Proceedings (Cont.)

CZECH/2433

Card 6/ 14

Proceedings (Cont.)

CZECH/2433

Card 7/14

Proceedings (Cont.) CZECH/2433

Card 8/14

Proceedings (Cont.)

CZECH/2433

Card 9/14

Proceedings (Cont.) CZECH/2433

Card 11/14

Proceedings (Cont.)

Proceedings (Cont.) CZECH/2433

Proceedings (Cont.) CZECH/2433

AVAILABLE: Library of Congress

Card 14/14

TM/mg
11-23-59

ZUMAN, P.

"Some problems of chemical kinetics and reactivity" by [prof.] N.N. Semjonov. Reviewed by P. Zuman. Chem listy 57 no.2:174 F '63.

ZUMAN, P.

Quantitative treatment of substituent effect in polarography. Part 4: Linear free energy relations in quinoid series. Coll Cz Chem 27 no.9: 2035-2057 S '62.

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

ZUMAN, P.

Symposium on Analytic Chemistry in Birmingham. Chem listy 57 no.2: 218-220 F '63.

CZECHOSLOVAKIA

SUE-YUAN TANG; ZUMAN, P.

Polarographic Institute of the Czechoslovak Academy of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications, No 6, 1963, pp 1524-1533

"A New Type of Maximum on the Limiting Current of the Reduction Wave of Phenacyl Sulfonium Ions."

ZUMAN, P.

"Introduction in the electronic theory of organic chemical reactions" by H. Becker. Reviewed by P. Zuman. Chem listy 57 no.1:86-87 Ja '63.

Z/002/63/000/001/001/001
E073/E535

AUTHOR: Zuman, Petr

TITLE: Conference on applying correlation equations in organic chemistry

PERIODICAL: Vestnik Československé akademie věd, no.1, 1963, 151-152

TEXT: Ministerstvo školství (The Ministry of Education), Oddělení chemických věd Akademie věd SSSR (The Chemical Sciences Section of the Academy of Sciences USSR) and Státna universita v Tartu (State University of Tartu) held a conference on this topic on September 11-16, 1962. There were 200 delegates and 34 papers were read. The main work of the conference consisted of discussions, which were very lively. The papers read were of a very high standard. Dr. O. Exner, Polarografický ústav ČSAV (Polarographic Institute, Czechoslovak AS) presented a paper on quantitative evaluation of the inductive effect in aromatic systems. Dr. P. Zuman (Polarographic Institute, Czechoslovak AS) discussed the relations between the structure, the linear relations governing the free energies and polarography; both authors participated in

Card 1/2

the discussion. The number and quality of top specialists studying quantitative relations between structure and reactivity in the USSR is considerably higher than would appear from superficial screening of the appropriate scientific literature (Professor Shatenshtein, Professor Ginzburg, Professor Efros, Professor Litvinenko, Dr. Palm, Dr. Entelis, Dr. Rudakov); the number of young, able and well informed scientific workers is also remarkable. Whilst in Western Europe this type of research does not receive much attention, in the Soviet Union the number of groups working in this field is growing continuously and if the facilities in Czechoslovakia are also taken into consideration, it can be stated that soon these facilities will equal the best American facilities, which up to relatively recently has enjoyed a practical monopoly in this field of organic chemistry. Apart from the Soviet Union, Czechoslovakia is the only country of the Soviet Bloc which pays attention to these problems. This conference was organized by Dr. V. Palm of Tartu University.

MANOUSEK, O.; ZUMAN, P.

Direct polarographic determination of pyridoxal in the presence of pyridoxal-5-phosphate. Coll Cz Chem 27 no.2:486-487 F '62.

1. Central Research Institute for Food Industry and Polarographic Institute, Czechoslovak Academy of Sciences, Prague.

ZUMAN, P.

(26) (27)

Prague, Collection of Czechoslovak Chemical Communications, Vol 27, No 4, April 1962.

Copyright by the Publishing House of the Czechoslovak Academy of Sciences, 1962.

1. "Polarography of Nonbenzenoid Aromatic and Related Substances. Part [illegible]. Adsorption Processes During the Electroreduction of the Tropylium Ion," P. ZUMAN of the Polarographic Institute of the Czechoslovak Academy of Sciences, Prague, and J. CHODKOWSKI of the Institute of Physicochemical Analytical Methods, at the Polish Academy of Sciences, Warsaw (original-language institutional names not given); pp 759-774 (English article).

2. "Substitution of Ligands in Macrocomplexes. Part IV. [illegible] of Ferric Metahydroxide," V. FREI of the Institute of Inorganic Chemistry at Charles University, Prague; pp 775-781.

3. "Substitution of Ligands in Macrocomplexes. Part V. Hydrated Ferric Oxyfluoride," V. FREI of the Institute of Inorganic Chemistry at Charles University, Prague; pp 782-787.

4. "On Protein Interactions. Part XXXII. A Study, by the Light Scattering Isochronous Interpolation Method, of the Effect of Conditions Upon the Aggregation of Heat-Denatured Human Serum Albumin," P. KRATOCHVIL, P. MUNK and B. SEDLACEK, Institute of Macromolecular Chemistry at the Czechoslovak Academy of Sciences, Prague; pp 788-801 (English article).

5. "On Protein Interactions. Part XXXIII. Degradation, by Urea Solutions, of Aggregates of Heat-Denatured Human Serum Albumin," P. KRATOCHVIL, P. MUNK and B. SEDLACEK, Institute of Macromolecular Chemistry at the Czechoslovak Academy of Sciences, Prague; pp 802-808 (English article).

6. "A Study, with the Aid of the Extraction Method, of the Complexes That Hexavalent Uranium Forms with Alpha-Hydroxy Acids," J. STARY and V. BALEK of the Nuclear Chemistry Institute, Faculty of Industrial and Nuclear Physics, Czech Institute of Technology, Prague; pp 809-815.

7. "Chromatographic Fractionation of Polychloroprene," J. POLACEK and B. MATYSKA, Institute of Physical Chemistry at the Czechoslovak Academy of Sciences, Prague; pp 816-822.

8. "Separation Methods for Natural Products. Part I. New Countercurrent Distribution Procedure," V. PROCHAZKA, J. PITRA and Z. CEKAN, Research Institute for Natural Drugs, Prague; pp 823-831 (English article).

ZUMAN, P.; MANOUSEK, I.

Polarographic study of the nonenzymatic hydrolysis of pyridoxal-5-phosphate. Coll Cz Chem 26 no.9:2134-2143 '61.

1. Polarographic Institute, Czechoslovak Academy of Sciences, Prague, and Vitamin Department, Central Research Institute of Food Industry, Prague.

(Phosphates) (Hydrolysis) (Polarograph and polarography)

ZUMAN, P.; HORAK, V.

Fission of activated carbon-nitrogen and carbon-sulfur bonds. I. Polarographic reduction of the single C-N-bond. Coll Cz chem 26 no.1:176-192 Ja '61. (EEAI 10:9)

1. Polarographic Institute, Czechoslovak Academy of Science and Department of Organic Chemistry.

(Carbon) (Nitrogen) (Sulfur) (Chemical bonds)
(Polarograph and polarography)

HORAK, V.; ZUMAN, P.

