

INDEX AND REFERENCE

PROCESSES AND PROPERTIES INDEX

BC

a-1

Common Elements

Materials Index

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

AGGREGATIVE STATES. II. Ratio of the temperature interval of existence of substances in the solid and liquid states; E. I. AGUMOV (J. Gen. Chem. Russ. 1965, 3, 1445-1454; cf. this vol., 21).--Theoretical. The aggregative coeff., $\phi_s(T_s - T_l)/T_l$, where T_s is the l.p. and T_l the m.p. (abs.), is evaluated for a no. of elements and compounds, and certain regularities are pointed out. R. T.

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117 AND 1200 CONCEPTS

PRINTED AND PROPERTY INDEX

4

Electrolysis of sodium nitrate from its solution in liquid ammonia. R. I. Akhmedov, N. A. Gombatov and E. A. Izetova. *J. Gen. Chem. (U. S. S. R.)* 3, 1744 (1935). -- Vapor pressures of NH_3 satd. with NaNO_3 at 0°, 4°, 13°, 16°, 20°, 25° and 30°, were found to be 2.20, 2.65, 3.03, 4.20, 4.96, 6.05 and 6.85 atm., resp. Sp. conds. of satd. solns at -10°, -18°, -7°, 0°, 3°, 10°, 15°, 15°, 10°, 10° and 30° were 0.0798, 0.0708, 0.1107, 0.1200, 0.1494, 0.1503, 0.1645, 0.1633, 0.1710, 0.1700 and 0.1776 reciprocal ohms, resp. Expts. on electrolysis of NaNO_3 from a soln. in liquid NH_3 were carried out at -30° to -30° by using 3.0 v. The cell was provided with a diaphragm. The decomn. products were NaNH_2 at the cathode and NH_4NO_2 at the anode. S. I. Malorsky

ASB. 11.A METALLURGICAL LITERATURE CLASSIFICATION

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117 AND 1200 CONCEPTS

PRINTED AND PROPERTY INDEX

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

18

ca

The problem of obtaining potassium and magnesium salts by leaching. R. J. Akhmedov. *J. Chem. Ind. (Moscow)* 12, 246-71(1935). The possibilities of extr. K and Mg from bore holes are discussed. H. M. L.

3RD AND 4TH ORDERS

GROUPS SYMBOLS INDEX

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ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION

3RD ORDER

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND DEGREE 3RD AND 4TH DEGREE

PROCESSES AND PROPERTIES INDEX

BC

a-1

Electrolysis of sodium chloride in liquid ammonia. H. B. Johnson and N. A. Gonsky. *J. Gen. Chem.* 1951, 25, 534-541; of A.I. Chem. 1950. Conductivities are recorded for solutions of NaCl-NH₃ and NaCl-NH₄Cl in liquid NH₃ at -35 to -39°. For saturated solutions of NaCl max. κ is at -3.5°. Degree connecting decomp. potential with temp. are given for solutions of NaCl in NH₃ and H₂O. *abstract from* R. T.

A S B - 3 L A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS	SUBGROUPS	SUBSUBGROUPS	SUBSUBSUBGROUPS
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MATERIALS INDEX COMMON ELEMENTS OPEN COMMON VARIABLES INDEX

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1ST AND 2ND ORDERS

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100 AND 2TH ORDERS

Chemical composition and optical properties of solutions. II. E. I. Akhmedov and M. P. Golovkov. *J. Gen. Chem. (U. S. S. R.)* 6, 642 (1930); cf. *C. A.* 29, 7107. Refractive indices of the system NaCl-KCl-NH₄Cl-H₂O at 15° are plotted on a triangular diagram (solid solns. were used). Several soly. detns. are given along the crystn. lines of NaCl + KCl, NaCl + NH₄Cl and NH₄Cl + KCl at 15°. V. A. Kalichevsky

ASB. 33.8 METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

PERCELS AND PROPERTIES INDEX

Investigation of the aggregate states. III. Properties and composition of binary eutectics of first type. K. I. Akhmov. *J. Gen. Chem.* (U. S. S. R.) 6, 569-76 (1930); *cf. C. A.* 30, 2444. - Eutectics of binary systems of the 1st type (classification of G. Tammann, *C. A.* 19, 1000) were assumed to obey the following relation deduced by Shreder (*Gornii Zhurnal* 4, No. 11 (1880)) and Le Chatelier (*Compt. rend.* 110, 638 (1884)): $\ln x = -(Q/2) \cdot [(1/T) - (1/T_0)]$ where: x = mols. % of solute, Q = latent heat of fusion of solute, T = abs. m. p. of soln., T_0 = abs. m. p. of solute. By considering each component separately as solute and the other as solvent a new equation is developed: $(Q_s/Q_b) \ln(1-x) = \ln x + (Q_s/2)(1/T_s - 1/T_b)$ where a and b refer to individual components. Further analysis shows that when the latent heats of fusion of the two components are equal: $Q_s/Q_b = \ln x / \ln(1-x)$ and $1 - (Q_s/2)(1/T - 1/T_0) + 1 - (Q_b/2)(1/T - 1/T_0) = 1$, when the m. ps. are equal: $x = w/(1+w)$, where $w = 1 - (Q_s/2)(1/T_b - 1/T_s)$, and $T = (Q_s/2) \ln[(Q_b/2) + (Q_s/2)]$, and when both latent heats of fusion and m. p. are equal: $x = 0.5$ and $T = 2Q_s/[1(Q_s/T_s) + \ln 4]$. The above formulas refer to ideal solns. but they can be applied practically by introducing the conception of activity coeff. of Lewis and Randall (*cf. C. A.* 13, 2374).

V. A. Kalichevsky

A 58-51 A METALLURGICAL LITERATURE CLASSIFICATION

E 2

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

2

COMMON ELEMENTS

OPEN

WATERGALS INDEX

ASB. S. LA METALLURGICAL LITERATURE CLASSIFICATION

RELATION BETWEEN THE SEPARATE AND COMBINED SOLUBILITIES OF COMPONENTS IN SYSTEMS WITH DOUBLE DECOMPOSITION. R. I. Akhmedov. *J. Gen. Chem.* (U. S. S. R.) 6, 601 (1936); *cf. C. A.* 20, 4052. -- By making certain fundamental assumptions the compns. of triple points in reciprocal salt systems of the type $KCl-NaNO_3$ and $NaCl-NH_4HCO_3$ which undergo double reaction in aq. soln. without forming double salts or solvates can be detd. mathematically. Examples are presented to show the agreement between exptl. data and theory. John Ldvak

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

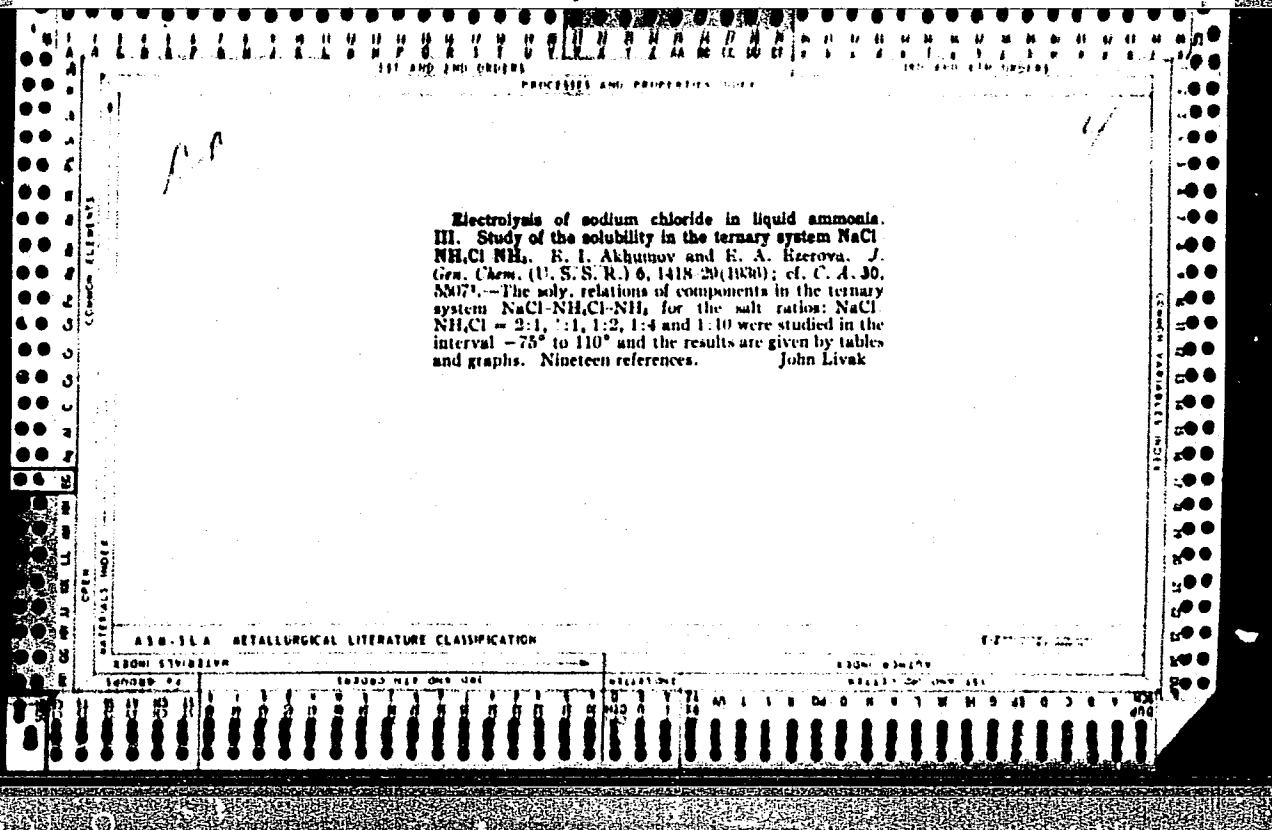
Ca 4

Electrolysis of sodium nitrite solutions in liquid ammonia. R. I. Akhmedov and N. V. Deryabina. *J. Gen. Chem. (U.S.S.R. K.)* 6, 1157-68(1938); cf. C. A. 30, 3807. — Tables showing the soly. of NaNO_2 in liquid NH_3 between -77.7° and 17.2° , sp. gr. of solns. at 20° , vapor pressures between -37.5° and 30.5° and elec. conductivities between -30° and 40° are presented. A compl. corresponding to $2\text{NaNO}_2 \cdot \text{NH}_3$ exists between -67.5° and -64° . In electrolyzing solns. at -35° NaNH_2 and H_2 are formed at the cathode and NH_4NO_2 and N_2 at the anode. V. A. Kalichevsky

