87336

S/078/60/005/011/023/025/XX
B004/B060

5.4110 2209, 1043, 1273

AUTHORS: Dombrovskaya, N. S., Alekseyeva, Ye. A.

TITLE: Methods of Decomposing Diagrams of the Composition of Multicomponent Systems According to the Indices of the Peaks of Prisms of the First Kind

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 11, pp. 2612-2620

TEXT: The following definition is given: A prism of the rth kind is an n-dimensional polytope, formed by the parallel shift of an n-r dimensional polytope in independent directions in an n-dimensional space. The authors were concerned with the problem of studying such multicomponent systems as frequently arise in chemical technology. They proceeded from papers by N. S. Kurnakov (Ref. 1), A. G. Bergman, V. P. Radishchev (Refs. 2-5), which had dealt with the triangulation of diagrams of the chemical equilibrium and the search for singular stars. The singular stars of the chemical diagram constitute the geometrical representation of the chemical interaction between the components of the system. This is illustrated by

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Methods of Decomposing Diagrams of the Composition of Multicomponent Systems According to the Indices of the Peaks of Prisms of the First Kind

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Fig. 1, a diagram of the reciprocal ternary system A,B ‖ X,Y. This is a cut through the tetrahedron of the quaternary system A - B - X - Y, brought about by the formation of the binary compounds AX, BX, AY, BY. The square formed by a plane cut is divided by the stable diagonal AY - BX into two stable cells, i.e., two triangles each of which represents a ternary system in the case of irreversibility of reaction. The exchange reaction is denoted in the square by the point O of conversion where the stable and the unstable diagonal intersect in conformity with the reaction AX + BY ⟶ AY + BX. The stability of the diagonal is determined from the thermal data or the character of the liquidus surface. After a thorough description of the conventional method of decomposing complicated diagrams, which requires practice in spatial representation, the authors introduce their simplified method, as recommended in Ref. 10. Decomposition is performed on the basis of the peak indices. An index table is utilized for reciprocal systems of the 2/n type. The first row is characterized by the natural series 1,2,3,...,n, and the second row by the inverse series n,...,3,2,1. Table 2 holds for the singular star in the system Na,K ‖ F,Cl,Br,I (Fig. 4):

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Methods of Decomposing Diagrams of the Composition of Multicomponent Systems According to the Indices of the Peaks of Prisms of the First Kind

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Indices of peaks

8	I	Br	Cl	F	Σ
Na	0	1	2	3	6
K	3	2	1	0	6
Σ	3	3	3	3	12

The pentatope which contains the zero peak NaI is cut off by means of the tetrahedron with the peak indices 1,2,3 of the first row and index 3 of the second row. This constitutes the tetrahedron NaF - NaCl - NaBr - KI. Pentatope NaF - NaCl - NaBr - NaI - KI is obtained. The tetrahedron for cutting off the pentatope with the zero peak KF has the index 3 of the first row and the indices 3,2,1 of the second row. The common edge of the two tetrahedra has the largest indices 3 - 3, i.e., NaF - KI. The third tetrahedron, finally, has the edge 3 - 3 and two peaks with the remaining largest indices 2 - 2. The following stable diagonal tetrahedra are thus formed: 1) 123 - 3; 2) 23 - 32; 3) 3 - 321. The stable pentatope cells have the indices 1) 0123 - 3; 2) 123 - 32; 3) 23 - 321; 4) 3 - 3210. The stable cells are established by a nondiagonal transition from the largest index of the 1st row to the largest index of the 2nd row, as shown in Table 3. The same procedure is illustrated by the Li,Na,K,Rb,Cs ‖ Cl,I system (Fig. 7). Table 6 gives

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Methods of Decomposing Diagrams of the Composition of Multicomponent Systems According to the Indices of the Peaks of Prisms of the First Kind

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the indices, while Table 8 shows how to find the stable cells. There are 7 figures, 7 tables, and 11 references: 10 Soviet and 1 German.

SUBMITTED: October 9, 1959

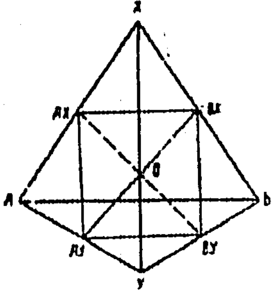

Рис. 1

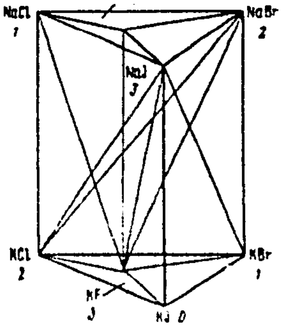

Рис 4

Card 4/6

5.4110
~~7(3)~~

68610
S/020/60/130/05/020/061
B011/B005

AUTHORS: Dombrovskaya, N. S., Alekseyeva, Ye. A.
Khokhlova, N. V., Posypayko, V. I.

TITLE: The Basal Tetrahedron 1/2 Li_2SO_4 – NaCl – $RbNO_3$ – TlBr in the 7-Component Reciprocal System Li, Na, Rb, Tl ‖ Br, Cl, NO_3, SO_4

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 5, pp 1027-1029 (USSR)

ABSTRACT: The singular point of the reciprocal system of 16 salts Li, Na, Rb, Tl ‖ Br, Cl, NO_3, SO_4 (Ref 1) determining the direction of the exchange reactions is described. The position of the most stable basal tetrahedron 1/2 $LiSO_4$ – NaCl – $RbNO_3$ – TlBr was determined in the center of the cube orienting the singular point. Only 4 of its diagonals are fully stable: TlBr – $RbNO_3$; TlBr – 1/2Li_2SO_4; $RbNO_3$–NaCl and NaCl – 1/2Li_2SO_4. The stability of the diagonal TlBr – NaCl is less certain since the solid solutions Tl(Br,Cl) and Na(Br,Cl) occur in the system Na, Tl ‖ Br,Cl. M. N. Zakhvalinskiy (Ref 2) found the presence

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The Basal Tetrahedron 1/2 Li_2SO_4 — NaCl — $RbNO_3$ — TlBr in the 7-Component Reciprocal System Li, Na, Rb, Tl ‖ Br, Cl, NO_3, SO_4

S/020/60/130/05/020/061
B011/B005

of 2 complex compounds on the diagonal $RbNO_3$ — $1/2Li_2SO_4$ in lithium- and rubidium salts. They are presumably: $Li_2SO_4 \cdot Rb_2SO_4$ (1:1) and $4Li_2SO_4 \cdot Rb_2SO_4$ (4:1). The base of the tetrahedron is formed by the ternary system 1/2 Li_2SO_4 — NaCl — $RbNO_3$. Besides the 3 crystallization fields of the components, this system contains 2 additional fields which correspond to the binary compounds mentioned. Besides the 4 crystallization volumes of the components, the investigated part of the tetrahedron contains 2 relatively small volumes of the complex compounds of lithium- and rubidium sulfate (1:1 and 4:1). Rubidium sulfate is the exchange product between Li_2SO_4 and $RbNO_3$. The 6 crystallization volumes meet in 2 quaternary points: the eutectic and the transition point lying in the "rubidium" corner of the diagram. Table 1 shows temperatures and compositions of the multiple points of the

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The Basal Tetrahedron 1/2 Li_2SO_4 — NaCl — $RbNO_3$ — TlBr in the 7-Component Reciprocal System Li, Na, Rb, Tl ‖ Br, Cl, NO_3, SO_4

S/020/60/130/05/020/061
B011/B005

ternary systems and of the quaternary system. Figure 1 shows an evolvement, figure 2 a perspective representation of the tetrahedron. The composition of the ternary and quaternary eutectic and transition points was determined by graphic constructions; the temperatures were determined by recording the heating curves on the recording pyrometer of N.S.Kurnakov. In conclusion, the following can be said about the type of the 7-component system of 16 salts: the tetrahedron investigated determines the reaction direction in a way similar to the "basal" triangle in a quinary reciprocal system of 9 salts (Ref 3), and also similar to the stable diagonal triangles in a quaternary reciprocal system of 6 salts (Ref 4), and finally similar to the stable diagonal of the square of a ternary reciprocal system of 4 salts. By means of an experimental determination of the fusibility of the system 1/2 Li_2SO_4 — — NaCl — $RbNO_3$ — TlBr, it was ascertained that the reciprocal

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65610

The Basal Tetrahedron 1/2 $Li_2SO_4 - NaCl - RbNO_3 - TlBr$ in the 7-Component Reciprocal System Li, Na, Rb, Tl ‖ Br, Cl, NO_3, SO_4

S/020/60/130/05/020/061
B011/B005

7-component system Li, Na, Rb, Tl ‖ Br, Cl, NO_3, SO_4 may be assigned to the class of reversible-reciprocal systems. There are 2 figures, 1 table, and 5 Soviet references. 4

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya (All-Union Scientific Research and Design Institute of Chemical Machine Construction)

PRESENTED: October 15, 1959, by I. I. Chernyayev, Academician

SUBMITTED: October 12, 1959

Card 4/4

83559

also 2308

18.1285

S/020/60/134/001/011/021
B004/B060

AUTHORS: Andreyeva, V. V., Alekseyeva, Ye. A.

