had a discontinuity at its beginning and a limiting current whose magnitude decreased, with respect to that of the first wave, from a ratio of 1.6 at $2 \times 10^{-4}M$ Co to 1.0 at $10^{-3}M$ Co. This wave corresponds to the reversible reduction of the bivalent Co, formed in the first step, to univalent Co. The third wave, $E_{1/2} = -1.34$ v. *vs.* S.C.E. for $10^{-3}M$ Co and shifting to more neg. potentials with increasing Co concn., appeared only at the higher concns. It probably corresponds to the further reduction of part of the univalent Co, and indicates that the corresponding complex of the latter is not inactivated on the electrode surface. The probable mechanism of the electrode process is elaborated and explained in terms of the ligand-field theory. H. K. Zimmerman

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A. A. VLCEK

Distr: 4E2c

Relation between the electronic structure of inorganic depolarizers and their polarographic behavior. V. Cobalt tetracarbonyl. A. A. Vlček (Polarograf. ústav Čsl. akad. věd, Prague). *Chem. listy* 52, 1460–7(1958); cf. *C.A.* 52, 13484*e*.—$Co_2(CO)_8$ (I) gives a reduction wave at −0.35 v. *vs.* satd. calomel electrode (S.C.E.). $Co(CO)_4^-$ which is the reduction product of I gives an anodic wave of the corresponding Hg-complex at the same potential and an oxidation wave at +0.12 v. *vs.* S.C.E. The wave of I is identical with the reduction wave of $Hg[Co(CO)_4]_2$. From the polarographic behavior the conclusions about the electronic structure of the studied substances were made.

F. Strafelda

VICEK, A.

SCIENCE

Periodical CHEMICKE LISTY. Vol. 52, no. 2, Feb. 1958.

VICEK, A. Relation between the electron structure of inorganic depolarizers and their polarographic behavior. IV. Electrode processes in which (n-2)f electrons take part. p. 214.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

VLCEK. A.A

Relations between the polarographic half-wave potentials and optical properties of some inorganic complexes. / A. A. Vlček (Czechoslov. Acad. Sci., Prague). *Discussions Faraday Soc.* No. 26, 164–71(1958).—The half-wave potential of the reduction waves of some Co(III), Cr(III), and Rh(III) complexes of the type $[M(Y)_5X]$ were shifted to more pos. values with increasing difference in the position of ligand Y and X in the spectrochem. series. The plot of $E_{1/2}$ against $\Delta\nu$ was a straight line. Similarly, the activation energy of the equation of these complexes also followed the linear plot. On the basis of this observation a model of the electrode process was developed. In the course of the electrode process a change in the electronic configuration of the complex takes place which is proportional to the tetragonal splitting caused by the ligand X. The ligand X influences also the ligand in the trans position to itself, this being more influenced by the electrode field. S. E. Whitcomb

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CZECHOSLOVAKIA / Physical Chemistry. Electrochemistry. B-12

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 76832.

Author : Vlcek, A. A.
Inst : Not given.
Title : The Relationship Between Electronic Structure and Polarographic Behavior of Inorganic Depolarizers. IV. Electrode Processes Involving the Participation of (n-2) f-Electrons.

Orig Pub: Chem Listy, 52, No 2, 214-227 (1958) (in Czech).

Abstract: As a rule, the oxidation of Eu^{2+} ions proceeds at more positive E values than the reduction of Eu^{3+} ions, i.e., the reaction is irreversible. The difference between the half-wave potentials of the cathodic and the anodic waves as well as the form of the waves depends on the background. Halides produce a shift in $E_{1/2}$

Card 1/4

CZECHOSLOVAKIA / Physical Chemistry. Electrochemistry. B-12

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 76832.

Abstract: and also affect the slope of the waves. At high halide concentrations (e.g., 7M [sic] Cl^- or 0.05M I^-) the difference between the $E_{1/2}$ of the anodic and of the cathodic wave is so small that a single anodic-cathodic wave is obtained, the slope of which however differs from that required by the theory. A single reversible wave is obtained only in the case of ethylenediaminetetraacetic acid solutions. The current in the lower portion of the anodic and of the cathodic wave is of kinetic character [diffusion current] at constant E. As the time between drops increases the half-wave potential of the cathodic wave is shifted in the positive direction while that of the anodic wave is shifted to more negative values. The slope of the cathodic wave decreases with decreasing time

Card 2/4

CZECHOSLOVAKIA / Physical Chemistry. Electrochemistry. B-12

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 76832.

Abstract: electrode and the central ion. The presence of excited Eu^{2+} ions at the electrode is assumed.

Card 4/4

7

Progress in the chemistry of complex compounds. Antonín A. Vlček (Čsl. akad. věd., Prague). *Chem. listy* 53, 370–82(1959).—Complex compds., their absorption spectra, the nature of such coördination structures as cyclopentadienyl complexes, complexes with unsatd. compds., and their practical applications are discussed. M. Hudlický

Distr: 4E2c(j)

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VLCEK, A.

"Progress in the chemistry of complex compounds." p. 376.

CHEMICKE LISTY. Praha, Czechoslovakia, Vol. 53, no. 4, Apr. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August, 1959.
Uncl.

VLCEK ; KUBAL, J.

"Present problems of photographic chemistry." p. 365.

CHEMICKE LISTY. Praha, Czechoslovakia, Vol. 53, no. 4, Apr. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August, 195 9.
Uncl.