Fission of activated carbon-nitrogen and carbon-sulfur bonds. Coll Cz chem 26 no.1:173-175 Ja '61. (EEAI 10:9)

1. Department of Organic Chemistry, Charles University and Polarographic Institute, Czechoslovak Academy of Science.

(Carbon) (Nitrogen) (Sulfur) (Chemical bonds)

ZUMAN, P.; CHODKOWSKI, J.; SANTAVY, F.

Polarography of nonbenzenoid aromatic and related substances. VII. A polarographic study of the acid-base properties of tropylium ion. Coll Cz chem 26 no.2:380-391 F '61. (EEAI 10:9)

1. Polarographic Institute, Czechoslovak Academy of Science, Prague and Chemical Institute, Medical Faculty, Palacky's University, Olomouc (for Zuman and Santavy) 2. Standing address: Institute of Physicochemical Analytical Methods, Polish Academy of Science, Warsaw, Poland(for Chodkowski).

(Polarograph and polarography) (Aromatic compounds)
(Tropylium compounds)

ZUMAN, Petr

Application of polarography in organic chemistry. Magy kem lap 17 no.1:8-11 Ja '62.

1. Csehszlovak Tudomanyos Akademia Polarografiai Intezete, Praga.

(Polarograph and polarography)
(Chemistry, Organic)

ZUMAN, Petr

"Oscillographic and Classical Polarography," Bratislava, Chemicke Zvesti, No. 11-12, Nov-Dec 60, p. 869.

Affiliation: Polarographic Institute, CSAV, Prague.

ZUMAN, Petr

"Investigation of the Effect of Constitution on Polarographic Behavior of Organic Compounds in the Polarographic Institute of CSAV," Prague, Chemicke Listy, No. 12, Dec 60, p. 1244.

Affiliation: Polarographic Institute, CSAV, Prague.

Z/008/60/054/012/003/004
E112/E335

AUTHOR: Zuman, Petr,

TITLE: Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

PERIODICAL: Chemické listy, 1960, Vol. 54, No. 12, pp1244 - 1264

TEXT: This paper was written to commemorate the seventieth birthday of Academician J. Heyrovský.
The contribution of polarography to organic chemistry is briefly outlined. J. Heyrovský was the first to demonstrate the relationship between the number of conjugated double-bonds in a compound and its reducibility at the dropping mercury electrode. Shikata et al introduced the rule of electronegativity to explain substitution effects upon the half-wave potentials of organic compounds having polarographically active groups in the side chain. The terms "induction effects" and "tautomeric effects" (I and T) were later introduced to polarography in accordance with developments of theoretical organic chemistry. Induction effects are static and refer to

Card 1/11

Z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

a shift of electrons caused by a substituent, while tautomeric effects are dynamic and produced by an external field. The principal group of substituents encountered in organic chemistry are listed and signs of their "I" or "T" effects are indicated, relative to hydrogen. The following conventions are used throughout the paper: groups more negative than hydrogen (electrophilic) will exert negative effects (-I, -T), whilst less negative groups (nucleophilic) will produce positive effects (I, T). Reductions are nucleophilic processes, for which the following rules apply:
I) groups with -I and -T will move the half-wave potentials towards more positive values, whilst groups with positive I and T will produce the opposite effect.

Card 2/11

Z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

II) Ortho- and paraderivatives in the benzene series, with groups, exerting -T effects will be reduced in the ranges of more positive potentials than the m-isomers. The opposite will hold true for compounds with positive T . Hitherto described methods only permit qualitative interpretation of polarographic processes and are not applicable to aliphatic compounds. The author summarizes quantitative methods developed by the Czechoslovak School of Polarography for the study of substitution effects upon the polarographic behaviour of organic compounds. The new methods are based on the assumption that although electrodic processes are heterogeneous, they can be nevertheless interpreted as if their kinetics were homogeneous. The paper is divided into four main sections:
A - effect of substituents on half-wave potentials.
B - effect of substituents on limiting currents.
C - analysis of unstable intermediates.
Card 3/11

z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

D - study of homogeneous kinetics,
ad A: experimental details are discussed. It is essential that the electrode mechanism of all the compounds which are being studied and compared should be identical. Transfer coefficients, as determined from the current/voltage and halfwave potential/pH curves should be practically identical for all compounds of the series of comparable derivatives. According to the work of Taft, describing the effect of substituents on the kinetics of homogeneous reactions, three main factors contribute to the numerical value of the velocity constant, namely, P (polar), S (steric) and M (mesomeric), as expressed by:

$$\Delta \log k = P + S + M \qquad (1),$$

Card 4/11

Z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

The Czechoslovak group of polarographers have developed for half-wave potentials for irreversible electrode processes the equation:

$$E_{1/2} = \underline{RT}/\alpha n\underline{F} \ln 0.87\, k_f^{0} \sqrt{t_1/D} \qquad (2)$$

where k_f^{o} is the velocity constant of the electrodic process and α expresses the numerical value of the charge-transfer constant. Other symbols in the equation have their conventional meanings. Combining Eqs. (1) and (2) the author arrives at the expression:

$$\Delta E_{1/2} = P + S + M \qquad (3)$$

for the change of half-wave potentials produced by polar, steric

Card 5/11

Z/008/60/054/012/003/004
E112/E335

Effect of Subsitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

and mesomeric effects of substituents. A detailed description is given of how the above equation is utilised for the interpretation of substitution effects. Series of compounds are taken in which it is assumed that only one effect will be operative, e.g. polar effects will be studied with model substances where steric effects between reducible groups and substituents can be excluded. Para-substituted benzene derivatives are examples of compounds where both mesomeric and polar effects may be exerted. Steric effects can be studied in aliphatic compounds having bulky substituents in the vicinity of polarographically active groups, such as alkyl bromides, disulphides, hydroperoxides and 4-amino-N-dialkylanilines, substituted in the o-position. Finally, o-substituted benzene derivatives can be taken as examples of reactions in which all three effects are operative. Various qualitative observations on the effect

Card 6/11

Z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

of substituents are also included, particularly in cases which cannot be supported by sufficient quantitative data. The author summarises and assesses critically polarographic work carried out by a Czechoslovak research team and published in Czechoslovak publications. The following studies are included: polarographic reduction of pyridine derivatives; ease of reduction increases in the order of the 3, 2 and 4 isomers. It is assumed that the heterocyclic nitrogen exerts a -T effect, producing highest electron density in the 3-position. Esters of phthalic acid show the interesting phenomenon that the monomethyl-phthalate was reduced at pH 9,8 at more negative potentials than the dimethyl-ester. This is explained as being due to the effect of COO^-. Dimethyl-terephthalate is reduced at more positive potentials than the dimethyl-phthalate. The half-wave potentials of some sterole derivatives, particularly the cardiac glycosides,

Card 7/11

Z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

are compared and the effects of substituents in rings C and D on the reducibility of ring A are noted. Naphthoquinones (1,4) showed the interesting behaviour of substituents in positions 5-8 having additive characteristics while those substituted in 2 or 3 displayed considerable deviations.

ad B. The polarographic study of limiting diffusion currents permits the determination of equilibrium constants, while velocity constants can be calculated from measuring limiting kinetic currents. Examples of equilibrium constants determined polarographically from limiting currents include the reaction products of carbonyl compounds with primary amines. One of the carbonyl compounds studied and for which the equilibrium constant was established was pyruvic acid and it was seen that its reactivity with different amines decreased in the following

Card 8/11

2/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, CSAV Prague

order: methylamine, histamine, glycine, histidine, alanine and ammonia. In a series of reaction products of ketones with amines, the stability of the compounds increases, on the other hand, in the following order: methylcyclohexanone, -acetone-, cyclohexanone-, cyclopentanone. The effect of nuclear substitution on the equilibrium constant of the reaction product of benzaldehyde and glycine was investigated, showing increasing values of the equilibrium constant in the order: p-OH, p-OCH_3, o-CH_3, H, o-OH.