TITLE: Thin Oxide Films^{18} on Titanium,^{27} Zirconium,^{27} Molybdenum,^{27} and Titanium Alloys

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 1, pp. 106 - 109

TEXT: The authors wanted to study the kinetics of the oxidation of Ti, Zr, Mo, and the alloys Ti+10% Mo and Ti+3% Al+5% Cr in the temperature range 50-400°C. The thickness of the thin, invisible oxide films was measured by means of a previously described (Refs. 1,4,5) optical polarization method which is based on the ellipticity of reflected light. The oxidation took place in a tubular furnace in an oxygen stream. The thickness of the oxide films was measured every 60 min. Figs. 1,2 show the results of measurement; Table 1 lists the film thicknesses attained after 6 h. Zirconium is noticeably oxidized already at 50°C, titanium and the alloy Ti+10%Mo at 100°C, molybdenum and the alloy Ti+3%Al+5%Cr at 150°C. The oxidation is fast at the beginning, and gradually stops

X

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83559

Thin Oxide Films on Titanium, Zirconium, Molybdenum, and Titanium Alloys

S/020/60/134/001/011/021
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as soon as the oxide film attains a certain thickness. The increase in film thickness, L, can be represented by equation (1): $L = k \log(k_1 t + k_2)$. At high temperatures, however, the relation (2) $L^2 = k_3 t$ (Fig. 3) holds. For the metals and alloys examined, Table 1 supplies the temperature ranges in which the logarithmic or the parabolic law holds. Up to 800°C, the oxide film on titanium consists of TiO_2 (rutile). TiO layers are formed above 800°C (immediately on the metal), Ti_2O_3 (middle layer) and TiO_2 (external layer). On zirconium, ZrO_2 of a cubic structure forms up to 250°C, and ZrO_2 of a monoclinic structure above 250°C. In the case of molybdenum, the oxide layer consists of MoO_3 up to 300°C. Above 300°C, MoO_2 is formed additionally due to dissociation. Fig. 3 further shows oxidation curves for chromium and aluminum, which are taken from the paper by T. N. Krylova (Ref. 9). These metals form only Cr_2O_3 and Al_2O_3, respectively. The activation energy was calculated from the slope of the linear function $\log k = f(1/T)$ (Table 1). The mechanism underlying

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Thin Oxide Films on Titanium, Zirconium, Molybdenum, and Titanium Alloys

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the oxidation of zirconium and molybdenum differs from that of the oxidation of titanium and the alloy Ti+10%Mo. A mixed oxide, $TiO_2 + xMoO_3$, is formed in the latter case. The resistivity to heat is thus improved. The high resistivity of the alloy Ti+3%Al+5%Cr to oxidation is explained by the formation of a mixed oxide of the spinel type. Fig. 4 shows the oxidation of titanium at 50-250°C in dry and moist, fully saturated air. In dry air, the oxide layer becomes twice as thick as in moist air. In the latter, however, the oxide layer is more compact and contains fewer defects. At 250°C, the water binding is loosened, and the thickness of the oxide layer attains the same value as in dry air. There are 4 figures, 1 table, and 12 references: 9 Soviet, 2 US, and 1 German.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: April 28, 1960, by A. N. Frumkin, Academician

SUBMITTED: April 28, 1960

Card 3/3

DOMBROVSKAYA, N.S.; ALEKSEYEVA, Ye.A.

Methods of cleaving phase diagrams of multicomponent, reciprocal anhydrous salt systems for prisms of the 2nd kind, 3/3. Zhur. neorg. khim. 6 no.3:702-711 Mr '61. (MIRA 14:3)
(Phase rule and equilibrium)
(Systems (Chemistry))

POSYPAYKO, V.I.; KHAKHLOVA, N.V.; ALEKSEYEVA, Ye.A.; DOMBROVSKAYA, N.S.

Singular decomposition of the polytope of the quintary reciprocal system consisting of nine salts: Na, Rb, Tl $\|$ Cl, Br, NO_3. Zhur.neorg.khim. 6 no.6:1401-1407 Je '61. (MIRA 14:11)
(Salts) (Systems (Chemistry))

15.6600

25503

S/065/61/000/007/004/005
E030/E435

AUTHORS: Vinogradova, I.E., Alekseyeva, Ye.A.

TITLE: Thermographic investigation of E.P. (entrance pressure) additives in oils

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, 6 No.7, pp.56-61

TEXT: A differential thermocouple system has been applied to study the physical and chemical reactions of E.P. additives on heating, by themselves and in admixture with iron powder, to throw light on the reasons for their effectiveness. Of the thermocouples, one was placed in a beaker containing the additive or additive plus pure iron powder, and the other was placed in a beaker containing calcined magnesium oxide, noted for its absence of heating effects in the range investigated; the cold thermocouple junctions were in a Dewar flask of water at 18°C and the direct reading gave the absolute specimen temperatures. The oil used in testing was ДС-14 (DS-14) and the additives were Хлорэф-40 (Khloref-40) (butyl ether of trichlormethylphosphonic acid $CCl_3PO(OC_4H_9)_2$), ГХС (GKhS) (hexachlorsulphide $[CCl_3(CH_2-CH_2)_2]_2S$),

X

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25503

Thermographic investigation of ... S/065/61/000/007/004/005
E030/E435

Л3-6/9 (L3-6/9) (ethylene dibutylxanthate $(C_4H_9OCS_2\text{-}CH_2)_2$) and chlorinated paraffins (mixtures from $C_{25}H_{51}Cl$ to $C_{25}H_{40}Cl_{12}$). All the additives gave endothermic effects on boiling and, where relevant, on melting, either by themselves or on addition of powdered iron (1:2.5 by weight). The butyl ether also gave an exothermic effect on decomposition at 240°C; one at 135°C with iron powder was verified by repeat experiments at lower iron concentrations to be reaction with the iron. Similarly, the hexachlorsulphide reacted with iron at 153°C and the dibutylxanthate at 224 to 238°C. Chlorinated paraffins scarcely react with iron but the iron catalyses their decomposition, reducing the decomposition from 325 to 285°C. All these reaction temperatures are below those generated during boundary friction accompanied by wear, thus confirming the anti-friction properties of the additives. A strong correlation is claimed to exist between the degree of wear reduction and the magnitude of the exothermic effect on reaction with iron powder. There are 6 figures, 2 tables and 2 Soviet references.

ASSOCIATION: VNII NP

Card 2/2

ALEKSEYEVA, Ye.A.; DOMBROVSKAYA, N.S.

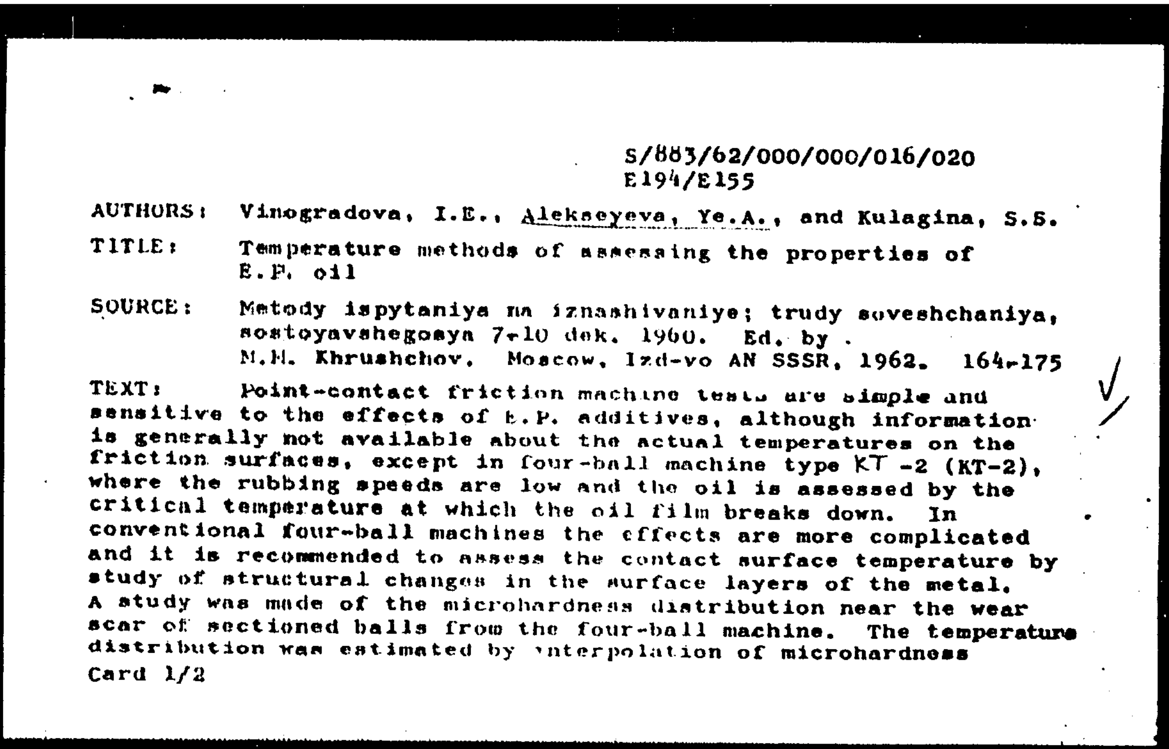
Dividing the composition diagram of the septenary reciprocal system consisting of 20 salts A, B, C, D || X, Y, Z, T of the 16 C type. Zhur.neorg.khim. 6 no.9:2158-2162 S '61. (MIRA 14:9)
(Salts) (Systems (Chemistry))