COUNTRY	: Czechoslovakia	B-12
CATEGORY	:	
ABS. JOUR.	: RZKhim., No. 21 1959, No.	74378
AUTHOR	: Vlcek, A. A.	
INST.	: Not given	
TITLE	: Relationship Between Electronic Structure and Polarographic Behavior of Inorganic Depolarizers. IV. Electrode Processes Involving (n-2) f-Elec*	
ORIG. PUB.	: Collection Czechoslov Chem Commun, 24, No 1, 181-197 (1959)	
ABSTRACT	: See RZhKhim, 1958, No 23, 76832.	

CARD: 1/1 *trons

VLCEK, A.

"Relation between electronic structure and the polarographic behavior of inorganic depolarizers" IV. Electrode processes in which (n-2)f-electrons take part. In German. p. 181.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech., Vol. 24, No. 1, Jan. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, Sept. 59

Unclassified

VLČEK, A.

Reaction kinetics of the decomposition of cobalt carbonyl in ethanol solutions. Antonín A. Vlček (Tschechoslowakische Akad. Wiss., Prague). *Z. anorg. u. allgem. Chem.* 298, 270–8(1959).—The polarographically detd. over-all rate of decompn. of $Co_2(CO)_8$ at 22° in EtOH solns. contg. 2–6% C_6H_6 is given by the equation: rate = $\Sigma k_i[X_i][Co_2(CO)_8]$, where X_i is an ion or mol. (Cl^-, NH_3, $NH_2C_2H_4NH_2$, CN^-, or bipyridyl) forming a complex with Co^{++}, and k_i is the corresponding rate const. In the absence of complex-forming species the rate const. is 6.3×10^{-4} sec.$^{-1}$. From the stoichiometry and kinetics a reaction mechanism is proposed, the 1st and rate-detg. step of which is the reaction of $Co_2(CO)_8$ with the complex-forming species to give $Co_2(CO)_7X$, which then disproportionates to $Co(CO)_4^-$ and $Co^I(CO)_7X$. Richard H. Jaquith

Distr: 4E2c(j)

VLCEK, A. A.

3
1-4f(NB)

Substitution reactions of cobaltic complexes catalyzed by adsorption. A. A. Vlcek and J. Kuta (Czech. Acad. Sci., Prague). *Nature* 185, 95-6(1959).—The rate of redn. of $[Co(NH_3)_5X]$ ions at a dropping Hg electrode varies with the supporting electrolyte in the order $SO_4^{--} \ll ClO_4^- < NO_3^- < Cl^- < Br^-$, as shown by shift of the half-wave potential. At some min. halide concn. Cl^-, Br^-, and sometimes I^- cause a new redn. wave to occur with a relative height increasing with halide concn. This is attributed to a rapid, adsorption catalyzed reaction at the Hg surface to form a halide complex, as $[Co(NH_3)_5Br]^{++}$, followed by redn. The relative height of this wave gives the reaction rate const.: Br^- replaces X substituents in the order $NO_3^- < NH_3 \approx F^- <$ oxalate $\approx ONO^- < OAc^- < H_2O < NO_2^-$.

R. M. Witucki

B-12

COUNTRY : Czechoslovakia
CATEGORY :

ABS. JOUR. : RZKhim., No. 5 1960, No. 17166

AUTHOR : Vlcek, A. A.
INST. : Not given
TITLE : The Relationship Between the Electronic Structure and the Polarographic Behavior of Inorganic Depolarizers. V. Cobalt Carbonyl.
ORIG. PUB. : Collection Czechoslov Chem Commun, 24, No 6, 1748-1756 (1959)
ABSTRACT : See RZhKhim, 1959, No 18, 63845.

CARD: 1/1

VLCEK, A.

Relation between electronic structure and polarographic behavior of inorganic depolarizers. VII. Determination of activation energy of electrode processes. In English. Coll.Cz.Chem. 24 no.11:3538-3547 N '59. (ERAI 9:5)

1. Polarographic Institut, Czechoslovak Academy of Science, Prague. (Polarograph and polarography) (Electrons) (Inorganic compounds) (Electrodes) (Depolarizers)

BERAN, P.; VLCEK, A.A.

Polarographic control of substitution reactions of inorganic complexes. I. Reaction of $AuCl_4$ ions with ethylenediamine. In German. Coll.Cz.Chem. 24 no.11:3572-3578 N '59. (EEAI 9:5)

1. Institut fur analytische Chemie, Karlsuniversitat und Polarogrphisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag.
(Polarograph and polarography) (Inorganic compounds) (Ions) (Ethylenediamine) (Gold chlorides)

VLCEK, Antonin A.

"Polarography as an Indirect Method of Investigation of the Structure of Coordination Compounds," Prague, Chemicke Listy, No. 12, Dec 60, p. 1237.

Affiliation: Polarographic Institute, CSAV, Prague.

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AUTHOR: Antonín A. Vlček

CZECH/8-59-12-2/15

TITLE: Reactivity and Mechanism of Substitution Reactions of Inorganic Complexes

PERIODICAL: Chemické listy, 1959, Nr 12, pp 1139-1247

ABSTRACT: This article was given as a lecture on July 2, 1959 at a conference on inorganic chemistry at Bratislava.