Velocity constants of fast chemical reactions can be determined from the measurements of kinetic limiting currents. The effects of constitution on the values of these constants can be studied. The problem of adsorption on the mercury electrode is discussed and particular attention is paid to the adsorption of the depolarisator. An attempt is made to

Card 9/11

Z/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

correlate adsorption currents with constitution. Examples are, however, restricted to a few sterole derivatives.
ad C. Detection of unstable intermediates. Polarography makes it possible to detect unstable intermediates in reactions proceeding by proton transfer. It was possible to establish from changes of limiting currents with pH the existence of certain cations, the existence of which has so far been unknown. Compounds which were shown polarographically to be proton acceptors included some α, β unsaturated ketones, acetophenone, phthalic acid, azulenes and others. It was also established that it was possible to distinguish, by means of polarography the cis- and trans-forms of dibenzoylethylene. The formation of unstable intermediates in electrodic processes was also demonstrated polarographically - such as, for example, the formation of free radicals, which then may

Card 10/11

2/008/60/054/012/003/004
E112/E335

Effect of Substitution on the Polarographic Characteristics of Organic Compounds. Report on Research Work at the Polarographic Institute, ČSAV, Prague

undergo dimerisation. The free radicals may also undergo protonation, as in the case of phthalimide.
ad D. Study of homogeneous kinetics. This work refers, among others, to the polarographic study of reaction mechanism and effect of constutition/velocity constants of the decomposition of dithiocarbamates, of the oxidation of dioles with periodic acid and alkaline hydrolysis of isothiourea.
There are 101 references: 48 Czech and 53 non-Czech.

ASSOCIATION: Polarografický ústav ČSAV, Praha
(Polarographic Institute, ČSAV, Prague)

Card 11/11

ZUMAN,P.; KUIK,M.

Catalysis of hydrogen separation in presence of some sulfur derivatives of hydantoin and pyrimidine. Coll Cz chem 25 no.12:3861-3880 '59. (EEAI 9:6)

1. Polarographisches Institut, Tschechoslovakische Akademie der Wissenschaften, Prag.

(Catalysis) (Hydrogen) (Sulfur)
(Hydantoin) (Pyrimidine)

COUNTRY : CZECHOSLOVAKIA B
CATEGORY : Physical Chemistry. Electrochemistry

ABS. JOUR. : RZKhim., No. 1 1960, No. 624

AUTHOR : Banyai, E.; Zuman, P.
INST. : -
TITLE : Polarographic Behavior of 4-amino-4'-methoxydiphenylamine (Variaminblau)

ORIG. PUB. : Collect. Czechosl. Chem. Communs, 1959, 24, No 2, 522-525

ABSTRACT : In the oxidation of 4-amino-4'-methoxydiphenylamine (I), the quinone of p-anisyldiimine is formed. The polarographic study of this reaction showed that at pH 2-14, oxidation proceeds with the participation of two electrons; $(dE_{\frac{1}{2}}/dpH) = 0.056$ v. The height of the wave is proportional to the concentration of I and to $\sqrt{h}$ (h - height of Hg column). The oxidation of I proceeds reversibly.-- O. Knesal

CARD: 1/1

Distr: 4E2c(j)

Polarography of aromatic compounds; sydnone and azulene. P. Zuman (Polarographic Inst., Prague). *Z. physik. Chem.* (Leipzig) Sonderheft Jilly, 1958, 243-61.—A systematic polarographic study of derivs. of sydnone showed the N-O bond in the mol. to be the most readily polarized. The substitution of a phenyl nucleus in the 3-position, or a methyl group in the 4-position led to a marked transmission of their polarizing effects to the bond to be reduced; and it was shown that the modified Hammett equation gave an excellent linear correlation between the σ consts. and the half-wave potentials of para-substituted 3-phenylsydnones. It was thus established that the π-electron system in the sydnone ring is fully as mobile as that in other aromatic compds. In addn., the polarography of azulene was described. In an unbuffered soln. (75% dioxane) with a tetraalkylammonium salt as supporting electrolyte it gave a one-electron step at −1.7 v., followed by 2 further steps at −2.4 v. and −2.6 v., resp. In aq. strong acid soln. contg. 10% dioxane or EtOH, it gave a further reduction step at −0.4 v. involving 3 electrons, accompanied by a catalytic step at −1.0 v. The former step was attributed to the reduction of the azulenium cation; and the ionization consts. of the acidic forms of azulene derivs. could be approx. detd. H. K. Zimmerman.

CZECHOSLOVAKIA/Physical Chemistry - Surface Phenomena. B
Adsorption. Chromatography. Ion Exchange.

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67393

Author : Zuman, Petr; Cerny, Vaslav
Inst : -
Title : Polarography of Steroids. III. Polarographic Reduction of Steroids Containing the Aldehyde Group in Position 18.

Orig Pub : Chem. listy, 1958, 52, No 8, 1468-1473

Abstract : The polarographic behavior of dehydro-5,6-dihydrotetramethylholarrhimine (I), its oxime (II), dehydrotetramethylholarrhimine, and dehydrotetramethylholarrhidine (III) was investigated. These steroids which contain the aldehyde group in position 18 and branched chain in position 17 are reducible within the pH range 7-10.5 to give a single wave of $E_{\frac{1}{2}} \approx -1.65$ which is independent of pH. The fact that $E_{\frac{1}{2}}$ is independent of pH is explained by steric hindrance due to hydration. II is not

Card 1/2

Physical Chemistry - Surface Phenomena.
Adsorption. Chromatography. Ion Exchange. B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67393