DOMBROVSKAYA, N.S.; KHAKHLOVA, N.V.; ALEKSEYEVA, Ye.A.

Intersection between a stable and a nonequilibrium tetrahedron in the septenary reciprocal system Li, Na, Rb, Tl Br, Cl, NO_3, SO_4. Dokl. AN SSSR 137 no.6:1361-1363 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya. Predstavleno akademikom I.V. Tananayevym.

(Systems (Chemistry))



S/883/62/000/000/016/020
E194/E155

AUTHORS: Vinogradova, I.E., Alekseyeva, Ye.A., and Kulagina, S.S.

TITLE: Temperature methods of assessing the properties of E.P. oil

SOURCE: Metody ispytaniya na iznashivaniye; trudy soveshchaniya, sostoyavshegosya 7-10 dek. 1960. Ed. by M.M. Khrushchov. Moscow, Izd-vo AN SSSR, 1962. 164-175

TEXT: Point-contact friction machine tests are simple and sensitive to the effects of E.P. additives, although information is generally not available about the actual temperatures on the friction surfaces, except in four-ball machine type КТ -2 (KT-2), where the rubbing speeds are low and the oil is assessed by the critical temperature at which the oil film breaks down. In conventional four-ball machines the effects are more complicated and it is recommended to assess the contact surface temperature by study of structural changes in the surface layers of the metal. A study was made of the microhardness distribution near the wear scar of sectioned balls from the four-ball machine. The temperature distribution was estimated by interpolation of microhardness

Card 1/2

Temperature methods of assessing... S/883/62/000/000/016/020
E194/E155

results on the tempering curve of the steel in question. The differing effects of chlorine- and sulphur-containing additives on the load/temperature characteristics at seizure were determined in this way. Most sulphur additives reduce the temperature of the friction surfaces, whilst chlorine additives prevent welding. Thermographic analysis is a most sensitive procedure for studying physical and chemical processes but has been little used in studying E.P. oil. It was accordingly used to judge of changes in the aggregate state from inflection points on the heating or cooling curves, which correspond to endothermic or exothermic reactions. The results were compared with those obtained in four-ball machines. Test results are quoted for a number of sulphur- and chlorine-containing additives in oils, both with and without iron powder. It is, of course, necessary to separate the reactions between additives and iron from those corresponding to evaporation or thermal decomposition of the additive. It is desirable to check the reaction between additives and iron up to temperatures above the highest bulk oil temperature and below the seizure temperature, i.e. in the range 150 to 250 °C.

Card 2/2 There are 8 figures and 2 tables.

ALEKSEYEVA, Ye.A.; DOMBROVSKAYA, N.S.

Interaction of salts in the five-component reciprocal system Li, Rb, Tl $\|$ Br, NO_3,SO_4. Zhur.neorg.khim. 7 no.7:1659-1665 Jl '62. (MIRA 16:3)

(Systems (Chemistry)) (Salts)

DOMBROVSKAYA, N.S.; ALEKSEYEVA, Ye.A.

Singular star of the senary reciprocal system consisting of 12 salts: Li, Rb, Tl || Br, Cl, NO_3, SO_4. Zhur. neorg. khim. 7 no.8:2002-2012 Ag '62. (MIRA 16:6)

(Systems(Chemistry))
(Fused salts)

DOMBROVSKAYA, N.S.; ALEKSEYEVA, Ye.A.

Completeness of interaction and thermochemical relations in the quinary reciprocal system Li, Rb, Tl || Br, NO_3, SO_4. Zhur.neorg.khim. 7 no.12:2801-2805 D '62. (MIRA 16:2)
(Systems (Chemistry)) (Thermochemistry)

32397
S/080/62/035/001/009/013
D245/D304

156600 2209

AUTHORS: Vinogradova, I. E., and Alekseyeva, Ye. A.

TITLE: Study of the stability and reactivity of derivatives of chlorophosphinic acids used as anti-wear additives in oils

PERIODICAL: Zhurnal prikladnoy khimii, v.35, no.1, 1962, 176-182

TEXT: The authors used thermographic analysis to study the behavior of chlorophosphinic acid derivatives used as anti-wear additives to gear box oil. Samples were heated to high temperatures slowly with and without addition of powdered Fe. Wear tests were carried out in accordance with GOST 9490-60. It is shown that additives which impart high anti-wear properties to oil undergo a marked exothermic reaction with Fe when heated in this way. The additive "chlorefamin" showed the most satisfactory anti-wear properties at the temperatures studied and had no corrosive effect. It consists of the methyl-octadecylamine salt of butoxytrichlormethyl-phosphinic acid:

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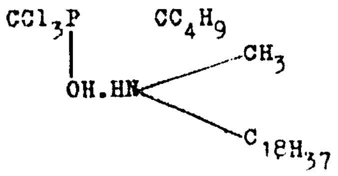
32397

S/080/62/035/001/009/013
D245/D304

Study of the stability ...



This additive does not react with Fe until a temperature of 178°C is reached. (In a gear box, the oil usually reached a maximum temperature of 150°C.) There are 4 figures, 2 tables and 5 Soviet-bloc references.

SUBMITTED: February 17, 1961

Card 2/2

DOMBROVSKAYA, N.S.; ALEKSEYEVA, Ye.A.

New types of the singular stars of senary reciprocal systems.
Zhur. neorg. khim. 9 no.5:1266-1271 My '64.

KOSTENKO, Mikhail Poliyevktovich; PIOTROVSKIY, Lyudvik
Marianovich; ANEMPODISTOV, V.P., nauchn. red.; ALEKSEYEVA,
Ye.A., red.

[Electrical machines] Elektricheskie mashiny. Moskva,
Energiia. Pt.2. 1965. 703 p. (MIRA 18:11)

L 15284-65 [illegible]

ACC NR: AP5028763 SOURCE CODE: UR/0119/64/000/009/0025/0027

AUTHOR: Alekseyeva, Ye. A. (Engineer); Gruzdov, A. P. (Engineer); Il'in, Ye. P. (Engineer); Konovalova, L. N. (Engineer); Maksimova, O. V. (Engineer); Shtremel', M. A. (Engineer)

51
50
B

ORG: none

TITLE: Effect of temperature on elastic properties of thin-sheet spring alloys

SOURCE: Priborostroyeniye, no. 9, 1964, 25-27

TOPIC TAGS: spring, measuring instrument, industrial instrument

ABSTRACT: The results are reported of measurements of the elastic limit σ (with residual strains of 0.01 and 0.005%) and elasticity modulus E in bending of 85--120-micron thick specimens (10 x 100 mm) of BrOF6, 5-0, 15, BrKMTs 3-1, BrB2, BrBNT1, 9 bronzes, 60S2, EI814 steels, and N36KhTYuM8 alloy at temperatures that ranged from -70C to +150 or +500C. Also, the ultimate strength σ_b and the yield point σ_s of 0.1 x 10-mm 57-mm long specimens were determined. All specimens were thermally treated according to specifications normally used in the

Card 1/2 UDC: 620.172.22:62-415:536.49

L 15284-66

ACC NR: AP5028963

instrument-making industry. The numerical findings are reported in the form of curves. It is noted that many specimens suffered brittle fractures partly due to their thickness nonuniformity and high width-to-thickness ratio. Orig. art. has: 7 figures and 1 table.