The chemistry of solutions of inorganic substances is basically the chemistry of coordination. The question of stability and composition of various complexes in solution has, in the past, been paid considerable attention with the result that present knowledge in this field is, on the whole, satisfactory. Somewhat later and in less detail, the studies of mechanism of reaction of complexes in solution were commenced; they have practical as well as theoretical significance. The instantaneous reactions, involving inorganic complexes in solution, have been reviewed in the previous paper (Ref 1). The reviewer, here deals with relatively slow reactions. Kinetic parameter values are very often missing, eg temperature dependence data. Recent collections of data suggest a

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Reactivity and Mechanism of Substitution Reactions of Inorganic Complexes

parallelism between substitutions in organic reactions and in inorganic complex compounds. The Ingold classical concepts of organic substitutions (Ref 2 and Eq 1). Nucleophilic reactions may proceed by two mechanisms -S_N1 and S_N2. In the course of an S_N1 type mechanism an activated complex is formed without the participation of a ligand substitution, eg with a reduction of coordination number whilst characteristically an S_N2 mechanism directly involves ligand substitution in the activated complex formation. In the latter case, the formation of an M-Y bond weakens the M-X bond. It is difficult to decide whether an S_N1 or S_N2 mechanism is involved. This is then considered further. Fig 1 illustrates the course of substitution via mechanisms S_N1 and S_N2. Taube (Ref 3) , using expanded Pauling models, differentiated between labile and inert complexes according to d orbit occupation. Table I gives the electronic configurations of labile and inert complexes after Ref 3. S_N1 and S_N2 mechanisms are then considered in the light of this and Taube's work is considered to be

Reactivity and Mechanism of Substitution Reactions of Inorganic Complexes

of qualitative value only. The basic shortcoming of Taube's scheme is then dealt with. Table II gives the velocity of hydration for complexes of the configuration $d^2d^2d^2D^2SP^3$; k_{H_2O} (S^{-1}) at pH 1; 25°C (after Ref 3). More fundamental explanations of the relationship between velocity and structure has been advanced on the basis of Basolo and Pearson's (Ref 4) theory of crystal poles. Theoretical calculations of simplified examples have been produced and Table III gives the change of stabilization energy (in Dq units) for reactions of complexes of the transitional metals under conditions of the so-called strong crystal pole (after Basolo and Pearson (Ref 4)). Activation energy of the process: $Ea = (a-b).Dq$. But even this theory does not suffice since it only allows a more detailed estimate to be made along the lines of Ref 3. The author advances the hypothesis, taking into consideration the connection between structure of the complex and its reactivity, that the activation energy of the reaction will be linked in a certain way with parameters describing the given complex

Reactivity and Mechanism of Substitution Reactions of Inorganic Complexes

in its basic or excited state, or in certain cases with those describing the change between the basic and excited states. The relationship $Q = \text{const}\ (E_{basic} - E_{excited})$ is found to hold for a series of closely related complexes (Ref 5). Fig 2 gives the dependence of hydration activation energy for various series of complexes on their excitation energy: a. Series of trans - Co $en_2X_2 + H_2O$, $Q = 0.6\nu$; b. Series of $Co(NH_3)_5X + H_2O$, $Q = 0.47\nu$; c. Series of $Cr(NH_3)_5X +$ $+ H_2O$, $Q = 0.42\nu$. Various aspects of substitution are then considered further. Fig 3 gives the dependence of the velocity constant of a complex series

$$\left[Pt(NH_3)_{4-n}Cl_n\right]^{2-n}$$

(after Grinberg, Ref 6). A: $K_2[PtCl_4]$, B: $K[Pt\,NH_3\,Cl_3]$, C: $[Pt(NH_3)_2Cl_2]$, D: $[Pt(NH_3)_3Cl]Cl$. The author claims that the experimental dependences found may be generalized and a hypothetical model process for substitution reactions of complexes proposed. These are then examined in the

Reactivity and Mechanism of Substitution Reactions of Inorganic Complexes

light of the theories of Ref 4. The relationship between activation energy of the reaction and the polarizability of the complex are then examined (cf Ref 8). The trans effect (Ref 9 cf Ref 7) is then dealt with briefly. Table IV gives the representation of various stereoisomers in the reactions of certain complexes (after Basola, Ref 4). The author deduces that these results show that the activation process occurs via two mechanisms which lead to different stereoisomers. Ref 3 envisages the course of the S_N1 mechanism as that of Eq (2) to (4) for alkaline hydrolysis but the author concurs with Ingold (cf Ref 2) in that he considers the mechanism to be S_N2 in this case. There are 3 figures, 4 tables and 9 references, 3 of which are Czech, 4 English and 2 Soviet.

ASSOCIATION: Polarografický ústav ČSAV, Praha (Polarographic Institute, Czechoslovak Academy of Sciences, Prague)

VLCEK, A.A.

The 6th International Conference on Coordination Chemistry in Detroit, 1961. Vestnik CSAV 71 no.1:130-132 '62.

KONRÁD, D; VLČEK, A. A;

Czechoslovakia

Department of Inorganic Chemistry, J. E. Purkyně Universtiy, Brno and Polarographic Institute, Czechoslovak Academy of Science -- Prague - (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 4, 1963, pp 808-827

"Study of the Cobalt (II)- Cobalt(III) Ethylene-diamine System."

2

KONRAD, D.; VLCEK, A.A.

Potentiometric study of the Co (II)-Co(III)-ethylenediamine system. Coll Cz Chem 28 no.3:595-604 Mr '63.

1. Polarographic Institute, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

REICHL, J.; KOCI, S.; VLCEK, A.; Institute of Physiology of Domestic Animals (Ustav Fysiologie Hospodarskych Zvirat) A [Abbreviation not explained] Faculty (F), College of Agriculture (VSZ), Brno; Poultry Research Institute (Vyskumny Ustav pre Chov Hydiny), Ivanka pri Dunaji; Research Institute for Fodder Materials (Vyzkumny Ustav Krmivarsky), Pohorelice.