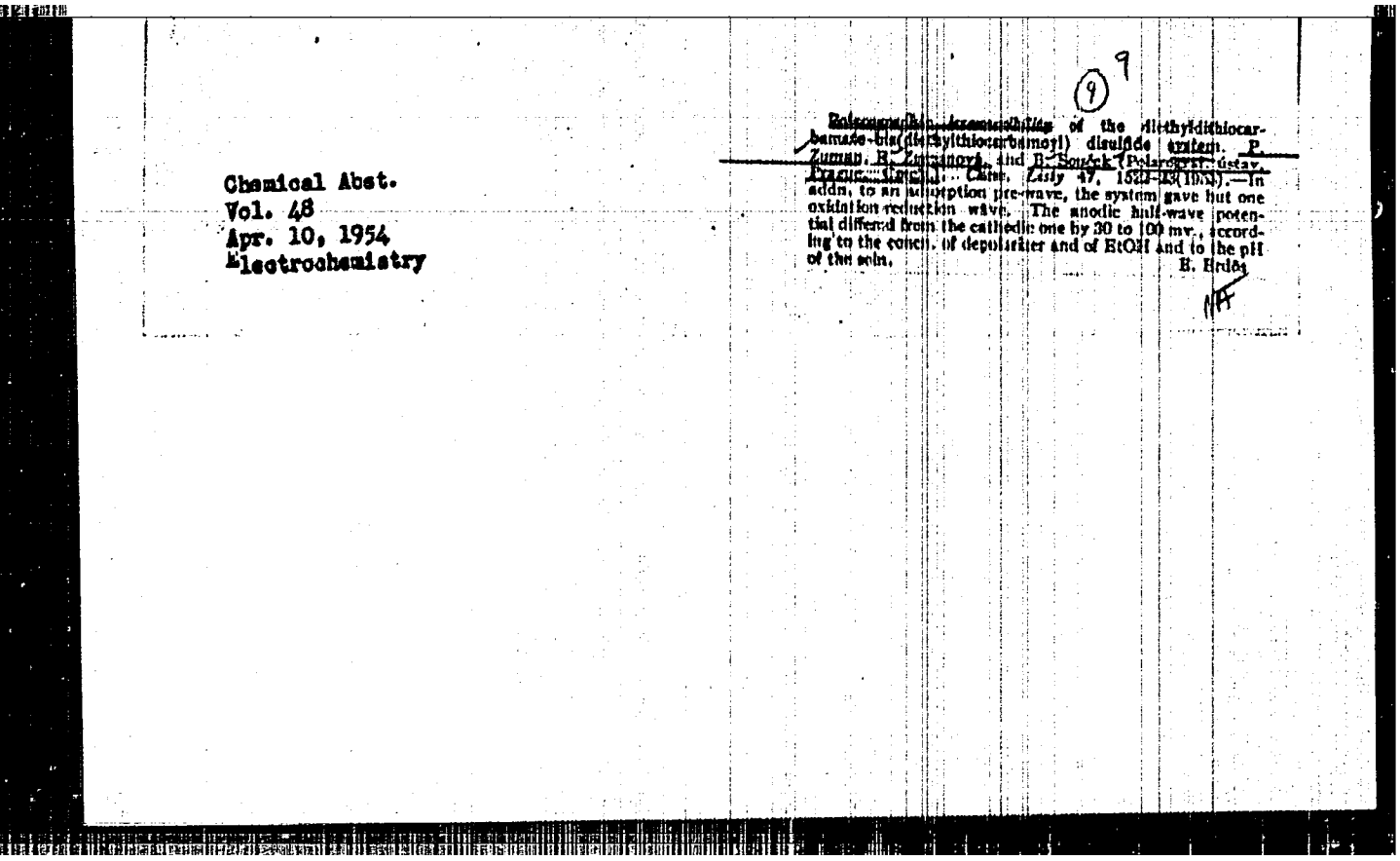
reducible. The nitrogen-containing steroids investigated lower the overvoltage of H_2 evolution, and the steroid reduction wave combines with the catalytic H_2 wave at higher concentration. Holarrhedine is much less active when oxygen maxima are depressed than the other substances investigated. Dissociation constants (pK_{a1} and pK_{a2}) were determined in 70% alcohol at rather low ionic strength: I 8.75 and 9.7; 5,6-dehydrotetramethylholarrhimine 8.75 and 9.5; II $\sim$ 8.4 and $\sim$ 9.1; III $\sim$ 8.3 and $\sim$ 9 3.

See Communication II in RZhKhim, 1955, No 23, 54749. --
L. Matousek

Card 2/2

ZUMAN, R.

"Reference electrodes. Theory and practice" edited by D.J.G. Ives and D.J. Janz. Reviewed by P. Zuman. Chem listy 57 no.1:83-84 Ja '63.



Chemical Abst.
Vol. 48
Apr. 10, 1954
Electrochemistry

(9) 9

Polarographic reduction of the diethyldithiocarbamate-bis(diethylthiocarbamoyl) disulfide system. P. Zuman, B. Zumanová, and B. Souček (Polarograf. ústav, Prague, Czech.). Chem. Listy 47, 1522-33(1953).—In addn. to an adsorption pre-wave, the system gave but one oxidation reduction wave. The anodic half-wave potential differed from the cathodic one by 30 to 100 mv., according to the concn. of depolarizer and of EtOH and to the pH of the soln.
B. Hrdá

ZUMANOVA, R.

ZUMAN, P.; ZUMANOVA, R.; SOUCEK, B.

Polarographic determination of carbon bisulfide by anode rays [in German with summary in Russian]. Sbor.Chekh.khim.rab. 18 no.5:632-647 O '53. (MLRA 7:6)

1. TSentral'nyy polyarograficheskiy institut i Institut professional'nykh zabolevaniy i trudovoy gigiyeny. (Carbon bisulfide) (Polarograph and polarography)

ZUMANOVA, R. ; ZUMAN, P.

Polarography of some sulfur compounds. V. Complexes of 2, 3,-dimercapto-propanol with heavy metals. p. 652

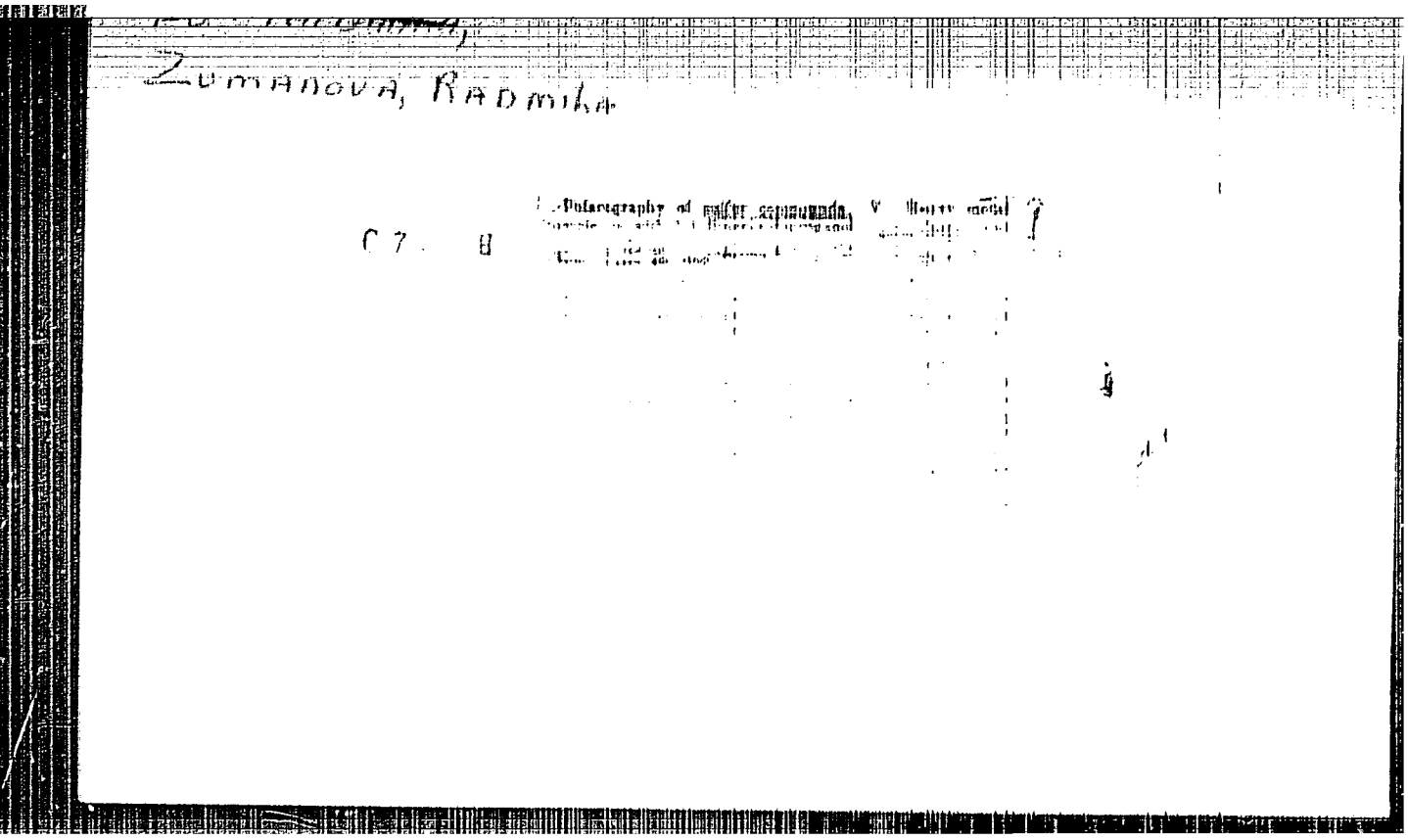
CHIMICKE LISTY (Ceskaslovenska akademic ved. Ceskaslovensak spolecnost chemicks) Praha, Czechoslavakia. Vol. 49, no. 5, May, 1955