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

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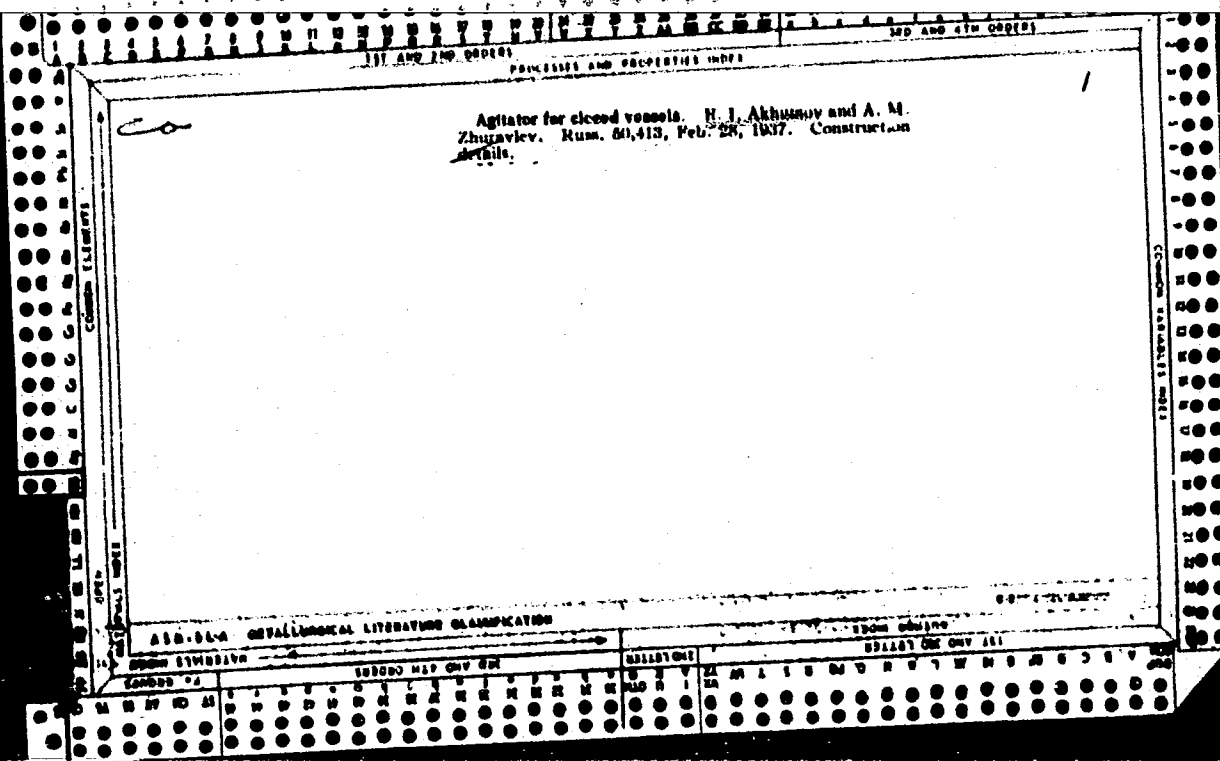
PROCESSES AND PROPERTIES INDEX

STABILITY OF SODIUM CARBONATE IN AQUEOUS AMMONIA.

H. I. Akhmedov and K. A. Ererova. *J. Applied Chem.*
 (U.S.S.R.) 9, 1173-7 (1936). -- Dry NH₃ gas was al-
 lowed to condense in a tube contg. Na₂CO₃ soln. placed in
 a Dewar flask. For the investigation of the Na₂CO₃-
 NH₃-H₂O system the following initial concns. were taken:
 Na₂CO₃ 1.13, 5.31, 6.66, 7.80, 10.01, 13.16, 15.13% and
 NH₃ 4.44%. Soly. isotherms for the system at 0°, 10° and
 20° are constructed. The soly. of Na₂CO₃ decreases con-
 siderably in the presence of NH₃ (soly. of Na₂CO₃ in 30%
 aq. NH₃ is equal to 1% at 20°). The ice field of this sys-
 tem is very small and located along its H₂O-NH₃ side.
 No references. A. A. Podgorny

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

E27



4

Electrolysis of potassium bromide in liquid ammonia
 B. I. Akhmedov and L. I. Druzaykova. *J. Gen. Chem.*
 (U.S.S.R.) 7, 208-204 (1937); cf. *C. A.* 31, 4139.

Soln. of KBr in liquid NH₃ was investigated in the temp.
 interval -84° to 98° by the method described in the
 previous work. The soln. curve consists of 3 branches
 in the first branch, in the interval -84° to -58°, the
 solid phase consists of NH₃, in the 2nd branch, -58° to
 -58°, the solid phase is KBr·(NH₃) and in the 3rd branch,
 -58° and up, the solid phase is KBr. The 1st and 2nd
 branches intersect at -84° and 11% wt. KBr; the 2nd
 and 3rd branches intersect at -58° and 27% wt. KBr.
 The results agree well with those of other investigators.

A study was also made of vapor pressure and cond. of a
 satd. soln. of KBr in NH₃ in the interval -31° to 30°,
 also of the 20° isotherm of sp. gr. of KBr in NH₃ soln.
 Decompn. voltage of KBr in NH₃ at -35°, at atm.
 pressure, was found to be 3.45-3.6 v. Electrolysis of
 KBr in liquid NH₃ was carried out successfully, with
 6-10 v., and a yield of 80-90% KNH₂ was obtained.
 S. I. M.

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

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2

CA The solubility of a solid substance in a binary mixed solvent. I. B. F. ABRAHAMOV, J. Gen. Chem. (U. S. S. R.) 9, 1907-19 (1939).—A theoretical discussion of the ternary system $S-L_1-L_2$ and the deduction of the formula $Y = Y_1(1-X)^{n_1} + Y_2X^{n_2}$ for the partial soly. of a solid substance S (under ordinary conditions) in a binary mixed solvent $L_1 + L_2$ in which Y_1 and Y_2 are the sep. solubilities of S in the binary systems $S-L_1$ and $S-L_2$, X is the no. of moles of L_2 in the binary solvent. The exponents n_1 and n_2 det. the processes of solvation by means the components of the mixed solvent L_1 and L_2 in the presence of the 3rd component S in the soln. With an increase of the temp. n_1 and n_2 decrease. The condition for the mutual solvation in the components of the mixed solvent is more favorable in the components of the pure solvents. An equation $K = [(Y_1 - Y)/Y_1 X] - 1$ is deduced which can be utilized for the calcn. of the no. of moles of water that hydrate the alc. in water-alc. solns. If there are common ions between the S and L_1 or S and L_2 , the partial soly. of the solid in the mixt. ($L_1 + L_2$) is expressed by $Y = Y' + Y''$, where Y' is the decrease of the soly. caused by the mutual solvation of L_1 and L_2 , and Y'' by ionic equll. Seven references are given. II. *Ibid.* 1290-96 (1939).—Examples illustrate the above deductions. The systems investigated were $C_{12}H_{22}O_{11}-C_2H_5OH-H_2O$, $KCl-C_2H_5OH-H_2O$, $NaCl-C_2H_5OH-H_2O$, $Na_2S_2O_3-C_2H_5OH-H_2O$, $KCl-NH_4-H_2O$, $Na_2CO_3-NH_4-H_2O$ and $NaNO_2-NH_4-H_2O$.

The equations given agree with the exptl. material on the soly. in ternary systems, and good agreement was found between $Y_{calc.}$ and $Y_{exptl.}$. The relation between the soly. of a solid substance in a binary solvent is true to the first approximation for $n = const.$, and is exact for $n = const.$. The conceptions of partial soly. in a binary solvent are very important from a theoretical point of view. However, the question of the exptl. detn. of Y_1 and Y_2 when $Y_1 = 0$ and $Y_2 = 0$ is still not clear. Eight tables, 12 diagrams and 12 references. W. R. Hearn

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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(1ST AND 2ND ORDERS) (1ST AND 2ND ORDERS)

PROCESSES AND PROPERTIES INDEX

2

CA

Application of the methods of physicochemical analysis for the representation and systematization of organic chemical compounds. E. I. Akhmedov. *Uspekhi Khim.* 9, 59-70(1940).—The contents of org. chem. compds. are represented by means of phase diagrams; as binary systems in the case of hydrocarbons, ternary for C,H,O; C,H,N; C,H,J, and like compds., and quaternary for C,H,O,N compds. F. H. Rathmann