"Study of Energy Values of Poultry Fodder."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 5, Sep 66, pp 388 - 390

Abstract: Experiments were conducted with white Plymouth chickens 4-5 weeks old. Intake of dry material, protein and calories was determined. The intake and retention of the materials increased with an increasing ratio of calories to proteins, and decreased when the content of cellulose of the fodder was increased. 2 Western references. Submitted at 3 Days of Physiology of Domestic Animals at Liblice, 9 Dec 65.

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L 1226-66 EWP(j)/T RM

ACCESSION NR: AP5025846 CZ/0008/65/059/005/0561/0577

AUTHOR: Vlcek, Antonin A.

TITLE: Reactions of coordination compounds

SOURCE: Chemicke listy, v. 59, no. 5, 1965, 561-577

TOPIC TAGS: coordintion chemistry, chemical reaction

Abstract: All the reactions of coordination compounds may be classified in 4 big groups: 1. The reaction of the introduction or exchange of a ligand (primary change located on the central atom); 2. reaction of a combined ligand (primary change located on the ligand); 3. isomerisation reaction, racemization (only stereochemical changes take place in the complex); 4. oxidation-reduction reactions (the primary change concerns only the number of electrons, but this of course can induce a series of further changes in the complex part). Coordination reactions are characterized by the following : the ligand entering into a reaction remains a discrete structural particle throughout the reaction; the ligand is

Card 1/2

ACCESSION NR: AP5025846

a stable unit in the given medium, or is electronically saturated in the original condition; the reaction produces coordination compounds with orbits of sigma symmetry. Only reactions that were realized are discussed in the article. Orig. art. has 49 formulas.

ASSOCIATION: Polarograficky ustav J. Heyrovskeho CSAV, Prague (Polarographical Institute of J. Heyrovsky, Czechoslovak Academy of Sciences)

SUBMITTED: 00	ENCL: 00	SUB CODE: GC
NO REF SOV: 002	OTHER: 031	JPRS

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Card 2/2

VLCEK, Antonin A.

Reactions of coordination compounds. Chem listy 59 no.5:561-577 My '65.

1. J.Heyrovsky Institute of Polarography of the Czechoslovak Academy of Sciences, Prague.

VLCEK, A.A.

"Orbitals in atoms and molecules" by Ch.Klixbull Jorgensen.
Reviewed by A.A.Vlcek. Coll Cz Chem 29 no.5:1336 My '64.

VLCEK, A. A.

"Metal π-complexes with di- and oligolefinic ligands" by E. O. Fischer, H. Werner. Reviewed by A. A. Vlcek. Chem listy 58 no. 2:242 F '64.

"Progress in inorganic chemistry." Reviewed by A. A. Vlcek. Ibid.: 243-244.

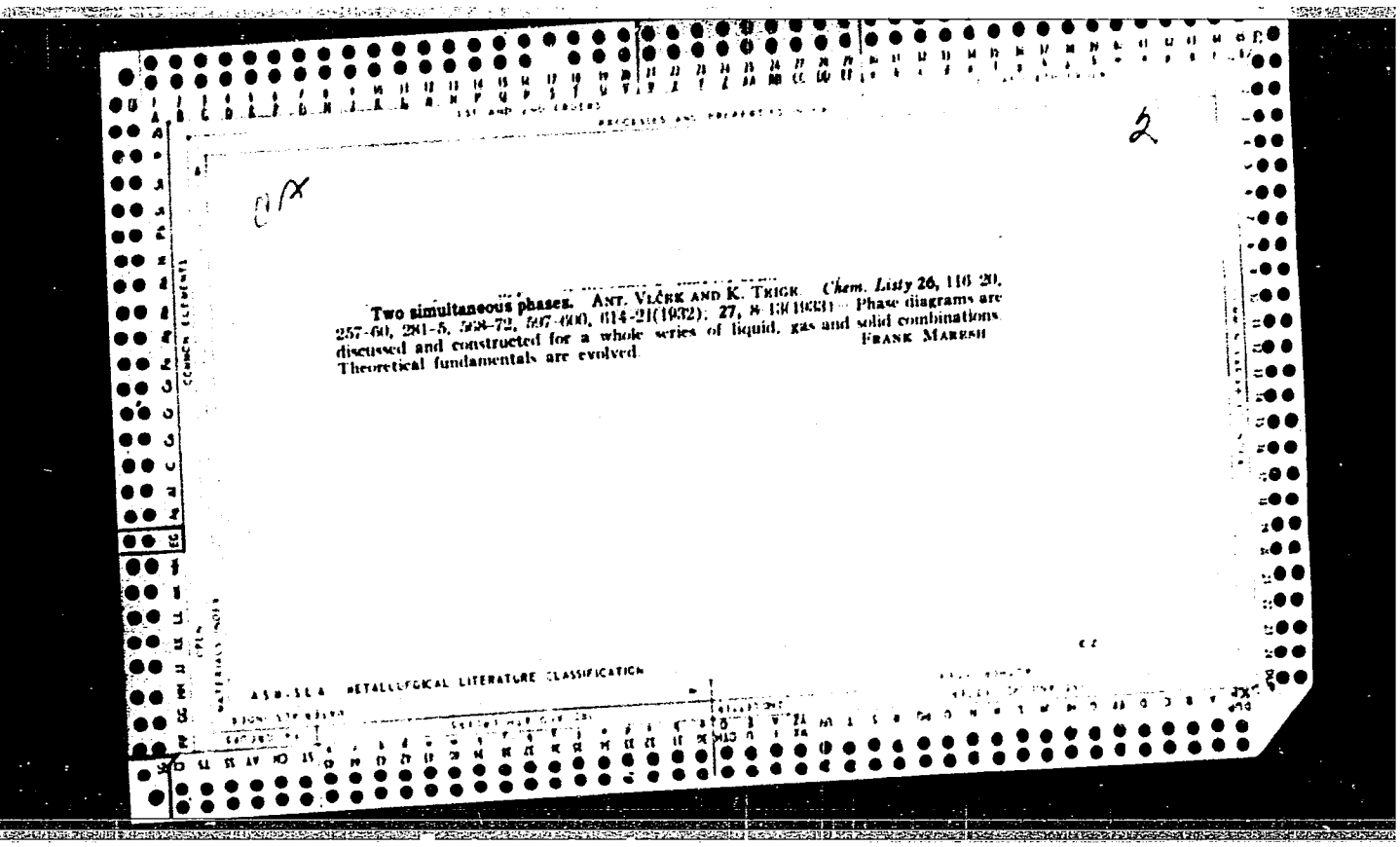
"Advances in inorganic chemistry and radiochemistry." Reviewed by A. A. Vlcek. Ibid.: 244.

