dark brown, [illegible], obtained by heating chlorobis-dimethylglyoximecobaltic acid $H[Co(DH)_2Cl_2]$ (I) with water on a water bath [illegible]

[illegible]

[illegible] dimethylglyoxime [illegible] p-$H_2NC_6H_4CH_3)(DH)_2I]$, [illegible] bisdimethylglyoxime-p-toluidinecobalt, $[Co(p\text{-}H_2NC_6H_4CH_3)(DH)_2I] H_2O$, and iodobisdimethylglyoxime-p-anisidinecobalt, $[Co(p\text{-}H_2NC_6H_4OCH_3)(DH)_2I] H_2O$.

C. H. Fuchsman

[illegible]

ABLOV, A.V.; SAMUS', N.M.; POPOV, M.S.

Isorhodanonitro- and isorhcdanohalogeno-bis-dimethyl-glyoxime-cobaltic acids. Dokl.AN SSSR 106 no.4:665-668 F '56.(MLRA 9:6)

1.Kishinevskiy gosudarstvennyy universitet. Predstavleno akademikom I.N.Nazarovym.
(Cobalt compounds)

. Ablov, A.V.

USSR/Physical Chemistry - Molecule, Chemical Bond. B-4

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 99

Author : A.V. Ablov, M.P. Filippov.
Inst : -
Title : Light Absorption by Complex Compounds of Trivalent Cobalt. I. Dependence of Absorption Spectra of Compounds of $[CoEn_2Amine\ Cl]X_2$ Type on Nature of Co-ordinated Amine.

Orig Pub : Zh. neorgan. khimii, 1957, 2, No 1, 42-52

Abstract : The absorption spectra of solutions of cations $[CoEn_2Amine\ Cl]$ in 0.1 n. HCl were investigated. Ethylamine, benzylamine, aniline, n-fluoraniline, n-chloraniline, m-toluidine, o-anisidine, O-phenetidine and n-anisidine were the amines in this cations. 3 absorption bands were found in the absorption spectrum of the cations $[CoEn_2(XC_6H_4NH_2)Cl]^{2+}$ at 520, 305 to 345 and 232 to 235 mμ. A 4th absorption band was also observed at 215 to 218 mμ in some cases (amine = n-chloraniline, O-anisidine and o-phenetidine).

Card 1/3

USSR/Physical Chemistry - Molecule, Chemical Bond. B-4

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 99

the similarity of the absorption spectra of these two cations with the spectrum of 1.2-$[CoEn_2NH_3Cl]^{2+}$, the

authors arrive at the conclusion regarding the cis-structure of the investigated cations. It is postulated that the structure of all the other studied cations is also a cis-structure. The synthesis of $[CoEn_2\cdot(n\text{-}C_6H_4NH_2Cl)Cl]Cl_2\cdot$

$\cdot H_2O$ and $[CoEn_2(NH_2C_2H_5)Cl]S_2O_6\cdot H_2O$ is described.

Card 3/3

ABLOV, A.V.; NAZAROVA, L.V.

Spectrophotometric analysis of nickel salt pyridinates in aqueous solutions. Zhur. neorg. khim. 2 no.1:53-59 Ja '57. (MLRA 10:4)

1. Kishenevskiy gosudarstvennyy universiter.
(Nickel nitrate) (Pyridine) (Systems (Chemistry))

ABLOV, A.V.; FILIPPOV, M.P.

Absorption of light by complex compounds of trivalent cobalt. Part 2: Dependence of absorption spectra for compounds of [bis (ethylenediamine) ammino-bromocobalt(III)] salts. Zhur. neorg. khim. 2 10:2390-2399 O '57. (MIRA 11:3)

1. Kishinevskiy gosudarstvennyy universitet.
(Cobalt) (Absorption spectra) (Complex compounds)

[illegible]

ABLOV, A.V.; NAZAROVA, L.V.

Spectrophotometric analysis of pyridinates of cobalt salts in aqueous solutions. Zhur. neorg. khim. 2 no.11:2575-2580 N '57. (MIRA 11:3)

1.Kishinevskiy gosudarstvennyy universitet.
(Spectrophotometry) (Cobalt salts)
(Pydridine)

AUTHORS: Ablov, A. V., Batyr, D. G. 75-6-18/23

TITLE: Quantitative Determination of Reducing Saccharines by Means of Copper Compounds of Trioxyglutaric Acid (Kolichestvennoye opredeleniye vosstanavlivayushchikh sakharist͜ykh veshchestv pri pomoshchi mednogo soyedineniya trioksiglutarovoy kisloty).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6, pp. 749-753 (USSR)

ABSTRACT: A new method for the determination of reducing saccharins by means of a copper compound of the trioxyglutaric acid was proposed. It is shown that the alkaline copper solutions of trioxyglutaric acid are more stable on heating than Fehling's solution. Glucose, fructose and maltose are determined with great accuracy (relative errors 0,34 to 1,14%) by this method. It was shown that this method is more advantageous than Fehling's solution since a strict proportionality governs the relation between copper oxide and saccharins. Ther are 4 tables and 11 references, 4 of which are Slavic.

ASSOCIATION: State University, Kishinev (Kishinevskiy gosudarstvenyy universitet).

[redacted]

AUTHOR: ABLOV, A.V., SAMUS', N.M. 20-6-22/59

TITLE: On the Strong Transinfluence of the Hydroxygroup in Trivalent Cobalt Dioximides. (O sil'nom trans-vliyanii gidroksogruppy u dioksiminov trekhvalentnogo kobal'ta, Russian)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 6, pp 1265 - 1268 (U.S.S.R.)

ABSTRACT: On the occasion of the investigation of the acid properties of nitro-bis-dimethylglyocy-moaquocobalt $(CoH_2O/DH_2/NO_2)$ it was found that it is completely soluble in concentrated alkalis on which occasion a dark red solution is formed. In the case of slight heating a red brown precipitation $(K/Co\ (DH_2)_2OH_2/3H_2O)$ is abundantly separated from this solution (DH = the dimethylglyoxym residue). Also a sodium-salt is formed in the same way. Nitric acid, when acting on these salts, forms a red colored nitrate of the bis-dimethylglyoxy-imodiaquocobalt, on which occasion also the developing of an intermediate product is noticed. The latter can be obtained also by the action of potassium carbonate on chlorine-bis-dimethylglyoxy-moaquocobalt. If alkali is poured over the chlorine-compound a dihydroxo-compound is formed. Furthermore, the electric conductivity and the hydrolysis-dissociation reactions respectively of the substances mentioned are given. One of the authors expressed the opinion that in the compounds $/Co(DH_2)_2X_2/$ the two X-residues are

Card 1/2

On the Strong Trans-Influence of the Hydroxygroup in Trivalent Cobalt Dioximides. 20-6-22/59

in trans-position to one another. Further investigation confirms this spatial configuration of the dioxymines of the trivalent cobalt. Also the infrared spectra confirm the transfiguartion (Nakahara). Furhtermore, the transition of the nitro-to-dimethylglyoxy-moaquocobalt to potassium-dihydro-to-dimethylglyoxymocobaltiate is explained by Chernyayev by the conformity of the trans-influence. Thus, the hydroxo-group has a stronger transactivity than rhodano- and nitrogroups. Therefore these three groups should be arranged in the following order: $OH > NCS > NO_2$ with respect to the increasing transactivity in the dioxymines of the trivalent cobalt. In the experimental part the aforementioned reactions with constants and yields are described in detail. (5 Slavic references).

ASSOCIATION: Kishiniev State University.
PRESENTED BY: Chernyayev, I.I., Member of the Academy.
SUBMITTED: 2.10.1956
AVAILABLE: Library of Congress

Card 2/2

ABLOV, A.V.

ABLOV, A.V.

5(4)

AUTHORS: Vasil'yev, V. P., Korableva, V. D., Yatsimirskiy, K. B. SOV/153-58-3-30/30

TITLE: Conference Discussion on the Methods of Investigating the Complex Formation in Solutions (Soveshchaniye-diskussiya po metodam izucheniya kompleksoobrazovaniya v rastvorakh)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp 173 - 174 (USSR)

ABSTRACT: From February 18 to 21, 1958 a conference discussion took place at the town of Ivanovo; it dealt with the subjects mentioned in the title. It was called on a decision of the VIIth All-Union Conference on the Chemistry of Complex Formations. More than 200 persons attended the conference, among them 103 delegates from various towns of the USSR. At the conference methods of determining the composition of the complexes in solutions were discussed, as well as the methods of calculating the instability constants according to experimental data and problems concerning the influence of the solvent upon the processes of complex formation.

. . . . In the lecture by A. K. Babko and N. N. Tananayko, "Physical and Chemical Analysis of the Systems With 3 Colored Complexes in the Solution", the results of a systematic investigation in copper-quinoline-salicylate, as well as in copper-pyridine-salicylate systems by means of the optical method were dealt with. In the lecture by Ye. A. Pialkov the idea of a further investigation of the complex formation processes in solutions was developed. Besides the determination of the composition and stability of the complexes also the physical and chemical properties, the chemical nature and the structure of the complex compounds must be investigated . . . . . .

