Kinetics of the Nitrosation of Secondary Aromatic Amines. SOV/153-58-2-3/30
Communication I. Velocity of the Nitrosation of Tropacolin in Sulfuric Acid Solutions

references, 9 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Chemical Technical Institute) Kafedra fizicheskoy khimii (Chair of Physical Chemistry)

SUBMITTED: October 3, 1957

Card 5/5

LOSHKAREV, M.A.; AVRUNINA, A.M.; ROSTOVTSEVA, V.K.

Effect of surface active agents on the dissolution of zinc in acid. Trudy DKHTI no.6:12-20 '58. (MIRA 13:11)
(Surface active agents) (Zinc) (Acids)

LOSHKAREV, M.A.; MARK, L.V.

Effect of surface active agents on the electrolytic crystallization of cadmium. Report No.2: Inhibiting action of OP-10 and "peregal' O." Trudy DKHTI no.6:21-31 '58 (MIRA 13:11)
(Cadium crystals) (Surface active agents) (Electrolysis)

SOV/81-59-15-52786

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, pp 69-70 (USSR)

AUTHORS: Sevryugina, M.P., Loshkarev, M.A.

TITLE: The Effect of Surface Active Substances on the Electric Deposition of Copper

PERIODICAL: Tr. Dnepropetr. khim.-tekhnol. in-t, 1958, Nr 6, pp 36-50

ABSTRACT: The effect of various surface active substances (SAS) on the reduction of Cu^{2+} ions on the Hg- and the Cu-electrode has been studied. It has been established that the greatest inhibition of the electrochemical reaction on the Hg-electrode is caused by additions of tribenzylamine, typhene, PB-5, and α- and φ-naphthols. In a broad interval of φ-potentials an adsorption threshold current is observed which is 10 times less than the normal diffusion current. At more negative φ-values the change of the current with φ is subjected to Tafel's equation with large prelogarithmic coefficient. The inhibition of the discharge of Cu^{2+} ions under the action of SAS on a solid electrode is less, in which case the additions of pyridine and its derivatives as well as methylene blue which are inactive in the case of a Hg-electrode show a noticeable effect. The most efficient inhibitors of the electric crystallization of Cu are sulfur-containing

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SOV/81-59-15-52786

The Effect of Surface Active Substances on the Electric Deposition of Copper

compounds (typhene, methylene blue, etazol, thiourea and its derivatives) which shift the cathode φ so much that the joint separation of Cu with Sn, Cd and Pb becomes possible. The effect of the temperature (2 - 60°C) on the electric crystallization of Cu in the presence of SAS has been studied and the effective activation energies (15,000 - 25,000 cal) have been calculated which confirms the activation mechanism of the action of SAS additions. Electron-microscopic investigations have shown that in the presence of SAS additions a strong reduction of the grain sizes of the Cu deposit takes place.

Z. Solov'yeva

Card 2/2

TSYMBAL, R.M.; BURMISTROV, S.I.; LOSHKAREV, M.A.

Study of the reaction of nitrosation of amines. Report No.2: Basicity constants of azo indicators with a secondary amino group. Trudy DKHTI no.6:185-192 '58. (MIRA 13:11)
(Amines) (Nitrosation) (Indicators and test papers)

LOSHKAREV, M.A.; CHERNENKO, V.I.; GAMALI, I.V.

Some characteristics of the refining of lead from a sulfamine electrolyte. Report No.1: Potential balance of the electrolytic bath. Trudy DKHTI no.6:193-201 '58. (MIRA 13:11)
(Lead) (Electroylsis)

CHERNENKO, V.I.; LOSHKAREV, M.A.

Some characteristics of the refining of lead from a sulfamine electrolyte. Report no.2: Preventing a decrease in the lead content of the electrolyte. Trudy DKHTI no.6:202-207 '58.
(MIRA 13:11)

(Lead) (Electrolysis)

TSYMBAL, R.M.; LOSHKAREV, M.A.; BURMISTROV, S.I.

Kinetics of nitrosation of secondary aromatic amines. Report No.1: Rate of nitrosation of tropeolin in sulfuric acid solutions. Trudy DKHTI no.6:249-261 '58. (MIRA 13:11)
(Benzenesulfonic acid) (Nitrosation)

LOSHKAREV, M.A., kand.tekhn.nauk; BOGORAD, M.L., kand.tekhn.nauk; SHOKHOR, G.I., inzh.

Calculation of the durability of threaded flange joints on the basis of maximum loads. Sbor. st. NIIKHIIMMASH no.21:3-8 '58. (MIRA 11:7)

(Flanges--Testing)

LOSHKAREV, M.A.; CHERNENKO, V.I.; GAMALI, I.V.

Some features of refining lead from sulfamic acid electrolyte. Zhur. prikl. khim. 31 no.2:248-255 F '58. (MIRA 11:5)
(Lead) (Sulfamic acid)

5(4)
AUTHORS: Loshkarev, M. A., Chernobayev, I. P. SOV/2o-121-5-32/5o

TITLE: Concerning the Calculation of Electrochemical Reactions in an Intermediate Reagent (K raschetu elektrokhimicheskikh reaktsiy s promezhutochnym reagentom)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 5, pp 881 - 884 (USSR)

ABSTRACT: The authors carried out investigations for the special case of an immediate electrode process, and also for a more general case where the oxidation or reduction of the depolarizer occurs in the presence of an intermediate reagent in the electrolyte. In the latter case, for example for an anodic oxidation, both of the parallel courses of the process may be represented by the following scheme: $K - e \rightarrow K^+$ (on the electrode), 2) $B - e \rightarrow B^+$ (on the electrode) and $B^+ + K \rightarrow K^+ + B$ (in the diffusion layer and in the volume of the electrolyte). K denotes the basic depolarizer and B - the intermediate reagent. Such systems are very important in electrochemical technology. The purpose of this

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paper is the deduction of the equations for the calculation of the velocity of the electrochemical process and the verification of their applicability to real systems of solid electrodes if the processes are steady. First, the authors assume that the chosen depolarizer is contained in a solution which does not contain an intermediate reagent. The differential equations for this case and also for a more general case (where the velocity of the electrode process depends on the stage of the discharge and on the diffusion of the depolarizer to the electrode). In various cases, the concentration C depends on t in the same manner. The introduction of an intermediate oxidizer is equivalent to the increase in total concentration; it shifts reaction into the original most advantageous region. Then the authors verified their equations for some oxidizing and reducing reactions, for example, for the oxidizing of $FeSO_4$ in solutions with and without NaCl. Moreover, the influence of the intermediary reagents on the precipitation of metal

hydroxides, on the charge exchange of titanium ions, and on various reactions of the electrosynthesis of organic compounds were investigated. For these cases, the experimental data agreed well with the derived equations. There are 2 figures, 1 table, and 11 references, 5 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F.E.Dzerzhinskogo (Dnepropetrovsk Chemical-Technological Institute imeni F.E.Dzerzhinskiy)

PRESENTED: April 11, 1958, by A.N.Frumkin, Academician

SUBMITTED: April 11, 1958

LOSHKAREV, M.A.

PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.
Trudy...: [Sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.); Academician O.A. Yesin, B.N. Kabanov, Professor, A.N. Zhdanov (Resp. Secretary), S.I. Zhdanov, Professor, S.I. Zhdanov, Doctor of Chemical Sciences; V.V. Losev, Ph.D., V.V. Stender, Professor, Ya. M. Kolotyrkin, Docent; V.A. Solov'yeva; V.F. Yegorov; Ye. M. Lukovtsev, Professor; Z.A. Iofa, Ed. of Publishing House; N.G. Yegorov and G.M. Florianovich; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and electrolytic metal electrodeposition and industrial electrochemical processes. Abridged discussions are given at the end of each division. No personalities are mentioned. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Table of Contents:

Strander, V.I., G.Z. Kirpikov, O.M. Znamenskiy, S.A. Alekseyev, and A.F. Solyanskiy. High Current Densities During the Electrolytic Preparation of Zinc 461

Loshkarev, M.A., and Ya. I. Dubyago (Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E. Dzerzhinskogo-Dnepropetrovsk Institute of Chemical Technology imeni F.E. Dzerzhinskiy). Electrocrystallization of Bismuth From an Oxychloride Electrolyte 467

Rodnevas, I.I., and Yu. Yu. Matulis (Institute of Chemistry and Chemical Technology, Academy of Sciences, Lithuanian SSR). New Electrolyte for Bright Tinplating 477

Markhor, M.I., and K.M. Kharlamova. Adhesion of Nickel Plating to Steel 2, Nickel, Chromium, Steel 1Kh19N9T and a Chrome-Nickel Alloy 482

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Card 19/34

5 (4), 18 (5)

AUTHORS: Chernenko, V. I., Loshkarev, M. A. (Dnepropetrovsk)

SOV/76-33-8-12/39

TITLE: Concurrent Discharge of Lead and Tin During Electrolytic Refining of Lead

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 8, pp 1750 - 1757 (USSR)