VLCEK, A.A.

"Introduction to ligand field theory" by C.J.Ballhausen. Reviewed by A.A.Vlcek. Chem listy 57 no.10:1084-1085 O '63.

VLCEK, A.A.

"Absorption spectra and chemical bonding in complexes" by C.K. Jorgensen. Reviewed by A.A.Vlcek. Chem listy 57 no.8:854-855 Ag '63.



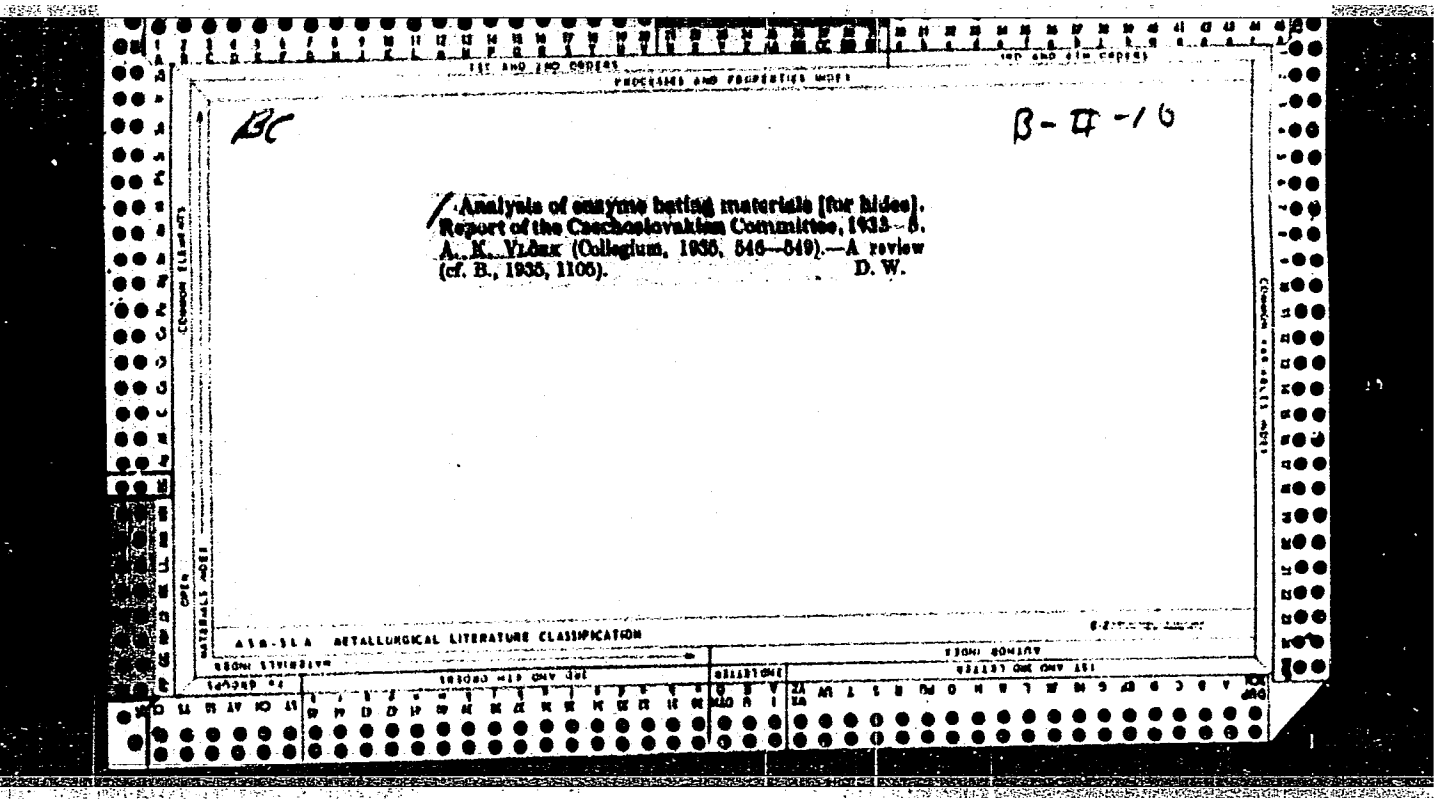
Two simultaneous phases. ANT. VLČEK AND K. TRIGR. *Chem. Listy* 26, 116-20, 257-60, 281-5, 568-72, 597-600, 614-21(1932); 27, 8-13(1933).—Phase diagrams are discussed and constructed for a whole series of liquid, gas and solid combinations. Theoretical fundamentals are evolved. FRANK MARSH

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KONRAD, D.; VLCEK, A.A.