SUB CODE: 11, 13 / SUBM DATE: none / ORIG REF: 004

Card 2/2

DOMBROVSKAYA, N.S.; POSYPAYKO, V.I.; ALEKSEYEVA, Ye.A.; KHAKHLOVA, N.V.

Stable elements of hepta-component reciprocal systems. Dokl. AN SSSR 165 no.5:1081-1084 D '65. (MIRA 19:1)

1. Submitted May 13, 1965.

ALEKSEYEVA, Ye.F.; KIRILLOV, V.V.; LYATKOVSKAYA, N.M.; MALYSHEVA, T.D.;
ORLOV, V.M.; STEPANOV, A.S.; KHROPOVA, P.M.; CHERNENKO, M.I.;
GRAMMAKOV, A.G., prof., red.; SMIRNOV, P.S., tekhn. red.

[Manual on exercises in physics] Posobie k uprazhneniiam po fizike. Leningrad, Leningr. elektrotekhn. in-t im. V.I.Ul'ianova (Lenina). Part. 1. [Mechanics. Molecular physics] Mekhanika. Molekuliarnaia fizika. Sost. E.F.Alekseeva i dr. 1960. 75 p. (MIRA 14:10)

(Physics—Problems, excercises, etc.)

ALEKSEYEVA, Ye.I.

Free transplant of bones into infected tissues. Vest.khir.
74 no.1:45-51 Ja-F '54. (MLRA 7:2)

1. Iz nauchno-issledovatel'skogo instituta khirurgicheskogo tuberkuleza (nauchnyy rukovoditel' - professor P.G.Kornev).
(Bones--Wounds and injuries)

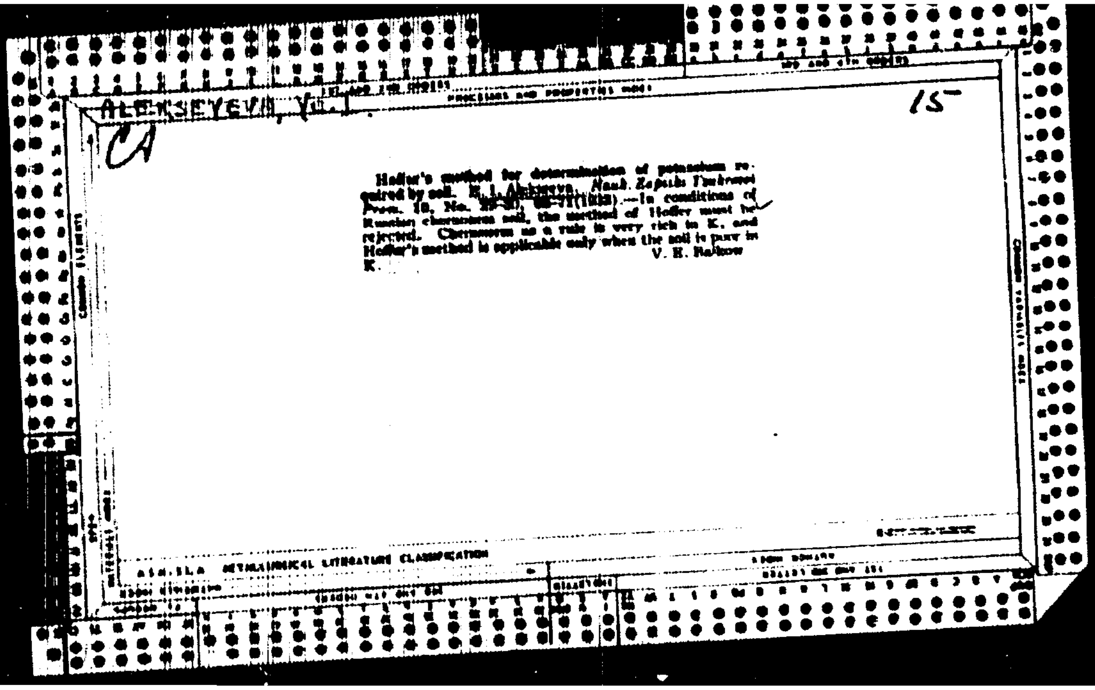
ALEKSEYEVA, Ye. I.

ALEKSEYEVA, Ye. I.: "The Free Transplantation of Bone into Infected Tissue in Order to Treat and Avoid 'False Arthroses' From Firearm Wounds." Leningrad State Order of Lenin Inst for the Advanced Training of Physicians imeni S. M. Kirov. Leningrad, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis', No. 18, 1956.

ALEKSEYEVA, Yelizaveta Ivanovna; BOGDANOVA, Mariya Semenovna; LILENKO, S.I., redaktor; RUDNEVA, M.S., tekhnicheskiy redaktor.

[Work therapy in hospitals; knitting] Trudoterapiia v lechebnykh uchrezhdeniiakh : viazanie na spitsakh. [Leningrad] Gos.izd-vo med.lit-ry, Leningr.otd-nie, 1956. 44 p. (MLRA 10:6)
(Knitting)



ALEKSEYEVA, Ye. I.

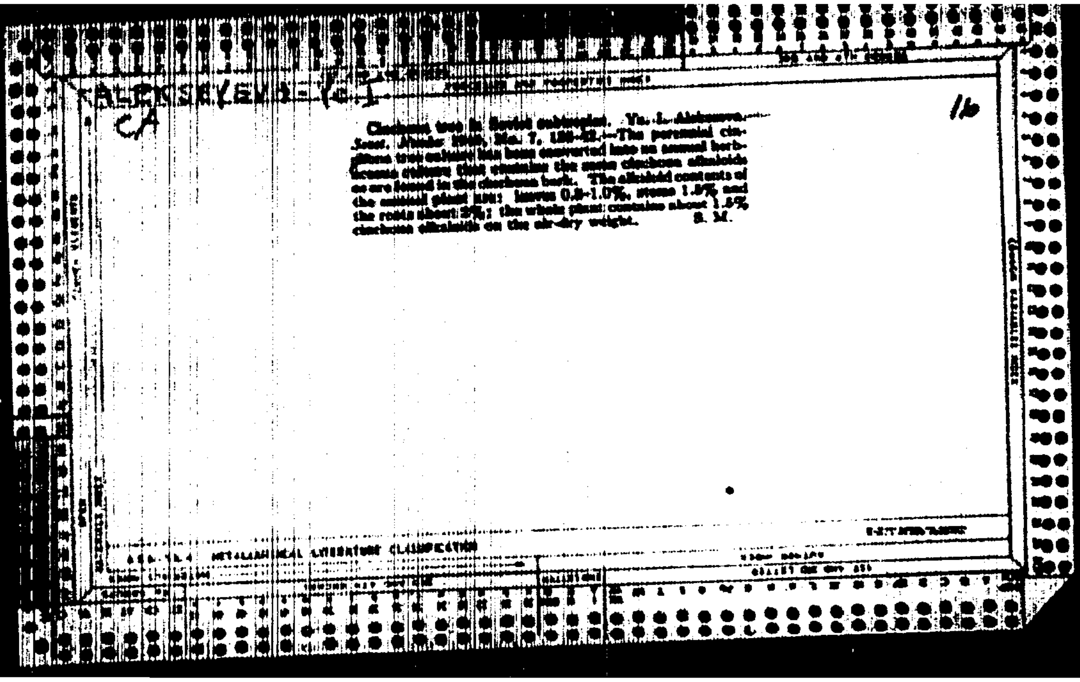
CA

15

Hoffer's method for determination of potassium required by soil. E. I. Alekseeva. Nauk. Zapiski Tsukrovoi Prom. 10, No. 29-30, 66-71(1930).—In conditions of Russian chernozem soil, the method of Hoffer must be rejected. Chernozem as a rule is very rich in K, and Hoffer's method is applicable only when the soil is poor in
V. H. Rafkow
K.

PROCESSES AND PROPERTIES INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



ALEKSEYEVA, YA. L.

CA

1b

Cinchona tree in Soviet subtropics. Ya. L. Alekseeva. Sovet. Subtropiki 1940, No. 7, 120-22.—The perennial cinchona tree culture has been converted into an annual herbaceous culture that contains the same cinchona alkaloids as are found in the cinchona bark. The alkaloid contents of the annual plant are: leaves 0.8-1.0%, stems 1.5% and the roots about 2%; the whole plant contains about 1.5% cinchona alkaloids on the air-dry weight. S. M.

METALLURGICAL LITERATURE CLASSIFICATION

AMBESHYAN, Ye. I.

"Anatomical Structure of Green Grafts of Rosa Gallica L. in the Root-Forming Process," Dok AN SSSR, 67, No 3, 1949.

All-Union Sci. Res. Inst. Essential Oil Cultures.