ABSTRACT: The concurrent discharge of lead and tin ions at low Sn^{2+} concentrations from a sulphamine electrolyte in the presence of surface-active substances (SAS) was investigated. In particular the laws which show a connection between the tin content in cathode lead on the one hand, and the concentration of $Sn(SO_3NH_2)_2$, current density, and concentration of Pb^{2+} ions on the other hand, were studied. Electrolysis was carried out without thorough mixing at 25°C. Polarization measurements were carried out by the compensation method. The measurement results obtained show that the dependence of the tin content in cathode lead on the Sn^{2+} concentration in the electrolyte is greatly influenced by the (SAS) (resorcin, β-naphthol, waste sulphite liquor). In the range of current density investigated the lead discharge may be

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expressed by the equation $D = a \cdot e^{-b/\eta}$ (D = density of the cathode current, η = voltage), which is in agreement with other publications. It is assumed that in the presence of (SAS) the tin-discharge on lead at low Sn^{2+} concentrations in the electrolyte follows an equation of retarded discharge, which is confirmed by equations expressing a relation between the tin content of the cathode lead and the current density, the Pb^{2+} concentration and the (SAS) concentration. It is shown that additions of (SAS), by means of a change in the ratio of deposition rates of Pb and Sn, change the character of the function $A_i = f(c_i ; D_M ; c_M)$ (c_i = concentration of the additions of (SAS)) (Refs 7-10), in that the (SAS) content of the cathode deposit decreases owing to the increase in the effect of these additions. There are 6 figures and 13 Soviet references.

SUBMITTED: January 16, 1958

LOSHKAREV, M.A.; CHERNENKO, V.I. (Dnepropetrovsk)

Inhibiting action of naphthols on the process of discharge of lead ions and the magnitude of the activation barrier. Zhur.fizh.khim. 34 no.5:1060-1068 My '60. (MIRA 13:7)
(Naphthols) (Lead plating)

S/076/60/034/007/014/042/XX
B004/B068

AUTHORS: Loshkareva, M. A. and Dubyago, Ye. I.

TITLE: Kinetics of Cathodic Deposition of Bismuth. I. Polarographic Waves of the Discharge of Bismuth Ions From Non-complex Electrolytes

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 7, pp. 1430-1442

TEXT: The authors treat the problem of the distortion of the polarographic wave of bismuth due to the presence of organic surface-active impurities. The technique used for plotting the polarographic curves was described by them in Ref. 13. The following experimental conditions are reported: dropping period: 2.67 sec; rate of outflow of Hg from the capillary: 0.0259 g/sec; mean drop diameter: 0.06 cm; temperature: 25°C; stabilized by a TC-15 (TS-15) thermostat . The adsorption of the surface-active substances was studied by plotting the electrocapillarity curves. The determination of the surface tension has already been described. The polarographic waves of bismuth deposition were taken (Fig. 1) in the

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Kinetics of Cathodic Deposition of Bismuth. I. Polarographic Waves of the Discharge of Bismuth Ions From Non-complex Electrolytes

S/076/60/034/007/014/042/XX
B004/B068

presence of the following acids as backgrounds: sulfuric, hydrochloric, nitric, perchloric, toluenesulfonic, and phenolsulfonic acids. For the half-wave potentials at a bismuth concentration of $c_{Bi^{3+}} = 0.01$ N, the following data are given: Table 1:

Background	$\varphi_{1/2}$, v
1 N H_2SO_4	-0.002
1 N HCl	-0.10
1 N HNO_3	-0.01
2 N $CH_3C_6H_4SO_3H$	-0.007
2 N $HOC_6H_4SO_3H$	-0.048
1 N $HClO_4$	-0.067

The irreversibility of the electrodic processes thus depends on the background, and reaches maximum values when $HClO_4$ and $HOC_6H_4SO_3H$ are used. It was shown by the calculation of the effect of the total potential drop

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$\Delta E_{el} + \Delta E_{Hg}$ in the electrolyte and in mercury, as well as of the diffusion potential φ_d that the potential drop was insignificant under the experimental conditions and only the effect of φ_d had to be considered. The corresponding correction according to the equation $\varphi = \varphi_{1/2} - b \ln[i/(i_d - i)]$ (2); ($b = 2.3 \cdot RT/\alpha nF$) gave elevated values of the coefficient b for perchloric, phenolsulfonic, and toluenesulfonic acids. This is explained by the inhibition of the electrolytic deposition of bismuth. This inhibition depends on the character of the background and increases with the surface activity of large-diameter anions. According to A. N. Frumkin (Ref. 21), the simultaneous effect of two factors was established: change of the potential ψ' and increase of the potential barrier. From this, it is concluded that electrodic processes may be inhibited by the adsorption of surface-active substances. This was experimentally proved by the effect of 0.005 mole/l β-naphthalenesulfonic acid, thymol, tribenzylamine, or borneol on the deposition of bismuth. From the shift $\Delta\varphi_{1/2}$ and the change of the potential ψ' due to the effect of impurities, the change of the activation barrier

F(G) was calculated. F(G) is equal to $1.3 \cdot 10^{-10}$ for β-naphthalenesulfonic acid, to $6.3 \cdot 10^{-9}$ for thymol, and to $3.4 \cdot 10^{-11}$ for borneol. A study of the influence of the background on the inhibitory effect of impurities showed that this influence depends on the adsorption characteristics of the anion. With increasing adsorbing capacity of the background anion, its influence on the rate of the electrodic process decreases. A. G. Stromberg, Ya. I. Tur'yan, and O. A. Yesin are mentioned. There are 7 figures, 3 tables, and 23 references: 14 Soviet, 7 US, 1 British, 3 Czechoslovakian, 2 French, and 1 German.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Institute of Chemical Technology)

SUBMITTED: September 13, 1958

Text to Fig. 1: Polarographic Waves of Bismuth Deposition From Non-complex Electrolytes. Acid Concentration: 2N; Concentration of Bismuth Salt: 0.01N; Background 1: H_2SO_4; 2: HCl; 3: HNO_3; 4: $CH_3C_6H_4SO_3H$; 5: $HOC_6H_4SO_3H$; 6: $HClO_4$.

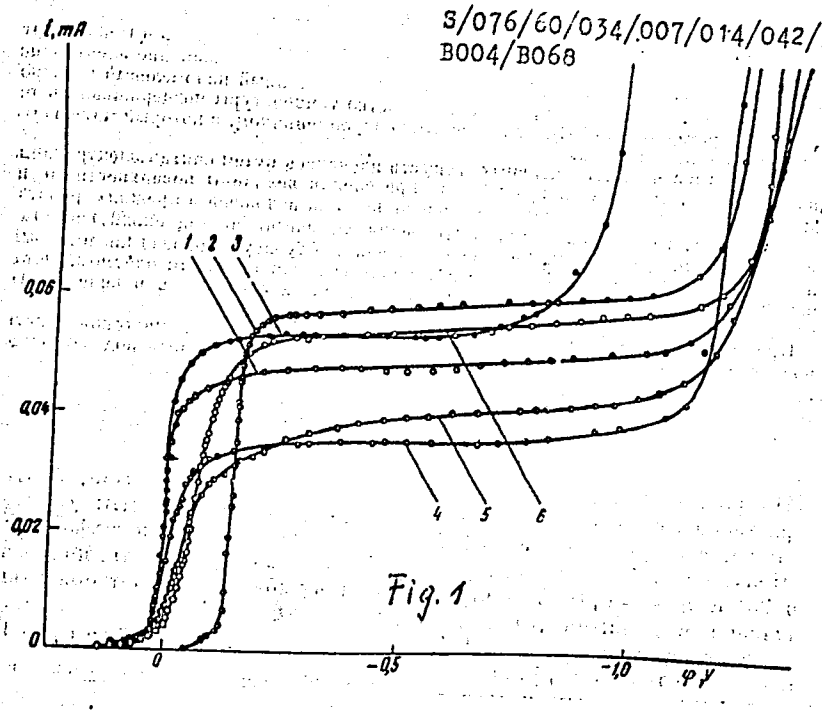

Fig. 1

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S/076/60/034/008/022/039/XX
B015/B063

AUTHORS: Loshkarev, M. A. and Tomilov, B. I.