Polarographic study of the cobalt(II)-cobalt(III) ethylenediamine system. Coll Cz Chem 28 no.4:808-828 Ap '63.

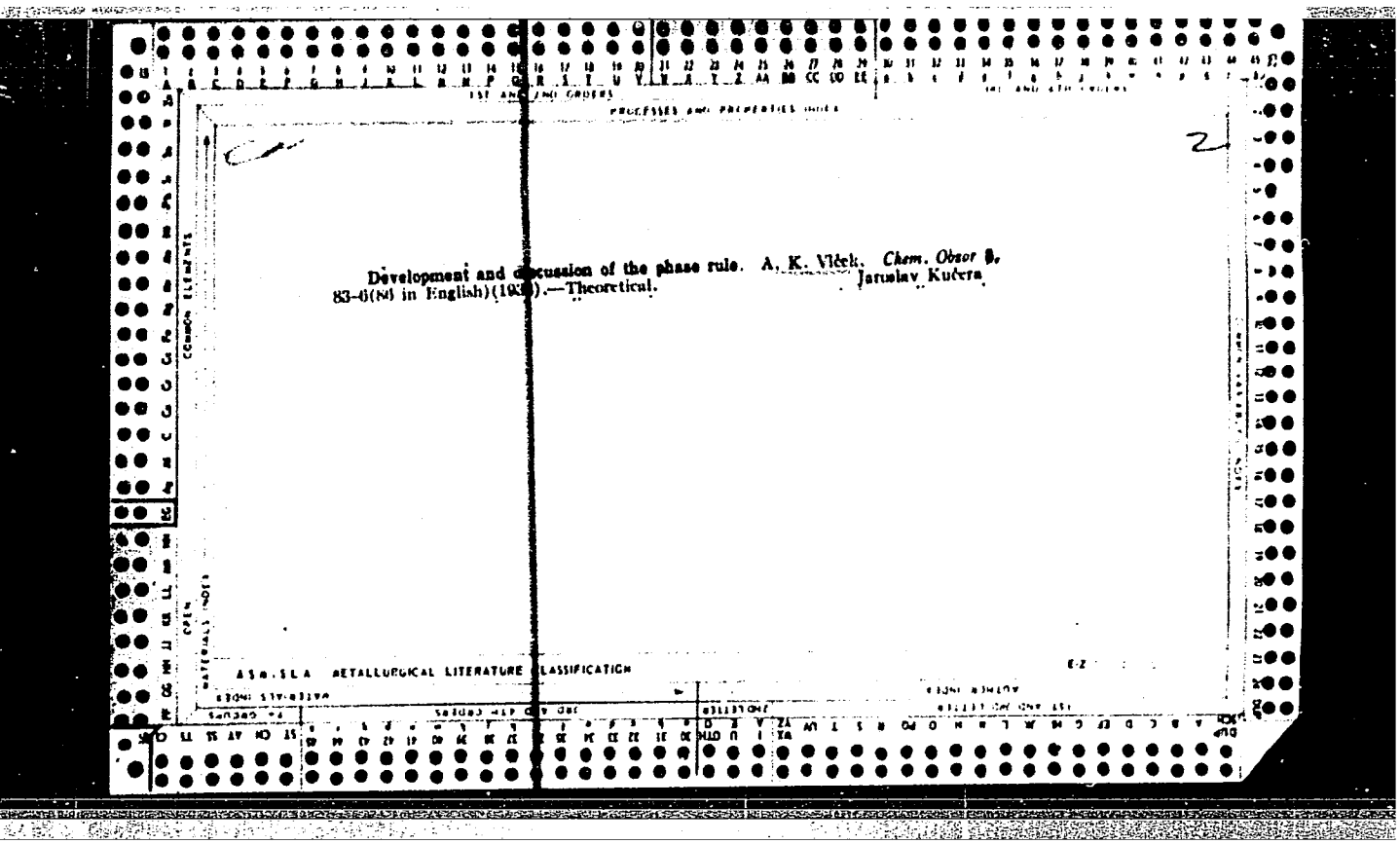
1. Polarographic Institute, Czechoslovak Academy of Sciences, Prague.



BC

B-II-16

Analysis of enzyme bating materials [for hides]. Report of the Czechoslovakian Committee, 1933–5. A. K. Vlček (Collegium, 1935, 546–549).—A review (cf. B., 1935, 1106). D. W.



Development and discussion of the phase rule. A. K. Vlček. *Chem. Obzor* 8, 83-6(Nl in English)(1933).—Theoretical. Jaroslav Kučera