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

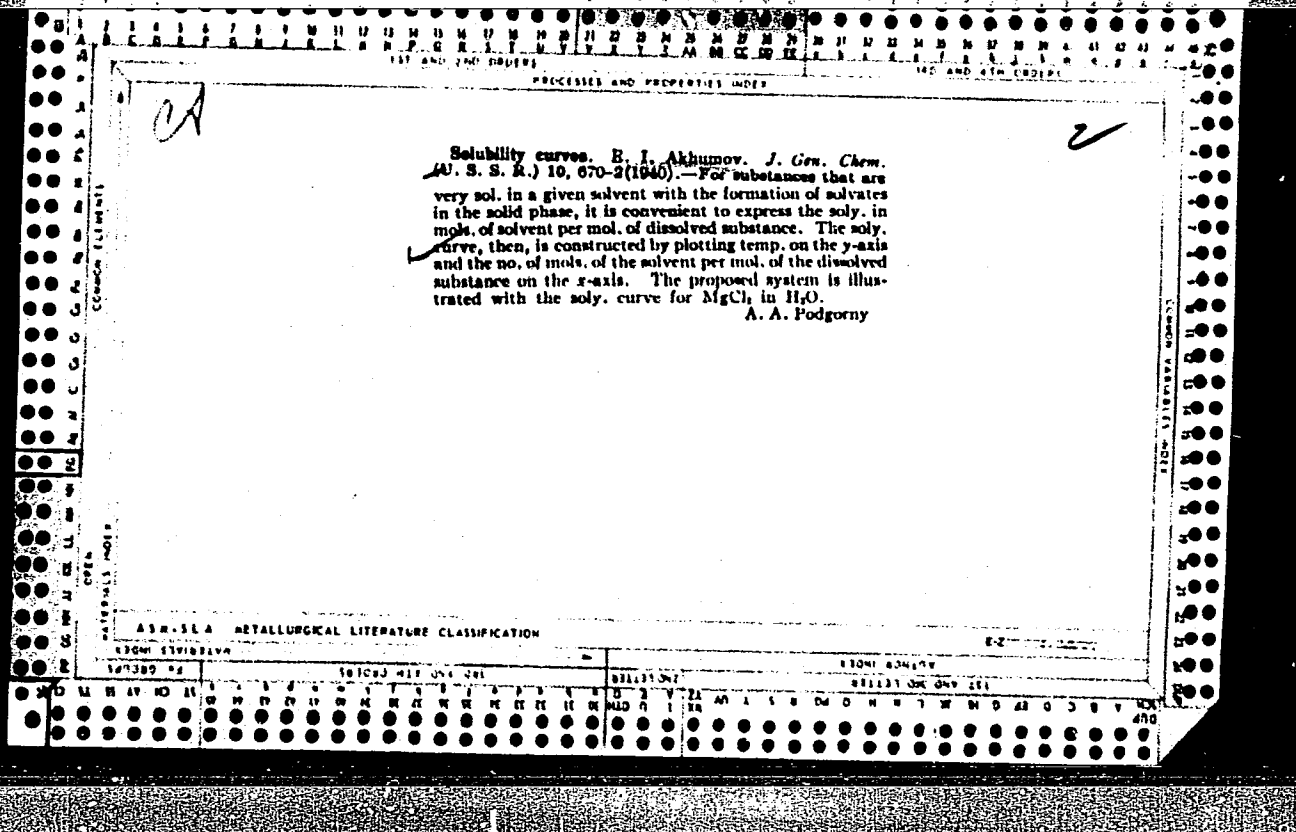
COMMON VARIETIES INDEX

OPEN MATERIALS INDEX

(1ST AND 2ND ORDERS) (1ST AND 2ND ORDERS)

(1ST AND 2ND ORDERS) (1ST AND 2ND ORDERS)

COMMON ELEMENTS COMMON VARIANTS MOET	15 Apparent molar volumes of salts in ammonia and water solutions. E. I. Akhmedov. <i>J. Gen. Chem.</i> (U. S. S. R.) 10, 233-40(1940).—The apparent molar vols. NH_4Cl , NH_4Br , NH_4NO_3 , NaCl , NaN_3 and NaNO_3 in ammonia and water solns. were compared isothermally. As a rule, the apparent molar vol. of dissolved salt increased with increase in concn. of soln. This increase was considerably larger in ammonia solns. than in water. The values for apparent molar vol. of salts in ammonia soln. were considerably smaller than those in water, the concn. (in mol. fraction) of solns. being the same. The values for apparent molar vols. of ammonium salts in water solns. were higher than the mol. vol. of the pure component, whereas in ammonia soln. those values were lower. The apparent molar vol. of sodium salts in both cases were lower than the molar vol. of pure components. NaCl and NaNO_3 had neg. apparent molar vols. in dil. solns. A. A. Prokofev		COMMON VARIANTS MOET
	AS-31A METALLURGICAL LITERATURE CLASSIFICATION		
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GROUP #2	GROUPS HIS QM V 524	COLLIGATIVE	
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1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

Common Element

Common Variable Index

ca

2

Comparison of the solubilities in binary systems of type I. E. I. Akhmanov, *J. Gen. Chem.* (U. S. S. R.) 10, 1471-80 (1940); *Ch. C. A.* 34, 920A¹.—The paper discusses the theory of comparing the solubilities in binary systems of type I (according to the classification of Tamman). Investigations of the solubilities of various compds. showed the unreliability of the isothermal comparison of the solubilities. The study of the log of the soly. shows that the temp. of fusion can be included in the equation. The log of the soly. shows a relation between the soly. x and the temp. θ . The chem. nature of the substances that form the system is detd. by the values of the coeffs. ϕ and f . The various solubilities are compared at identical temps. For perfect solns. their ratio is const. and is detd. by the coeff. ϕ . For real solns. this ratio is not const. and is detd. by the product ϕf . Examples are given which support the theoretical generalizations. 34 references. W. R. Henn

ASIS-ALA METALLURGICAL LITERATURE CLASSIFICATION

EXTRACTS

EXTRACTS

EXTRACTS

CA

PROCESSES AND PROPERTIES INDEX

2

Zero period of the periodic system of the elements.
 E. I. Ashurov. *J. Gen. Chem. (U.S.S.R.)* 10, 601-3
 (1946) (in Russian).—Elementary atomic particles are
 considered as chem. elements. In order to place the par-
 ticles in the periodic system a zero period is introduced
 into the usual table. The electron is placed in the 7th
 group, whereas the neutron is placed in the inert-gas group.
 O. M. Kozlov

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COPIES

3RD AND 4TH COPIES

MATERIALS INDEX

COMMON ELEMENTS

COMMON CHARACTERISTICS INDEX

GROUPS

RELATIONS

1ST LETTER

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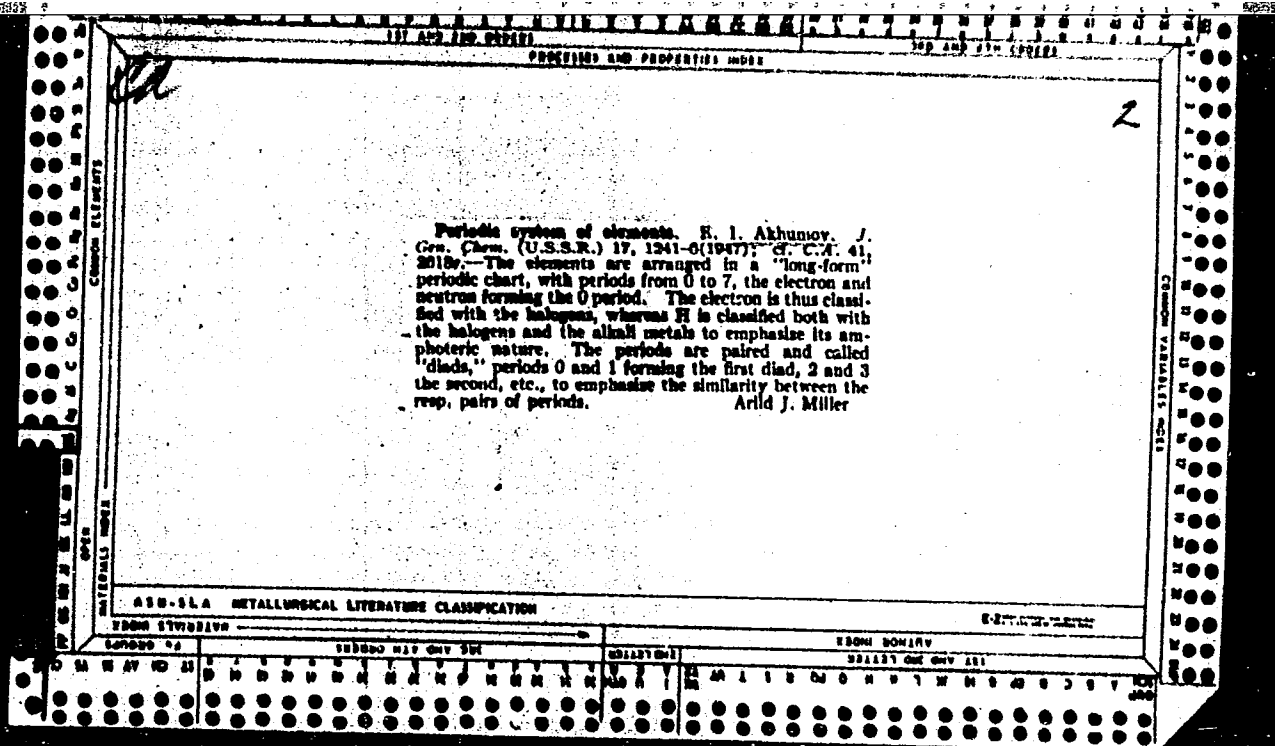
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PROCEDURES AND PROPERTIES INDEX

2

Use of graphic methods in the systematization of inorganic compounds. E. I. Akhurov. *Zhur. Obshchei Khim. (J. Gen. Chem.)* 19, 545-53(1948).—Graphic methods can be used to systematize the types of compds. formed between various kinds of elements by use of an equilateral triangle. Two-component compds. are represented along one side of the triangle; 3-component compds. use the 3 corners of the triangle for the 3 components (as in 3-component phase diagrams); 4-component compds. can be represented by the triangle method, by use of a slightly different method, or by means of a tetrahedron.
 Arild J. Miller