TITLE: Study of the Kinetics of Electrochemical Redox Reactions. I. Character of Polarization in the Benzoquinone-Hydroquinone System

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8, pp. 1753 - 1762

TEXT: In spite of the great number of studies conducted so far on polarization in redox systems, research workers disagree on the nature of polarization in these systems. The authors have studied the polarization of cathodic and anodic processes in the benzoquinone-hydroquinone system with a smooth platinum electrode, a platinized Pt electrode, and a gold electrode as a function of the intermixing rate of the electrolyte, the concentration of quinone or hydroquinone (in equimolar ratios), and temperature. Measurements were made in nitrogen under equal hydrodynamic conditions. The authors used the direct compensation method and a ППТВ (PPTV) potentiometer. The polarization curves were drawn by a method

proposed by S. V. Gorbachev and Khr. Iv. Noninski (Ref.11), in which first the anode polarization $\Delta\varphi_a$ and then the cathode polarization $\Delta\varphi_k$ were measured at the same current density i. All the measurements were made in a 0.1 N HCl solution. The $i = f(\Delta\varphi_k)$ curves show that polarization is largely dependent upon the electrode material. A change in the concentration of quinhydrone ($c_{Q\cdot H_2Q}$) shows that the values of the anode limiting current I_a and the cathode limiting current I_k are proportional to $c_{Q\cdot H_2Q}$ and, on an average, $I_k : I_a = 1.13$. The values obtained are in agreement with the theory of V. G. Levich (Ref.13), since the ratio between the diffusion coefficients of Q and H_2Q amounting to 2:3 corresponds to the ratio obtained for the limiting currents. A comparison between calculation and experiment shows that in the quinhydrone electrolysis there also takes place a noticeable chemical polarization which can be explained by an activation inhibition of electron transfer.

Study of the Kinetics of Electrochemical Redox Reactions. I. Character of Polarization in the Benzoquinone-Hydroquinone System

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B015/B063

The inclinations of the straight lines of the kinetic coefficients for the cathode (α) and the anode (β) processes on the smooth Pt electrode were found to be 0.44 and 0.48, and 0.36 and 0.48, respectively. The reason why $\alpha + \beta < 1$ will be discussed in a later article. There is no direct proportionality between the exchange current and the concentration of quinhydrone. The exchange current rises with temperature (about twice with a temperature rise of 10°C). The data obtained show that Vetter's assumption of two different exchange currents for the cathode and anode processes in the quinone-hydroquinone system (Z.Elektrochem., 56, 797, 1952) is incorrect and can be explained by impurities in the components. Special experiments conducted by the authors to clarify the rise of polarization with time and the decrease of the exchange current revealed that these changes are to be explained by impurities - decomposition products of quinone and hydroquinone - in the solution. The effect of adsorption upon polarization was studied by adding pyrogallol oxidation products and a cationic high-molecular compound. Also a change of α and β was found to occur besides a decrease of the exchange current. The inhibition of electrochemical processes by molecular adsorption on the electrode is

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Study of the Kinetics of Electrochemical Redox Reactions. I. Character of Polarization in the Benzoquinone-Hydroquinone System

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B015/B063

explained within the framework of A. N. Frumkin's theory of delayed discharge (Ref.14). The results of measurement are in good agreement with the equations of the theory of delayed discharge in the whole range of current density considered (from 10^{-6} a/cm^2 to $1 \cdot 10^{-3}$ - $5 \cdot 10^{-3}$ a/cm^2). O. A. Yesin, M. A. Loshkarev, and O. B. Khachaturyan are mentioned. There are 7 figures, 3 tables, and 14 references: 8 Soviet, 1 British, 1 US, 2 German, and 2 French.

ASSOCIATION: Khimiko-tekhnologicheskiy institut (Institute of Chemistry and Technology)

SUBMITTED: November 15, 1958

Card 4/4

28023
S/081/61/000/015/025/139
B101/B110

5.1310

AUTHORS: Loshkarev, M. A., Chernobayev, I. P.

TITLE: A new method of studying the kinetics of electrochemical processes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 70-71, abstract 15Б516 (Tr. Dnepropetr. khim.-tekhnol. in-t, no. 12, 1959, ch. I, 73-90)

TEXT: The authors studied the change in concentration of the reacting substance on the electrode surface during electrolysis. They derived a relation between the current i and the time t in an electrolysis with given potential (corresponding to the limiting current of the electrochemical reaction): $\ln(i_o/i_t) = mt$, where i_o and i_t is the current at $t = 0$ and t, respectively, m the proportionality factor dependent on the conditions of mixing, the composition of the solution, etc. The relation found was checked on oxidation reactions of Ti^{3+}, V^{2+}, Cu^{+}, $Fe(CN)_6^{4-}$, Fe^{2+}, and reduction reactions of TiO^{2+}, Cu^{2+}, $Fe(CN)_6^{3-}$, I_3^-, and others, on

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B101/B110

A new method of studying ...

stationary and rotating disk electrodes, as well as on the electrocrystallization of metals on cathodes of Hg and solid metals. The authors measured the apparent activation energy of several electrodic processes; in the case of Ni electrocrystallization, it is 13.9 kcal/mole.
[Abstracter's note: Complete translation.]

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28024
S/081/61/000/015/026/139
B101/B110

5.1310

AUTHORS: Loshkarev, M. A., Chernobayev, I. P.

TITLE: Study of kinetics of electrochemical reactions by means of an intermediate reagent

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 71, abstract 15Б517 (Tr. Dnepropetr. khim.-tekhnol. in-t, no. 12, 1959, ch. 1, 91-108)

TEXT: In continuation of the previous paper (see abstract 15Б516), the authors derived equations for the change in concentration C and current with time during electrolysis with given potential in the presence of intermediate reagents as charge carriers: $C = b - m't$, where t = time, b and m' = constants. The carriers acting as catalysts considerably accelerate the main reaction on the electrode, and permit its quantitative realization. By means of the reduction of VO_3^- in the presence of Fe^{3+} and the oxidation of Ti^{3+} in the presence of Fe^{2+}, it is shown that calculation and experiment are in good agreement. Conclusions

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Study of kinetics of electrochemical ...

are drawn as to the dependence of the observed order of the reaction on the process conditions. It is shown that the acceleration of the electrode process under the action of intermediate reagents may be caused by the inhibition or reduction of the inhibition of the discharge of the principal depolarizer. The theories developed are also applicable to the case where the principal depolarizer has the form of a suspension or emulsion, e.g., in the reduction of Bi_2O_3 in the presence of $TiOSO_4$.

[Abstracter's note: Complete translation.]

Card 2/2

LOSHKAREV, M.A.; D'YACHENKO, T.F.

Effect of additives on the electrodeposition of lead from a pyrophosphate electrolyte. Trudy UNIITI no.16:27-34 '62

Obtaining bright cadmium deposits from cyanide baths. Ibid.:35-42

YEFREMOVA, M.G.; ZAGHKARIN, K.A.

Tribenzylamine as an inhibitor of tin ionization and Sn^{2+} discharge on an amalgam electrode. Trudy MKHTI no.16:99-112 '62
(MIRA 17:8)

LOSHKAREV, M.A.; YEFREMOVA, M.G.

Inhibition of the anodic ionization of zinc. Trudy DKHTI no.16: 77-85 '62 (MIRA 17:8)

STENDER, V.V., otv. red.; ZOSIMOVICH, D.P., zam. otv. red.; DELIMARSKIY, Yu.K., red.; LOSHKAREV, M.A., red.; NECHAYEVA, N.Ye., red.; NIKIFOROV, A.F., red.; BYCHKOVA, R.I., red.

[Hydroelectrometallurgy of chlorides; reports] Gidroelektrometallurgiia khloridov; doklady. Kiev, Naukova dumka, 1964. 178 p. (MIRA 17:11)

1. Vsesoyuznyy seminar po prikladnoy elektrokhimii. 5th, Dnepropetrovsk, 1962. 2. Dnepropetrovskiy khimiko-tekhnologicheskiy institut (for Stender).

LOSHKAREV, M.A.; LEVITIN, Zh.N.; CHERNENKO, V.I.

Experimental check of the graphic method for calculating polarization when superimposing the direct and alternating currents. Trudy DKHTI no.16:87-98 '62 (MIRA 17:8)

LOSHKAREV, M.A. (Dnepropetrovsk); TOMILOV, B.I. (Dnepropetrovsk)

Kinetics of electrochemical redox reactions. Part 2. Zhur. fiz. khim. 36 no.1:132-142 Ja '62. (MIRA 16:8)

(Quinones) (Hydroquinone)
(Oxidation-reduction reaction)

TOMILOV, B.I.; LOSHKAREV, M.A.

Two setups for studying the kinetics of electrode processes on the basis of the ENO-1 electronic low-frequency oscillograph. Zhur. fiz. khim. 36 no.4:900-906 Ap '62. (MIRA 15:6)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Oscillography) (Electrochemistry)

TOMILOV, B.I.; LOSHKAREV, M.A.

Kinetics of electrochemical oxido-reduction reactions. Part 3.
Zhur. fiz. khim. 36 no.9:1902-1908 S '62. (MIRA 17:6)

1. Khimiko-tekhnologicheskiy institut, Dnepropetrovsk.

LOSHKAREV, M.A.; YASYUNAS, R.M.

Kinetics of nitrosation of secondary aromatic amines. Part 2: Catalytic action of halide ions. Izv.vys.ucheb.zav.;khim. i khim.tekh. 6 no.2:236-242 '63. (MIRA 16:9)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E.Dzerzhinskogo, kafedra fizicheskoy khimii.
(Amines) (Nitrosation) (Halides)

BOGORAD, M.L.; LOSHKAREV, M.A.; LIPOV, I.G.