Card 2/16

L. I. Alekseyeva and K. B. Yatsimirskiy in their lecture "Investigation of the Polymerization of Iso-Poly Acids in Solutions" mentioned experimental results of the investigation of the polymerization in solutions of molybdic acid. The authors proved that especially the molybdic acid within a certain range of the pH values and the concentrations exists as a number of compounds that can be expressed by an overall formula $MoO_4(HMoO_4)^{n-2}$. In the lecture by N. V. Aksel'rud and V. B. Spivakovskiy investigation results on basic salts taking into account the complex formation in solutions by means of the potentiometric method were mentioned for systems with zinc, cadmium and indium. In the evaluation of their results the authors employed the method of the table difference. The calculation of the consecutive constants was carried out according to the interpolation formula by Newton. M. A. Chepelevetskiy held a lecture on "pH Measurement Method of the Solutions in Combination With the System Analysis of the Solubility Diagram of the System Cu^{2+}-HCl - H_2O in Investigating Complex Copper Compounds in Saturated Solutions". It was found that the substance at the bottom of the liquid is more basic than the solution; furthermore, the increased acidity of the solution from the viewpoint of the formation of hydroxy-aniono complexes in the solution was explained. V. I. Kuznetsov opened the discussion with his lecture; he pointed out the necessity of utilizing the concepts worked out in the investigations of the polymerization in organic chemistry in the chemistry of polynuclear complexes. A. A. Grinberg thinks that the new approach of the hydrolysis

Card 4/16

Card 5/16

Conference Discussion on the Methods of Investigating the Complex Formation in Solutions SOV/153-58-3-30/30

plex compounds was stressed. In the lecture delivered by I. A. Shek on "The Investigation of the Complex Formation by the Method of the Dielectric Permeability and the Polarization" the principles of the methods mentioned were presented. This method was employed for investigating the compounds of the type of the "affiliation" products. The lecture delivered by I. A. Shek and Ye. Ye. Kriss "Employing the Method of the Dielectric Constant for Investigating Complex Compounds of the Type of Crystal Solvates in Solutions" dealt with the investigation of the solvates of lanthanum and cerium chlorides with ketones, as well as with the study of the compounds formed in heterogeneous systems with tributyl phosphate and nitric acid. V. F. Toropova gave in her lecture "The Polarographic Method of Investigating the Complex Formation in Solutions" a survey of the applications of the polarographic method in the study of the complex compounds, and illustrated several fine characteristic features of this method. In the lecture delivered by T. N. Sumarokova "The Cryoscopic Method of Investigating the Complex Formation Reactions" a survey of the possibilities of the cryoscopic method was given, and its

Card 12/16

applicability in the study of several complex compounds of stannic chloride with organic substances was proved. A. M. Golub described the results of his investigations of thiocyanate complexes of several metals. A vivid discussion took place on the lectures held. Ya. A. Fialkov and Yu. Ya. Fialkov considered the cryoscopic method of investigating complex compounds to be of considerable value. K. B. Yatsimirskiy pointed out that the publication of the surveys on individual methods of investigating the complex formation reactions would be desired; this concerns especially the polarographic method. The cryoscopic method should be brought to a level that makes the calculation of the equilibrium constants of the processes to be investigated possible. The problem of the method of evaluating the experimental results becomes more and more important. Many scientists use the instability constants without taking into account the way in which they had been obtained. The calculation methods employed by A. M. Golub are one step back, as compared to those employed at present. In his lecture N. P. Komar' pointed out the extremely great importance of the mathematical

Card 13/16

evaluation of the results obtained, as well as of the plotting of curves. A. K. Babko suggested selecting one or two systems that are experimentally well investigated, and to evaluate the results obtained according to different methods so that it is possible to check and evaluate them. Ye. I. Tur'yan took part in the discussion. Ya. A. Fialkov discussed in his lecture "The Effect of the Solvent on the Complex Formation Process as Well as on the State of Equilibrium in the Solutions of Complex Compounds" the influence exerted by the solvents upon the molecular state, upon the solvation of the system components, upon the stabilization of the complexes formed in the system, upon the step-wise dissociation of the complexes and upon a number of other processes. The influence exercised by the dielectric constant upon the complex formation process was discussed. It was concluded that a direct relation does not exist, and that the chemical nature of the solvent must be taken into account. A. V. Ablov and L. V. Nazarova held a lecture on "The Spectroscopic Investigation of Nickel Cobalt 'Pyridinates' in Various Solvents". The instability constants of the complexes were determined and it was proved that the

Card 14/16

Conference Discussion on the Methods of Investigating the Complex Formation in Solutions SOV/153-58-3-30/30

stability of the 'pyridiaates' is changed in dependence on the solvent. Ya. I. Tur'yan in his lecture "The Influence of the Solvent Upon the Composition and Stability of Complex Ions" discussed the polarographic investigation method of the chloride and thiocyanate complexes of lead in aqueous ethanol solutions at different content of the non-aqueous solvent and at a constant ionic strength. A step-wise character of the complex formation was found as well as the instability constants of the complexes. The influence of the dielectric constant of the solution on the stability of the investigated complexes was proved. In the lecture by V. P. Vasil'yev on the "Investigation of Aquo Complexes in Mixed Solvents" the main attention was devoted to the necessity of the qualitative recording of the solvation effects in the complex formation. The applicability of the polarographic method in the determination of the composition and stability of the aquo complexes in mixed solvents was proved and experimental material on the thermodynamics of the dissociation of the cadmium-aquo complexes in aqueous ethanol solutions was mentioned. V. N. Tolmachev, V. I. Kuznetsov

Card 15/16

and I. V. Tananayev stressed in their lectures the necessity of a more complete and general investigation of the solvation processes. A. K. Babko and A. M. Golub pointed out the great importance of the investigations of the complex formation equilibria in non-aqueous solutions, and made several critical comments on the lecture by Ya. I. Tur'yan. The following scientists took part in this discussion: L. P. Adamovich, O. I. Khotsyanovskiy, A. P. Moskvin and A. G. Mustakhov. At the final meeting of the conference A. A. Grinberg, Corresponding Member, AS USSR, said in his speech that such a conference was very urgent. A detailed discussion of the determination methods of the composition of the complexes, as well as of the method used in the study of the quantitative characteristics of the stepwise complex formation was extremely useful for all who attended this conference.

Card 16/16
USCOMM-DC-60976

ABLOV, A. V.

78-3-5-12/39

AUTHOR: Ablov, A. V.

TITLE: Basic Cobalt Dioximines (Osnovaniya dioksiminov kobal'ta)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol 3, Nr 5, pp 1118-1125 (USSR)

ABSTRACT: On the action of concentrated bases on solutions contraining $[CoAm_2(DH)_2]^+$, protons are yielded by both DH groups. The yielding preocess was analyzed with the help of the absorption spectrum. Spectrophotometric tests demonstrated that all cations of the $[CoAm_2(DH)_2]^+$ type are capable of delivering protons. (A = NH_3, pyridine or aromatic amines) Some basic dioximines were isolated in crystalline state. It was proved by the potentiometric titration that no correlation exists between the dissociation constant of the basic complex and the amine group. The solutions of basic dioximines are weak electrolytes. The following compounds were formed:

$[Co(H_2N.C_6H_5)_2D_2H] . 3H_2O$ - bi-dimethylglyoxyncobaltdianiline dark brown rhombic crystals

$[Co(n - H_2N.C_6H_4.CH_3)_2D_2H] . 4H_2O$ - basic Di-O-toluidindioxine-cobalt dark brown octahedrons

Card 1/2

Basic Cobalt Dioximines

78-3-5-12/39

$[Co(n-H_2N.C_6H_4.CH_3)_2D_2H].3H_2O$ - basic Di-N-toluidinedioxine-cobalt small plates of yellowish-brown color

$[Co(n-H_2N.C_6H_4.OCH_3)_2D_2H],4H_2O$ - basic- Di - N-anisidindioxine cobalt light brown crystals

$[Co(n-H_2N.C_6H_4Cl)_2.D_2H].2H_2O$ - basic Di-N-chloride aniline dioxine cobalt small plates of yellow color

$[Co(n-H_2N.C_6H_4Br)_2.D_2H].2H_2O$ - bromide anilinedioxine greenish brown prisms.

$[CoPy_2(DH)_2]Cl.2H_2O$ - bi -chloride dimethylglykoxydipyridine cobalt.

There are 4 figures, 1 table, and 10 references, 6 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: May 29, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Cobalt Dioximines--Production 2. Cobalt Dioximines--Properties 3. Spectrographic analysis--Applications 4. Titration

78-3-6-11/30

AUTHORS: Lobanov, N. I., Rassonskaya, I. S., Ablov, A. V.

TITLE: The Heating Curves of Some Cobaltic Amines (Krivyye nagrevaniya nekotorykh kobal'tiamminov)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1355 - 1365 (USSR)

ABSTRACT: The heating curves of some cobaltic amines were investigated and the results obtained were compared to the heating curves of platinum complex compounds. The thermographic analyses were performed by means of the recording pyrometer by N. S. Kurnakov. It can be seen from the thermographic analysis that endothermic effects occur in the heating curves of hexamine cobaltic chloride and hexamine cobaltic bromide which indicate the release of ammonia and the transition of the above mentioned salts into pentamine cobaltic halide. There is no important difference between the temperature of decomposition of pentamine cobaltic halide and that of the luteosalts. The loss of ammonia takes place already at 2oo°C. The loss of ammonia from hexamethylene

Card 1/3

The Heating Curves of Some Cobaltic Amines 78-3-6-11/30

cobaltic bromide takes place more quickly than the loss of the corresponding chloride, i.e. hexamethylene cobaltic chloride is more stable than hexamethylene cobaltic bromide. Beginning with 275°C the second endothermic effect takes place. The aquo-pentamine cobaltic salts equally show endothermic effects. The first endothermic effect takes place at 100°C, which indicates a loss of water. Aquo-pentamine cobaltic sulfate bromide proved to be the most stable aquo-pentamine cobaltic salt($[Co(NH_3)_5.H_2O](SO_4)Br$). The first endothermic effect which indicates a loss of water takes place in this salt only at 210°C. Endothermic effects which are connected with the loss of ammonia from the inner sphere of the complex were observed in the hexamine cobaltic nitrite complexes, pentamine cobaltic nitrato complexes, and in the cis-dinitro tetramine cobaltic complex as well as also in $[Co.en_2(NH_3)_2](NO_3)_3$ and in $[Co.en_2(NH_3).NO_2](NO_2)_2$. All cobaltic amino complexes containing the NO_2- and NO_3-group in their composition, independent of whether these groups belong to the inner or the outer sphere of

Card 2/3

The Heating Curves of Some Cobaltic Amines 78-3-6-11/30

the complex, show endothermic effects at temperatures of 190 - 200°C. The comparison between the amino complexes of platinum and palladium and the amino complexes of cobalt-(III) shows that the reactions of displacement in the inner sphere of the cobaltic amino complex take place extremely slowly and that they are accompanied by side-reactions such as decomposition or oxidation. There are 24 figures and 16 references, 9 of which are Soviet.

ASSOCIATION: Moldavskiy filial AN SSSR, Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova, AN SSSR (Moldavia Branch AS USSR, Institute of General and Inorganic Chemistry imeni N. S. Kurnakov)

SUBMITTED: May 25, 1958

AVAILABLE: Library of Congress

1. Cobaltic amines--Thermal analysis

Card 3/3

AUTHORS: Ablov, A.V., Filippov, M.P.