A 13-51A METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

2

CA

Calculation of the heats of fusion of iron carbide and silicide. R. I. Akhramov, *Zhur. Priklad. Khim.* (J. Applied Chem.) 21; 227-34(1948).—The heats of fusion Q of Si, of $(Fe_3C)_2$, and of $(FeSi)_2$, not directly measurable, are calcd. from data of binary melting diagrams by the formulas of Schroeder (*Z. phys. Chem.* 11, 449(1903)) and Le Chatelier (*Compt. rend.* 112, 638(1894)), $Q_A = -2 \ln x / (1/T - 1/T_A)$ where T = obs. melting temp. at the comp. x (mole fraction of component A), T_A = obs. melting temp. of pure A, along the branch of A of a Tammann-type-I melting diagram (no compts., no mixed crystals, no liquid soly. gap, one eutectic). (1) Applicability of the S. and LeC. logarithmic formula to the system Al-Si is demonstrated by calcn. of the eutectic temp. T_e , giving $T_e = 928^\circ K.$ as against the expl. $850^\circ K.$ From the Si branch of the diagram, one finds $Q(Si) = 7478 \text{ cal./g.-atom} = 246.8 \text{ cal./g.-atom/degree}$. (2) From the Fe-(Fe₃C)₂ portion of the Fe-Si diagram, assuming $x = 0$, one finds, along the Fe branch, $T_e = 1458^\circ K.$ as against the expl. $1478^\circ K.$ From the (FeSi)₂ branch, $Q(FeSi)_2 = 40800 \text{ cal./mole} = 81.4 \text{ cal./g.}$, and $\Delta S = 24.13 \text{ cal./mole/degree}$. (3) From the Fe portion of the system Fe-C, if the formula $(Fe_3C)_2$ is assumed for the carbide according to Werner's representations, the calcd. T_e (78.07 mole % Fe, 21.93 mole % $(Fe_3C)_2$) = $1260^\circ K.$ against the expl. $1400^\circ K.$; the 9% discrepancy is considered acceptable. From the $(Fe_3C)_2$ branch, $Q(Fe_3C)_2 = 13480 \text{ cal./mole} = 51.5 \text{ cal./g.}$, $\Delta S = 10.14 \text{ cal./mole/degree}$.

N. Thon

458-35A METALLURGICAL LITERATURE CLASSIFICATION

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CA

Laws of solubility changes. II. Energy characteristics of eutectic points of polytherms in multicomponent systems. E. I. Akhmedov and N. S. Sobro. *Zhur. Obshch. Khim.* 19, No. 1, 17-23 (1949); *J. Gen. Chem. (U.S.S.R.)* 19, 18-20 (1949) (English translation); cf. *C.A.* 43, 6923h. — In considering deviations from ideality in real solns., the quantity φ is introduced, defined by the relation $\varphi = K_1/K_0$, where K_0 is the equil. const. in terms of concn. and K_1 in terms of activities. φ is thus a measure of the non-ideality of the soln., and its evaluation involves the knowledge of activity coeffs. It is closely related to the free energy change in the system, since $\Delta F = \Delta F_0 - RT \ln \varphi$. A plot of $\log \varphi$ against $1/T$ results in a straight line. Various data are analyzed using the quantities mentioned above. III. Energy characteristics of isotherms in multicomponent systems. *Zhur. Obshch. Khim.* (J. Gen. Chem.) 20, 2117 (1950). — Theoretical equations are derived on the basis of the "reduced equation const.," previously defined as $\varphi = K_1/K_0$, and they are applied to data from various sources for the systems NaCl-KCl-H₂O and NaCl-MgCl₂-H₂O (cf. *C.A.* 27, 2871). In a 3-component system, a soln. that is liquid with respect to one component can be considered as a new solvent for the component with respect to which the soln. is solid. In such a system, if the concn. of this component is held const., the activity of the other component varies exponentially with the temp. At const. temp., $\log \varphi$, and hence ΔF , are proportional to the logarithm of the concn. of the component with respect to which the soln. is solid. Arif I. Miller

CA

Laws of changes of solubility. IV. Solubility equation for the isotherm in multicomponent systems. E. I. Akhmedov and N. S. Spirin. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 46-51(1951); cf. C.A. 44, 9215A.—An equation for the isotherm in multicomponent systems is rigorously derived by making use of the reduced equil. const. which was introduced in the previous paper. The equation can be solved algebraically only when it is not higher than 4th order; however, graphic methods give results of desired accuracy. Application of the equation to data from the literature for the system NaCl-KCl-H₂O gave values which were in good agreement with exptl. data. V. Raoult's law. *Ibid.*, 51-8.—Raoult's coeff. is expressed as the reduction of the pressure of the satd. vapor of the solvent over a soln. per unit pressure. At const. temp. and within broad concn. limits (up to satn.), Raoult's coeff. changes linearly with concn., and the slope of the curve depends on the chem. nature of the dissolved material. In unsatd. solns. having const. concn., Raoult's coeff. changes exponentially with respect to temp., and in satd. solns. the same is true. Data are given for the following systems and Raoult's coeff. is calcd. therefrom: CuH₂O₂-H₂O (0-70°), KCl-H₂O (20-100°), MgCl₂-H₂O (0-116°), and NaNO₃-H₂O (0-125°).
Paul W. Howerton

1251

AKHUNOV, E. I.

"Laws of change of solubility. V. Raoult's Law." (p.51) by E. I. Akhurov and
H. S. Spiro.

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1951, Volume 21,
No. 1

AKHUMOV, E. I.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
General and Physical Chemistry

(2) 3
The laws of change of solubility. VI. Raoult's law.
E. I. Akhumov and N. S. Spiro. *J. Gen. Chem. U.S.S.R.*
1954, 30, 3 (1954) (Engl. translation).—See C.A. 47, 5707e.

H. L. H.
11-5-54

IL'INSKIY, V.P.; KOROLEV, V.F.; AKHUMOV, Ye.I.

Sodium chloride dihydrate. J.appl.Chem. USSR '52, 25, 507-515.
(BA-AI Je '53:511) (MLRA 5:5)

AKHUMOV, YE. I.

USSR/Chemistry - Priorities

Nov 52

"The Effect of Temperature on the Direction of Displacement of Chemical Equilibria During Reversible Reactions," Ye. I. Akhumov and B. Ya. Rozen, Leningrad

"Zhur Fiz Khim" Vol 26, No 11, pp 1711-1712

The authors refer to a publication by a Russian scientist, A. L. Potylitsyn, in 1881, which, they claim, preceded van't Hoff's formulation of his law of equil by four years. Therefore, they state, the Russian scientist had priority, and the van't Hoff law should be henceforth renamed the Potylitsyn-van't Hoff law.

242T19

AKHUMOV, E. I.

Chemical Abst.
Vol; 48 No. 9
May 10, 1954
General and Physical Chemistry

✓ The second curve of solubility (supersaturation). E. I. Akhumov and B. Ya. Rozen. *Doklady Akad. Nauk S.S.S.R.* 85, 303-8 (1952). The max. concns. of supersatd. solns. of anhyd. and hydrated salts obey the soly. law of Le Chatelier and are considered as the "second" soly. of a given substance. This conclusion is supported by available data on K_2SO_4 , $HgCl_2$, $K_2Cr_2O_7$, and 8 hydrates of Na_2CO_3 .
I. Benconite

②
Lem

9-2-54
JAP

Abstract, Y. S.

... quaternary system. A quaternary system is a system of more than 2 components.

... solvent. By varying the concn. of $MgCl_2$...

Akhunov, E. I.

CH
60

✓ Salt deposits of Lake No. 5 of the Karabogazgol Bay. B. I. Akhunov and V. M. Bukshteln. *Trudy Vsesoyuz. Nauch. Issledovatel. Inst. Galurg.* 1953, No. 27, 214-20; *Referat. Zhur., Khim.* 1954, No. 44566.—Lake No. 5 is a unit of the production basins for mirabilite from the Karabogazgol Bay brine and is used for dumping mother liquor. Over a period of years thick salt deposits have accumulated in this lake. The mother liquor discharged into this lake contains 1.5 times more KCl than the brine in the production basins. As of March 1948 the mother liquor discharged into this lake contained SO₄ 12.17, Cl 54.08, Mg 8.80, Na 23.28, and K 1.69 wt. %. To det. the compn. of the surface layers of the salt deposits 5 holes were drilled to a depth of 100-60 cm. At a distance of 1 km. from the point where the mother liquor is discharged into the lake there was a sharp accumulation of SO₄ (14.24-26.24%). Beyond this point and going farther away there was a decrease of SO₄ and an accumulation of Cl. The compn. of the salts expressed in the Jeneke index was Mg 40.70 and SO₄ 14.24. The basic minerals were halite and epsomite. Some carnallite was also found. M. Hosh

①

B. I.

HSSD:

Activity and the activity coefficient of water in binary solutions. B. I. Akhmedov and N. S. Surov. *Zhur. Fiz. Khim.* 19, 000-0000 (1984), 45, 74117, 47, 5767.
By use of rules developed earlier for the Raoult and
conjugate formulas are obtained for the activity
of water in binary systems.

AKHUMOV, Ye. I.

(3)

6

Supersaturated solutions. Ye. I. Akhumov and B. Ya. Rosen (Machine Construction Inst., Leningrad Branch). *Zhur. Fiz. Khim.* 27, 1700-6 (1953); cf. *C.A.* 48, 4936f. —A math. discussion of supersatn. and supercooling of aq. solns. of salts. Values of soly. calcd. for stable and metastable equl. at various temps. for K_2SO_4 , $Th(SO_4)_3$, and $Na_2S_2O_7$ are given as examples. J. W. Lowenberg, Jr.

mf

Akhumov, E.I.

U.S.S.R.