Apparatus for pulsed high-temperature unilateral heating of samples. Plast. massy no.8:58-59 '63. (MIRA 16:8)

(Testing machines)

LOSHKAREV, M.A.; KOSTENKO, B.N.; CHERNENKO, V.I.; SEVRYUGINA, M.P.

Selecting optimal conditions for copper electrocrystallization.
Trudy DKHTI no.16:43-54 '63. (MIRA 17:2)

CHEBRIKOVA, Z.M.; BELAYA, Zh.V.; LOSHKAREV, M.A.

Effect of temperature on the potentials of cobalt and nickel oxide electrodes. Trudy DKHTI no.16:55-62 '63. (MIRA 17:2)

KRYUKOVA, A.A.; LOSHKAREV, M.A.

Effect of films of sparingly soluble inorganic compounds on the rate of electrode processes. Trudy DKHTI no.16:63-73 '63.
(MIRA 17:2)

LEVITIN, Zh.N.; CHERNENKO, V.I.; LOSHKAREV, M.A.

Calculation of polarization when superposing direct and alternating currents. Trudy DKHTI no.16:115-120 '63. (MIRA 17:2)

DUBYAGO, Ye.I.; LOSHKAREV, M.A.

Khimiia i khimicheskaia tekhnologiia, pt.2. Effect of Cl^- and NO_3^- on the structure of bismuth cathode deposits. Trudy DKHTI no.16: 101-113 '63. (MIRA 17:2)

S/073/63/029/003/003/009
A057/A126

AUTHORS: Loshkarev, M. A., Chernobayev, I. B.

TITLE: The electrochemical oxydation and reduction of suspensions of difficultly soluble compounds

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 3, 1963, 287 - 292

TITLE: In the Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Institute of Chemical Technology) a method was developed for the preparation of highly dispersed metallic powders and active oxidizers by using an intermediate reagent in the electrochemical method. This reagent, which has to oxidize or to reduce easily on the electrode, changes the electrochemical process from a surface process to a process occurring in the mass of the electrolyte. Thus, acceleration is effected, and in systems where the compound is dissolved the intermediate reagent can be considered as a catalyst. As intermediate reagents may be used ions of metals with variable valency (Ti^{4+}/Ti^{3+}, V^{5+}/V^{6+}, Cr^{3+}/Cr^{2+}), and oxidizing or reducing agents which generate during the electrolysis (among these organic compounds). In the present experiments the

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S/073/63/029/003/003/009
A057/A126

electrochemical oxidation of a suspension of difficultly soluble $Ni(OH)_2$, $Co(OH)_2$, and PbO was studied with and without NaCl as intermediate reagent, and the reduction of a suspension of Bi_2O_3 or CuCl with Ti^{4+}/Ti^{3+} ($TiOSO_4$) as intermediate reagent. The results of experiments carried out in the system C^+ (graphite)/$Ni(OH)_2$ (solid), NaCl, H_2O/Ni^- demonstrated that electrochemical oxidation of $Ni(OH)_2$ suspensions does not occur in the absence of NaCl. In the presence of the latter the oxidation occurs fast almost to 100%, if the outlet of chlorine is prevented and conditions are favorably secured for ClO^- formation. The current yield is affected considerably by the pH of the electrolyte, showing a maximum in neutral solutions. Analogous results were obtained in electrochemical oxidation of a $Co(OH)_2$ suspension. The electrochemical reduction of a Bi_2O_3 (CuCl respectively) suspension in presence and absence of $TiOSO_4$ was carried out in order to prepare finely dispersed metallic powders in the system Pb^-/Bi_2O_3 $_{(s)}$ (resp. $CuCl_{(s)}$), H_2SO_4, $TiOSO_4$, H_2O/Pt^+. No reduction could be observed in the absence of $TiOSO_4$, while considerable formation of finely dispersed metals (Bi or Cu respectively) occurs in the presence of the intermediate reagent. Thus, 95.28% of Bi was reduced in an electrolyte containing 0.1 mole/l

Bi_2O_3, 0.2 mole/l $TiOSO_4$, and 1 N H_2SO_4 with a 0.5 a current at 25°C during 2 hrs, respectively 92,0% of Cu from 0.25 mole/l CuCl, 0.2 mole/l $TiOSO_4$ in 1 N H_2SO_4, 0.5 a, 25°C during 2 hrs. Since the amount of reduced metallic powder is proportional to the time of electrolysis the equation $c = b - [(S \cdot D_v)/VnF] \cdot t$ deduced from kinetic equations is valid (c and b = concentrations of solid suspensions in the bulk at the beginning, respectively the time t of electrolysis, D_v = current density necessary through the intermediate reagent, S = = surface of the electrode, V = volume of the electrolyte, n = number of electrons). Crystallographic analyses of the prepared metallic powders showed dendrid structure (Bi 10 - 25 mμ, Cu 60 - 255 mμ). Hence, the present method can be employed in powder metallurgy. There are 2 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Institute of Chemical Technology)

SUBMITTED: December 13, 1961

CHERNOBAYEV, I.P.; LOSHKAREV, M.A.

Electrolytic oxidation and reduction of organic compounds with an intermediate reagent. Ukr. khim. zhur. 29 no.4: 423-432 '63. (MIRA 16:6)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Chemistry, Organic--Synthesis)
(Electrochemistry)

LOSHKAREV, M.A.; LOSHKAREV, Yu.M.; D'YACHENKO, T.F.

Effect of chlorine ions on the cathodic deposition of metals. Soob. AN Gruz. SSR 32 no.2:359-365 '63. (MIRA 18:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E. Dzerzhinskogo. Submitted March 28, 1963.

LOSHKAREV, M.A.; YEFREMOVA, M.G.

Inhibition of the anodic ionization of zinc. Zhur. fiz. khim. 37 no.6:1281-1287 Je '63. (MIRA 16:7)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Zinc electrodes) (Inhibition (Chemistry))

LOSHKAREV, M.A. [Loshkar'ov, M.O.]; YEFREMOVA, M.G. [IEfremova, M.H.]

Slowing-down of the anodic ionization of metals under the effect of the adsorption of addition agents on electrodes. Dop. AN URSR no.1: 84-88 '64. (MIRA 17:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut. Predstavleno akademikom AN UkrSSR A.I.Brodskim [Brods'kyi, O.I.].

MORDOVCHENKO, I.P.; LOSHKAREV, M.A.

Dependence of the inhibition effect of the electrode process on the surface concentration of the inhibitor on the electrode. Elektrokhimiia 1 no.1:94-100 Ja '65. (MIRA 18:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut im. F.E. Dzerzhinskogo.

L 21145-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/JW/JWD/WE/RM

ACC NR: AP6008409 (A) SOURCE CODE: UR/0374/66/000/001/0139/0142

AUTHOR: Bogorad, M. L.; Loshkarev, M. A.

ORG: Military Artillery Academy, Leningrad (Voyennaya artilleriyskaya akademiya)

TITLE: New method of creating pulse loads for investigating the dynamic stability of polymer materials

SOURCE: Mekhanika polimerov, no. 1, 1966, 139-142

TOPIC TAGS: polymer, polymer structure, specific impulse, electromotive force, magnetic field, pulse duration modulation, test model

ABSTRACT: A new method for production of pulse loads by electrodynamic forces which affect a specimen placed in a strong pulse magnetic field is suggested. The testing set, developed on the basis of the principle indicated, makes it possible to obtain pressure pulses of several hundredths of an atmosphere with pulse duration from tenths of microseconds to milliseconds. Orig. art. has: 3 figures and 5 formulas. [Based on authors' abstract.] [NT]

SUB CODE: 11, 20/ SUBM DATE: 30Aug65/ ORIG REF: 001/ OTH REF: 001/

Card 1/1 UDC: 678:530.4.019.1

LOSHKAREV, N.M.

Upsetting bolt heads. Stan. i instr. 24 no.5:33-34 My '53. (MLRA 6:6)
(Bolts and nuts)

POGUDINA, D.G.;LOSHKAREV, P.M.;BAN'KOVSKIY, A.I.