SOV/78-3-7-17/44

TITLE: III. The Dependence of the Absorption Spectrum of the Compound of the Type $[Co.Amin_2\,(DH)_2]_x$ on the Nature of the Coordination Amine (III. Zavisimost' spektrov pogloshcheniya soyedineniy tipa $[Co.Amin_2\,(DH)_2]_x$ ot prirody koordinirovannogo amina)

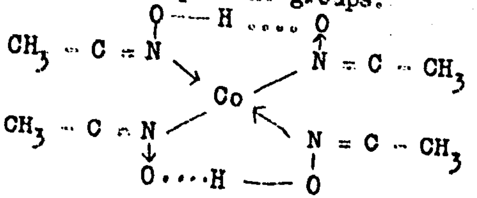
PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 7, pp 1565-1572 (USSR)

ABSTRACT: The absorption spectrum within the range of λ = 210-650 mμ up to dimethylglyoxymodiaminecobalt-cation complex $[Co\,(Amin_2)\,(DH)_2]^+$ was investigated, in which amine = ammonia, pyridine, aniline, o-, m- and p-toluidine, m- and p-chloroaniline, m- and p-bromoaniline, p-iodine aniline, o- and p-anisidine and o-phenetidine. DH denotes the remainder of dimethyl glyoxin. The first line of the investigated compounds shifts in the direction of the short wave range in contrast to the corresponding ethylene-diamine compounds. The occurrence of new intense lines in the absorption spectrum on the introduction of aniline into the inner sphere of the complex is caused by the group Co-N⟨⟩. During exchange into the complex $[Co\,(NH_3)_2\,(DH)_2]^+$ of one molecule ammonia for

Card 1/2

III. The Dependence of the Absorption Spectrum of the Compound of the Type $[Co.Amin_2(DH)_2]x$ on the Nature of the Coordination Amine SOV/78-3-7-17/44

one chlorine atom the position of the lines of the absorption spectrum changes only slightly. The occurrence of the lines in the absorption spectrum at 250 mμ does not depend on the nature of the amine but upon the groups.



There are 7 figures, 3 tables and 11 references, 5 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: June 10, 1957

Card 2/2

1. Complex compounds--Spectra 2. Complex compounds--Chemical reactions 3. Amines--Chemical properties

AUTHORS: Ablov, A. V., Samus , N. I. SOV/78-3-8-17/48

TITLE: Isothiocyanoiodo-Bi-Dimethylglyoximo Cobaltic Acid (Izorodanoyodo-bis-dimetilglioksimokobal'ti kislota)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1818-1825 (USSR)

ABSTRACT: In the action of hydriodic acid on isothiocyano-bi-dimethylglyoximaquo cobalt isothiocyanoiodo-bi-dimethylglyoxime cobaltic acid is formed which has the following composition: $H[Co(DH)_2J(SCN)]H_2O$.

Some salts of this acid were produced which have the following composition: $[Co.Amin_2(DH)_2][Co(DH)_2 J(SCN)]$.

On the action of aniline, pyridine and ammonia on a solution of isothiocyanoiodo-bi-dimethylglyoximo cobaltic acid in alcoholic medium amine is substituted by the isothiocyano group under the formation of $[Co.Amin (DH)_2J]$. In aqueous solutions and in dependence on the pH value of the medium the isothiocyano group or the iodo group in the isothiocyanoiodic acid is displaced by water.

Card 1/2

It is shown that iodine in the dioximes of cobalt-(III)

Isothiocyanoiodo-Bi-Dimethylglyoxime Cobaltic Acid SOV/78-3-8-17/48

compounds has a strong trans-effect. In dependence on the pH value of the medium and the concentration of the reacting component the trans-effect of the isothiocyano group can be stronger or weaker than that of iodine.
There are 13 references, 8 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: July 18, 1957

Card 2/2

AUTHORS: Ablov, ~~A. V.,~~ Konunova, Ts. B. SOV/78-3-8-48/48

TITLE: Conference on the Chemistry of Heteropolyacids (Soveshchaniye po khimii geteropolikislot)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1989-1989 (USSR)

ABSTRACT: On December 13, 1957 a conference on the chemistry of heteropolyacids took place at Kishinev. Five reports were given at this conference. In the report by A. I. Kokorina the triheteropolyacids were dealt with, especially the basicity, the oxidizeability and reductivity, as well as the reaction of the triheteropolyacids with cations and some organic compounds. From the report by N. A. Polotebnova may be seen that not only the central atom but also addenda are of importance for the basicity of heteropolyacids. In the lecture delivered by A. N. Kovadlo the technology of the structure of isopolyacids and heteropolyacids were dealt with on the basis of the classical theory of valence. To determine the chemica individuality of the tri- and tetraheteropolyacids A. V. Ablov and Ts. B. Konunova employed paper chromatography. The x-ray analysis was

Card 1/2

Conference on the Chemistry of Heteropolyacids SOV/78-3-8-48/48

used for explaining the structure of heteropolyacids.
The conference decided upon a far reaching employment of physical and chemical methods being necessary for investigating the heteropolyacids and explaining their structure.

Card 2/2

AUTHORS: Ablov, A. V., Konunova, Ts. B. SOV/78-3-9-38/38

TITLE: Conference on the Polarographic Method of Analysis (Soveshchaniye po polyarograficheskomu metodu analiza)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 9, pp 2221-2222 (USSR)

ABSTRACT: A conference on the polarographic method of analysis took place from January 21 to 23, 1958, in which the Moldavskiy filial AN SSSR (Moldavian Branch, AS USSR), the Khimicheskiy fakul'tet Kishinevskogo gosudarstvennogo universiteta (Department of Chemistry, Kishinev State University) and the Kishinevskoye otdeleniye Vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleyeva (Department of the All-Union Chemical Association imeni D. I. Mendeleyev - Kishinev) participated. Also scientific cooperators from Kishinev, Moscow and Dnepropetrovsk took part in the conference. Eighteen reports were delivered. Sinyakova, S. I. - Institut geokhimii i analiticheskoy khimii AN SSSR im. V. I. Vernadskogo - Moskva (Institute of Geochemistry and Analytic Chemistry, AS USSR imeni V. I. Vernadskiy - Moscow) made a report on the use of catalytic current for the polarographic determination of molybdenum and other metals. Lyalikov,

Card 1/4

SOV/78-3-9-38/38

Conference on the Polarographic Method of Analysis

Yu. S. - Kishinevskiy universitet (Kishinev University) reported on the characteristics of polarographic waves. Numerous reports were submitted on the formation of complexes in solutions. Tur'yan, Ya. I. - Kishinevskiy universitet (Kishinev University) has computed the stability constant of the halogen and rhodanite complexes of cadmium by polarographic determination. The report of Migal' , P. K. and Pushnyak, A. N. (Kishinev University) describes the polarographic analyses of ethanol amine complexes of cadmium, copper, lead and zinc. Gabovich, A. A. and Gabovich, A. M. - Kishinevskiy sel'skokhozyastvennyy institut (Kishinev Institute of Agriculture) determined manganese, zinc, cobalt, nickel and chromium by oscillographic polarography. Also the determination of thallium in solutions in the presence of cobalt and manganese was discussed. Bobrinskiy, M. B. - Moldavskiy filial AN SSSR (Moldavian Branch, AS USSR) - examined the metallic precipitate obtained on the solid electrode in the polarographic determination by means of an electronic microscope. Bardin, M. B. (Kishinev University) suggests the use of rotating disc-shaped electrodes with a small surface in polarography. Usatenko, Yu. S. and Vitkina, M. A. - Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Institute of

Card 2/4

Conference on the Polarographic Method of Analysis SOV/78-3-9-38/38

Chemical Technology) - reported on the polarographic titration by sodium diethyl dithiocarbamate. Reznik, V. I. and Danilenko, Ye. F. - Dnepropetrovskiy universitet (Dnepropetrovsk University) made a report on the ammetric titration of zinc in various samples. Pshenitsyn, N. A., Yezerskaya, N. A. and Ratnikova, V. O. - Institut obshchey i neorganicheskoy khimii AN SSSR - Moskva (Institute of General and Inorganic Chemistry, AS USSR - Moscow) - reported on the polarographic determination of iridium-(IV) from $H_2[IrCl_6]$ by means of rotating platinum electrodes. The authors also described an ammetric titration of small quantities of iridium with hydroquinone and ascorbic acid. Temyanko, V. S. - Magnitogorskiy gornometallurgicheskiy institut (Magnitogorsk Institute of Mining and Metallurgy) reports on the use of solid electrodes for the polarographic determination of gold and platinum. Novik, R. M. (Moldavian Branch, AS USSR) reports on the polarographic and ammetric determination of the bromine ion in the melt. Lipis, B. V. - Moldavskiy institut sadovodstva, vinogradarstva i vinodeliya (Moldavian Institute of Horticulture, Viticulture and Wine Production) determined oxygen and SO_2 in wine. Vayntraub, F. P. -

Card 3/4

Conference on the Polarographic Method of Analysis SOV/78-3-9-38/38

Moldavskaya stantsiya zashchity rasteniy (Moldavian Station of Plant Protection) worked out a method for the polarographic determination of dinitrobenzene thiocyanate. Rayk, S. Ya. (Moldavian Branch, AS USSR) reports on the polarographic determination of pectic substances. The reports initiated a number of discussions. In the resolution special attention was drawn to the development and use of the polarographic method in the practical work of scientific institutes and industrial laboratories.