The relation between the concentrations for isoactive aqueous two-component systems. E. I. Akhumov and N. S. Solov. *Doklady Akad. Nauk S.S.S.R.* 91, 673-6 (1963).
The properties of aq. 2-component systems that are isoactive with respect to the solvent are studied. An equation is derived showing that a linear relation exists between the inverse values of the cosines of the different 2-component systems at const. temp. This relation is illustrated by data on the systems HCl, NaOH, NaNO₃, Na₂CO₃, MgCl₂, CaCl₂, and MgSO₄ in water. J. Rovnar Lenth

MA 82

USSR/Chemistry - Natural Salts

Card 1/1

Author : Akhumov, Ye. I., Cand Chem Sci, Docent; and Rozen, B. Ya., Cand Chem Sci, Docent, reviewers

Title : Manual of experimental data on the solubility of multicomponent aqueous salt systems

Periodical : Khim. prom. 3, p 62 (190), April-May 1954

Abstract : This is a review of the book Spravochnik Eksperimental'nykh Dannyykh po Rastvorimosti Mnogokomponentnykh Vodno-Solevykh System (Manual of Experimental Data on the Solubility of Multicomponent Aqueous Salt Systems) compiled by A. B. Zdanovskiy, Ye. I. Lyakhovskaya, and R. E. Shleyovich under the general editorship of V. M. Likhteyn, M. G. Valyashko, and A. D. Pel'sh, Vol. 1, Trekhkomponentnyye Sistemy (3-Component Systems), Goskhimizdat, Leningrad, 1953, 672 pp.

Institution : All-Union Institute of Halurgy. (Authors of the book)

AKHUMOV, YE. I.

AID P - 912

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 3/22

Authors : Akhumov, Ye. I. and Nikolayeva, Ye. I.

Title : Moisture content of table salt

Periodical : Zhur. prikl. khim., 27, no. 5, 480-484, 1954

Abstract : The maximum moisture capacity of Baskunchi table salt was determined by using the so-called "first drop method". A description of this method is given. The relation of the moisture capacity to the granulometric composition and volumetric weight was established. Four references (Russian: 1947-1952). Two tables, 1 diagram.

Institution : None

Submitted : F 24, 1953

AKHUMOV, E. I.

CH Water capacity of table salt. E. I. Akhumov and E. I. Nikolaeva. *J. Appl. Chem. U.S.S.R.* 27, 447-8 (1954). (Engl. translation).—See *C.A.* 48, 11147c. B. M. R.

AKHUMAY V. I.

U S S R .

Solubility of chlorides in hydrochloric acid. R. I. Akhumay and N. S. Spiro. *Zhur. Priklad. Khim.* 27, 1163-9 (1954); cf. *C.A.* 45, 7411c. —The soly. of a salt MR_n in an aq. soln. of an acid HR is expressed by $\log \varphi = a + b \log c$, where a and b are const., c is the MR_n concn. (M), and φ is the reduced equil. const. (cf. *C.A.* 44, 9216a). Available data on the soly. of NaCl (30°), MgCl₂ (0 and 35°), AlCl₃ (25°), and mixts. of NaCl + KCl (25°) in aq. solus. of HCl substantiate this relation. I. Benecowitz

H L K O W O X E L I

Akhumov, E. I.

USSR

Solubility of nitrates in nitric acid. E. I. Akhumov.
Zhur. Priklad. Khim. 27, 1324-6 (1954); cf. *C.A.* 38, 927.
 Aq. HNO₃ is treated as a binary solvent contg. x mole frac-
 tion of HNO₃ and $(100 - x)$ H₂O. The soly. L of nitrates
 is then given by $L = l_1 + l_2 = L_1[1 - (x/100)]^{n_1} +$
 $L_2(x/100)^{n_2}$, where l_1 and l_2 are the partial solubilities of I
 in H₂O and HNO₃, and L_1 and L_2 are the solubilities of I
 in H₂O and HNO₃. The values of n can be obtained from
 expl. data sufficient to set up 2 equations. A simplifying
 approximation is suggested: for $x \lesssim 10$ the 2nd term of
 the equation can be ignored, and for $x \gtrsim 90$ the 1st term
 The values of n_i can then be obtained from the respective
 expl. data of Nikolaev, *et al.* (*C.A.* 30, 943) on the soly.
 of KNO₃. I. Bencowitz

Akhumov, E. I.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 9/27

Authors : Akhumov, E. I., and Spiro, N. S.

Title : Equation of the state of two-component solutions

Periodical : Zhur. fiz. khim. 28/9, 1591-1598, Sep 1954

Abstract : The applicability of the van der Waals equation to two-component aqueous solutions was investigated at a wide range of temperatures and concentrations. The value of individual coefficients in the van der Waals equation, applicable to two-component aqueous solutions, was analyzed. Calculated data for two-component solutions, which confirm the possibility of applying the van der Waals equation to such two-component aqueous solutions, are presented. Certain empirical relations, based on the equation of state for solutions, were theoretically substantiated. Seven USSR references (1935-1953). Tables.

Institution : ...

Submitted : December 7, 1953

AKHUMOV, E. I.

Ye. I.

USSR/Chemistry - Physical Chemistry

Card 1/1

Authors : Akhumov, E. I., and Spiro, N. S.

Title : About the pressure curve of saturated two-component aqueous solutions

Periodical : Dokl. AN SSSR, 97, Ed. 2, 269 - 272, July 1954

Abstract : The effect of critical phenomena (temperature rise) on the pressure curve of two-component aqueous solutions of highly soluble non-volatile salts is described. The pressure rises to a certain known maximum and then decreases reaching zero at a melting temperature. This phenomenon is observed in the case of salts with melting point which is lower and also much higher than the critical temperature of water. An explanation of this interesting phenomenon is given in this report. Ten references. Tables, graphs.

Institution : The V. I. Ul'yanov Electro-technical Institute, Leningrad

Presented by : Academician I. I. Chernyaev, March 23, 1954

AKHUMOV, Ye. I.

AID P - 2266

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 11/19

Authors : Akhumov, Ye. I. and N. S. Spiro

Title : ~~Calculation of activity coefficients of water in two-component solutions~~
Calculation of activity coefficients of water in two-component solutions

Periodical: Zhur. prikl. khim., 28, no.2, 205-208, 1955

Abstract : Formulas for the measurement of the activity coefficients are given. Aqueous solutions of chlorides of alkali metals and alkaline earth metals were studied at 25°C. Two tables, 4 references (all Russian: 1952-1953).

Institution: None

Submitted : 0 3, 1953

AKHUMOV, Ye.I.; ROZEN, B.Ya.

T.E.Lovits, founder of microcrystallo-optical analysis. Priroda
44 no.11:77-80 N '55. (MLBA 9:1)

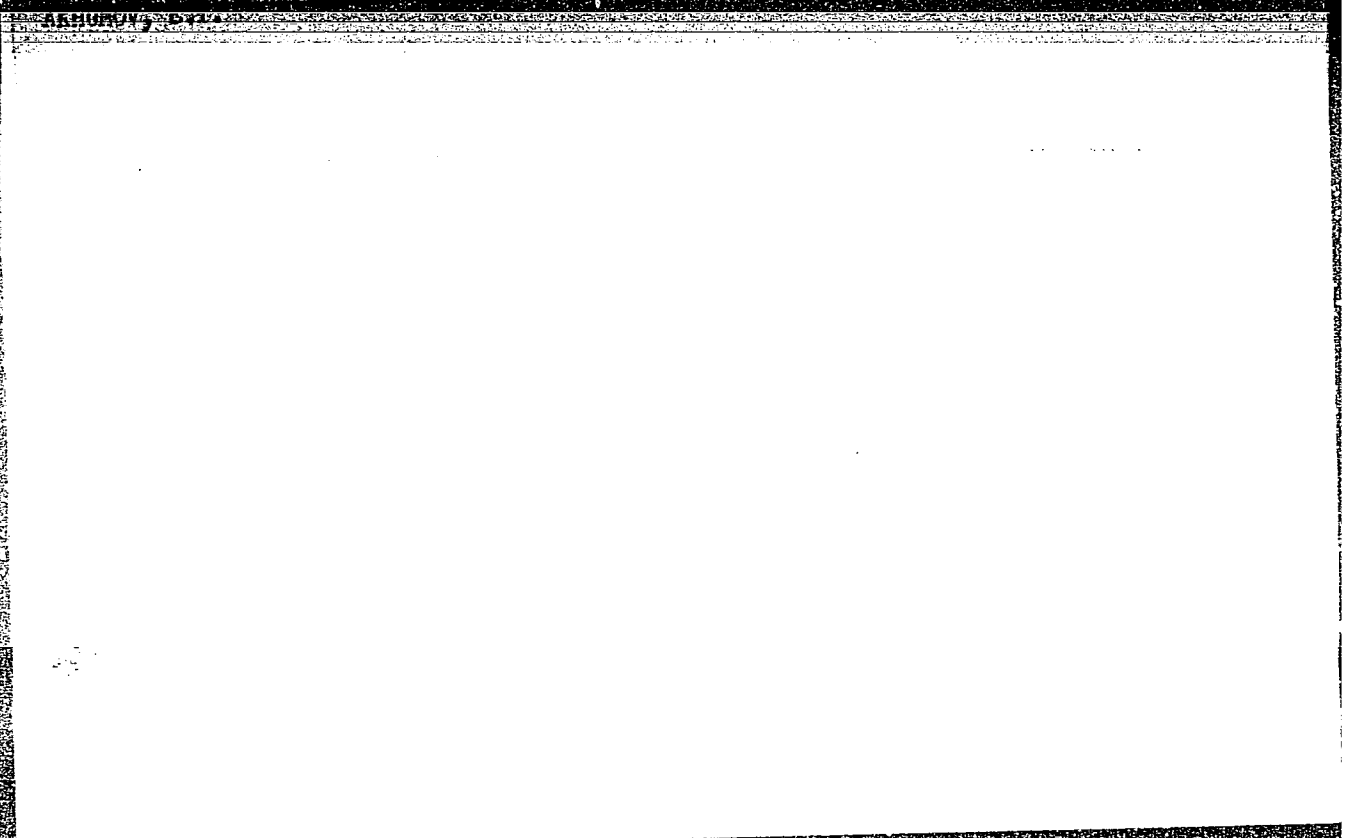
(Lovits, Tsvii Egerevich, 1757-1804) (Crystallochemistry)

AKHUMOV, Ye.I.