Glycosides content in Erysimum canescens during vegetation. Aptech. delo, Moskva 2 no. 1:26-30 Jan-Feb 1953. (CIML 24:1)

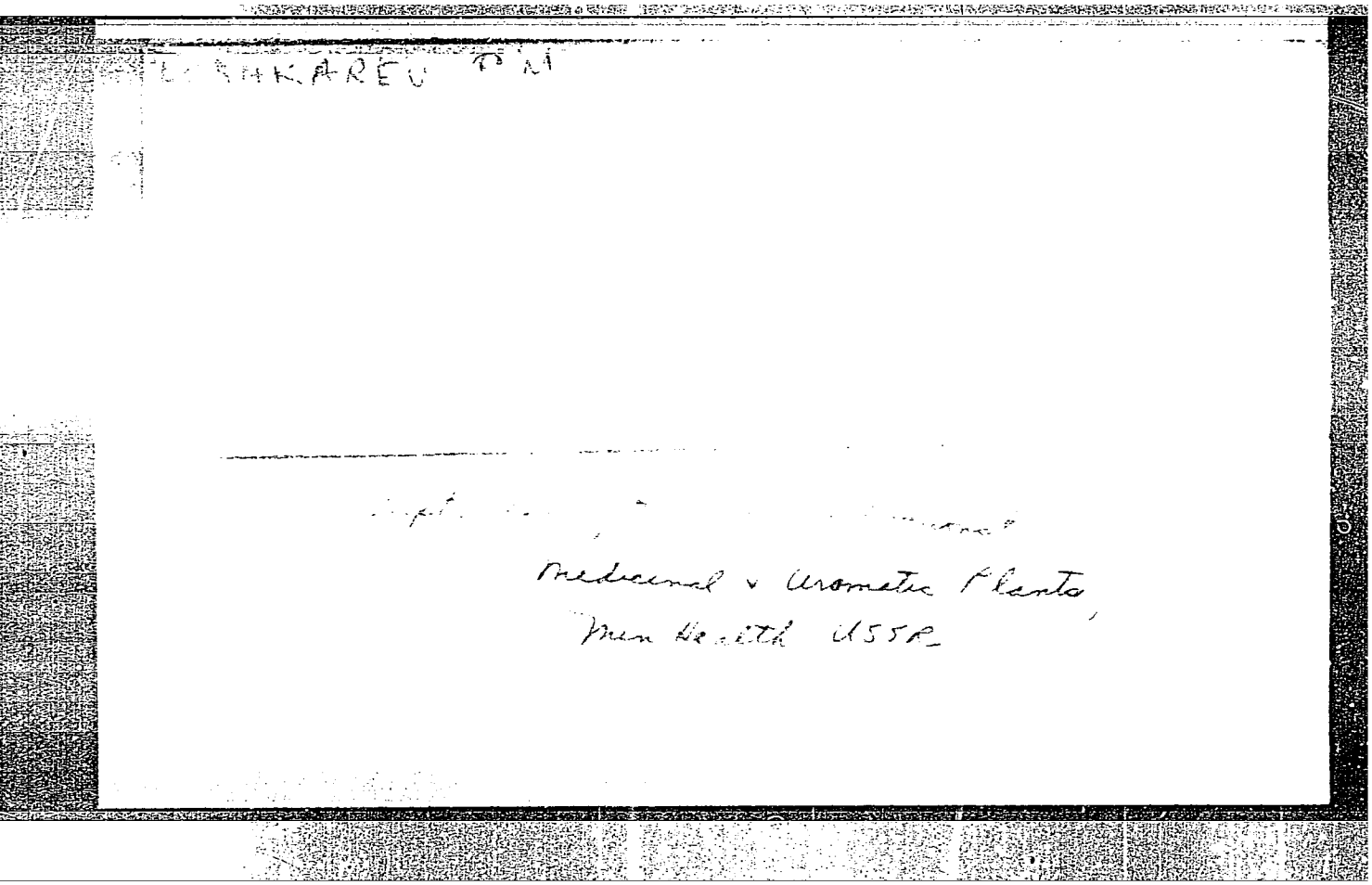
1. Of the Department of Chemistry of the All-Union Scientific-Research Institute of Medicinal and Aromatic Plants (Director -- N. Ya. Itskov) of the Ministry of Public Health USSR.

LOSHKAREV, P.M.

FEOFILAKTOV, V.V.; LOSHKAREV, P.M.

Erysimin, the cardiac glucoside obtained from Erysimum canescens Roth. Dokl.AN SSSR 94 no.4:709-712 F '54. (MLRA 7:2)

1. Vsesoyuznyi nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy. (Erysimin)



USSR/Pharmacology. Toxicology. Cardiovascular Drugs V

Abs Jour : Ref Zhur - Biol., No II, 1958, No 51994

Author : Berezhinskaya, V.V., Loshkarev P.M., Turova A.D.
Inst : Medical Industry of USSR
Title : The Cardiac Drug Erysimine

Orig Pub : Med. prom-st SSSR, 1957, No 9, 32-36

Abstract : Erysimine is close to strophantine by its general mode of action upon the heart, by its speed of action, the absence of cumulative effects and electrocardiographic changes, but its action is milder, and of less intensity. The dose is established individually, taking into consideration the general condition of the patient and his cardiac status.

Card : 1/1

LOSHKAREV, P.M.

BEREZHINSKAYA, V.V.; LOSHKAREV, P.M.; TUROVA, A.D.

Erysimine, a cardiac. Med.prom. 11 no.6:32-36 Je '57. (MLRA 10:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy
(ERYSIMUM) (CARDIAC GLYCOSIDES)

LOSHKAREV, P.M.; FEOFILAKTOV, V.V. [deceased]

Erysimin, a glycoside acting on the heart extracted from Erysimum canescens Roth. Trudy VILAR no. 11:157-168 '59. (MIRA 14:2)
(ERYSIMIN) (CARDIAC GLYCOSIDES)

LOSHKAREV, P.M.

Method for a quantitative determination of cardiac glycosides.
Trudy VILAR no. 11:267-278 '59. (MIRA 14:2)
(CARDIAC GLYCOSIDES) (COLORIMETRY)

LOSHKAREV, P.M.

Mustard family (Cruciferae) as a source of cardiac glycosides.
Trudy VILAR no. 11:354-386 '59. (MIRA 14:2)
(BRASSICACEAE). (CARDIAC GLYCOSIDES)

GULYY, Ye.A.; LOSHKAREV, P.M.

Quantitative determination of lanatosides A, B, C, and D in Digitalis lanata. Med. prom. 16 no.1:41-45 Ja '62. (MIRA 15:3)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy.

(LANATOSIDES) (DIGITALIS)

LYU YUN-LUN [Liu Yung-lung]; LOSHKAREV, P.M.

Glycosides from seeds of the grey wallflower, Erysimum canescens Roth. (the Minsk form); report No. 1. Med.prom. 16 no.4:11-14 Ap '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.
(CARDIAC GLYCOSIDES) (ERYSIMUM)

PANINA, V.V.; LOSHKAREV, P.M.

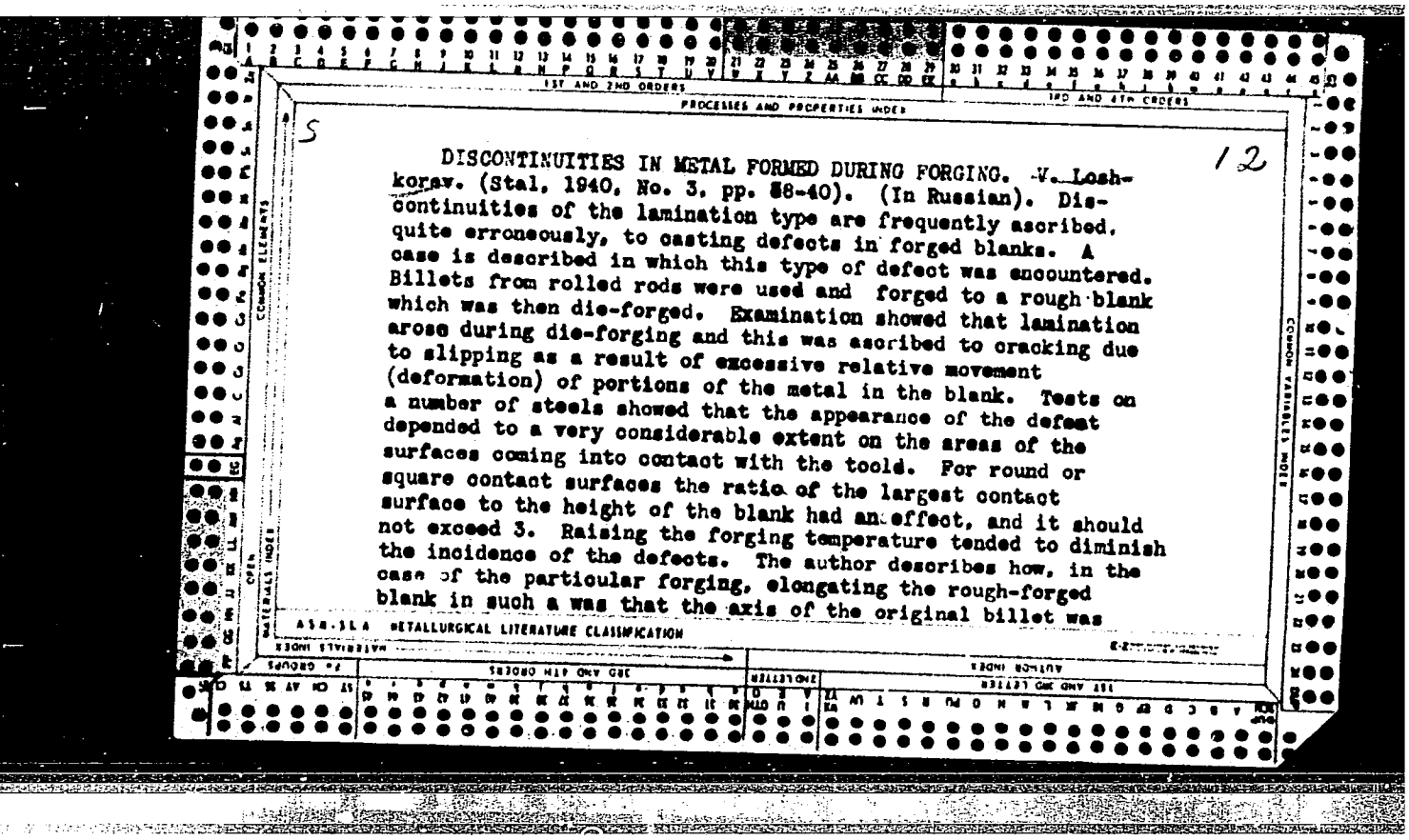
Colorimetric method of determining diosgenin in dioscorea.
Med. prom. 17 no.6:45-48 Je'63 (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.