1. D'YACHKOV, I. I., <u>ALEKSEYEVA, YE. I.</u>

2. USSR (600)

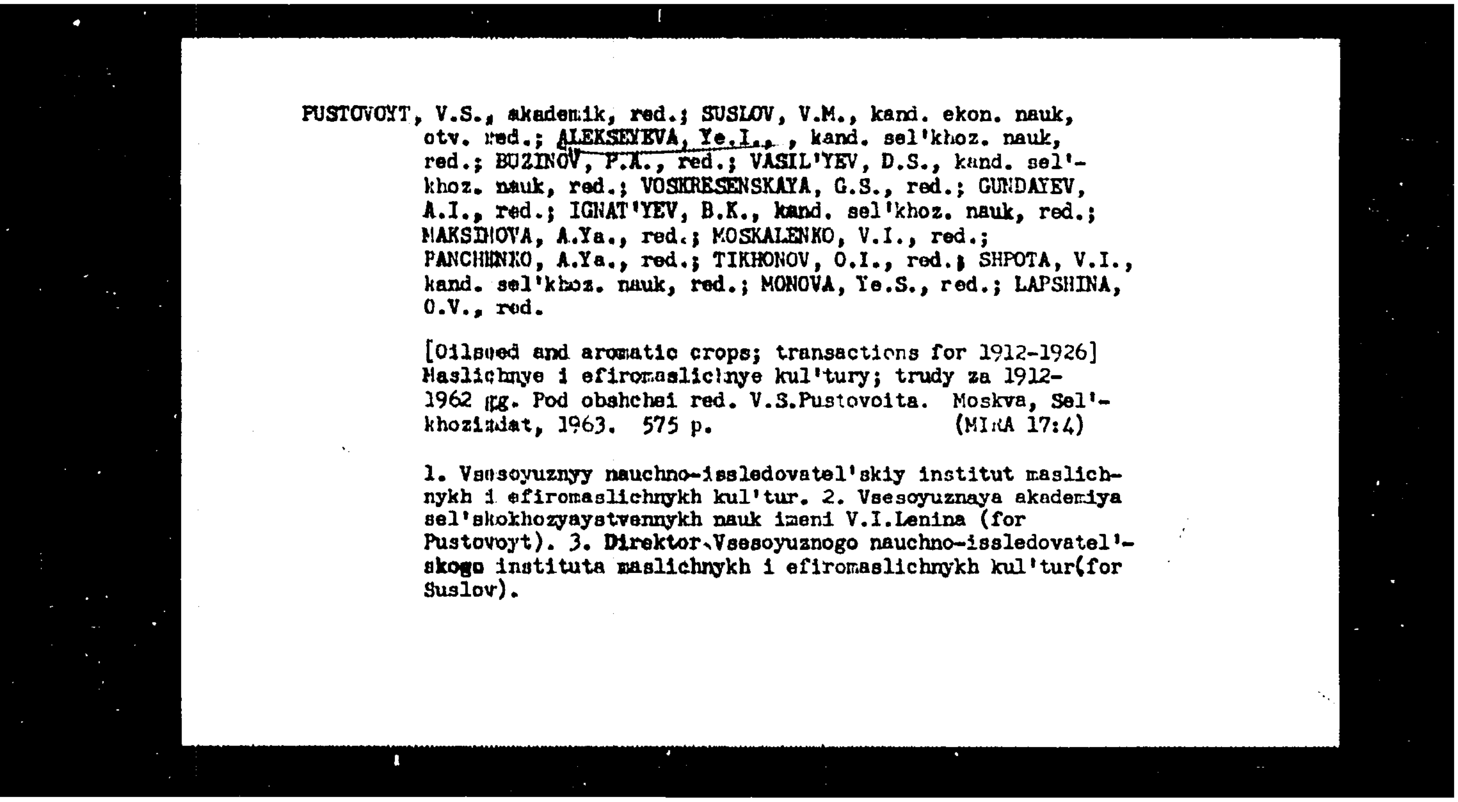
4. Nicotine

7. Problem of the synthesis of nicotine in the tobacco plant. Tabak.
13 no. 5, 1952

9. <u>Monthly List of Russian Accessions</u>, Library of Congress, January 1953, Unclassified.

ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk; BUZINOV, P.A., kand. sel'khoz. nauk; VODOLAGIN, V.D.; VOLKHOVSKAYA, U.V.; GLUSHCHENKO, N.N., kand. biol. nauk; GURVICH, N.L., doktor biol. nauk; ZHELEZNOV, P.A., kand. sel'khoz. nauk; KSENDZ, A.T.; LESHCHUK, T.Ya.; LUK'YANOV, I.A., kand. sel'khoz. nauk; MAYCHENKO, Z.G., kand. sel'khoz. nauk; TANASIYENKO, F.S., kand. khim. nauk; ZNAMENSKIY, M.P.; PERSIDSKAYA, K.G.; PODLESHCOVA, A.F.; ROGOCHIY, I.Ya.; REZNIKOV, A.R.; SHUL'GIN, G.T.; KHOTIN, A.A., doktor sel'khoz. nauk; LAPSHINA, O.V., red.; KINENKOVA, V.R., red.; MAKHOVA, N.N., tekhn. red.; BALLOD, A.I., tekhn. red.

[Aromatic plants] Efiromaslichnye kul'tury. Moskva, Sel'khozizdat, 1963. 358 p. (MIRA 16:12)
(Ukraine—Aromatic plants)



PUSTOVOYT, V.S., akademik, red.; SUSLOV, V.M., kand. ekon. nauk, otv. red.; ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk, red.; BUZINOV, P.A., red.; VASIL'YEV, D.S., kand. sel'khoz. nauk, red.; VOSKRESENSKAYA, G.S., red.; GUNDAYEV, A.I., red.; IGNAT'YEV, B.K., kand. sel'khoz. nauk, red.; MAKSIMOVA, A.Ya., red.; MOSKALENKO, V.I., red.; PANCHENKO, A.Ya., red.; TIKHONOV, O.I., red.; SHPOTA, V.I., kand. sel'khoz. nauk, red.; MONOVA, Ye.S., red.; LAPSHINA, O.V., red.

[Oilseed and aromatic crops; transactions for 1912-1926] Maslichnye i efiromaslichnye kul'tury; trudy za 1912-1962 gg. Pod obshchei red. V.S.Pustovoita. Moskva, Sel'khozizdat, 1963. 575 p. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiromaslichnykh kul'tur. 2. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Pustovoyt). 3. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta maslichnykh i efiromaslichnykh kul'tur(for Suslov).

GLUSHCHENKO, N.N., kand. sel'khoz. nauk; ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk; VOROB'YEVA, G.V.; LUZINA, L.V., kand. biol. nauk; MARCHENKO, Z.G., CHIKALOV, B.M., kand. sel'khoz. nauk; KRYLATOVA, S.A., red.

[Recommendations for the production of aromatic plant seeds] Rekomendatsii po semenovodstvu efiromaslichnykh kul'tur. Moskva, Sel'khozizdat, 1963. 27 p. (MIRA 17:6)

1. Russia (1923- U.S.S.R.) Ministerstvo sel'skogo khozyaystva. Upravleniye nauki, propagandy i vnedreniya peredovogo opyta. 2. Nauchnyye sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instituta maslichnykh i efiromaslichnykh kul'tur.(for all except Krylatova).

S/080/62/035/006/002/013
D204/D307

AUTHORS: Andreyeva, V. V. and Alkeseyeva, Ye. L.

TITLE: The oxidation of titanium, zirconium, molybdenum and certain alloys.

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 6, 1962, 1175-1183

TEXT: The rates of oxidation of massive Ti, Mo, Zr, 90Ti10Mo and 92Ti5Cr3Al were studied in oxygen and in air, between 20 and 400°C. Progress of oxidation was assessed by the thickness of oxide scale formed, as measured by an optical polarization method. At room temperature, in air, Ti oxidized logarithmically, the scale reaching a thickness of 80 - 90 A.V. after 545 days. Between 50 and 250°C Ti oxidized faster in dry than in humid air. The oxidation of Zr was already appreciable at 50°C, of Ti and 90Ti10Mo alloy at 100°C and of Mo and 92Ti5Cr3Al at 150°C. At 150°C the scales on Ti, Mo and Zr reached 30 - 50 A.V. after 6 hours and were 250 - 400 A.V. thick after 6 hours at 250 - 350°C. Zirconium

Card 1/2

S/080/62/035/006/002/013
The oxidation of titanium ... D204/D307

oxidized more rapidly than Mo at 250°C or than Ti at 350°C. This was associated with the growth of monoclinic ZrO_2. Mo oxidized rapidly above 300°C but an admixture of 10% Mo and Ti made this alloy better than Ti alone at the same temperature. The TiCrAl alloy was particularly resistant to oxidation. In general the metals oxidized logarithmically at lower and parabolically at higher temperatures. The rate of oxidation is thought to be governed initially by the rate of formation of a thin scale as the temperature is increased. The scales were found to be rutile for Ti, cubic ZrO_2 up to 250°C and monoclinic ZrO_2 above 250°C for Zr, MoO_3 up to 300°C and $MoO_3 + MoO_2$ above 300°C for Mo, solid solution of TiO_2 and MoO_3 for 90Ti10Mo and (probably) a solid solution of Ti, Cr, Al oxides for the ternary alloy. Energies of activation for the oxidation processes ranged from 10 to 21.2 kcal/mole between 200 and 350°C. The results are discussed. There are 8 figures and 2 tables.