Monthly List of East European Accessions (EEAI) EC, Vol. 9, no. 1, Jan 1960
Uncl.

ZUMANOVA, R.; ZUMAN, P.; SOUCEK, B.

"Polarographic Determination of Carbon Bisulfide With The Aid of Anode Waves", P. 632, (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Vol. 18, No. 5, October 1953, Praha, Czech.)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.



ZUMANOVA, R.

CZECHOSLOVAKIA / Physical Chemistry. Electrochemistry. B

Abs Jour: Ref Zhur-Khimiya, No 19,1958, 63904

Author : Zumanova R; Teisinger J; Zuman P
Inst : Not given
Title : The Influence of Albumens on the Polarographic Behavior of Metals and Their Compounds with 2.3-Dimercaptolpropanol.

Orig Pub: Chem. zvesii, 1957, 11, No 9, 517-527

Abstract: Waves of Au, Ag, Hg, Cu, Sb, Bi, Zn, Cd and Pb are reduced in a citric buffer solution (pH 6.3) with the addition of albumin (I) during which the dependence i_{pr} on the I concentration is exponential. These data are explained by the

Card 1/3

CZECHOSLOVAKIA / Physical Chemistry. Electrochemistry. B

Abs Jour: Ref Zhur-Khimiya, No 19, 1958, 63904

Abstract: complex formation of metals (M) with (I); in addition, the Au, Ag, Hg and Bi complexes are not reducible and in the absence of I the waves of these M disappear, while Cu, Cd and Pb complexes are reduced, and their waves are reduced with the addition of I to a somewhat limited value, which is determined by the coefficient of diffusion of these complexes. An adsorption retardation of the process simultaneously appears, which indicates the character of the i_{pr} dependence of the reduced waves on the height of the reservoir Hg and the reduction of the Cu wave only in the limited area of potentials (trough). With the addition of I to the solutions of complexes of M with 2.3--dimercaptolpropanol (II), the M waves are also reduced but only because of the adsorption

Card 2/3

ZUMANOVA, R.

TEISINGER, J.; ZUMANOVA, R.; ZEZULA, I.

Effect of calcium salt of ethyldiaminotetracetic acid on lead binding in erythrocytes and blood proteins. Pracovni lek. 9 no.4: 277-280 Sept 57.

1. Ustav hygieny prace a chorob z povolani v Praze, reditel prof. MUDr J. Teisinger.

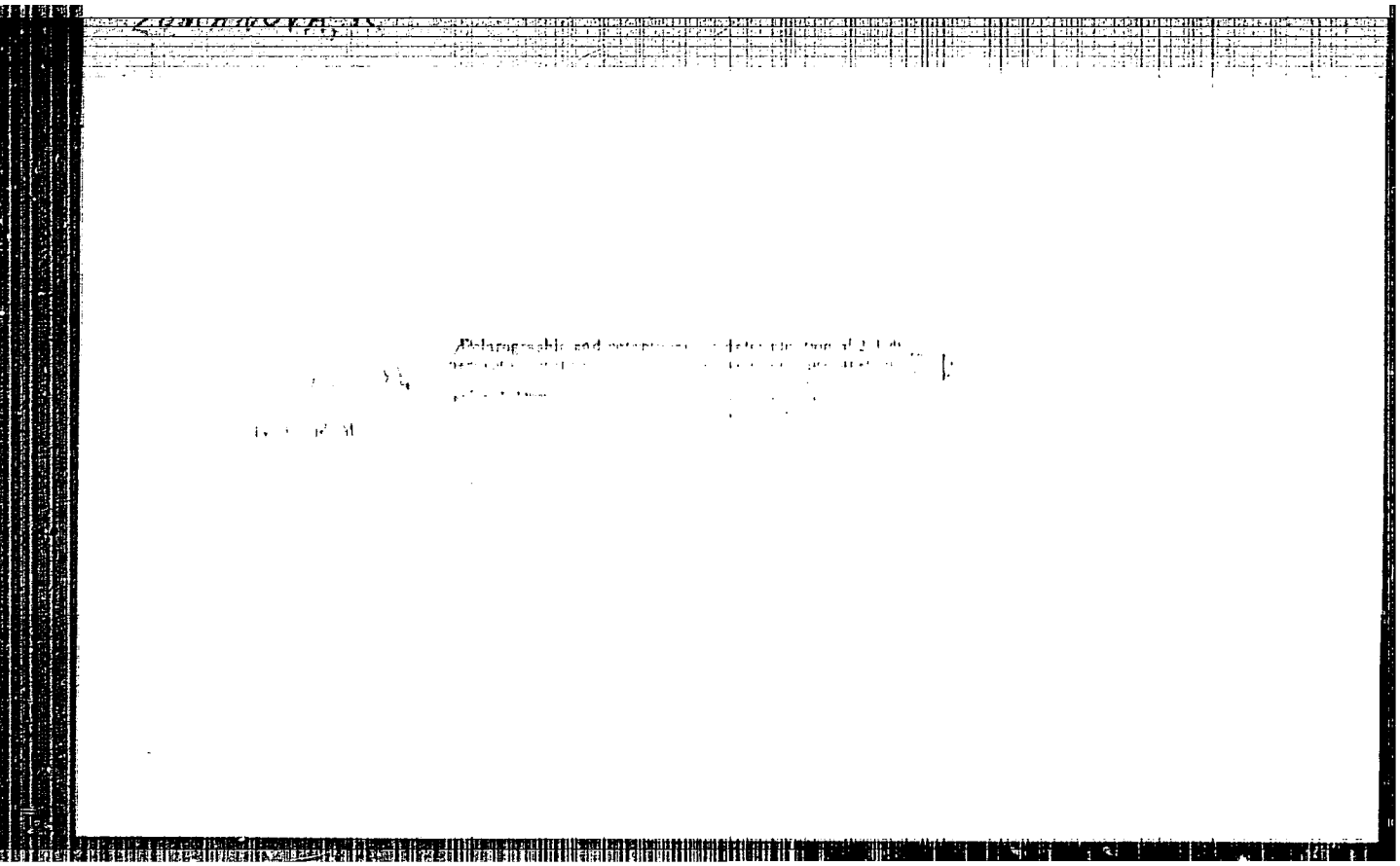
(EDATHAMIL, eff.
on lead binding in erythrocytes & blood proteins (Cz))
(ERYTHROCYTES, eff. of drugs on
edathamil on lead binding (Cz))
(BLOOD PROTEINS, eff. of drugs on
same)