ANANICHEV, A.V.; LOSHKAREV, P.M.

Quantitative determination of active substances in the seeds of Ammi majus L. Med. prom. 17 no.9:36-38 S'63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.



5

12

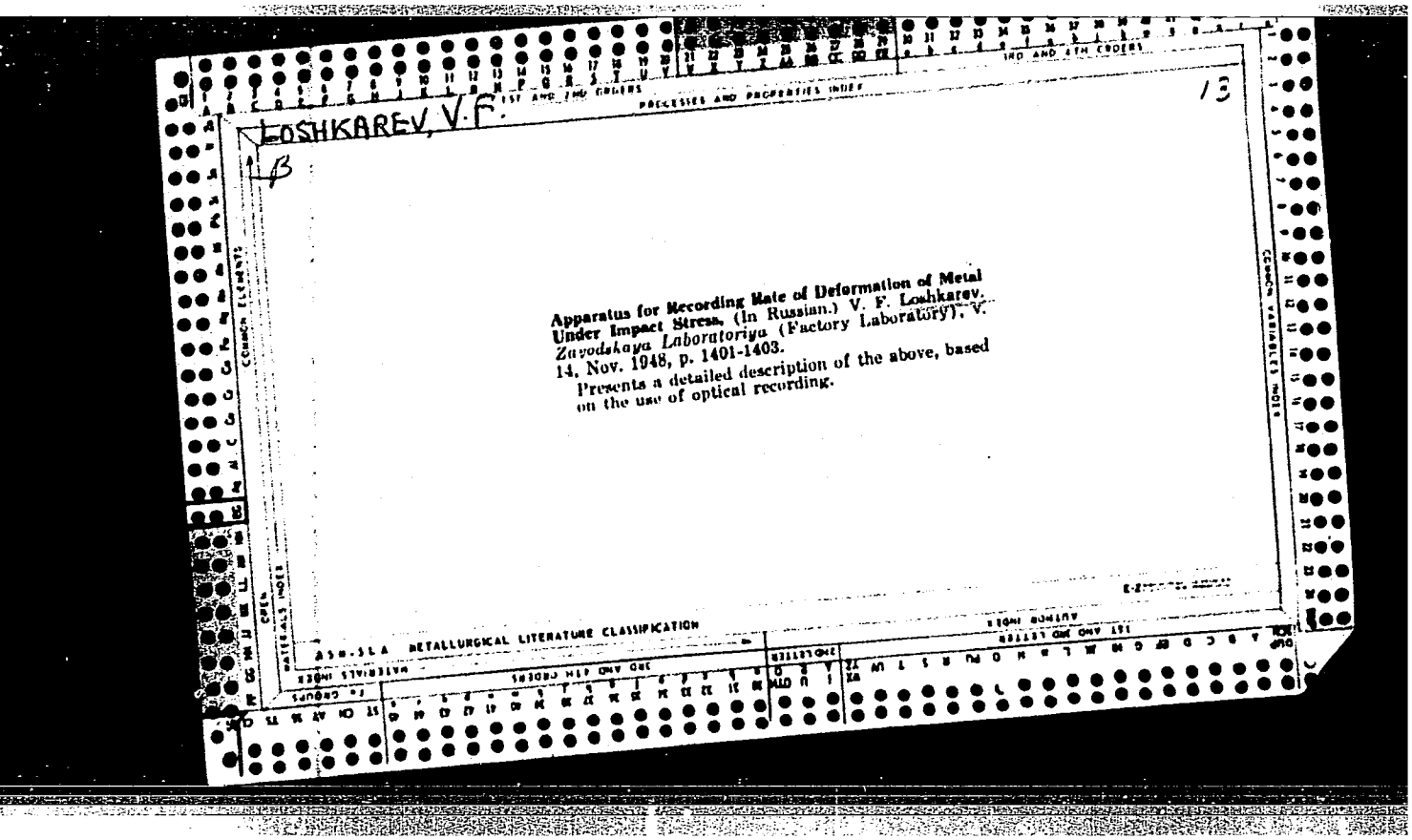
DISCONTINUITIES IN METAL FORMED DURING FORGING. V. Loshkorav. (Stal, 1940, No. 3, pp. 38-40). (In Russian). Discontinuities of the lamination type are frequently ascribed, quite erroneously, to casting defects in forged blanks. A case is described in which this type of defect was encountered. Billets from rolled rods were used and forged to a rough blank which was then die-forged. Examination showed that lamination arose during die-forging and this was ascribed to cracking due to slipping as a result of excessive relative movement (deformation) of portions of the metal in the blank. Tests on a number of steels showed that the appearance of the defeat depended to a very considerable extent on the areas of the surfaces coming into contact with the tools. For round or square contact surfaces the ratio of the largest contact surface to the height of the blank had an effect, and it should not exceed 3. Raising the forging temperature tended to diminish the incidence of the defects. The author describes how, in the case of the particular forging, elongating the rough-forged blank in such a was that the axis of the original billet was

at right-angles to the longitudinal axis of the blank overcame the defect. For this purpose a billet of much larger diameter was employed.

LOSHKAREV, V.F., inzhener.

Pseudo porosity of steel. Stal' 7 no.3:249-252 '47. (MLRA 9:1)

1.Chebarkul'skiy zavod.
(Steel--Testing)

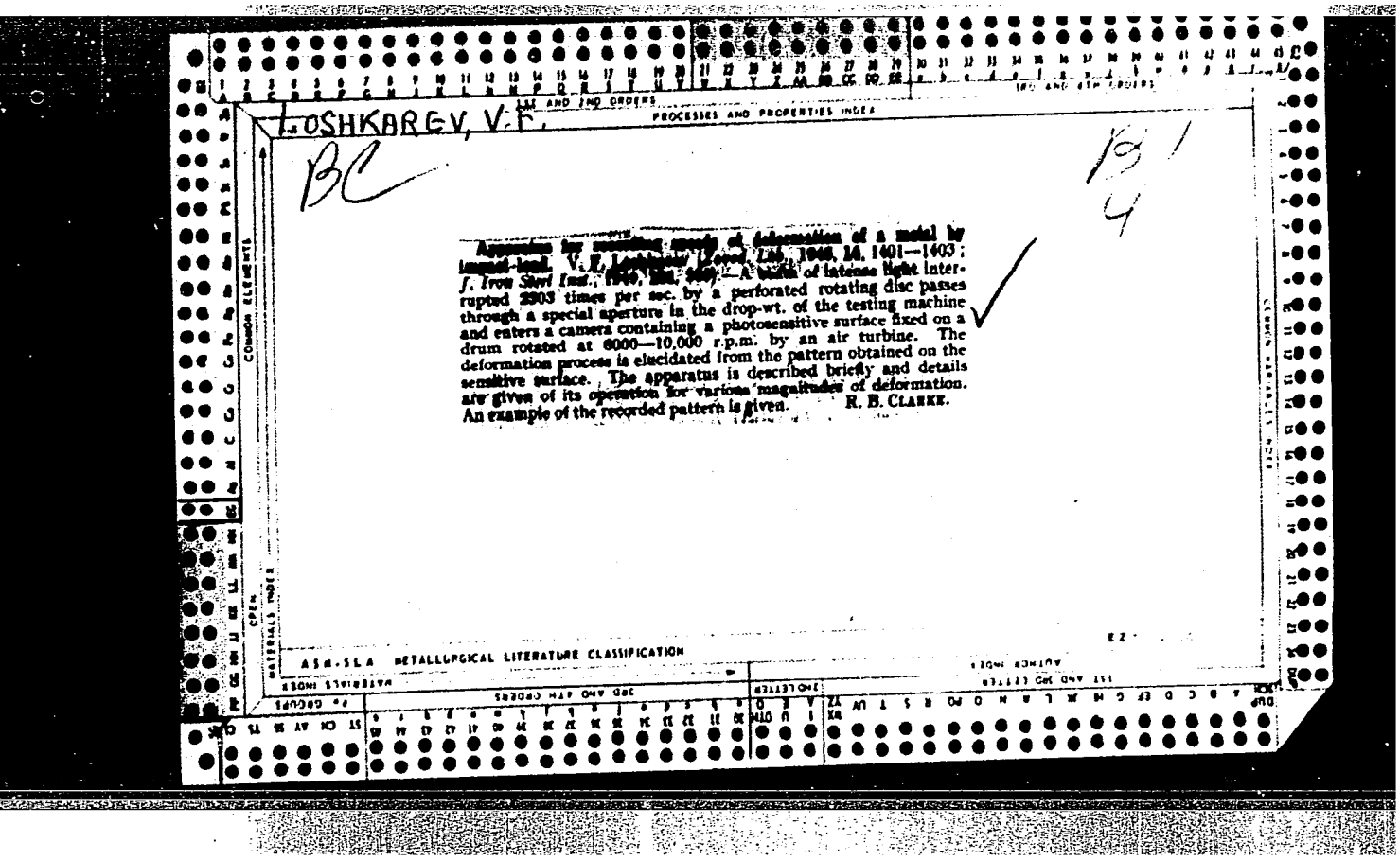


LOSHKAREV, V.F.