Card 4/4

USCOMM-DC-60.780

5(2, 3)

AUTHORS: Ablov, A. V., Samus', N. M. SOV/20-123-3-21/54

TITLE: Complex Compounds of Trivalent Cobalt Containing Thiourea (Kompleksnyye soyedineniya trekhvalentnogo kobal'ta, soderzhashchiye tiomochevinu)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 457-460 (USSR)

ABSTRACT: After a short survey of those metals the salts of which form affiliation products with thiourea (Refs 1-4) the authors found that only some comparatively unstable compounds of the bivalent cobalt with thiourea are known (Ref 5). Such compounds of the trivalent cobalt have so far not yet been described. The authors succeeded in introducing thiourea into the inner coordination sphere. The reactions of the compounds thus obtained have shown that thiourea in the dioximes of trivalent cobalt exerts an increased trans-effect. On the interaction of chloro-bis-dimethyl glyoxime-aquocobalt with an aqueous or alcoholic solution of thiourea (1:1) a yellow-brown fine-crystalline substance is formed with good yield already at room temperature. This substance is chloro-bis-dimethyl glyoxime-thiocarbamide

Card 1/3

cobalt. The same substance can also be obtained according to a general method (Ref 6). On slight heating with aqueous or alcoholic thiourea solution it dissolves and crystals of bis-dimethyl glyoxime-dithiocarbamide cobalt chloride $[Co\ (thio)_2(DH)_2]\ Cl \cdot 5H_2O$ precipitate from the solution. This compound can be obtained from an alcoholic solution of cobalt chloride (1 mol), dimethyl glyoxime (2 mol) and thiourea (more than 2 mol) by oxidation with air. From further reactions of the salts thus obtained: $[Co\ (thio)_2(DH)_2]\ X$, (where X = Br, NO_3), as well as from the unequal linkage of two thiourea molecules, furthermore from the fact that two dimethyl glyoxime radicals in the dioximes of 3-valent cobalt are lying on one level (Refs 7, 8), the authors conclude that both thiourea molecules in the complex cation $[Co\ (thio)_2(DH)_2]^+$ are in trans-position. The facts described can be explained if trans-effect higher than that exerted by the acid radicals Cl, Br, NO_2, J and CNS is

Complex Compounds of Trivalent Cobalt Containing Thiourea SOV/20-123-3-21/54

attributed to thiourea in the cobalt dioximes on reactions in neutral media. The experimental section with the usual data follows. There are 9 references, 6 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

PRESENTED: June 26, 1958, by I. I. Chernyayev, Academician

SUBMITTED: June 23, 1958

Card 3/3

5(2,3)

AUTHORS: Ablov, A. V., Malinovskiy, T. I. SOV/20-123-4-28/53

TITLE: The Structure of the Addition Products of Aromatic Amines to Zinc Halides (Stroyeniye produktov prisoyedineniya aromaticheskikh aminov k galogenidam tsinka)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 677 - 680 (USSR)

ABSTRACT: Two closely connected theories try to explain the effect of the ligands on the behaviour of the d-electrons of the central atoms of elements of the middle of the first great period of Mendeleyev's system: I. This theory is also called the theory of the crystalline field. The authors mention the criticism found in publications (Refs 1-5). II: This theory demands a partly covalent character of the bonds in the complexes (Refs 6,7). Consequently the compounds of zinc with aromatic amines had to have an octahedral structure. The final conclusions were not proved by bonds of bivalent cobalt (Refs 8-11). The explanation of the problem mentioned in the title was of special interest. For this purpose the structure of the

Card 1/3

addition product of para-toluidine to zinc chloride $ZnCl_2.2p=H_2N.C_6H_4.CH_3$ was investigated. The crystals of this compound were investigated by x-rays, by means of a pycnometer, radiographically and by radiogoniometric pictures. Based on these investigations 2-dimensional F^2_{hkl} lines were plotted for the zero, first and second layer-line. The maxima 1 and 2 were clearly shown on the projection: they were identified as the vectors Zn-Cl and Cl-Cl. Therefrom the distance Zn-Cl = 2.35 ± 0.05 Å was determined. This distance tends to show a predominantly covalent binding of the central atom with the halogen, as is the case in the structure of $CoCl_2$.2p toluidine (Ref 11). Several similar characteristics caused the authors to assume that the addition products of para-toluidine on zinc chloride as well as on cobalt (II) chloride are isostructural (Fig 2). Therefrom it is concluded that the structure of $ZnCl_2$.2p-toluidine is molecular. The zinc atom is in the center of an almost regular tetrahedron two points of which are occupied by Cl atoms and two others by N atoms. Thus, the coordination number of zinc in compounds

Card 2/3

of the type $ZnCl_2.2A$ is not changed due to a substitution of ammonia by an aromatic amine; this is also the case in the corresponding compounds of bivalent cobalt. Ya. K. Syrkin, Corresponding Member, Academy of Sciences, USSR, took part in the discussion of the results obtained. There are 2 figures and 12 references, 5 of which are Soviet.

ASSOCIATION: Moldavskiy filial Akademii nauk SSSR (Moldavian Branch of the Academy of Sciences, USSR)

PRESENTED: June 26, 1958, by I. I. Chernyayev, Academician

SUBMITTED: June 23, 1958

ABLOV, A.V.; MALINOVSKIY, I.;

"The Crystal Structure of Zinc Dichloro-Diparatoluidine"

a report presented at Symposium of the International Union of Crystallography
Lenningrad 21-27 May 1959

SO: B 3,135,471 28 July 1959

/

5(2) SOV/78-4-2-15/40

AUTHORS: Ablov, A. V., Lobanov, N. I.

TITLE: The Reaction of Several Cobalt Ammines Containing Thiocyanogen and Nitro Groups in the Inner Coordination Sphere (Povedeniye nekotorykh kobal'tiamminov, soderzhashchikh vo vnutrenney koordinatsionnoy sfere rodano- i nitrogruppy)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 337-343 (USSR)

ABSTRACT: Several cobalt ammines were investigated in order to find out the influence of the thiocyanogen group in the inner coordination sphere upon the reactivity of the nitrito group. It was found that upon heating cis-isothiocyanogen nitrito diethylene diammine cobalti-ion, cis- and trans-dinitrito diethylene diammine cobalti-ion, and nitrito pentammine cobalti-ion with concentrated solutions of ammonium thiocyanogen the nitrito group is exchanged for a thiocyanogen group in the inner coordination sphere. If a solution of trans-isothiocyanogen nitrito diethylene diammine cobalti-ion with ammonium rhodanide is heated no diisothiocyanates are formed. The thiocyanogen group which is in trans-position to the nitrito group reduces the mobility and the exchange-

Card 1/2

SOV/78-4-2-15/40

The Reaction of Several Cobalt Ammines Containing Thiocyanogen and Nitro Groups in the Inner Coordination Sphere

ability, respectively, of the latter. On the interaction of isothiocyanogen nitrito tetrammine cobalti chloride with hydrobromic acid the following salts are formed: $[Co(NH_3)_4(NO_2)(NCS)]Br$ and $[Co(NH_3)_4(NO_2)(Br)]Br$. There are 1 figure and 23 references, 13 of which are Soviet.

ASSOCIATION: Moldavskiy filial Akademii nauk SSSR, Otdel neorganicheskoy khimii (Moldavian Branch of the Academy of Sciences USSR, Department of Inorganic Chemistry)

SUBMITTED: November 22, 1957

Card 2/2

5(4) SOV/78-4-2-24/40

AUTHORS: Ablov, A. V., Malinovskiy, T. I., Dedyu, V. I.

TITLE: The Structure of Mixed Heteropoly Acids (Stroyeniye smeshannykh geteropolikislot)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 397-401 (USSR)

ABSTRACT: The mixed phosphor-6-molybdenum-6-tungsten heteropoly acid was investigated. The roentgenograms of the non-mixed and the mixed heteropoly acid were compared and it was found that the intensity of the lines of the mixed heteropoly acid is weaker than that of the lines of the non-mixed acid. The structure of the anions in the mixed heteropoly acid is analogous to the structure of the anions of the non-mixed acid. The intensity of the lines of the mixed heteropoly acid found by calculation corresponds to that found by experiments. The geometrical position of the atoms of molybdenum and tungsten in the complex anion $[PMo_6W_{12-6}O_{40}]^{3-}$ is equivalent. The dried mixed heteropoly acid is a pentahydrate, as is the non-mixed heteropoly acid. The cesium salts of several mixed

Card 1/3

SOV/78-4-2-24/40

The Structure of Mixed Heteropoly Acids

heteropoly acids were produced and their roentgenograms taken: $Cs_3H[SiW_{12}O_{40}]\cdot 0-2H_2O$ 11.78±0.02 Å (Cell parameter)
$Cs_3H[SiMo_6W_6O_{40}]\cdot 0-2H_2O$ 11.72±0.04 Å
$Cs_3[PMo_6W_6O_{40}]\cdot 0-2H_2O$ 11.81±0.02 Å
$Cs_3H_2[PMo_{10}V_2O_{40}]\cdot 0-2H_2O$ 11.72±0.05 Å.

The cesium salts of the mixed heteropoly acids are more stable than their initial acids. In the formulas three atoms of cesium correspond to 1 central atom. The following formulas were suggested for the mixed tungsten-molybdenum-phosphoric acids and the vanadium-molybdenum-phosphoric acids: $[AMo_nW_{12-n}O_{40}]^{m-}$ and $[AMo_nV_{12-n}O_{40}]^{m-}$. An attempt of producing heteropoly acids containing tungsten, molybdenum, and vanadium (tetraheteropoly acids) did not prove successful because a strong reaction takes place during the production. There are 4 figures, 1 table, and 15 references, 8 of which are Soviet.

Card 2/3

SOV/78-4-2-24/40

The Structure of Mixed Heteropoly Acids

ASSOCIATION: Moldavskiy filial Akademii nauk SSSR (Moldavian Branch of the Academy of Sciences USSR)

SUBMITTED: December 4, 1957

Card 3/3

5(4)

AUTHORS: Ablov, A. V., Konunova-Frid, Ts. B. SOV/78-4-3-15/34

TITLE: Investigation of Heteropolyacids by the Method of Paper-chromatography (Issledovaniye geteropolikislot metodom bumazhnoy khromatografii)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 3, pp 578-584 (USSR)

ABSTRACT: The chemical properties of the mixed tri- and tetraheteropolyacids consisting of metallic acids of molybdenum-tungsten, molybdenum-vanadium, and tungsten-vanadium with phosphorus and silicon central atoms were investigated by the method of paper-chromatography. The comparative investigations were carried out with di-, tri-, and tetraheteropolyacids. For the chromatographical investigation a 0.01 m solution of heteropolyacid in 2 n H_2SO_4 was used. From the investigations it may be concluded that phosphomolybdotungstic acid is an individual chemical compound. Similar investigations were carried out with silico-diheteropolyacid and silicomolybdotungstic acid. The chromatograms show that silicomolybdotungstic acid is also an individual chemical compound.