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Two coexisting phases. VI. The effect of the Hofmeister series on heterogeneous equilibria in quaternary systems and some studies of phase curves in ternary systems. A. K. Vlček. *Chem. Obzor* **8**, 198-201, 219-20, 238-43 (243 in English) (1933).- A math. and physicochem. analysis of coexisting phases in the liquid state was made to explain the conditions of heterogeneous equil. of 2 liquid coexisting phases (cf. *C. A.* **26**, 4232; **27**, 3660, 5235) and the results obtained were examd. for application to the more complicated systems in which not all components were liquids under the exptl. conditions. Important processes of *bating* and *dyeing of leather* are involved because they can be viewed from the standpoint of 2 coexisting phases. The manifestation of lyotropic series in the formation of 2 coexisting phases is studied by means of phase curves as vol. isotherms of phase changes. The following systems were selected: H_2O-C_6H_6-Me_2CO, H_2O-C_6H_6-EtOH, H_2O-C_6H_6-AcOH, H_2O-Et_2O-Me_2CO, H_2O-Et_2O-EtOH, H_2O-Et_2O-MeOH and H_2O-Et_2O-AcOH and the following neutral salts were used: NaCl, NaBr, $NaNO_3$, NaI, NaSCN, LiCl and NH_4Cl. Compared in their normal solns. in their effect on the increase of vol. of H_2O phase they form the Hofmeister series: $Cl^- < Br^- < NO_3^- < I^- < SCN^-$ and $Li^+ > NH_4^+ > Na^+ > K^+$ and $Ca^{++} > Mg^{++}$. NaCNS increased the vol., whereas the remaining Na salts in the series decreased the vol. of the aq. phase as compared to pure H_2O. The effect of iodide was intermediate. The differences in the activities of individual anions are relatively larger than those of cations. All chlorides examd. decreased the vol. of the H_2O phase. The effect of lyotropic series results from the mutual relations of solv. or of relationship of the system the expression of which is the formation of two coexisting phases. The study of phase curves for ternary systems represented by 2 diagrams resulted in the series: Me_2CO < AcOH < EtOH < MeOH when components used were compared as to their effect on the increase of vol. of H_2O phase which is in agreement with Rothmund (*Z. phys. Chem.* **26**, 450 (1898)). The phase characteristics det. the behavior of the component not only in binary systems but in ternary systems as well. Since the phase characteristics depend apparently on the mol. structure of the compd. a bridge is set up between the 2 seemingly opposed ideas of corpuscle chemistry and of phase chemistry evolved by Wald in 1918.

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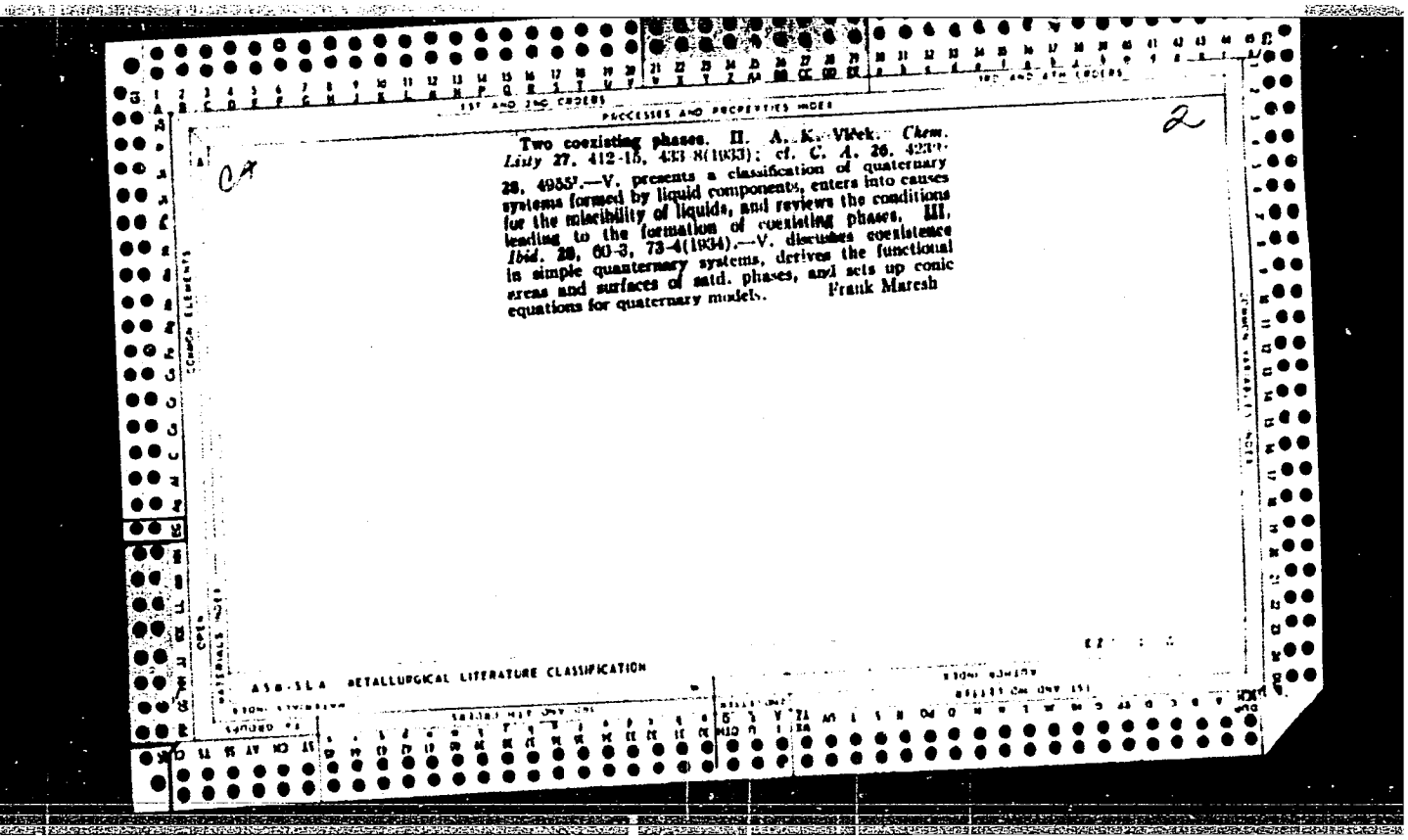
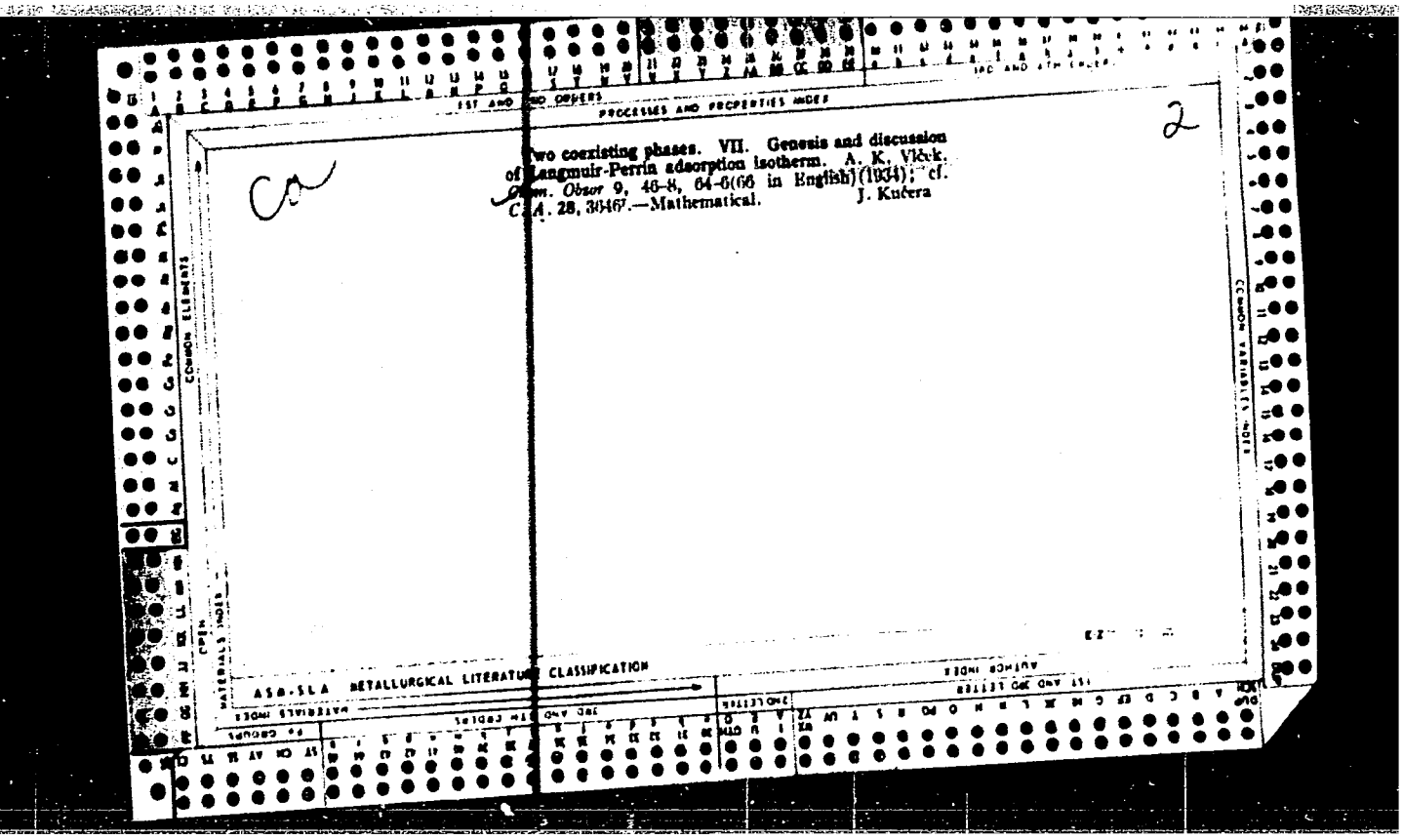