13

Apparatus for Recording Rate of Deformation of Metal Under Impact Stress. (In Russian.) V. F. Loshkarev. *Zavodskaya Laboratoriya* (Factory Laboratory), v. 14, Nov. 1948, p. 1401-1403.

Presents a detailed description of the above, based on the use of optical recording.



LOSHKAREV, V.F.

BC

PROCESSES AND PROPERTIES INDEX

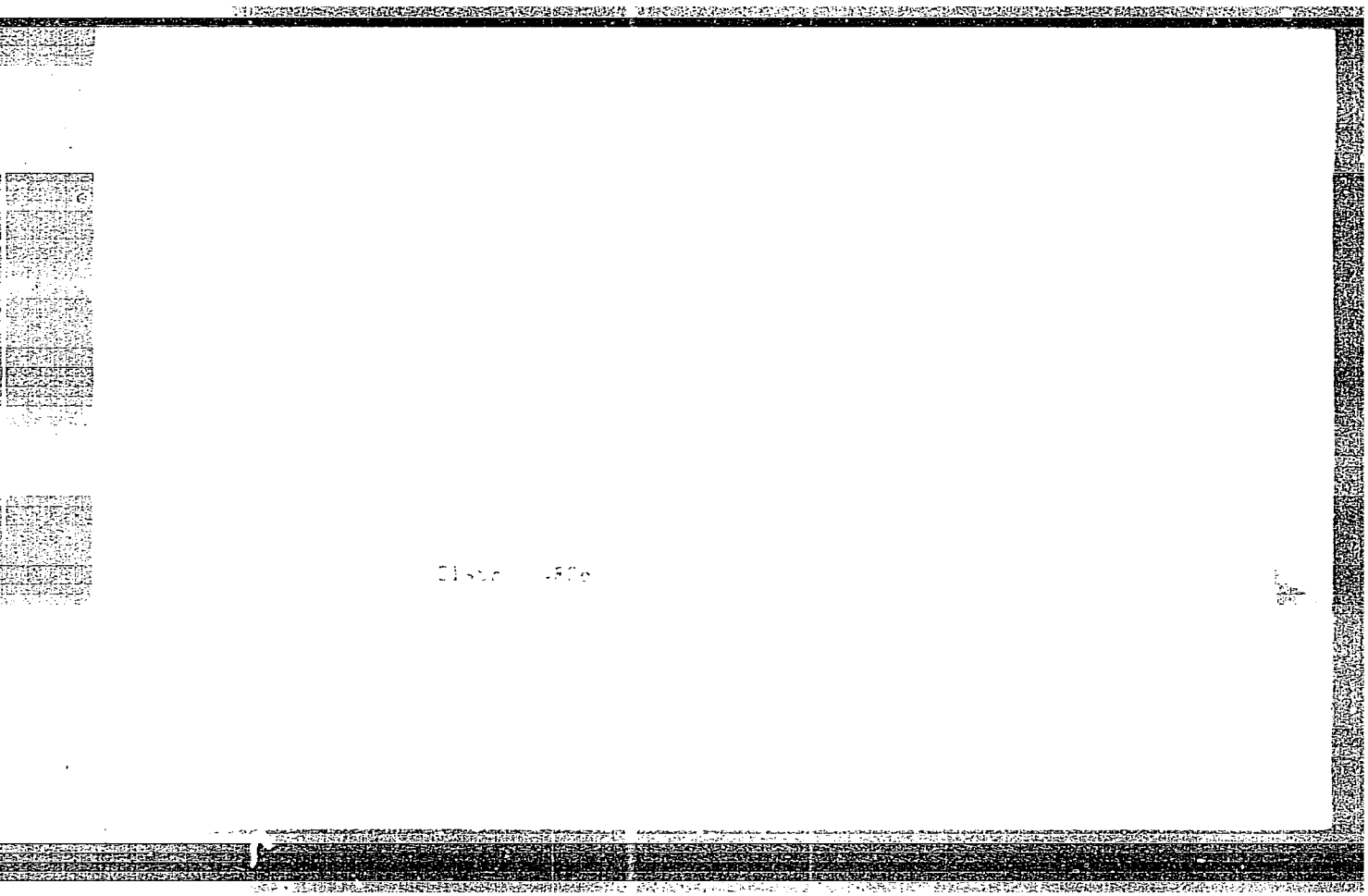
Apparatus for recording speeds of deformation of a metal by impact-load. V. F. Loshkarev. *Zavod. Lab.* 1948, 14, 1401—1403; *J. Iron Steel Inst.*, 1949, 161, 469.—A beam of intense light interrupted 2303 times per sec. by a perforated rotating disc passes through a special aperture in the drop-wt. of the testing machine and enters a camera containing a photosensitive surface fixed on a drum rotated at 8000—10,000 r.p.m. by an air turbine. The deformation process is elucidated from the pattern obtained on the sensitive surface. The apparatus is described briefly and details are given of its operation for various magnitudes of deformation. An example of the recorded pattern is given. R. B. CLARKE.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LOSHKAREV, V F

Proizvodstvo Stal'nykh Nokovok (Production of Steel Forgings) Moskva, Metallurgizdat, 1953.
v. (V.-P.) Illus., Diagrs., Tables.
"Literatura": p. (299)-v.I
Lib. Has: v. I

N/5
733.98
.L8



KOZHEVNIKOV, S.N.; PRAZDNIKOV, A.V., kand.tekhn.nauk; LOSHKAREV, V.I., inzh.

Automatic indicator of plunger position on a Pilgrim mill feed mechanism. Trudy Inst.chern.met.AN URSR 16:105-111 '62. (MIRA 15:12)

1. Chlen-korrespondent AN UkrSSR (for Kozhevnikov).
(Rolling mills) (Feed mechanisms)

LOSHKAREV, V. YE.

"Effect of External Potential and Other Factors on Capacitive Photoresponse in Semiconductors," by V. Ye. Kozhevin and V. Ye. Loshkarev, Kiev State University imeni T. G. Shevchenko, Radiotekhnika i Elektronika, No 3, Mar 57, pp 260-268

Investigation was carried out to study the capacitive photoresponse of various powdered semiconductors separated by insulating strips, and the effect of an extraneous potential field. The capacitance method of investigating the photoresistance of semiconductors came into widespread use in recent years as a consequence of extensive work performed by Ye. K. Putseyko. The following semiconductors were investigated: mercury iodide, lead iodide, cadmium sulfide, cadmium selenide, cadmium telluride, selemium, cuprous oxide, and germanium.

The semiconductors were tested either in powdered form (grain size about 0.01 mm) or as thin plates about 0.3mm thick. The tested semiconductors were illuminated by rectangular pulses of white or monochromatic light. The duration of light pulses varied from 10^{-2} to 10^{-3} sec. The pulse magnitude was read from a specially calibrated scale on an oscillograph with an accuracy of about 5%.

The results of investigation of the effect of extraneous potential and steady bias lighting upon the capacitive photoresponse are presented. (U)

SUM. 1374

L 12649-63 BDS/EWP(q)/EWT(m) AFFTC/ASD JD

ACCESSION NR: AP3002698 S/0080/63/036/005/1033/1040

55

AUTHOR: Stender, V. V. and Loshkarev, Ye. M.

TITLE: Experiments involving electrodeposition of manganese from chloride solutions

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 5, 1963, 1033-1040

TOPIC TAGS: electrodeposition, manganese, current density, electrolysis

ABSTRACT: Electrolysis of manganese chloride solutions is of practical interest for processing manganese ore and waste with the aid of hydrochloric acid. In studying the influence of current density, temperature, pH and concentration of manganese in electrolyte on electrodeposition of manganese from chloride solutions the possibility was shown of conducting short-term electrolysis with high current densities (3000-4000 amp/m^2) with high current yields. Use of fresh manganese sulfide deposits permits a degree of use of current of 80-85% during high current densities and with temperatures 25-50C. Supplementary electrolytic purification increases current yields 5-7%. Coarsely crystalline manganese residue was obtained from solutions subjected to additional electrolytic purification. "The authors thank I. V. Gamali for his help in the work." Orig. art. has: 5 figures and 2

Card 1/2

USATENKO, Yu.I.; KLIMKOVICH, Ye.A.; LOSHKAREV, Yu.M.