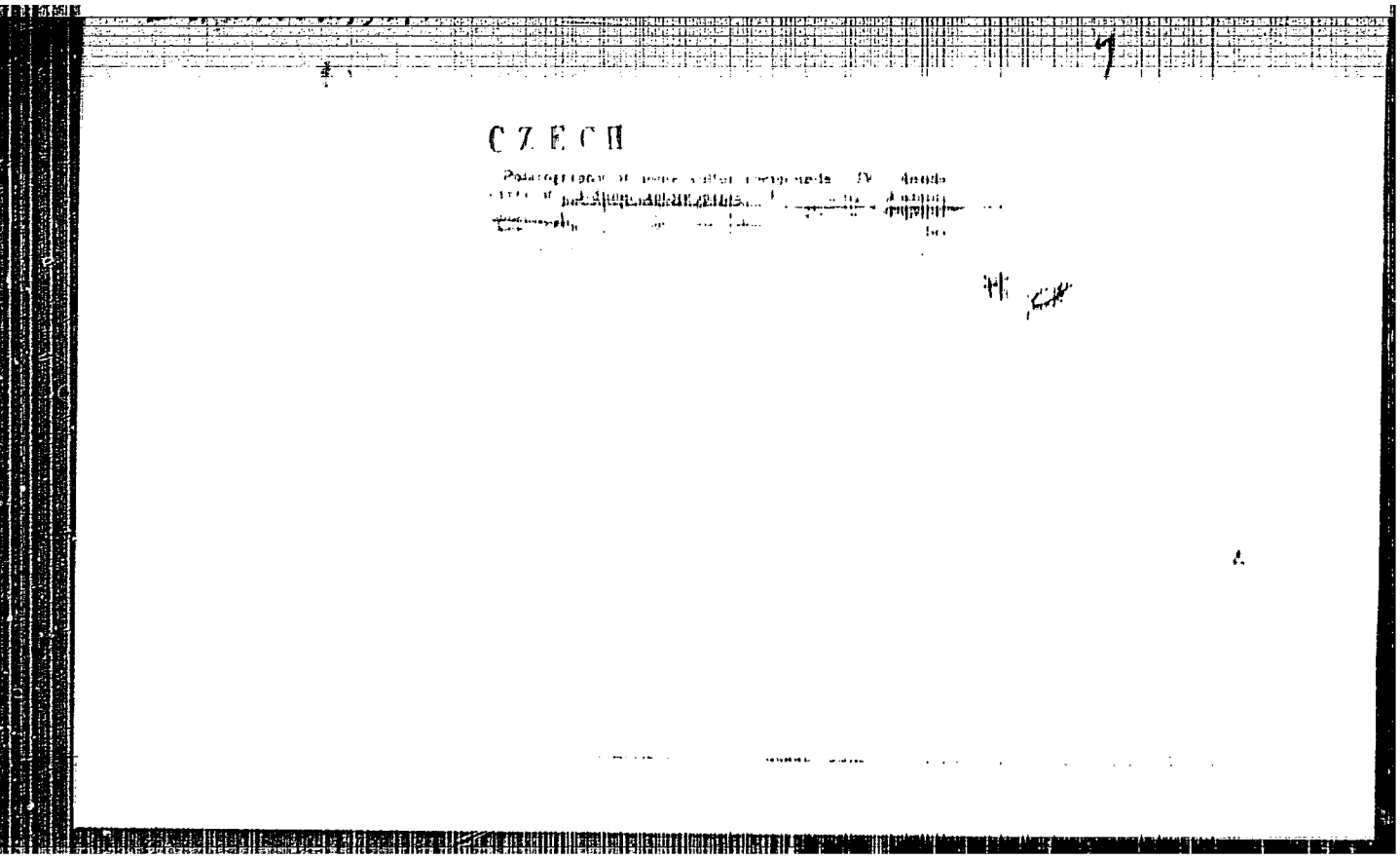
ZUMANOVA, R.

Effects of proteins on the polarographic behavior of metals and their compounds with 2, 3-dimercaptopropanol.

P. 517 (Chemicke Zvesti. Vol. 11, no. 9, Sept. 1957, Bratislava, Czechoslovakia)

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





[redacted], B.

"Polarographic determination of carbon disulphide from its anodic wave." p. 178.
(CHEMICKE LISTY, Vol. 47, #2, Feb. 1953, Czechoslovakia)

SO: Monthly List of Russian Accessions, East European Vol. 2, #8 Library of Congress, August 1953, Uncl.

ZUMANOVA R.

Polarographic determination of carbon disulphide from its anodic wave. p.178 (Chemicke Listy., Vol. 47, no. 2, Feb. 1953) Czechoslovakia

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress, August 1953, Incl.

ZUMBADZE, D.N.; MAVROTSKAYA, V.S.

Comparability of the results of studies on dry winds obtained on the basis of different criteria. Trudy OGMI no.19:31-34 '59. (MIRA 13:5)

(Winds)

AKHALADZE, G.L.; ZUMBADZE, G.L.

Certain surgical forms of crucellosis. Khirurgiia, Moskva no.12:55-59 Dec 1953. (CIML 25:5)

1. Candidate Medical Sciences for Akhaladze. 2. Of Kazbegsk Rayon Hospital (Head — G. L. Zumbadze).

AKHALADZE, G.L., kandidat meditsinskikh nauk; ZUMBADZE, G.L.

Certain surgical forms of brucellosis. Khirurgiia no.12:55-59 D '53. (MLRA 7:1)

1. Iz Kazbegskoy rayonnoy bol'nitsy (zaveduyushchiy G.L.Zumbadze). (Brucellosis)

STURMANE, Milda; TUMSEVICS, V., kand. ekonom. nauk, red.; ZUMBERGA, M., red.; BITARS, A., tekhn. red.

[Ways of improving the overhauling of industrial equipment in the metalworking industry of the Latvian S.S.R.] Razosanas iekartu kapitalremonta pilnveidosanas iespejas Latvijas PSR metalapstradasanas rupnieciba. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1961. 91 p. (MIRA 15:3)
(Latvia--Metalworking machinery--Maintenance and repairs)

VALDMANIS, Andrejs; ZUMBERGA, M., red.; PILADZE, Z., tekhn. red.

[Vitamins in stockbreeding] Vitamini lopkopiba. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1961. 92 p. (MIRA 15:2)

(Stock and stockbreeding) (Vitamins)

ZVIEDRIS, Arvi Indrikovich; ZUMBERGA, M., red.; PAEGLIS, J., tekhn. red.

[Spruce and spruce forests in the Latvian S.S.R.] Egle un eglu mezs Latvijas PSR. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1960. 238 p. [In Latvian] (MIRA 14:12)

(Latvia--Spruce)

CIPENS, Gunars; ZUMBERGA, M., red.

[Chemical foundations of heredity and mutation] Iedzimtibas and mainibas kimiskie pamati. Riga, Latvijas PSR Zinatnu akad. izd-ba, 1963. 106 p. [In Latvian]
(MIRA 17:6)

CIPE, Kalmans; GULANS, P., kand. ekon. nauk, red.; BIRZINA, L., kand. jur. nauk; ZUMBERGA, M., red.; LEMBERGA, A., tekhn. red.