Two coexisting phases. II. A. K. Vlček. *Chem. Listy* 27, 412-15, 433-8(1933); cf. *C. A.* 26, 4239; 28, 4955⁹.—V. presents a classification of quaternary systems formed by liquid components, enters into causes for the miscibility of liquids, and reviews the conditions leading to the formation of coexisting phases. III. *Ibid.* 28, 60-3, 73-4(1934).—V. discusses coexistence in simple quaternary systems, derives the functional areas and surfaces of satd. phases, and sets up conic equations for quaternary models. Frank Maresh



wo coexisting phases. VII. Genesis and discussion of Langmuir-Perrin adsorption isotherm. A. K. Vlčck. *Chem. Obsor* 9, 46-8, 64-6(66 in English)(1934); cf. *C. A.* 28, 3046?.—Mathematical. J. Kučera

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Two coexisting phases. IX. Coexistence in liquid ternary systems and possibility of formation of so-called small island ternary diagrams. A. K. Vlček. *Chem. Obzor* 10, 206-9(in English 209)(1934); cf. *C. A.* 28, 955[7].—Conditions necessary for the formation of 2 coexisting phases in ternary systems are described and it is deduced that the two-phase liquid equilibria in these systems cannot be suitably used for the sepn. of water components. The system water-phenol-acetone (Schreinemakers, *Z. physik. Chem.* 33, 78(1900)) is discussed and the validity of the following statement criticized: The formation of 2 liquid phases in the system of liquid components is conditioned by the presence of at least one pair of limitedly miscible components. In such a system a "small island" diagram rises above the binary crit. temp. of the mixt. H_2O-PhOH and the curve limiting the heterogeneous field does not cut the sides of the triangle. The possibility of the formation of the "small island" diagram through the presence of minute quantities of further component is shown on a tetrahedral chart. Attention is consequently drawn to the significance of "heavy water" in the phase diagrams with respect to the publication of Hall, *et al.* (*C. A.* 28, 5744[4]).

J. Kučera

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