Amperometric titration of mercury with unithiol solution.
Ukr.khim.zhur. 27 no.6:823-827 '61. (MIRA 14:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Mercury--Analysis)

LOSHKAREV, Yu.M.

Special features of the kinetics of manganese electrodeposition.
Ukr. khim.zhur. 29 no.9:918-925 '63. (MIRA 17:4)

1. Dnepropetrovskiy gosudarstvennyy universitet.

LOSHKAREV, M.A.; LOSHKAREV, Yu.M.; D'YACHENKO, T.F.

Effect of chlorine ions on the cathodic deposition of metals. Soob. AN Gruz. SSR 32 no.2:359-365 '63. (MIRA 18:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F.E. Dzerzhinskogo. Submitted March 28, 1963.

STENDER, V.V.; LOSHKAREV, Yu.M.

Electrodeposition of manganese from chloride solutions. Zhur. prikl. khim. 36 no.5:1033-1040 My '63. (MIRA 16:8)

(Manganese plating)

GALUSHKO, V.T.; LOSHKAREV, Yu.M.

Some particular features of a simultaneous discharge of manganese and hydrogen ions. Trudy DKHTI no.16:59-64 '62
(MIRA 17:8)

GALUSHKO, V.P.; LOSHKAREV, Yu.M.

Effect of a simultaneous adsorption of organic additions and anions on electroreduction of metals. Zhur. fiz. khim. 39 no.5:1185-1189 My '65. (MIRA 18:8)

1. Dnepropetrovskiy gosudarstvennyy universitet.

LOSHKAREVA, G. V.

"A Method for Detecting and Determining Admixtures in Nickel Without Taking Shavings." Cand Chem Sci, Ural Polytechnic Inst, Sverdlovsk, 1954. (RZhKhim, No 6, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

LOSHKAREVA, G. V.

USSR

Anodal polarisation of nickel sulphide. A. G. Loshkarev and G. V. Loshkareva (*Zhur. prikl. Khim.*, 1954, 27, 865—872).—In dissolution of Ni sulphide anodes the process consists in discharge of OH', followed by oxidation of the sulphide, to give Ni^{++}, SO_4^{--}, SO_3^{--}, and S, which forms a film on the anode. At c.d. of the order of 1 ma./sq. cm. this film has a low resistance, not increasing with time, but at 11—22 ma./sq. cm. the resistance rises rapidly with duration of electrolysis, from 0·4 initially to 26—55 ohms after 40 min. at 25°. Polarisation of Ni sulphide anodes is of the concentrational type.

R. Trusov.

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1

LOSHKAREVA, G. V.

G-1

USSR/Analytical Chemistry. General Topics.

Abs Jour : Referat. Zhurnal Khimiya, No 6, 1957; 19477.

Author : G.V. Loshkareva.
Inst : Ural Polytechnical Institute.
Title : New Reactions for Discovering of Copper, Cobalt and Nitrate by Means of Guaiacol.

Orig Pub : Tr. Ural'skogo Politekhn. In-ta, 1956, No 57, 61-65.

Abstract : NH_3 is oxidized to NO_2^-, when concentrated NH_4OH and H_2O_2 are added in excess to a solution of Cu^{2+} and all is heated; NO_2^- with guaiacol in an acid medium produces 2-methoxy-n-quinoxin of red color. The sensitivity of the reaction is 10^{-9} g/ml of Cu. Co^{2+} behaves in an analogous manner; the sensitivity of the reaction is 2×10^{-6} g/ml of Co. 1 - 1.5 ml of concentrated NH_4OH and 6 drops of 3% H_2O_2 are added to 1 - 2 ml of the tested solution for detecting of Cu or Co. It is boiled to remove gas bubbles, cooled, 5 - 7 drops of a 1% solution of guaiacol and, drop by drop,

Card 1/2

-10-

Abs Jour : Referat. Zhurnal Khimiya, No 6, 1957, 19477.

diluted H_2SO_4 (1:20) are added until coloration appears. The duration of the coloration development is 1 - 10 minutes. If both Cu and Co were present, they are first separated. At the relation Cu : Co $\geqslant$ 1 : 1000, Cu is found without separating Co. For detecting NO_2^-, a few drops of 1% guaiacol solution and a diluted mineral acid are added to the tested solution. The sensitivity of the reaction is 2×10^{-6} g/ml of NO_2^-. At 5×10^{-4} - 10^{-4} g of NO_2^-, Beer's law is satisfied. Excess over 10^{-4} g/ml of $FeCl_3$, as well as colored ions of metals interfere with test for NO_2^-.

SOV/32-24-7-11/65

AUTHOR: Loshkareva, G. V.

TITLE: The Non-Cutting Determination of Iron, Cobalt and Copper in Nickel (Besstruzhkovoye opredeleniye zheleza, kobal'ta i medi v nikele)

PERIODICAL: Zavodskaya Laboratoriya, Vol. 24, Nr 7, pp. 813 - 814 (USSR) 1958

ABSTRACT: In this method aqua regia is used as a solvent. Iron was determined with the thiocyanate method, copper by the reaction with guaiacol and nickel with nitroso R-salt. Three drops of each solvent (0,1 ml) were given into cavities in the standard and the test samples. They were kept there for a period of from 24 to 48 hours. They were washed out quantitatively, boiled in order to remove the chlorine and the nitrogen oxides, and then copper and iron were determined. The iron was determined colorimetrically according to the aforementioned method, and the iron content was computed according to a equation given. Copper was determined according to a comparative colorimetric method, which is based upon the reaction of guaiacol with ammonium nitrite in an acid medium. A red compound is produced, the color-intensity of which depends on its copper content. The time necessary for

Card 1/2

the two determinations is said to be 35 minutes. For the determination of cobalt the solution sample was combined with an aqueous nitroso R-solution, and a 40% sodium acetate solution, after it had been boiled in order to remove the chlorine and nitrogen oxides. Then it was boiled with nitric acid and subjected to the colorimetric determination. Exact prescriptions for the analysis, and a table of the results are given. There are 1 table and 3 references, which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im.S.M.Kirova (Ural Polytechnical Institute imeni S.M.Kirov)

LOSHKAREVA, G.V.; NIKITINA, B.N.; LOSHKAREVA, T.A.

Fractional detection of cobalt. Izv. vys. ucheb. zav; khim. i khim. tekh. 3 no. 5:960-962 '60. (MIRA 13:12)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova. Kafedra analiticheskoy khimii.
(Cobalt--Analysis)

LOSHKAREVA, G.V.

Method for determining cobalt in nickel without weighed sampling. Trudy Ural.politekh.inst. no.96:146-149 '60. (MIRA 14:3)
(Cobalt--Analysis) (Nickel--Analysis)

LOSHKAREVA, G.V.

Method for determining copper in nickel without weighed sampling. Trudy Ural.politekh.inst. no.96:150-155 '60. (MIRA 14:3)
(Copper--Analysis) (Nickel--Analysis)

LOSHKAREVA, G.V.

Fractional detection of nitrite- and nitrate ions; nitrite ion. Trudy Ural. politekh. inst. no.94:149-154 '60. (MIRA 15:6)
(Nitrites) (Ions)

LOSHKAREVA, G.V.; PLATONOV, V.Ye.; ROZIN, Yu.A.

Fractional detection of carbonate ion. Trudy Ural. politekh. inst. no.94:155-157 '60. (MIRA 15:6)
(Carbonates) (Ions)

LOSHKAREVA, K.A., uchitel'nitsa

Young helminthologists. Biol. v shkole no.1:75-76 Ja-F '59.
(MIRA 12:2)

1. Shkola No.9, g.Kalinin.
(Helminthology--Study and teaching)

GAUZE, G.G.; LOSHKAREVA, N.P.; ZBARSKIY, I.B.; GAUZE, G.F.

Composition of DNA in some bacteria and their mutants carrying oxidation deficiency. Dokl. AN SSSR 157 no. 2:457-459 Jl '64. (MIRA 17:7)

1. Institut morfologii zhivotnykh imeni A.N.Severtsova AN SSSR i Institut po izyskaniyu novykh antibiotikov AMN SSSR. Predstavleno akademikom A.A.Imshenetskim.

GAUZE, G.G.; LOSHKAREVA, N.P.

Effect of olivomycin on the cells of Ehrlich's ascites carcinoma.
Vop. med. khim. 11 no.4:64-66 Jl-Ag '65. (MIRA 18:8)

1. Laboratoriya biokhimii kletochnykh struktur Instituta morfologii zhivotnykh AN SSSR, Moskva.

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