Card 1/3

Investigation of Heteropolyacids by the Method of Paper-chromatography SOV/78-4-3-15/34

Separations of mixtures of phosphomolybdotungstic acid with phospho-12-molybdic and phospho-12-tungstic acid and mixtures of silicomolybdotungstic acid with the corresponding diheteropolyacids were carried out. Each of these acids shows individual zones on the chromatogram. By the chromatographical method it is possible to determine impurities of diheteropolyacids in triheteropolyacids. The following vanadium-containing heteropolyacids were analyzed and separated by the method of paper-chromatography: phospho-10-molybdo-2-vanadium acid ($H_3PO_4 \cdot 10MoO_3 \cdot V_2O_5 \cdot nH_2O$), phospho-10-tungsto-2-vanadium acid ($H_3PO_4 \cdot 10WO_3 \cdot V_2O_5 \cdot nH_2O$), silico-10-molybdo-2-vanadium acid ($H_4SiO_4 \cdot 10MoO_3 \cdot V_2O_5 \cdot nH_2O$), silico-10-tungsto-2-vanadium acid ($H_4SiO_4 \cdot 10WO_3 \cdot V_2O_5 \cdot nH_2O$). From the results it may be concluded that the method for determining the impurities of diheteropolyacids in vanadium-containing triheteropolyacids is well suited and that vanadium-containing triheteropolyacids are individual chemical compounds.

Card 2/3

Investigation of Heteropolyacids by the Method of Paper-chromatography SOV/78-4-3-15/34

Then, by chromatographical analyses the existence of the tetraheteropolyacid, phosphorus-6-molybdenum-4-tungsten-2--vanadium acid was determined. The stability of various heteropolyacids was investigated by the reduction of the hydrogen concentrations. The phosphorus-molybdenum complex is the most unstable one. The mixed phosphorus molybdotungstic acids are unstable in the presence of ammonia and decompose to phosphorus molybdate and phosphorus tungstate ions. Among all heteropolyacids the vanadium-containing triheteropolyacids are the most stable ones. R_f values of the acids investigated are collected on tables. The method of paper-chromatography is recommended for the determination of the purity of mixed heteropolyacids. There are 3 figures, 1 table, and 19 references, 9 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: June 4, 1957

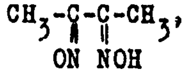
Card 3/3

5 (2)

AUTHORS: Ablov, A. V., Samus', N. M. SOV/78-4-8-9/43

TITLE: On the Reactivity of Iodine, the Isothiocyanate- and the Nitro Group in Diacido-bis-dimethyl Glyoximocobaltiate Ions (O reaktsionnoy sposobnosti yoda, izorodano- i nitrogrupp v diatsido-bis-dimetilglioksimokobal'tiat-ionakh)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1753 - 1761 (USSR)

ABSTRACT: On the basis of the rules governing the trans-effect which were found by I. I. Chernyayev (Ref 1) the author mentioned first proves that in the compound $[Co(DH_2)AB]$ the two dimethyl glyoxime residues are in the same plane (Ref 2) (DH =  $CH_3-\underset{ON}{\underset{\|}{C}}-\underset{NOH}{\underset{\|}{C}}-CH_3$, A, B = arbitrary substituents). Moreover, it was proved that in nitro-bis-dimethyl glyoxime-aquocobalt the water molecule is unstable under the influence of the nitro group which is in trans-position and that under the action of HCl or HBr it is easily substituted by chlorine or bromine. In order to clarify the rules found in other papers of the authors (Refs 3-5) the potassium salt of iodo-nitro-bis-dimethyl glyoxime-cobalt was

Card 1/2

On the Reactivity of Iodine, the Isothiocyanate- and the Nitro Group in Diacido-bis-dimethyl Glyoximocobaltiate Ions SOV/78-4-8-9/43

produced and investigated as to whether the nitro group can be displaced by iodine. With potassium iodine in alkali solution the ion $[Co(DH)_2J_2]^-$ was obtained and thus the displacement of the nitro group was proved. If one mole of concentrated ammonia or of an organic amine is added to the isothiocyano-nitro-bis-dimethyl glyoximocobaltic acid precipitates of the composition $[Co(Amin)_2(DH)_2(NCS)]$ are formed. With the addition of two mols of amine in hot solution, however, also the isothiocyanate group is substituted under formation of the cation $[Co(Amin)_2(DH)_2]^+$. Furthermore, it was proved that the nitro group is displaced by the SCN^- ion i.e. it exercises a weaker trans-effect than the isothiocyanate group. The experimental chapter gives a detailed description of the reactions carried out and the analyses of the compounds produced. There are 19 references, 14 of which are Soviet.

Card 2/3

Kishinev State U.

5(2) SOV/78-4-10-6/40

AUTHORS: Ablov, A. V., Filippov, M. P.

TITLE: Dependence of the Absorption Spectra of the Glyoximines of Trivalent Cobalt of the $[Co(Amine)(DH)_2Hal]$ Type on the Nature of the Co-ordinated Amine

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10, pp 2204-2212 (USSR)

ABSTRACT: In the formula mentioned in the title D denotes dimethyl glyoxime, hal - chlorine or bromine, amine - ammonia, pyridine, aniline, o-, m-, p-toluidine, o-, m-, p-chloro-aniline or o-, m-, p-bromo-aniline. The production of these non-electrolytes according to the method of L. A. Chugayev (Ref 5) does not yield pure preparations. For this reason the reaction of ammonia and amines with diazido-bis-dimethylglyoxime-cobaltic acids found by A. V. Ablov and N. M. Samus' (Ref 6) was used. The analyses of the preparations are given in table 1. In figures 1-5 the light absorption curves are shown and in table 2 position and intensity of the absorption bands in the region 210-600 mμ. In contrast with the dioxime electrolytes of the structure $[Co(amine)_2(DH)_2]^+$ the compounds investigated

Card 1/2

SOV/78-4-10-6/40

Dependence of the Absorption Spectra of the Glyoximines of Trivalent Cobalt of the $[Co(Amine)(DH)_2Hal]$ Type on the Nature of the Co-ordinated Amine

exhibit primary bands in the inner sphere owing to the presence of the halogen, the position of which does not depend on the dipole moment of the aromatic amine, which, however, can be masked by an intense ultraviolet absorption. The band in the range 340-370 mμ depends on the nature of the co-ordinated aromatic amine and is shifted into the short-wave range with respect to the band of the diammine electrolytes owing to the trans-position of the halogen. The band in the range of from 250-300 mμ is due to the $Co(DH)_2$ group. There are 5 figures, 2 tables, and 11 references, 8 of which are Soviet.

ASSOCIATION: Otdel neorganicheskoy khimii Moldavskogo filiala Akademii nauk SSSR (Department of Inorganic Chemistry of the Moldau Branch of the Academy of Sciences, USSR)

SUBMITTED: June 19, 1958

Card 2/2

5(2) 05860

AUTHORS: Ablov, A.V., Nazarova, L.V. SOV/78-4-11-13/50

TITLE: A Spectrophotometric Analysis of the Pyridinates of Nickel and Cobalt in Various Solvents

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2480-2484 (USSR)

ABSTRACT: This article was read at the "Conference and Discussion of Methods Used to Study the Complex Formation in Solutions" held in Ivanovo on February 21, 1958. The effect of the solvent on the composition and stability of complex compounds has been little investigated so far. Mention is made of articles by A.K. Babko (Refs 1,2), A.M. Golub (Ref 4) and Ya.I. Tur'yan (Refs 5,6). The authors investigated the pyridinates of Ni and Co in methanol, ethanol, n-propanol, n-butanol and acetone. In all solutions, the optical density of the nickel nitrate solutions changes when adding pyridine (Fig 1), and the absorption maximum is shifted toward the short-wave spectrum range. In cobalt nitrate only the optical density changes (Fig 2), while the absorption maximum is not shifted. The highest degree of stability is exhibited by pyridine complexes in acetone,

Card 1/2

05860

A Spectrophotometric Analysis of the Pyridinates of Nickel and Cobalt in Various Solvents SOV/78-4-11-13/50

whereas it increases in alcoholic solutions from methanol to butanol. The composition of the pyridinates and their stability in acetone were analyzed spectrophotometrically according to J. Bjerrum (Ref 10) with the assistance of F. Sheyn and I. Istratiy. The following values were obtained for the nickel compound: $K_1 = 3.6 \cdot 10^{-4}$, $K_2 = 5.6 \cdot 10^{-3}$, $K_3 = 1.6 \cdot 10^{-2}$. In alcoholic and aqueous solution, the authors found a linear dependence of K_1 on the reciprocal value of the dielectric constant (Fig 4). The resultant data are in agreement with the results published by N.A. Izmaylov (Refs 12,13). The stability of the pyridinates is greatly reduced by a small addition of water. In accordance with A.I. Rivkind (Ref 16) this indicates that alcohols and acetone are displaced by water out of the solvate sheath. There are 4 figures, 2 tables, and 16 references, 11 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State Univ.)

Card 2/3

5(2) 05861

AUTHORS: Ablov, A.V., Sychev, A.Ya. SOV/78-4-11-14/50

TITLE: The Kinetics of Hydrolysis of Halogen Bis-dimethyl Glyoxime Aquocobalt

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2485-2494 (USSR)

ABSTRACT: The kinetics of the substitution in the internal coordination sphere of octahedral complexes was thoroughly investigated in connection with the I.I. Chernyayev trans-effect as shown by numerous articles (Refs 1-10), among which are publications by Ya.A. Fialkov, V.D. Panasyuk (Ref 5), O.Ye.Zvyagintsev, Ye.F. Shubochkina (Ref 6) and A.A. Grinberg (Ref 7). The authors of this article made a contribution to this field by investigating the hydrolysis of the compounds $[Co(H_2O)(DH)_2Hal]$ (DH = dimethyl glyoxime, Hal^- = Cl, Br, J). By means of an SF-4 spectrophotometer, the course of hydrolysis was confirmed according to the reaction $[Co(H_2O)(DH)_2Hal] + H_2O \longrightarrow [Co(H_2O)(DH)_2]^+ + Hal^-$ (Fig 1). In order to determine the reaction rate, the

Card 1/3

The Kinetics of Hydrolysis of Halogen
Bis-dimethyl Glyoxime Aquocobalt

05861
SOV/78-4-11-14/50

authors made a potentiometric titration of the halogen ions released from the internal sphere (Figs 2,3). Titration took place at 0, 18 and 25°C. When measuring the electrical conductivity it was found that the type of the electrode used has a certain influence. Smooth platinum electrodes yielded lower values than platinum electrodes covered with platinum mud which had a catalytic effect (Table 2). The latter has already been detected by L.A. Chugayev (Ref 21). pH-measurement made with the help of a glass electrode and an LP-5 tube amplifier indicated that the pH-value of a solution of $[Co(H_2O)(DH)_2J]$ changes in the same manner as electrical conductivity (Figs 5,6). The reaction constants calculated by the various methods are in good agreement (Table 1). It was a remarkable detection that the hydrolysis rate of the bromine compound was somewhat lower than that of the chlorine compound, and that that of the iodine compound was the least, whereas the compounds $[Co(NH_3)(DH)_2Hal]$ showed opposite behavior, i.e. only the iodine compound in the internal coordination sphere was hydrolyzed (Fig 7).