SUBMITTED: May 12, 1961

Card 2/2

L [illegible] EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/JG/WB/GD

ACC NR: AT6013787 SOURCE CODE: UR/0000/65/000/000/0043/0058

AUTHOR: Andreyeva, V. V.; Kazarin, V. I.; Alekseyeva, Ye. L.; Glazunov, S. G.; Solenina, O. P.; [illegible], V. V.

47

B-1

ORG: none

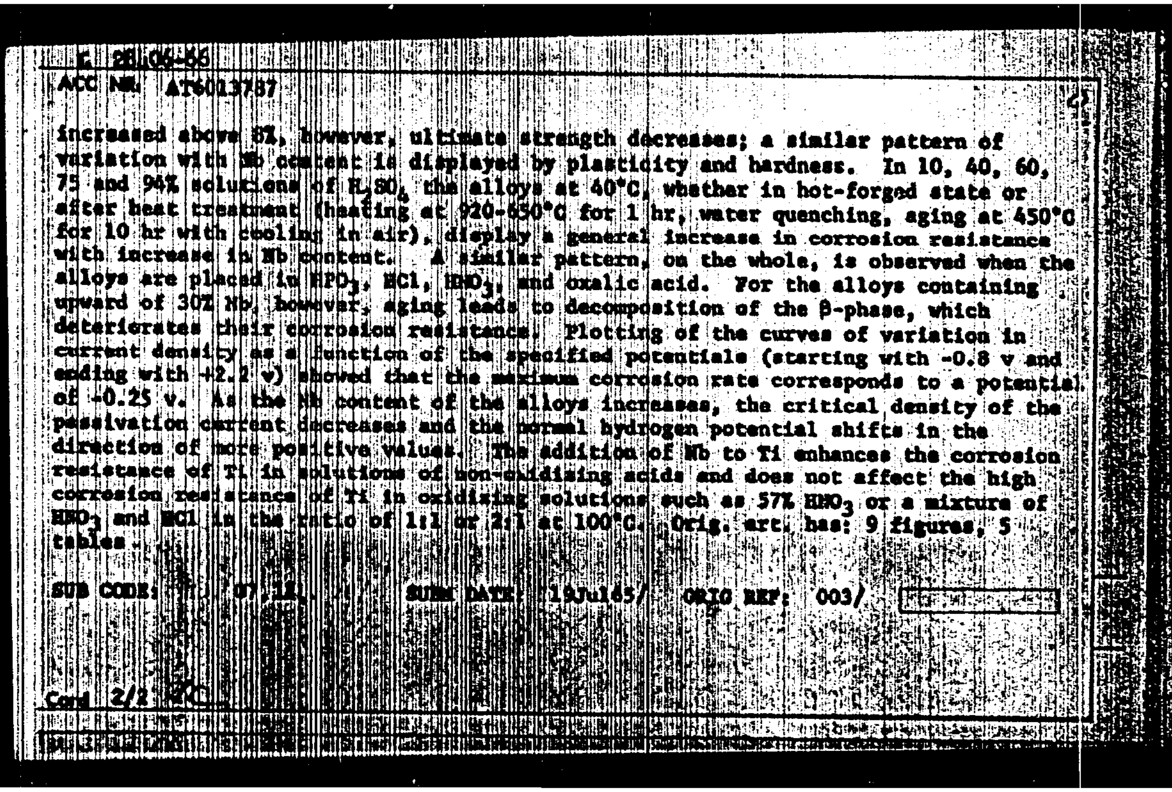
TITLE: Study of the corrosion resistance and electrochemical and mechanical properties of alloys of the titanium-niobium system

SOURCE: Korroziya metallov i splavov (Corrosion of metals and alloys), no. 2 Moscow, Izd-vo Metallurgiya, 1965, 43-58

TOPIC TAGS: corrosion resistance, electrochemistry, titanium containing alloy, niobium containing alloy, acid, metal heat treatment

ABSTRACT: This is a continuation of a previous investigation (this issue, pp 29-42) with the difference that it deals with alloys of the Ti-Nb system containing up to 50% wt. Nb. Both metals in unalloyed state have a high corrosion resistance, but in certain solutions, e.g. sulfuric and hydrochloric acid solutions, Ti dissolves at a sufficiently fast rate whereas Nb remains corrosion-resistant. Hence, the addition of Nb to Ti should increase the corrosion resistance of Ti. Mechanical tests of these alloys show that as the Nb content increases (up to 8%) the ultimate strength of the alloy increases from 57 kg/mm^2 to 92 kg/mm^2; as the Nb content is further

Card 1/2



L 28106-66

ACC NR: AT6013787

increased above 8%, however, ultimate strength decreases; a similar pattern of variation with Nb content is displayed by plasticity and hardness. In 10, 40, 60, 75 and 94% solutions of H_2SO_4 the alloys at 40°C, whether in hot-forged state or after heat treatment (heating at 920-650°C for 1 hr, water quenching, aging at 450°C for 10 hr with cooling in air), display a general increase in corrosion resistance with increase in Nb content. A similar pattern, on the whole, is observed when the alloys are placed in HPO_3, HCl, HNO_3, and oxalic acid. For the alloys containing upward of 30% Nb, however, aging leads to decomposition of the β-phase, which deteriorates their corrosion resistance. Plotting of the curves of variation in current density as a function of the specified potentials (starting with -0.8 v and ending with +2.2 v) showed that the maximum corrosion rate corresponds to a potential of -0.25 v. As the Nb content of the alloys increases, the critical density of the passivation current decreases and the normal hydrogen potential shifts in the direction of more positive values. The addition of Nb to Ti enhances the corrosion resistance of Ti in solutions of non-oxidizing acids and does not affect the high corrosion resistance of Ti in oxidizing solutions such as 57% HNO_3 or a mixture of HNO_3 and HCl in the ratio of 1:1 or 2:1 at 100°C. Orig. art. has: 9 figures, 5 tables.

SUB CODE: [illegible], 07, 11/ SUBM DATE: 19Jul65/ ORIG REF: 003/

Card 2/2 [illegible]

L 47367-66 EWT(m)/EWP(.)/T/EWP(:)/ETI IJP(c) JD/JG/WB

ACC NR: AR60284 SOURCE CODE: UR/0137/66/000/005/I085/I085

AUTHOR: Andreyeva, V. V.; Kazarin, V. I.; Alekseyeva, Ye. L.; Glazunov, 36 B S. G.; Nikulova, V. F.; Solonina, O. P.

TITLE: Investigation of the corrosion resistence and electrochemical and mechanical properties of alloys of the system niobium and titanium 27 27

SOURCE: Ref. zh. Metallurgiya, Abs. 5I590

REF SOURCE: Sb. Korroziya met. i splavov. No. 2, M., Metallurgiya, 1965, 43-58

TOPIC TAGS: niobium titanium alloy, corrosion resistance/Ti20Nb alloy

ABSTRACT: Titanium alloys with 2--50% niobium have been investigated. Alloying of titanium with niobium considerably increases σ_b and H_B of Ti. Thus, after hot forging the Ti-20Nb alloy has σ_b of ~104 Mn/m^2 (Ti 60 mn/m^2), δ ~ 11% (Ti ~ 18%). The corrosion resistance of alloys in solutions of unoxidative acids is considerably higher than that of titanium. In such acids as HNO_3, the resistance of titanium and titanium-niobium is identical. The critical density of passivating current decreases with an increase of niobium content in

Card 1/2 UDC: 669.295.5

L 47367-66
ACC NR: AR6028442

alloys, and the stationary potential shifts to more positive values. [Translation of abstract] [NT]