[Cash payment for the labor of collective farmers] Kolhoznieku darba samaksa nauda. Riga, Latvijas PSR Zinatnu Akademijas izdevnieciba, 1962. 94 p. (MIRA 16:5)
(Latvija--Agricultural wages)

RASIN'SH, A.[Rasins, A.], starshiy nauchnyy sotr.; SAVEL'YEVA, J., red.; ZUMBERGA, M., red.; BONDARE, A., tekhn. red.

[Scientific and technical terminology]Nauchnaia i tekhnicheskaia terminologiia. Riga, Izd-vo Akad.nauk Latviiskoi SSR. No.3.[Plant protection]Zashchita rastenii. 1960. 591 p. (MIRA 15:10)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. Latviesu valodas terminologijas komisija. 2. Pribaltiyskaya stantsiya zashchity rasteniy (for Rasin'sh). (Plants, Protection of--Dictionaries)

OZOLS, A., akademik, otv. red.; PETERSONS, E., kand. sel'khoz. nauk, red.; ROMANOVSKA, O., kand. sel'khoz. nauk, red.; SPOLITIS, A., kand. sel'khoz. nauk, red.; ZUMBERGA, M., red.; PILADZE, Z., tekhn. red.

[Possibilities of improving the winter hardiness and frost resistance of plants] Augu ziemcietiba, aikstumizturiba un to kapinasanas iespejas. Riga, Latvijas PSR Zinatnu akad. izdevnieciba, 1962. 186 p. (MIRA 16:5)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. Biologijas instituts. 2. Akademiya nauk Latviyskoy SSSR (for Ozols).

(Plants—Frost resistance)

GALENIECE, M.; TABAKA, L.; ZUMBERGA, M., red.; BITARS, A., tekhn. red.

[Guide to sphagnum mosses in the Latvian S.S.R.; a brief survey with tables for the determination of Sphagnum sections and species] Latvijas PSR sfagnu sumu noteicejs; isa parskats ar sfagnu sekciju un sugu noteiksanas tabulam. Riga, Latvijas PSRS Zinatnu akad. izdevnieciba, 1962. 109 p. (MIRA 16:5)

(Latvia--Mosses)

MIKELSONE, Ausma; ZUMBERGA, M., red.; BOKMANIS, R., tekhn. red.

[String beans] Krumu pupinas. Riga, Latvijas PSR Zinatnu Akad. izdevnieciba, 1963. 50 p. (MIRA 16:5)
(Latvia--Beans)

NOZENKO, Andrejs; LEJINA, Lucija; ZUMBERGA, M., red.; PILADZE, Z., tekhn. red

[Significance of vitamin A and carotenes in nutrition] A vitamina un karotinu nozime uztura. Riga, Latvijas PSR Zinatnu akademija izd-ba, 1962. 42 p. (MIRA 17:1)

TILTA, Elga; ZUMBERGA, M., red.

[Dairy industry of the Latvian S.S.R.] Latvijas PSR piena rupnieciba. Riga, Latvijas PSR Zinatnu Akademijas izd-ba, 1963. 81 p.
(MIRA 17:5)

KREICBERGS, Olgerts, kand. biol. nauk; ZUMBERGA, M., red.

[Movements of plants] Augu kustibas. Riga, Latvijas PSR Zinatnu akad. izd-ba, 1964. 60 p. [In Latvian]

(MIRA 17:6)

VILMANE, M.; ZUMBERGA, M., red.

[Narcissuses] Narcises. Riga, Latvijas PSR Zinatnu akad. izd-ba, 1963. 39 p. [In Latvian] (MIRA 17:7)

JUKNA, Arture; ZIEDINS, Indulis; OZOLINS, Uldis; BANKIERIS, Janis; ZUMBERGA, M., red.

[New materials from wood waste] Jauni materiali no koksnes atliekam. Riga, Latvijas PSR Zinatnu akad. izd-ba, 1963. 130 p. [In Latvian]

(MIRA 17:6)

CUDARS, Jazeps; ZUMBERGA, M., red.; LEMBERGA, A., tekhn. red.

[Elementary particles] Elementardalinas. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1961. 86 p. (MIRA 15:3)
(Particles, Elementary)

SAVEL'YEVA,J., red.; ZUMBERGA, M., red.; INKIS, R., tekhn. red.

[Scientific and technical terminology] Nauchnaia i tekhnicheskaia terminologiia. Riga, Izd-vo Akad. nauk Latviiskoi SSR. No.1 [Technology of metals and machine parts; (Latvian-Russian, Russian-Latvian)] Tekhnologiia metallov i elementy mashin; [Latviisko-russkii, russko-latviiskii] 1958. 120 p. (MIRA 14:12)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu akademija. Terminologijas komisija.

(Technology—Dictionaries)
(Russian language—Dictionaries—Latvian)
(Latvian language—Dictionaries—Russian)

VALDMANIS, A., doktor biol. nauk, red.; ZUMBERGA, M., red.; ZUKOVSKA, A., tekhn. red.

[Methods of vitamin and microelement determination] Vitaminu un mikroelementu noteiksanas metodes. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1959. 96 p. [In Latvian] (MIRA 14:12)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu akademija. Biologijas instituts.
(VITAMINS) (TRACE ELEMENTS)

ZUBER,L.

Plywood plates; a problem of a new product in our wood industry. p. 383.
(Nova Proizvodnja. Vol. 7, no. 6, Feb. 1957, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957, Uncl.

FUKARAK, P.; GAFNER, J.; MESTROVIC, S.; KLEPAC, D.; LNENICEK, Z.; ZMIJANAC, D.; SEVNIK, F.; ZAGAR, B.; MIKLAVZIC, J.; KNEŽ, A.; PIPAN, R.; FUNKL, L.; SVETLIČIC, A.; ZUMER, L.; KEVO, R.

Reveiw of periodicals; silviculture. Bul sc Youg 9 no.4/5:144-145 Ag-O '64.

ZUMER, M.; SIRCA, F.

ZUMER, M.; SIRCA, F. Contribution to the phenomenology of the diffusion of copper in iron. p. 25

NO. 1, 1955 RUDARSKO-METALURSKI ZBORNIK

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 3 March, 1956

BRCIC, B.S.; GOLIC, L.; PETERMEL, P.; SIFTAR, J.; ZUMER, M.

The CaO — Al_2O_3 at low temperatures. Vest Slov kem dr 9 no.1/2:27-32 Ja-Je '62.

1. Laboratorij za anorgansko kemijo, Institut za kemijo Univerze v Ljubljani.

ZUMER, M.

ZUMER, M.; Prosenc, V. The influence of cemented surfaces on the process of the deformation of steel. p. 327

No. 4, 1956
RUDARSKO-METALURSKI ZBORNIK
TECHNOLOGY
Ljubljana

So: East European Accession, Vol. 6, no. 3, March 1956

13373* The Diffusion Phenomenon of Copper in Iron. Prispevek k fenomenologiji difuzije bakra v železo. Slovenian. Matija Zumer and Ernest Stras. Rudarsko metalurški zbornik 1953, no. 1, p. 25-33.

Qualitative aspect of the diffusion of electrolytic [illegible] and [illegible] iron at 1130 [illegible] (86 [illegible] epsilon phase [illegible] (030) both in solid state and [illegible] 50 [illegible] modification of [illegible] iron. Difference between speed of intergranular and [illegible] diffusion: [illegible] temperature [illegible] above [illegible] [illegible] properties. Macrographs, graphs, diagrams, photographs. [illegible]

1599* Dislocation of Crystal Boundaries in Secondary Recrystallization O premikih kristalnih mej ob sekundarni rekristalizaciji Slovenian [illegible] and Engr. [illegible]

ZUMER, L.