Card 2/3

05861

The Kinetics of Hydrolysis of Halogen. Bis-dimethyl Glyoxime Aquocobalt

SOV/78-4-11-14/50

(Abstracter's note: The term "hydrolysis" was substituted for "hydration" used by the author on account of the reaction equation complex Hal + $H_2O \rightarrow$ complex$^+$ + Hal$^-$ given in this article). There are 7 figures, 2 tables, and 24 references, 10 of which are Soviet.

ASSOCIATION: Moldavskiy filial Akademii nauk SSSR (Moldavian Branch of the Academy of Sciences, USSR)

SUBMITTED: July 2, 1958

Card 3/3

ABLOV, A.V., doktor khim. nauk, otv. red. (Kishinev); KHARITONINA, A.A., red. izd-va; MARKOVICH, G.L., tekhn. red.

[Summaries of reports to the All-Union Conference on the Chemistry of Cobalt and Nickel Complexes] Tezisy dokladov Vsesoiuznogo soveshchaniia po khimii kompleksnykh soedinenii kobal'ta i nikelia, 1960. Kishinev, Izd-vo "Shtiintsa" Moldavskogo filiala Akad. nauk SSSR, 1960. 74 p. (MIRA 14:7)

1. Vsesoyuznoye soveshchaniye po khimii kompleksnykh soyedineniy kobal'ta i nikelya, 1960.
(Cobalt compounds--Congresses) (Nickel compounds--Congresses)

ABLOV, A.V.; BURNASHEVA, Z.P.

Products of the addition of aniline and its derivatives to zinc halides. Zhur. neorg. khim. 5 no.3:604-609 Mr '60. (MIRA 14:6)

1. Kishinevskiy gosudarstvennyy universitet.
(Aniline)
(Zinc halides)

5.2620

69019
S/078/60/005/04/014/040
B004/B007

AUTHORS: Ablov, A. V., Samus', N. M.

TITLE: Mixed Dihalogeno-cobalt(III)-bis-dimethylglyoxime Acids

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 852 - 860 (USSR)

ABSTRACT: The present paper deals with the investigation of the trans-effect of I. I. Chernyayev (Ref 4) in dioximines of Co(III), which contain two different halogen atoms in the inner sphere. The authors proceed from the reaction $[Co(H_2O)(DH)_2Br] + HCl = H[Co(DH)_2ClBr] + H_2O$ (DH = dimethylglyoxime radical). The behavior of the bromochloric acid obtained was studied. The authors arrive at the result that bromine has a stronger trans-effect than chlorine, and that iodine has a stronger trans-effect than bromine and chlorine. They describe the reaction of HCl with $[Co(H_2O)(DH)_2Br]$ and that of HBr with $[Co(H_2O)(DH)_2Cl]$, the production of bromochloric acid $H[Co(DH)_2ClBr]$ and its salts with the complex cations $[Co(amine)_2(DH)_2]^+$, where amine denotes aniline or p-anisidine.

Card 1/2

69019

Mixed Dihalogeno-cobalt(III)-bis-dimethylglyoxime Acids S/078/60/005/04/014/040
B004/B007

Bromochloric acid was obtained also after the reaction of I. I. Chernyayev (Ref 7) by the reaction of the dichloro- with the dibromo-cobalt(III)-bis-dimethylglyoxime acid. The formation of aquoamino-, and pyridine complexes of bromochloric acid under the action of water, ammonia, or pyridine was investigated. By the reaction of KI with chloroaquo- or bromoaquo-compounds, the iodoaquo compounds were obtained. Salts of the iodochloric- and iodobromic acid were produced with the cation $[Co(amine)_2(DH)_2]^+$. With water or amines $[Co(DH)_2ClI]^-$ and $[Co(DH)_2BrI]^-$ form the corresponding aquo- and amino complexes. The authors refer to A. K. Babko and M. V. Korotun (Ref 14). There are 14 references, 12 of which are Soviet.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: January 20, 1959

Card 2/2

5.2620

S/078/60/005/06/05/030
B004/B014

AUTHORS: Ablov, A. V., Syrtsova, G. P.

TITLE: Complex Compounds of Trivalent Cobalt With Dimethyl Glyoxime, Which Contain a Sulfite Group

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 6, pp. 1221 - 1227

TEXT: The authors found that in the reaction of 2 moles of sodium sulfite with chloro-bis-dimethyl glyoxime aquocobalt $[Co(H_2O)(DH)_2Cl]$ (DH = monovalent radical of dimethyl glyoxime) two SO_3 groups enter the internal sphere of the complex compound and form the ion $[Co(DH)_2(SO_3)_2]^{3-}$. The Na-, K-, and NH_4 salts of this ion were prepared as well as the difficultly soluble complex compounds $[Co(NH_3)_6][Co(DH)_2(SO_3)_2]\cdot 8H_2O$, $[Co(NH_3)_5\cdot H_2O][Co(DH)_2(SO_3)_2]\cdot 9H_2O$, $[Co(en)_3][Co(DH)_2(SO_3)_2]\cdot 11H_2O$ (en = ethylene diamine), and $[Cr(H_2NCONH_2)_6][Co(DH)_2(SO_3)_2]\cdot 2H_2O$.

Card 1/2

Complex Compounds of Trivalent Cobalt With Dimethyl Glyoxime, Which Contain a Sulfite Group

S/078/60/005/06/05/030
B004/B014

By a reaction of $[Co(H_2O)(DH)_2Cl]$ with ammonium sulfite in the molar ratio 1 : 1 the stable compound $NH_4[Co(H_2)(DH)_2SO_3] \cdot 9H_2O$ is formed, which passes over into the disulfite compound when it is further heated with ammonium sulfite. The behavior of the monosulfite and disulfite compounds (only one sulfite group can be easily split off) is explained by the strong affinity of the SO_3 group to the metal as well as by the strong trans-effect of this group. The experimental part describes the syntheses and analyses, and contains light absorption curves, X-ray pictures, and physical data of the compounds. A table gives the molecular electrical conductivity of $Na_3[Co(DH)_2(SO_3)_2] \cdot 12H_2O$. The authors refer to papers by V. V. Lebedinskiy et al. (Refs. 7-11), A. V. Ablov and G. A. Popovich (Ref. 17). There are 2 figures, 1 table, and 17 references: 15 Soviet, 1 German, and 1 Japanese.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University)

SUBMITTED: February 24, 1959

Card 2/2

S/078/60/005/007/032/043/XX
B004/B060

AUTHORS: Ablov, A. V., Konunova-Frid, Ts. B., Palkin, V. A.

TITLE: Heats of Addition of Aniline and Its Derivatives to Cobalt Chloride

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7, pp. 1544-1550

TEXT: The authors study the problem as to whether the addition of amines, aniline, and aniline derivatives to $CoCl_2$ has a covalent or a dipole-ionic character. The latter assumption leads to a contradiction since p-chloro aniline with a distinct pole concentrated on the chlorine atom does not add with it but, like aniline, with the nitrogen atom. To clarify this problem, the authors determined calorimetrically the heats of addition of aniline, p-toluidine, p-chloro aniline, and p-bromo aniline, to anhydrous $CoCl_2$ at 25°C in 2 N hydrochloric acid. They started from the following cyclic process:

Card 1/5

$$\begin{tikzcd}
CoCl_2,\ 2\ [\{amine\}] \arrow[r, "L_1"] \arrow[d, "Q^*"'] & CoCl_2,\ 2\ [\{amine\}] \text{ solution} \arrow[d, "L'_2"] \\
{[CoCl_2.2\ amine]} \arrow[r, "L"] & CoCl_2,\ 2\ amine \text{ solut. solut.}
\end{tikzcd}$$

Q^* denotes the formation heat of the addition products at the experimental temperature and the given state of the amine, L the solution heat of the addition products, L_1 the solution heat of $CoCl_2$, and L'_2 the solution heat of the amine. The calorimeter used is described in a paper by I. I. Chernyayev, V. A. Sokolov, and V. A. Palkin (Refs. 11, 12). Q^* was calculated from the experimental data as being 18.66 kcal/mole for $CoCl_2.2H_2NC_6H_5$, 12.40 kcal/mole for $CoCl_2.2p\text{-}H_2NC_6H_4CH_3$, 9.36 kcal/mole for $CoCl_2.2p\text{-}H_2NC_6H_4Cl$, and 9.71 kcal/mole for $CoCl_2.2p\text{-}H_2NC_6H_4Br$. In order

to obtain comparable data, the approximate values of the heats of addition of gaseous amines on entering into the enlarged lattice of $CoCl_2$ were calculated on the basis of the respective cyclic process.
$A = Q^{\lambda}_{gas} + (S_{CoCl_2} - S_{CoCl_2amine})$, where S denotes the sublimation heats on the assumption that no dissociation takes place. A is the addition energy. The value of $S_{CoCl_2} - S_{CoCl_2amine}$ is defined as being the work required for the expansion of the layered lattice of $CoCl_2$ to the molecular lattice of the addition product. The authors observe that this notion must not be mixed up with the "expansion work" of an ionic lattice according to W. Biltz (Ref. 7). Table 2 gives the parameters of the elementary cell in kX, the angle β, the volume V of the elementary cell in A, the number n of formula units situated in the elementary cell, and the volume V' of the formula unit. Table 2:

Heats of Addition of Aniline and Its Derivatives to Cobalt Chloride

S/078/60/005/007/032/043/XX
B004/B060

Соединение * compound	Периоды ячейки, kX periods of cell			β	$V^{c}_{A^3}$	n	$V'^{o}_{A^3}$
	a	b	c				
1 $CoCl_2 \cdot 2n\text{-}H_2NC_6H_4CH_3$	12,30±0,05	4,59±0,01	26,10±0,1	93°45±5	1474	4	363,5
2 $CoCl_2 \cdot 2n\text{-}H_2NC_6H_4J$	12,00	4,60	31,4	93°18	1758	4	439,5
3 $CoJ_2 \cdot 2n\text{-}H_2NC_6H_5$	13,75	5,15	23,8	94°45	1660	4	415,0
4 $CoJ_2 \cdot 2n\text{-}H_2NC_6H_4CH_3$	16,75	5,08	41,2	90°,00	3500	8	437,5