SUB CODE: 11/

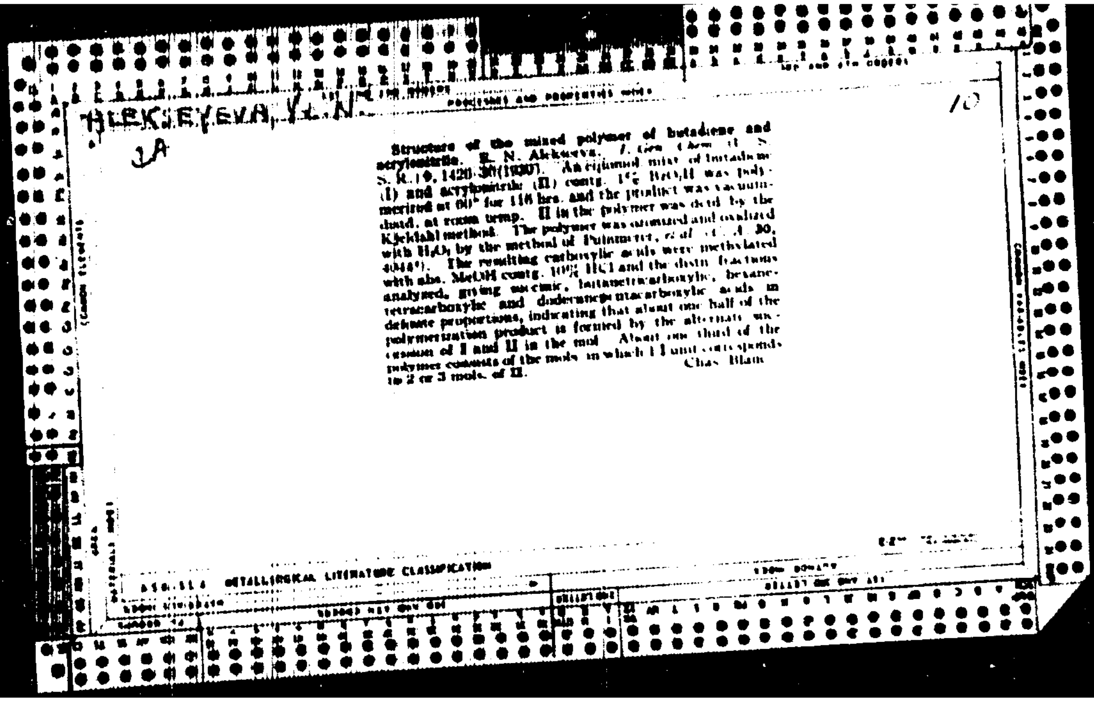
Card 2/2 afs

ALEKSEYEVA, Ye.N.

In memory of the Academician Vladimir Mikhailovich Rodionov. Soob.o nauch.rab.chl.VKHO no.4:1-4 '54. (MIRA 10:10)
(Rodionov, Vladimir Mikhailovich, 1878-1954)

TIKHONOV, G.A., dots., red.; ALEKSEYEVA, Ye.N., red.; VORONTSOVA,
Z.Z., tekhn. red.

[Automatic metering and control devices] Avtomaticheskie
ustroistva ucheta i kontrolia; sbornik statei. Izhevsk,
Udmurtskoe knizhnoe izd-vo, 1963. 43 p. (MIRA 17:3)



ALEKSEYEVA, Ye. N.

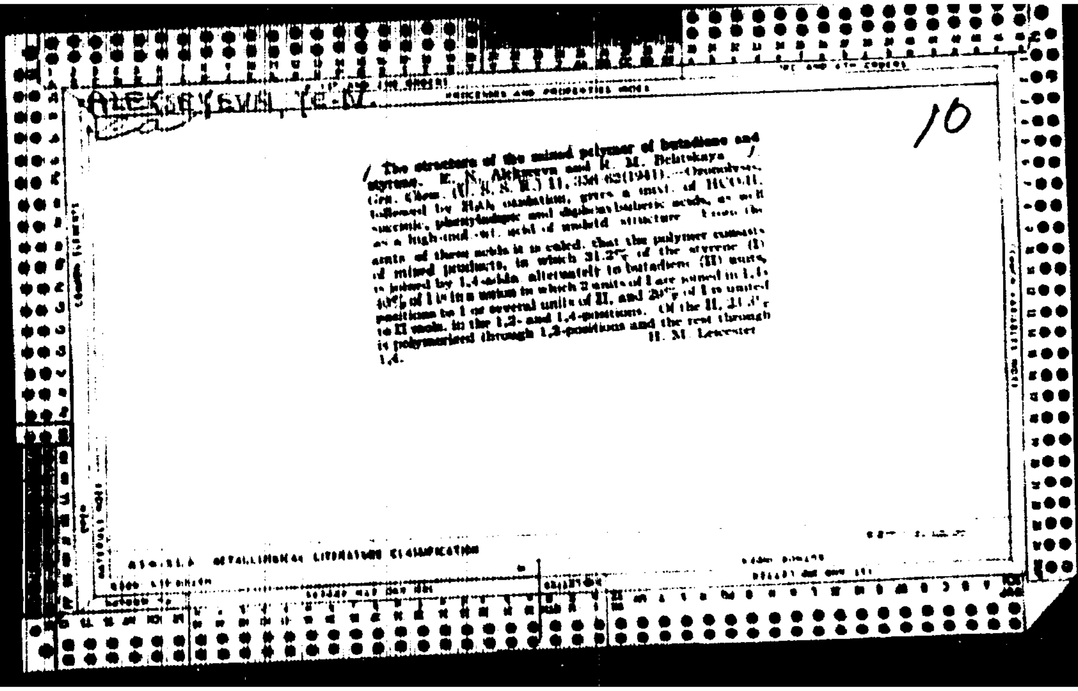
1A

10

PROCESSES AND PROPERTIES INDEX

Structure of the mixed polymer of butadiene and acrylonitrile. E. N. Alekseeva. *J. Gen. Chem. U. S. S. R.* 19, 1420-30(1949). An equimol. mixt. of butadiene (I) and acrylonitrile (II) contg. 1% BzO₂H was polymerized at 60° for 116 hrs. and the product was vacuum-dried at room temp. II in the polymer was detd. by the Kjeldahl method. The polymer was ozonized and oxidized with H_2O_2 by the method of Pummerer, *et al.* (*C. A.* 30, 4044⁹). The resulting carboxylic acids were methylated with abs. MeOH contg. 10% HCl and the distn. fractions analyzed, giving succinic, butanetetracarboxylic, hexanetetracarboxylic and dodecanepentacarboxylic acids in definite proportions, indicating that about one half of the polymerization product is formed by the alternate union of I and II in the mol. About one third of the polymer consists of the mols. in which 1 I unit corresponds to 2 or 3 mols. of II. Chas. Blanc

METALLURGICAL LITERATURE CLASSIFICATION



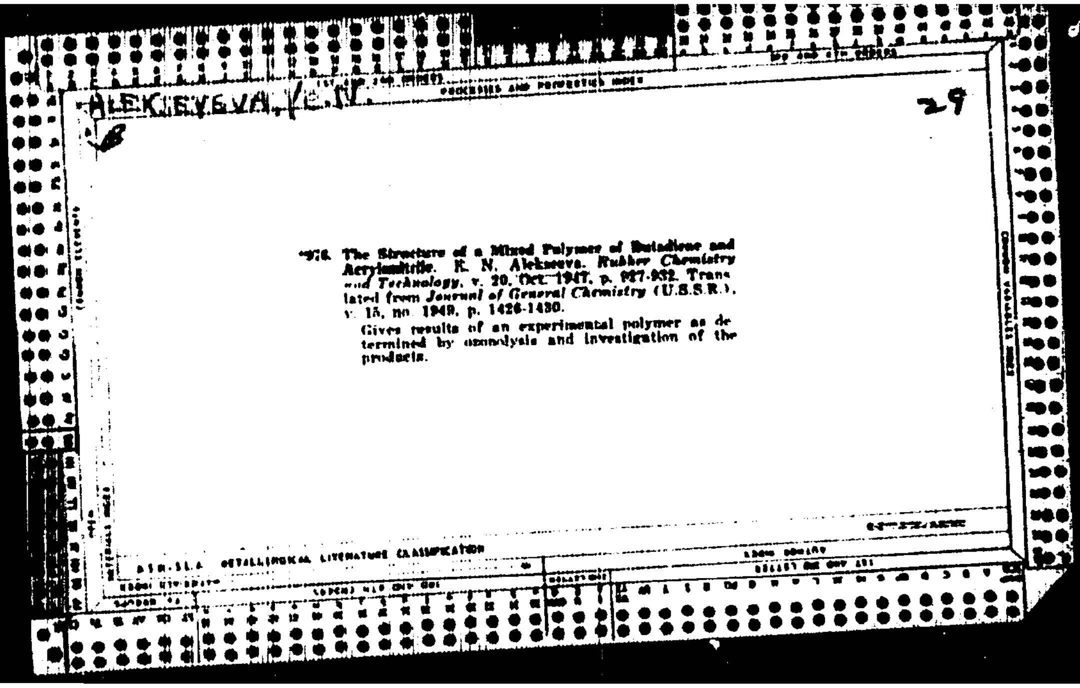
ALEKSEYEVA, YE. N.