Processing of sea water in cold climates. Zhmr. prikl. khim. 29 no.4:
569-577 Ap '56. (MIRA 9:11)
(Sea water) (Salt industry)

"APPROVED FOR RELEASE: 06/05/2000

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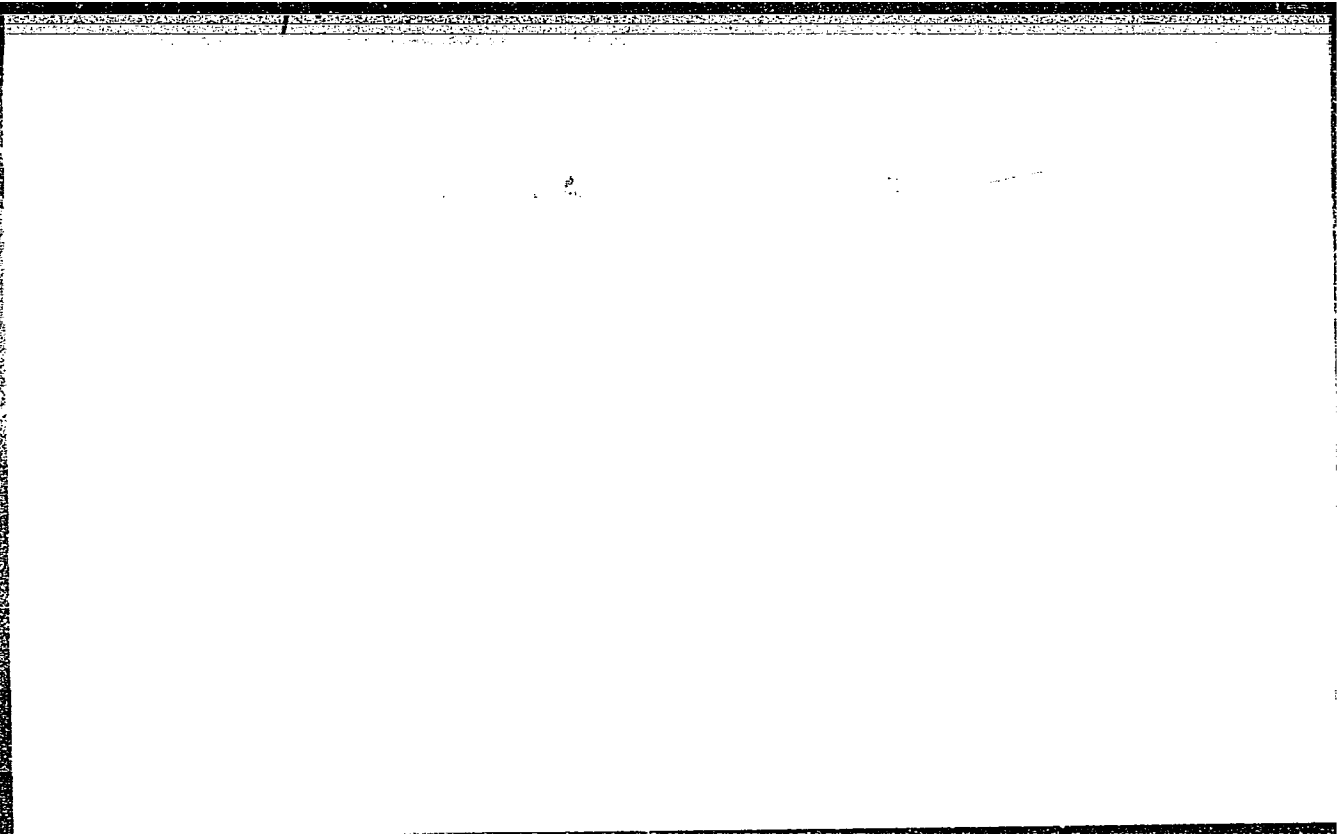
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AKHUMOV, Ye. I.; ROZEN, B. Ya.

"Handbook of experimental data on the solubility of multi-component water and salt systems. Vol.2. "Quaternary and higher systems" by I.M.Khentov, V.A.Kots, eds. Reviewed by E.I.Akhumov, B.IA.Rosen. Zhur.fiz.khim. 30 no.7:1681-1683 J1 '56. (Salts, Soluble)(Khentov, I.M.)(Kots, V.A.) (MLRA 9:11)

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100620007-5



APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000100620007-5"

Akhumov, Ye.I.

B-12

USSR/Electrochemistry

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26305

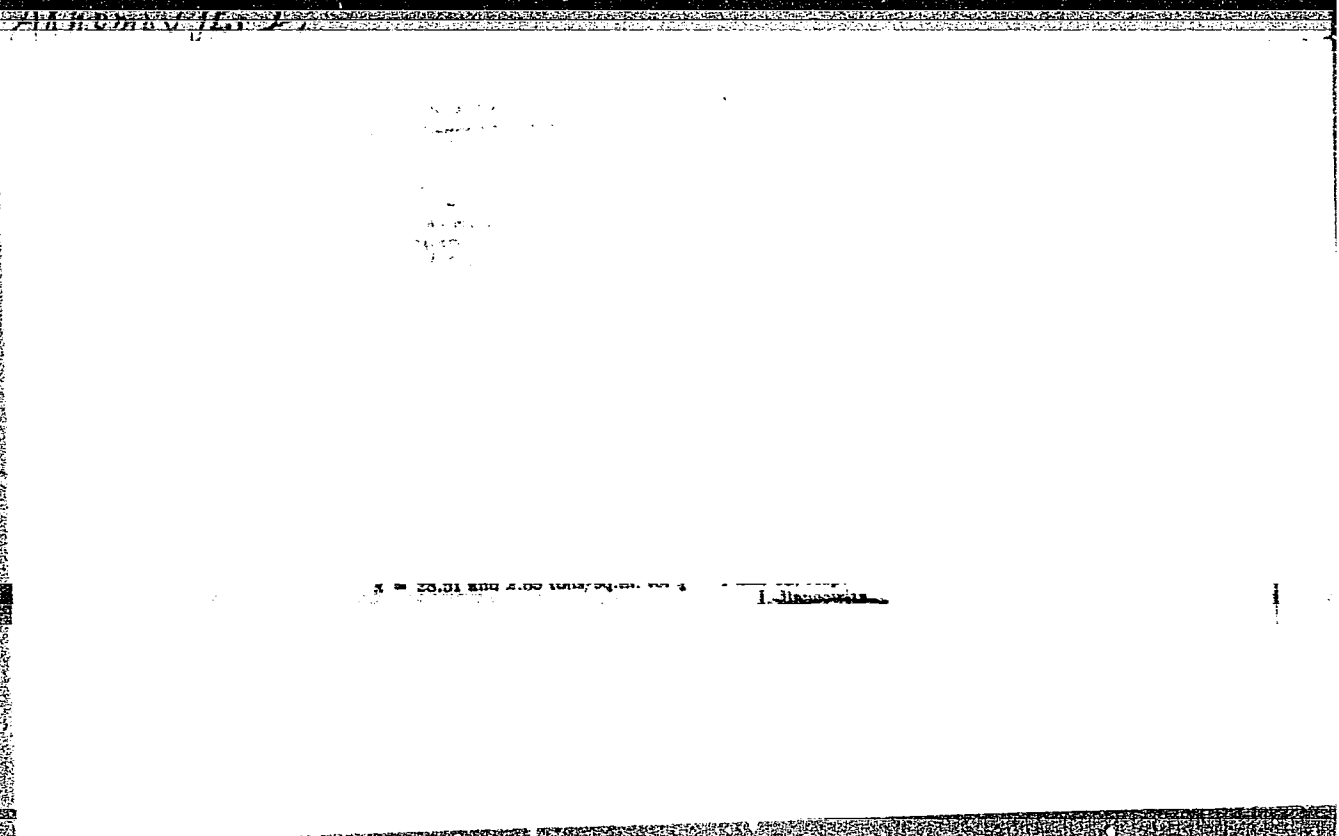
Author : Ye.I. Akhumov, B.Ya. Rozen

Inst : Academy of Sciences of USSR

Title : Relation between Solution and Deposit Compositions at Electrical Deposition of Two-Component Alloys.

Orig Pub : Dokl. AN SSSR, 1956, 109, No 6, 1149-1151

Abstract : Studying the connection between the composition of the cathode precipitate and the electrolyte composition at the electrical deposition of two-component alloys, the authors started from the equation of the joint discharge of metal ions $\varphi_1 + \eta_1 = \varphi_2 + \eta_2$ (φ_1 and φ_2 are equilibrium potentials of the metals, η_1 and η_2 are their overcharges at separation). Using Tafel's formula and Faraday's law for the case of discharge of ions of the same valence, the equation $\log \left(\frac{[M_1]}{[M_2]} \right) = A + B \log \left(\frac{M_1^{n+1}}{M_2^{n+1}} \right)$ was derived, in which M_1 and M_2 are the % by weight of the corresponding metals in the deposit, M_1^{n+} and M_2^{n+} are the concentrations of these metals in the solutions, and A and B are constants. The correctness of the proposed equation is confirmed by the example of the systems Cu - Zn, Cu - Sn, Sn - Zn and Ag - Cd.



Determinator of the

78-2-29/43

AUTHOR:

AKHUMOV, Ye. I.
Akhumov, Ye. I.