Yugoslavia (430)

Technology

Wood flour. p. 419, Nova Proizvodnja,
Vol. 2, no. 6, December 1951.

East European Accessions List, Library of Congress
Vol. 2, No. 3, March 1953. UNCLASSIFIED.

SIRCA, F.; DOBOVISEK, Bogomir, docent, dr. inz.; GRAFENAUER, S.; KOSOVINC, I.; HAMRLA, B.; VODOPIVEC, F.; KUSCER, D.; KERNC, J.; DROBNE, F.; PAVKO, D.; CAZAFURA, K.; TURK, St.; OCEPEK, Drago, docent, dr. inz.; ROSINA, A.; ZUMER, M.; SOVINC, I.

New books. Rud met zbor 4:431-457 '63.

1. Clanovi Uredniskega odbora, "Rudarsko-metalurski zbornik" (for Dobovisek and Ocepek).

ZUMER, M ; SIRCA, F.

ZUMER, M ; SIRCA, F. Shifting of crystal limits during secondary recrystallizations. p. 173

No. 3, 1955
RUDARSKO-METALURSKI ZBORNIK
Ljubljana, Yugoslavia

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

ZUMEROV, R.A.

Staining properties of the juice of Morus nigra in histological practice. Arkh. pat. 21 no.12:68-69 '59. (MIRA 13:12)
(STAINS AND STAINING (MICROSCOPY))
(MULBERRY)

ZUMEROV, R.A. (Astrakhan')

Spatula-hook for histological work. Arkh. pat. 19 no.2:83-84 '57 (MLRA 10:4)

(PHYSIOLOGICAL APPARATUS)

ZUMKINA, T.M.; LUKIRSKIY, A.P.

Photoionization absorption in alkali halide crystals in the 23-190 Å range. Fiz. tver. tela 7 no.5:1455-1461 My '65. (MIRA 18:5)

1. Leningradskiy gosudarstvennyy universitet.

ZUMNAYA, Ye.M.

Case of multiple osteochondropathy of the epiphyses of the phlanges of the hands. Vest. rent. i rad. 37 no.2:67 Mr-Ap '62.(MIRA 15:4)

1. Iz rentgenovskogo otdeleniya (zav. Ye. E.Linkevich) Mediko-sanitarnoy chasti Chelyabinskogo traktornogo zavoda (nachal'nik L.L.Seredinina).
(FINGERS--DISEASES)

STOIANOV, Velichko, inzh.; IVANOV, Ivan, inzh.; SAVOV, Ivan, inzh.; ZUMPALOV, Georgi, inzh.

Possibilities of applying chamber blast in the open-pit mines and quarries. Tekhnika Bulg 12 no.7:16-19 '63.

S/044/62/000/011/031/064
A060/A000

AUTHOR: Zumpe, Guenter

TITLE: Introduction of the elementary load function and the equalizing function into the solution of problems relating to flexure of beams

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 76, abstract 11B316 (Wiss. Z. Techn. Univ. Dresden, 1961, v. 10, no. 5, 1089 - 1092, German)

TEXT: The essence of the method proposed by the author for finding the extremum of a certain Riemann-Stieltjes integral consists in replacing the class of admissible sufficiently smooth comparison lines by a class of functions containing piecewise constant functions of elementary loads and the concentrated load function. The character of the solution of the variational problem obtained in the manner indicated is not investigated.

L. Ya. Tslaf

[Abstracter's note: Complete translation]

Card 1/1

16 3460

8/044/62/000/008/048/073
C111/C333

AUTHOR: Zumps, G.

TITLE: The application of the matrix calculus at the deduction of the extremal values of continuous beam cutting powers

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 36, abstract 8V184. (Wiss. Z. Techn. Univ. Dresden", 1961, 10, no. 6, 1339-1344)

TEXT: One descusses the reduction of boundary value problems for ordinary differential equations to a sequence of problems with initial values; the reduction is done by aid of the Green's function. Thereby the matrix calculus is highly used.

[Abstracter's note: Complete translation.]

Card 1/1

16.3400

8/044/62/000/008/049/073
C111/C333

AUTHOR: Zumpe, G.

TITLE: The formation rule of the elements of the transformed matrices and the leap quantities of the reduction method and its application

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 36, abstract 8V185. ("Wiss. Z. Techn. Univ. Dresden", 1961, 10, no. 6, 1377-1379)

/B

TEXT: This is the continuation of the preceding paper of the author (see Ref. 8V184).

[Abstracter's note: Complete translation.]

Card 1/1

KORBECKA, Hanna; WIELOPOLSKA, Hanna; ZUN, Hanna

Virological and serological investigation of neuroinfections of hospital patients in Warsaw in 1963. Przegl. epidemiol. 19 no.1:87-92 '65

1. Ze Stacji Sanitarno-Epidemiologicznej dla m. st. Warszawy.

ZUN, V.P., polkovnik meditsinskoy sluzhby, kand.meditsinskikh nauk

Safety measures during the preparation of artificial radon baths.
Voen.-med. zhur. no. 6:40-42 Je '60. (MIRA 13:7)
(RADIOACTIVITY—SAFETY MEASURES)

ZUN, V. P. Cand Med Sci -- (Diss) "The Effect of Light Negative Aero-Ions on the Dynamics of Arterial Blood Pressure in Hypertension Patients." L'vov, 1956. 16 pp 21 cm. (L'vov State Medical Inst), 100 copies (KL, 16-57, 101)

ZUNA, B.

Organization and planning the operation of a repair shop in the machine-tractor station. p. 45. SBORNIK. RADA MECHANISACE A ELEDTRIFIKACE ZAMEDELSTAVE A LESNICTVE. Praha. Vol. 29, no.1, Jan. 1956.

SOURCE: EAST EUROPEAN ACCESSIONS LIST (EEAL) Library of Congress Vol. 5, No. 7, July 1956.

KOVARIKOVA, V.; ZUNA, Vl.; SEBOR, J.

Abscesses of Douglas' pouch as a complication of acute appendicitis.
Rozhl. chir. 41 no.2:139-142 F '62.

1. I chirurg. klinika lek. fak. KU v Plzni, prednosta doc. dr Spinka.

(DOUGLAS POUCH dis) (ABSCESS)
(APPENDICITIS compl)

HAVEL, J.; ANDEL, Zd.; VALENTA, J.; ZUNA, Vl.

Perforation of the gastrointestinal tract by swallowed foreign bodies. Cesk. gastroent. 16 no.1:65-67 Ja '62.

1. I. chirurgicka klinika lek. fak. KU v Plzni, prednosta doc. dr. Spinka.

(FOREIGN BODIES) (STOMACH) (INTESTINAL PERFORATION)

ZUNA, Vl.; SPELINA, V.

Treatment and diagnostic use of intra-arterial oxygen insufflation in ischemic conditions of the extremities (Preliminary report). Rozhl. chir. 42 no.1:39-43 Ja '63.

1. I. chirurgicka klinika lekarske fakulty KU v Plzni, prednosta doc. dr. J. Spinka.

(OXYGEN) (EXTREMITIES) (VASCULAR DISEASES)
(ANGIOGRAPHY) (DIABETIC ANGIOPATHIES)