In accordance with Ref. 16, a volume of 141 A^3 is assumed for the formula unit. Q^{*}_{gas} is calculated from the equation $Q_{gas} = Q^{*} + 2L_m + 2L_{ev}$ (L_m = melting heat, L_{ev} = evaporation heat of the amine at 25°C). Table 3 gives the boiling point, melting point, melting and evaporation heats of $C_6H_5NH_2$, $p\text{-}H_2NC_6H_4CH_3$, and $p\text{-}H_2NC_6H_4Cl$. Part of these data were taken from literature, and part were calculated according to Nernst (Ref. 24). After correcting these data for the temperature of 25°C, the authors obtain the following values for Q^{r}_{gas}: $CoCl_2 2C_6H_5NH_2$ 43.2 kcal/mole; $CoCl_2 . 2p\text{-}H_2NC_6H_4CH_3$ 45.9 kcal/mole; $CoCl_2 2p\text{-}H_2NC_6H_4Cl$ 45.2 kcal/mole;

Card 4/5

Heats of Addition of Aniline and Its Derivatives to Cobalt Chloride

S/078/60/005/007/032/043/XX
B004/B060

$CoCl_2 2p\text{-}H_2NC_6H_4Br$ 44.8 kcal/mole. The substituents on the benzene ring, thus, have little effect on the value of Q^*_{gas}. The Co-N bond of these addition products is not dependent on the dipole moment of the addendum, and therefore probably has a covalent character. A paper by T. I. Malinovskiy is mentioned. There are 3 tables and 25 references: 16 Soviet, 2 US, 2 British, and 5 German.

ASSOCIATION: Kishinevskiy gosudarstvennyy universitet (Kishinev State University). Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: March 16, 1959

Card 5/5

ABLOV, A.V.; NAZAROVA, L.V.

Effect of substituents in the molecule of the ligand on the stability of complex nickel salts. Zhur. neorg. khim. 5 no.8: 1735-1737 Ag '60. (MIRA 13:9)

1. Kishinevskiy gosudarstvennyy universitet.
(Nickel compounds)

ABLOV, A.V.; MAL'KOVA, T.A.; POPA, E.V.

Conversion of dinitroethylenediaminediamminocobaltinitrites during heating in the solid state. Zhur. neorg. khim. 5 no. 12:2704-2716 D '60. (MIRA 13:12)

1. Institut khimii, Moldavskiy filial Akademii nauk SSSR.
(Cobalt compounds)

ABLOV, A.V.; FILIPPOV, M.P.

Change in the absorption of light accompanying the splitting of a proton off bis (dimethylglyoxime) compounds of trivalent cobalt. Zhur. neorg. khim. 5 no. 12:2717-2726 D '60.
(MIRA 13:12)

1. Moldavskiy filial Akademii nauk SSSR, Institut khimii.
(Cobalt compounds)

ABLOV, A.V.; BATYR, D.G.

Determination of reducing agents in hydrolyzates. Gidroliz i lesokhim.prom. 13 no.2:7-10 '60. (MIRA 13:6)

1. Moldavskiy filial Akademii nauk SSSR (for Ablov). 2. Tiraspol'skiy gosudarstvennyy pedagogicheskiy institut (for Batyr).
(Wood--Chemistry) (Hydrolysis)

5.5230

77760
SOV/75-15-1-22/29

AUTHORS: Ablov, A. V., Batyr, D. G.

TITLE: Determination of Microquantities of Sugars Using Trihydroxyglutaric Acid - Copper Complex

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol 15, Nr 1, pp 112-114 (USSR)

ABSTRACT: It was found that the volumetric determination of sugar, using complex Cu-trihydroxyglutaric acid, a method proposed previously by the authors of this article (Zh. anal. chem., 12, 749, 1957), can be used for determination of microquantities of glucose, fructose, galactose, xylose, maltose, and saccharose. The following solutions were used: solution Nr 1, 40 g of $CuSO_4 \cdot 5\ H_2O$/liter; solution Nr 2, 128 g of trihydroxyglutaric acid and 207 g NaOH per liter. Procedure: place into a series of test tubes n ml of sugar solution (0.1 - 9 mg of sugar), 3-n ml of water,

Card 1/4

3 ml of solution Nr 1, and 3 ml of solution Nr 2; heat in boiling water for 6 min and cool; filter and wash the precipitate 2-3 times with hot freshly boiled water; dissolve the precipitate in 3-5 ml of a solution containing 86 g of $FeNH_4(SO_4)_2 \cdot 12H_2O$ and 103 ml of concentrated sulfuric acid per liter; filter and titrate the filtrate with a standard $KMnO_4$ solution. There is a definite relationship between the volume of standard $KMnO_4$ solution used and the sugar concentration. The results are shown in Table A. R. A. Batyr participated in the experimental work. There is 1 table; and 3 Soviet references.

ASSOCIATION: Moldavian Branch of Academy of Sciences USSR (Kishenev) and T. G. Shevchenko Tiraspol' State Pedagogical Institute (Moldavskiy filial AN SSSR (Kishenev) i Tiraspol'skiy gosudarstvennyy pedagogicheskiy institut imeni T. G. Shevchenko)

SUBMITTED: July 14, 1958

Determination of Microquantities of Sugars
Using Trihydroxyglutaric Acid - Copper Complex

77760
SOV/75-15-1-22/29

Key to Table A: (1) sugar; (2) experiment Nr; (3) taken mg; (4) found x_1, mg; (5) found mg (average); (6) dispersion; (7) accuracy; (8) probable relative error; (9) glucose; (10) fructose; (11) galactose; (12) xylose; (13) maltose; (14) saccharose.

Card 3/4

77760 SOV/75-15-1-22/29

TABLE A

Card 4/4

1	2	3 (a)	4	5 ($\bar{x}$)	6 (s^2)	7 ($t_{0.95} \cdot s_{\bar{x}}$)	8 ($\frac{s_{\bar{x}} \cdot t_{0.95}}{a} \cdot 100\%$)
9	1—9	1,00	0,996—1,004	1,002	$11 \cdot 10^{-6}$	0,0025	0,25
	10—18	3,00	2,990—3,012	3,002	$57 \cdot 10^{-6}$	0,0056	0,19
	19—27	6,00	5,991—6,008	5,999	$54 \cdot 10^{-6}$	0,0053	0,09
	28—36	9,00	8,976—9,012	8,995	$188 \cdot 10^{-6}$	0,0105	0,12
10	1—9	3,00	2,993—3,009	3,003	$77 \cdot 10^{-6}$	0,0067	0,22
	10—18	6,00	5,995—6,019	6,005	$57 \cdot 10^{-6}$	0,0058	0,10
	19—27	9,00	8,980—9,997	8,992	$54 \cdot 10^{-6}$	0,0056	0,06
11	1—9	3,00	2,991—3,006	3,001	$56 \cdot 10^{-6}$	0,0057	0,19
	10—18	6,00	5,998—6,012	6,006	$55 \cdot 10^{-6}$	0,0057	0,09
	19—27	9,00	8,989—9,003	8,995	$55 \cdot 10^{-6}$	0,0057	0,06
12	1—9	3,00	2,992—3,005	3,001	$42 \cdot 10^{-6}$	0,0050	0,17
	10—18	6,00	5,998—6,012	6,003	$49 \cdot 10^{-6}$	0,0054	0,09
	19—27	9,00	8,989—9,003	8,997	$55 \cdot 10^{-6}$	0,0057	0,06
13	1—9	3,00	2,982—3,002	2,998	$78 \cdot 10^{-6}$	0,0068	0,23
	10—18	6,00	5,984—6,026	6,003	$270 \cdot 10^{-6}$	0,0126	0,21
	19—27	9,00	8,986—9,007	8,993	$110 \cdot 10^{-6}$	0,0080	0,09
14	1—9	3,00	2,995—3,008	3,002	$47 \cdot 10^{-6}$	0,0053	0,18
	10—18	6,00	5,992—6,005	6,001	$42 \cdot 10^{-6}$	0,0050	0,08
	19—27	9,00	8,989—9,001	8,993	$36 \cdot 10^{-6}$	0,0046	0,05

30401

15.8180

S/058/61/000/009/013/050
A001/A101

AUTHORS: Ablov, A.V., Proskina, N.N.

TITLE: Light absorption by polymer compounds

PERIODICAL: Referativnyy zhurnal. Fizika, no. 9, 1961, 90, abstract 9V108 ("Uch. zap. Kishinevsk, un-t", 1960, v. 56, 17 - 23)

TEXT: The authors studied absorption spectra in the visible and ultraviolet ranges of spectrum by coordination polymers of the following composition: $Co(NH_3)_3 (NO_2)_3$ (I) and $Co\ en\ (NH_3)\ (NO_2)_3$ (II). They show that in all cases studied the full additivity of absorption of colored ions is preserved. Absorption spectra of polymer compounds of both composition (I) and (II) differ from each other. Cobaltic hexanitrite salt ions ("geksanitrokobaltiat-ion") are very unstable in aqueous solutions, especially at pH-values >6.

[Abstracter's note: Complete translation]

X

Card 1/1

ABLOV, A.V.; FILIPPOV, M.P.; SAMUS', N.M.

Existence of cis- and trans-diaquobis(dimethylglyoximato) cobaltates(III). Dokl.AN SSSR 133 no.3:575-577 Jl '60.
(MIRA 13:7)

1. Moldavskiy filial Akademii nauk SSSR i Kishinevskiy gosudarstvennyy universitet. Predstavleno akad. I.I.Chernyayevym.
(Cobalt compounds)

ABLOV, A.V.; SAMUS', N.M.

Dihydroxyimines of trivalent cobalt containing a selenocyano group. Dokl.AN SSSR 133 no.6:1327-1330 Ag '60. (MIRA 13:8)

1. Kishinevskiy gosudarstvennyy universitet. Predstavleno akad. I.I.Chernyayevym.
(Cobalt compounds)

ABLOV, A.V.; PALADE, D.M.

Salts of dibromo- and carbonatodiphenanthrolinecobalt (III)ion.
Zhur.neorg. khim. 6 no.3:601-605 Mr '61. (MIRA 14:3)

1. Moldavskiy filial AN SSSR, Institut khimii.
(Cobalt compounds)

SYCHEV, A.Ya.; ABLOV, A.V.; ZARINSKIY, V.A.