TITLE:

The Solubility Diagram of Systems With Two Components Which Form Supersaturated Solutions (Diagrammy rastvorimosti v dvukhkompomentnykh sistemakh obrazuyushchikh peresyshchennyye rastvory)

PERIODICAL:

Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 2, pp. 456-463 (USSR)

ABSTRACT:

The present paper gives the theoretical rules governing ideal two-component systems which form supersaturated solutions. The equations for eutectic temperatures and eutectic concentrations are given. It was mathematically determined that the undercooling effect of the solution is a complicated function of concentration of this solution. Moreover a linear dependence exists between the negative value of the absolute temperature of the saturated solution and the crystallization from the undercooled solutions. From the equations for supersaturated solutions follows that a linear dependence exists between the logarithms of the concentration in saturated and

Card 1/2

AUTHORS: Akhumov, Ye. I., Pylkova, Ye. V. SOV/78-3-9-28/38

TITLE: Solubility and Supersaturation in the System Sodium Sulfate-Water at High Temperatures (Rastvorimost' i peresyshcheniye v sisteme sul'fat natriya-voda pri vysokikh temperaturakh)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 9, pp 2178-2183 (USSR)

ABSTRACT: The solubility and supersaturation in the system of sodium sulfate - water was examined at a temperature of 233°C. The analyses were carried out by polythermal methods. The crystallization in the system $\text{Na}_2\text{SO}_4\text{-H}_2\text{O}$ depends on the composition of the initial solutions when temperature varies. The results of experiments with saturated and supersaturated solutions of aqueous sodium sulfate at higher temperatures make it possible to draw the phase diagram of this system. It can be seen from the phase diagram that there are three meta-stable branches at temperatures of more than 233°C. The interdependence between the negative absolute temperatures of crystallization of the saturated solution T_1 and the supersaturated temperature of crystallization T_2 was represented graphically. Various rhombic

Card 1/2

Solubility and Supersaturation in the System Sodium Sulfate - Water at High
Temperatures

SOV/78-3-9-28/38

modifications of sodium sulfate appear in the system.
There are 5 figures, 3 tables, and 9 references, 6 of which
are Soviet.

SUBMITTED: July 8, 1957

Card 2/2

AUTHORS: Akhumov, Ye. I., Rozen, B. Ya. (Leningrad) SOV/76-32-9-22/46

TITLE: Empirical
/ Correlations in the Adsorption of Bromine and Iodine by Mineral Adsorbents in the Presence of the Chlorides and Sulfates of Sodium and Potassium (O zakonomernostyakh adsorbtsii broma i yoda mineral'nymi adsorbentami v prisutstvii khloridov i sul'fatov natriya i kaliya)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 9, pp 2094 - 2096 (USSR)

ABSTRACT: The adsorption on silicagel, aluminium oxide (diaspor), aged aluminium oxide hydrate (hydrargyllite) and kaoline was examined; the salt concentration amounted to 0, 1, 3, 5, and 10 percent in weight, the temperature to 20° C. The adsorption, as usual, was determined by titration (Ref 3), the accuracy amounts to 2%. To put their results into a formula, the authors introduce the "relative adsorption" as a new quantity:

$$\alpha_n = \frac{a_n}{a_0} \quad (n \text{ quantity of salt in percent in weight, } a$$

Card 1/2

adsorption of halogen in mg halogen per g adsorbent). If

Empirical

/ Correlations in the Adsorption of Bromine and Iodine by SOV/76-32-9-22/46
Mineral Adsorbents in the Presence of the Chlorides and Sulfates of
Sodium and Potassium

one examines the dependence of the relative adsorption of
halogen in the presence of potassium salt ($\alpha_{K,n}$) from
the relative adsorption in the presence of sodium salt
($\alpha_{Na,n}$) the results are (Figures 1 and 2):

$$A = \frac{\alpha_{K,n} - 1}{\alpha_{Na,n} - 1} = \text{const.}$$
 A is equal for bromine and

iodine and is independent from the nature of the adsorbent.
There are 2 figures and 3 references, 2 of which are Soviet.

SUBMITTED:

April 6, 1957

Card 2/2

AKHUMANU, Ye. I.

24(8)

PHASE I BOOK EXAMINATION

SOV/2809

Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk

Termodinamika i stroyneniye ravnovesiy, trudy sovetskoy khimii. Seriya "Termodinamika i stroyneniye ravnovesiy". Moscow: Nauka, 1978. 27-30. 1978. 295 p. 3,000 copies printed.

Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences; Ed. of Publishing House: M. G. Yegorov; Tech. Ed.: T. V. Folyakova.

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

COVERAGE: This collection of papers was originally presented at the Conference on Thermodynamic and Structure of Solutions sponsored by the Section of Thermodynamics of the Academy of Sciences, USSR, at the Institute of Chemistry of Moscow State University, Moscow, on January 27-30, 1978. A list of other reports and abstracts are listed in the Foreword. A list of other reports also read at the conference, but not included in this book, are given. Among the problems treated in this work are: electrolytic solutions, ultrasonic measurement, dielectric and thermodynamic properties of various mixtures, spectroscopic analysis, etc. References accompany individual articles.

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246	Chalidzhiy, V. M. Spectroscopic Methods for Studying the Structure of Solutions
251	Malin, M. H. Spectroscopic Methods for Studying Complexes in Solution
258	Zelinskiy, V. V., I. P. Kolobkov, and I. I. Kazdikovs. Relation Between Microscopic Absorption Spectra and Nature of Solvents
262	Yermakova, N. Ye., and I. I. Antipova-Karsteyeva. Study of Solvation of Ions in Solutions With the Aid of Optical Absorption Spectra
266	X Antipova-Karsteyeva, I. I. Study of the Effect of the Surrounding Medium on the State of the Chromophore of Absorption Spectra of Solutions and Alum Crystals
270	Yasenko, Ye. M. A. Infrared Spectra of Concentrated Infrared Spectra of Electrolytic Solutions in Potassium
273	Lavochkin, V. I., Ye. O. Buzynova, L. D. Derkachova, and L. V. Lyubchik. Study of Absorption in Concentrated Solutions of Dyes by Means of Absorption and Luminescence Spectra
275	X Lavochkin, L. V. Effect of Ionization and Association on Optical Properties of Complex Organic Molecules
285	

5(4)

AUTHORS:

Akhumov, Ye. I., Spiro, N. S.

SOV/78-4-3-31/34

TITLE:

Activity and Activity Coefficient of Water in Saturated Solutions of NaCl-H₂O, KCl-H₂O, NaBr-H₂O (Aktivnost' i koeffitsiyent aktivnosti vody v nasyshchennykh rastvorakh NaCl-H₂O, KCl-H₂O, NaBr-H₂O)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 3, pp 692-694 (USSR)

ABSTRACT:

In the present paper the thermodynamic character of water was investigated in saturated two-component aqueous salt solutions in a wide temperature range. On the basis of experimental data in saturated solutions of NaCl-H₂O, KCl-H₂O, and NaBr-H₂O the activity a_1 and the activity coefficient γ_1 of water were computed in the temperature range between 0 and the melting temperature of the salts. The computations are given in table 1 and were carried out according to the formulas 4 and 5:

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Activity and Activity Coefficient of Water in
Saturated Solutions of NaCl-H₂O, KCl-H₂O, NaBr-H₂O

SOV/78-4-3-31/34

$$a_1 = \frac{P}{P_1} \quad (4)$$

$$\gamma_1 = \frac{a_1}{N_1} \quad (5)$$

From the data it may be seen that the activity coefficient of water decreases in the systems investigated with increasing concentration of the saturated salt solutions. The results can be used for thermodynamic computations of the salt equilibrium at higher temperatures. There are 1 table and 15 references, 12 of which are Soviet.

SUBMITTED: November 29, 1957

Card 2/2

AKHUMOV, Ye.I.; PYIKOVA, Ye.V.

Metastable equilibria in the three-component system NaCl - KCl -
H₂O. Zhur. neorg. khim. 5 no.8:1819-1826 Ag '60. (MIRA 13:9)
(Salt) (Potassium chloride) (Phase rule and equilibrium)

AKHUMOV, Ye.I.

Periodic systems of elements and antielements. Zhur.ob.khim. 31
no.6:1777-1780 Je '61. (MIRA 14:6)

1. Leningradskiy elektrotekhnicheskiy institut imeni V.I.
Ul'yanova-Lenina. (Periodic law)

AKHUMOV, Yevgeniy Ivanovich; VYAZOVOV, V.V., red.; POZDYSHEVA, V.A., red.;
ERLIKH, Ye.Ya., tekhn.red.

[Study of supersaturated aqueous salt solutions] Issledovanie
peresyshchennykh vodnykh rastvorov solei. Leningrad, Gos.nauchno-
tekh.izd-vo khim. lit-ry, 1960. 127 p. (Leningrad. Vsesoiuznyi
nauchno-issledovatel'skii institut galurgii. Trudy, no.42)
(MIRA 14:7)

(Solution (Chemistry))

AKHUMOV, Ye.I.; VUL'FSON, V.I.; GRIGORIADI, P.K.; MAKSIMYUK, Ye.A.;
RAZUMOVSKIY, V.V.; UGOL'NIKOVA, G.A.

Chemistry and radio engineering. Izv. vys. ucheb. zav.; radiotekh.
4 no.4:502-503 J1-Ag '61. (MIRA 14:11)

1. Komissiya seksii prepodavaniya Leningradskogo oblastnogo prav-
leniya Vsesoyuznogo khimicheskogo obshchestva imeni D.I.Mendeleyeva.
(Radio) (Chemistry)

AKHUMOV, Ye.I.; PYLKOVA, Ye.V.

Kinetics of crystallization of two-component supersaturated solutions. *Izv.vys.ucheb.zav.;khim.i khim.tekh.* 5 no.2: 253-258 '62. (MIRA 15:8)

1. Leningradskiy elektrotekhnicheskij institut imeni Ul'yanova-Lenina, kafedra khimii.
(Salts) (Crystallization)

AKHUMOV, YE. I.

Dissertation defended for the degree of Doctor of Chemical Sciences
at the Institute of General and Inorganic Chemistry imeni
N. S. Kurnakov: in 1962:

"Investigation of Supersaturated Aqueous Salt Solutions."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

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Relation between the relative adsorption of bromine and iodine by mineral adsorbents from aqueous solutions in the presence of salts. Zhur. fiz. khim. 38 no.3:537-541 Mr '64.

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POLYAKOV, A.A.; TRZHEZSETSKAYA, T.A. [Trzhetsets'ka, T.A.]; ARBUZOV, K.N.;
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Bactericidal action of nitrogen dioxide on the vegetative and
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43-45 '62. (MIRA 17:5)

1. Voltavskiy sel'skokhozyaystvennyy institut, kafedra mikro-
biologii.

~~AKHUMYAN, Y. S.~~

Detection of the intermediary hosts of tapeworms *Raillietina echinobothrida* (Magnin, 1881) and *R. tetragona* (Melin, 1858) (Gastoda, Davaineidae). *Dokl. AN Arm. SSR* 15 no.5:153-156 '52.

(MLRA 9:10)

1. Zoologicheskiy insitut Akademii nauk Armyanskey SSR. Predstavleno G.Kh. Bunyatyanom.
(Armenia--Tapeworms) (Ants) (Poultry--Diseases and pests)

AKHUMYAN, K.S.

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(MIRA 8:7)

1. Zoologicheskiy institut Akademii nauk Armyanskoy SSR. Predstavleno
G.Kh. Bunyatyanom. (Armenia--Trematoda)

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Study of cestode parasites of rodents in Armenia. Zool.sbor.
no.9:171-223 '56. (MLRA 9:8)
(Armenia--Cestoda) (Parasites--Rodentia)

AKHUMYAN, K. S.

Parasitic worms of the coypu, acclimatized in the Armenian S.S.R.
Izv. AN Arm. SSR. Biol. i sel'khoz. nauki. 9 no. 4: 29-36 Ap '56.

(MLBA 9:8)

1. Zoologicheskiy institut Akademii nauk Armyanskoy SSR.
(Armenia--Coypu--Diseases)
(Worms, Intestinal and parasitic)

AKHUMYAN, K.S.

**New species of cestode *Rodentolepis avetjanae* nov.sp. from coypu.
Dokl.AN Arm.SSR 22 no.4:187-191 '56. (MLBA 9;8)**

**1. Predstavleno G.Ih. Bunyatyanom.
(Parasites--Coypu) (Cestoda)**

AKHUMYAN, K.S.;SVADZHYAN, P.K.

Data on parasitic worms of the suslik *Citellus citellus xanthopyrnus* in the Armenian S.S.R. Izv. AN Arm. SSR Biol. i sel'khoz. nauki 10 no.1:79-92 Ja '57. (MIRA 10:4)

1. Zoologicheskiy institut Akademii nauk Armyanskoy SSR.
(ARMENIA--WORMS, INTESTINAL AND PARASITIC)
(SUSLIKS--DISEASES AND PESTS)

USSR/Zooparasitology - Parasitic Worms.

G

Abs Jour : Ref Zhur Biol., No 1, 1959, 992

Author : Akhumyan, K.S.

Inst : AS Armenian SSR

Title : New Sexually Divided Species in Cestoidea of Gyrocoelia
skriabini nov. sp. -- Parasite of Birds (Sea Plover)

Orig Pub : Dokl. AN ArmSSR, 1958, 26, No 1, 59-63

Abstract : No abstract.

Card 1/1

- 23 -

AKHUMYAN, K.S.

Discovery of the intermediate hosts of the causative agent of Raillietina infections in chickens Raillietina (Skrjabinia) circumvallata var. sibirica Fedjushin, 1953 (Cestoda: Tavaineidae). Dokl. AN Arm. SSR 36 no. 5: 309-312 '63 (MIRA 17:7)

1. Zoologicheskiy institut AN Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR.

AKHUMYAN, K.S.; MASHADYAN, P.N.

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Izv. AN Arm. SSR. Biol. nauki 17 no.4:59-68 Ap '64.

(MIRA 17:6)

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SSR Biol. nauki 17 no.11:25-30 N '64 (MIRA 18:2)

AKHUMYAN, K.S.

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lands. Izv. AN Arm. SSR. Biol. i selkhoz. nauki 11 no.9:83-87 S '58.
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khozyaystva ArmSSR.

(Alkali lands) (Soil temperature)

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Synthesis of 1,6-disubstituted 3-chloro-3-hexene-1,6-dicarboxylic acids. Izv. AN Arm. SSR. Khim. nauki 17 no.6:656-659 '64.

Synthesis and transformations of dilactones. Part 1: Preparation of dilactones of 1,6-disubstituted 3-oxohexane-1,6-dicarboxylic acids. Ibid.:660-664 (MIRA 18:6)

1. Yerevanakly gosudarstvennyy universitet, kafedra organicheskoy khimii.

VASIN, L.V., inzh.; AKHUN, B.N., inzh.; IVANCHENKO, N.N., kand. tekhn. nauk; KOLLEROV, L.K., kand. tekhn.nauk; NIKITINA, N.V., inzh.; SOKOLOV, S.S., kand. tekhn. nauk; FODIN, A.A., red.; YURKEVICH, M.P., red. izd-va; PETERSON, M.M., tekhn. red.; SPERANSKAYA, O.V., tekhn. red.

[Diesel and gas engines; catalog-handbook] Dizeli i gazovye dvigateli; katalog-spravochnik. Pod red. A.A.Fadina. Moskva, Mashgiz, 1961. 279 p. (MIRA 14:12)

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(Gas and oil engines)

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tekhn. nauk; ABRAMOV, A.M., red.; KOVAL'SKAYA, I.F.,
tekhn. red.; KOGAN, F.L., tekhn. red.

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obzor. Moskva, 1962. 132 p. (MIRA 16:7)
(Diesel engines)

AKHUNBAYEV, I. K.

32747. Klinichyeskaya kharakteristika zoba uchyskoy douny, [Izdokt. Diss. Zulemichyieskiy sobchuyeskiy doliny kirgizskoy sssr / Sbornik nauch. Trudov (kirgiz. gos. med. in-t), T. IV, 1949, s. 94-114

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AKHUNBAYEV, I. ~~AKHUNBAYEV, I.~~

"The Kirgiz Medical Institute" by I. AKHUNBAYEV. 2pp. Full translation, Russian, d np,
Sovetskaya Kirgiziya, Frunze, 6 June 1952 W-24832
SO: S-38; Nov. 1952

AKHUNBAYEV, I.K.

Cases of tumoral forms of silicosis. Khirurgia, Moskva no.4:81-82
Apr 1953. (CJML 24:4)

1. Of the Clinic for Propedeutic Surgery (Director — Prof. I. K.
Akhunbayev), Kirgiz Medical Institute.

AKHUNBAYEV, I. K.

"The Collaboration of Scientists. (an article).
Chairman, Predidium, Kirg'z Affiliate, Academy of Sciences USSR.
SO: Sovetskaya Kirgiziya, 22 May 54

AKHUNBAYEV, I. K.

15-1957-1-29

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1
p 6 (USSR)

AUTHOR: Akhunbayev, I. K.

TITLE: State of Science in Kirgiziya and the Problems of
the Academy of Science, Kirgiz SSR (Sostoyaniye
nauki v Kirgizii i zadachi Akademii nauk Kirgizskoy
SSR)

PERIODICAL: 1-ya nauch. sessiya AN Kirg SSR, Frunze, 1955,
pp 17-28

ABSTRACT: The Kirgiz branch of the Acad. Sci. USSR was organized
in 1943. It consists of six institutes, three
divisions and a number of other institutions. Its
geological institute conducted the investigations
of some forms of ores and also studies the geological
structure of various regions of the Republic. It

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15-1957-1-29

State of Science in Kirgizya and the Problems of the Academy of
Science, Kirgiz SSR

completed a thorough investigation of the Tertiary salt deposits of the intermountain depressions in Tyan^{Shan}. In these deposits the formerly unknown sodium sulphate type of mineralization (glauberite, gypsum-mirabilite and tenardite-containing rocks) was discovered. The institute developed the principles for the hydrological subdivision of the region, determined hydrological conditions in various districts and estimated the future utilization of ground water for the national economy. It has also developed measures to be used in combating the deformation of irrigation ditches in loess soils on sloping terrain, as well as measures for speeding up mining operations and for the improvement of the raw materials obtained from these mines.

G.I.D.

Card 2/2

Akhunbayev I. K.

USSR/ Scientific Organization

Card 1/1 Pub. 124 - 2/40

Authors : Akhunbayev, I. K., President, Acad. of Sc., Kirghiz-SSR

Title : New phase in the development of science in Soviet Kirghizia

Periodical : Vest. AN SSSR 1, 11-14, Jan 1955

Abstract : The grand opening of the Kirghizian Academy of Sciences in Frunze, the capital of Kirghiz-SSR (Dec. 20, 1954), is announced. The establishment of the Academy in Kirghiz-SSR offers new perspectives and horizons for further development of science in this part of the Soviet Union.

Institution :

Submitted :

AKHUNBAYEV, I. K., SATPAYEV, K. and BERDYEV, T.

"The Concern of the Communist Party for the Development of Science in the Union Republics," Pravda, 11 Feb 56

Akhunbayev, Pres. AS KISSR

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Izv.AN Kir.SSR no.2:3-22 '56. (MIRA 9:9)
(Academy of Sciences of the Kirghiz S.S.R.)

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AKHUNBAYEV, I.K., akademik.

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(KIRGHIZISTAN--GOITER)

AKHUNBAYEV, I. K.

FRENKEL', G.L., prof.; AKHUNBAYEV, I.K., prof., red.

[Nomogram for the quick determination of the extent of burns on the body surface] Nomogramma dlia bystrogo opredeleniia protsenta obozhzhennoi poverkhnosti tela. Pod red. I.K.Akhunbaeva. S 7 risunkami i prilozheniem nomogrammy. Frunze, Akad.nauk Kirgizskoi SSR, In-t kraevoi med., 1957. 16 p. (Seria "V pomoshch' prakticheskomu vrachu," no.1) — — — 1 nomogr. (in portfolio) (MIRA 11:2)

1. Chlen-korrespondent AMN SSSR (for Akhunbayev).
(BURNS AND SCALDS)

AKHUNBAYEV, I. K.

VOLOKH, Yuriy Aleksandrovich; AKHUNBAYEV, I. K., akademik, red.; YEFIMOV, N. A., tekhn. red.

[Echinococcus in humans] Ekhinokkovaia bolezni' u liudei.
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1. Akademiya nauk Kirgizskoy SSR. (for Akhunbayev).
(HYDATIDS)

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Classification of shock conditions. Izv. AN Kir.SSR

no.4:221-227 '57.

(MLRA 10:7)

(Shock)