High frequency study of the hydration kinetics of halobis (dimethylglyoximato) aquocobaltate(III). Zhur.neorg.khim. 6 no.4:825-829 Ap '61. (MIRA 14:4)

1. Institut khimii Moldavskogo filiala AN SSSR, i Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR.
(Cobalt compounds)

ABLOV, A.V.; POPOVICH, G.A.. .

Ternary copper dl-tartrates forming in acid media. Zhur.neorg.
khim. 6 no.4:846-850 Ap '61. (MIRA 14:4)

1. Moldavskiy filial AN SSSR, Institut khimii.
(Copper compounds)

ABLOV, A.V.; IVANOVA, V.Ya.

Products of the addition of aromatic amines to cadmium halides.
Zhur.neorg.khim. 6 no.4:883-889 Ap '61. (MIRA 14:4)

1. Moldavskiy filial AN SSSR, Institut khimii.
(Cadmium compounds)

ABLOV, A.V.; PALADE, D.M.

Salts of cis-diaquodiphenanthrocobalt (III). Zhur.neorg.khim.
6 no.5:1110-1114 My '61. (MIRA 14:4)

1. Institut khimii, Moldavskiy filial AN SSSR.

(Cobalt compounds)

ABLOV, A.V.; KONUNOVA, TS.B.

Conference on the Chemistry of Complex Compounds of Cobalt and Nickel. Zhur.neorg.khim. 6 no.5:1256-1258 My '61.
(MIRA 14:4)
(Cobalt compounds) (Nickel compounds)

ABLOV, A.V.; SHAFRANSKIY, V.N.

Complex compounds of trivalent cobalt with dimethylglyoxime and thiourethans. Zhur.neorg.khim. 6 no.8:1781-1785 Ag '61.
(MIRA 14:8)

1. Moldavskiy filial AN SSSR, Institut khimii.
(Cobalt compounds) (Glyoxime) (Urethans)

SAMUS', N.M.; ABLOV, A.V.

Complex compounds of trivalent cobalt with thiosemicarbazide.
Zhur.neorg.khim. 6 no.9:2038-2042 S '61. (MIRA 14:9)

1. Kishinevskiy gosudarstvennyy universitet.
(Cobalt compounds) (Semicarbazide)

ABLOV, A.V.; NAZAROVA, L.V.

Stability of copper pyridinates in various solvents. Zhur.neorg.khim. 6 no.9:2043-2047 S '61. (MIRA 14:9)

1. Kishinevskiy gosudarstvennyy universitet.
(Copper compounds) (Pyridine)

ABLOV, A.V.; SAMUS', N.M.; BOLOGA, O.A.

Complex compounds of trivalent cobalt with dimethylglyoxime and organic derivatives of thiourea. Zhur.neorg.khim. 6 no.12:2680-2685 D '61. (MIRA 14:12)

1. Moldavskiy filial AN SSSR, Institut khimii i Kishinevskiy gosudarstvennyy universitet.
(Cobalt compounds) (Glyoxime) (Urea)

ABLOV, A.V.; GERBELEU, N.V.

Complex compounds of trivalent cobalt with dimethylglyoxime and thiosemicarbazones. Zhur.neorg.khim. 6 no.12:2686-2692 D '61. (MIRA 14:12)

1. Institut khimii, Moldavskiy filial AN SSSR.
(Cobalt compounds) (Glyoxime) (Semicarbazones)

ABLOV, A.V.; YABLOKOV, Yu.V.; ZHERU, I.I.

Electron paramagnetic resonance studies of the structure of certain copper acetates and copper chloroacetates. Dokl. AN SSSR 141 no.2:343-345 N '61. (MIRA 14:11)

1. Institut khimii Moldavskogo filiala AN SSSR i Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR. Predstavleno akademikom A.Ye. Arbuzovym.

(Copper acetate--Spectra)

ABLOV, A.V., akademik, doktor khim. nauk, otv. red.; SYROV, B.G., red.; POLONSKIY, S.A., tekhn. red.

[Conference on the Use of Physical Methods of Analysis in the Study of Complex Compounds; abstracts of reports] Tezisy dokladov Soveshchaniia po primeneniiu fizicheskikh metodov k issledovaniiu kompleksnykh soedinenii, 1962. Kishinev, Izd-vo "Shtiintsa," 1962. 75 p. (MIRA 16:6)

1. Soveshchaniye po primeneniyu fizicheskikh metodov i issledovaniyu kompleksnykh soyedineniy, 1962.2.Akademiya nauk Moldavskoy SSR, Institut khimii, Kishinev (for Ablov).
(Complex compounds) (Instrumental analysis)

S/078/62/007/002/019/019
B117/B101

AUTHORS: Ablov, A. V., Batyr, D. G.

TITLE: Conference of the Moldavian Republic on general and applied chemistry

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 2, 1962, 445 - 446

TEXT: This is a brief report on the Pervoye Moldavskoye respublikanskoye soveshchaniye po obshchey i prikladnoy khimii (First Conference of the Moldavian Republic on General and Applied Chemistry) held in Kishenev, September 13, - 16, 1961. This conference held by the Institut khimii Akademii nauk Moldavskoy SSR (Institute of Chemistry of the Academy of Sciences Moldavskaya SSR) and the Kishinevskiy gosudarstvennyy universitet (Kishenev State University) was attended by 170 chemists of the Moldavian Republic, and 30 scientists of scientific research institutions and schools of higher education of Moscow, Leningrad, Kiyev, Sverdlovsk, Dnepropetrovsk, and other cities of the USSR. Two plenary and 13 sectional sessions were held. 85 reports were given including 21 on inorganic chemistry. A. V.

Card 1/4

S/078/62/007/002/019/019
Conference of the Moldavian Republic ... B117/B101

Ablov, N. M. Samus', and O. A. Bologa reported on "Dioximines of trivalent cobalt of cis-configuration". N. I. Lobanov reported on "Bromates, iodates, and periodates of chromium (III)ammines", G. P. Syrtsova talked about "Complex compounds of trivalent cobalt with α-benzyl dioxime". Ts. B. Konunova and N. M. Samus' reported on the chromatographic study of mutual transitions of geometrically isomeric dioximines of trivalent cobalt. The chromatographic technique suggested by them roused great interest among the participants. D. M. Palade gave results on the examination of salts of oxalate and hydroxoaquodiphenanthroline cobalt(III). G. A. Popovich reported on a study of trioxyglutarates of monovalent and bivalent metals. A. V. Ablov and N. I. Belichuk reported on the interaction of diacetyl oxime hydrazone and some of its azines with nickel and copper salts. A. V. Ablov and G. G. Stratan talked about products of iodine addition to dioximines of trivalent cobalt. P. K. Migal' and N. Kh. Grinberg gave results on the complex formation of cadmium, lead and zinc ions with formamide in aqueous alcohol solutions. Ye. G. Chikryzova reported on polarographic studies of the behavior of bivalent cobalt and copper in solutions with different amounts of trihydroxy glutaric acid at

√

Card 2/4

different pH. A. V. Ablov and B. A. Bovykin reported on the "Determination of the stability constant of cobalt dioximine with thiourea". L. V. Nazarova gave a report on "Stability of complex cadmium compounds with pyridine and its derivatives". P. K. Migal' and G. F. Serova talked about the polarographic examination of composition and stability of cadmium, lead, and zinc complexes with monoethanol amine in aqueous alcohol solutions. P. K. Migal', A. Ya. Sychev, and A. P. Gerbeleu reported on the thermodynamics of stepwise complex formation of nickel ions with ethanol amines. V. N. Shafranskiy gave a report on complex compounds of trivalent cobalt with dimethyl glyoxime. N. V. Gerbeleu talked about crystalline products obtained from some thiosemicarbazones reacting with salts of bivalent cobalt, nickel, and zinc. N. M. Samus' reported on "Complex compounds of trivalent cobalt with thiosemicarbazide". I. M. Reybel' gave results on polarographic, potentiometric, conductometric, and optical studies of the activation kinetics of octammine-μ-(peroxo, amino)-dicobalt nitrate. A. V. Ablov and D. M. Palade reported on "Hydration kinetics of trans-halo-nitro-bis-dimethyl glyoximate cobaltiate ions". A. V. Ablov and V. G. Semina talked about "Composite tetrammines of bivalent platinum and their interaction with hydrochloric acid". Z. P.

S/078/62/007/002/019/019
Conference of the Moldavian Republic ... B117/B101

Burnasheva and Ts. B. Konunova reported on the thermochemical study of anilinates of zinc halides. The reports were vividly discussed. [Abstracter's note: Essentially complete translation.]

√

Card 4/4

ABLOV, A.V.; BELICHUK, N.I.

Metal derivatives of biacetyl oxime hydrazone. Zhur.neorg.khim. 7 no.4:777-782 Ap '62. (MIRA 15:4)

1. Moldavskiy filial AN SSSR, Institut khimii.
(Organometallic compounds) (Glyoxime) (Hydrazones)

ABLOV, A.V.; FILIPPOV, M.P.

Spectrophotometric study of the acid-base equilibrium of cobalt (III) dioximine complexes. Zhur.neorg.khim. 7 no.5:1021-1027 My '62. (MIRA 15:7)

1. Moldavskiy filial AN SSSR, Institut khimii.
(Cobalt compounds--Spectra) (Oximes)
(Acid-base equilibirum)

NAZAROVA, L.V.; ABLOV, A.V.

Determination of stepwise stability constants from potentiometric measurements of corresponding solutions. Zhur.neorg.khim. 7 no.6:1305-1308 Je '62. (MIRA 15:6)

1. Kishinevskiy gosudarstvennyy universitet.
(Complex compounds)

ABLOV, A.V.; SEMINA, V.G.

Mixed cis-tetramines of bivalent platinum with ammonia and aromatic amines and their reaction with hydrochloric acid. Zhur. neorg. khim. 7 no.8:1801-1810 Ag '62. (MIRA 16:6)

1. Institut khimii, Akademiya nauk Moldavskoy SSR.
(Amines) (Platinum compounds)
(Hydrochloric acid)

YABLOKOV, Yu.V.; ABLOV, A.V., akademik

Electron paramagnetic resonance of anhydrous copper salts of monocarboxylic acids. Dokl.AN SSSR 144 no.1:173-176 My '62.
(MIRA 15:5)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR i Institut khimii AN Moldavskoy SSR. 2. AN Moldavskoy SSR (for Ablov).
(Copper salts--Spectra)