10

PROCESSES AND PROPERTIES INDEX

The structure of the mixed polymer of butadiene and styrene. E. N. Alekseeva and R. M. Belitskaya. J. Gen. Chem. (U. S. S. R.) 11, 358-62(1941).—Ozonolysis in HCO₂H, followed by H₂O₂ oxidation, gives a mixt. of succinic, phenyladipic and diphenylsuberic acids, as well as a high-mol.-wt. acid of unkd. structure. From the amts. of these acids it is calcd. that the polymer consists of mixed products, in which 31.2% of the styrene (I) is joined by 1,4-adds. alternately to butadiene (II) units, 10% of I is in a union in which 2 units of I are joined in 1,4-positions to 1 or several units of II, and 20% of I is united to II mols. in the 1,2- and 1,4-positions. Of the II, 31.3% is polymerized through 1,2-positions and the rest through 1,4. H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



ALEKSEYEVA, YE. N.

29

*976. **The Structure of a Mixed Polymer of Butadiene and Acrylonitrile.** E. N. Alekseeva. *Rubber Chemistry and Technology*, v. 20, Oct. 1947, p. 927-932. Translated from *Journal of General Chemistry* (U.S.S.R.), v. 15, no. 1949, p. 1426-1430.

Gives results of an experimental polymer as determined by ozonolysis and investigation of the products.

ALEKSEYEVA, YE. N.

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Organic Chemistry

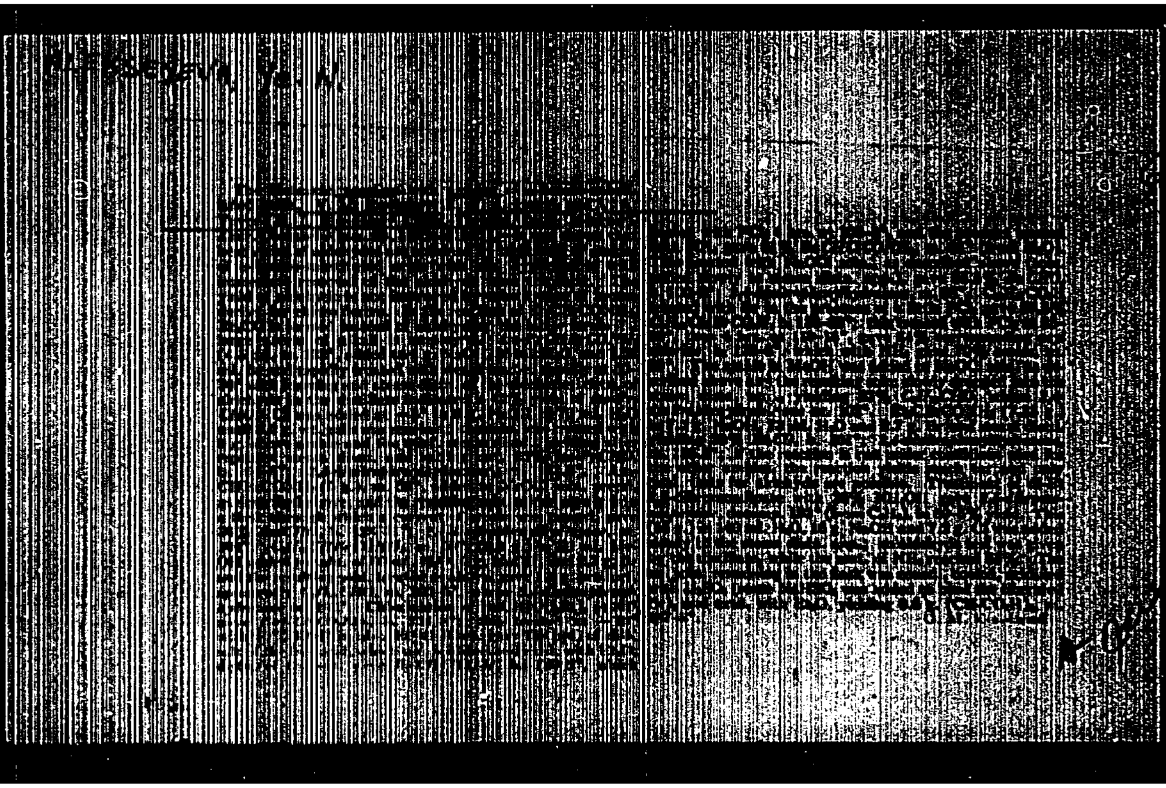
1

(2) [illegible]

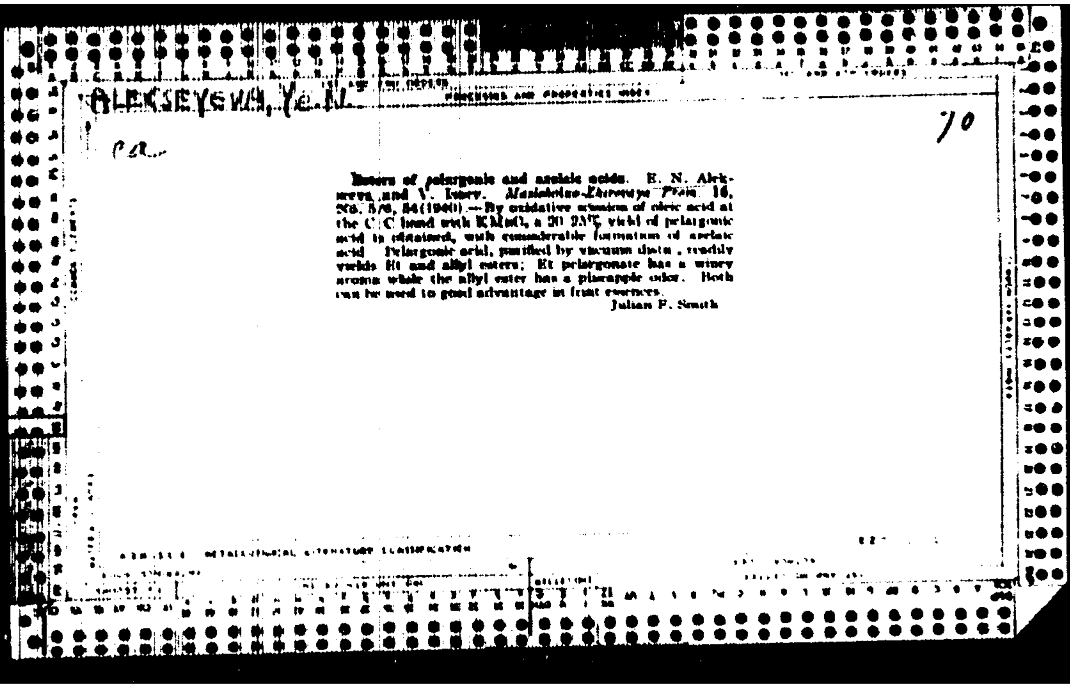
The structure of butadiene and acrylonitrile copolymer. Synthesis of hexanetetracarboxylic acids. E. N. Alekseeva and V. D. Mezhov. *J. Gen. Chem.* (U.S.S.R.) 23, 1351-4 (1953)(Engl. translation).—See C.A. 47, 5357a.

H. L. H.

9-17-54



[illegible], Ya. N.



ALEKSEYEVA, Ye.N.

PROCESSES AND PROPERTIES INDEX

ca

70

Esters of pelargonic and azelaic acids. E. N. Alekseeva and V. Isaev. *Masloboino-Zhirovaya Prom.* 16, No. 5/6, 34(1940).—By oxidative scission of oleic acid at the C:C bond with KMnO4, a 20-23% yield of pelargonic acid is obtained, with considerable formation of azelaic acid. Pelargonic acid, purified by vacuum distn., readily yields Et and allyl esters; Et pelargonate has a winey aroma while the allyl ester has a pineapple odor. Both can be used to good advantage in fruit essences.

Julian F. Smith

METALLURGICAL LITERATURE CLASSIFICATION

AUTHORS: Alekseyeva, Ye. N., Vavor, V. A.

SOV/156-58-3-37/52

TITLE: The Deposition of Phthalimide on the Esters of α-, β-Unsaturated Acids (Prisoyedineniye ftalimida k efiram α, β-nenasyshchennykh kislot)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp. 545 - 549 (USSR)

ABSTRACT: The possibility of the use of the catalyst of Radionov was investigated in the deposition of phthalimide on the double bonds of the alkalidenemalonic and alkalideneacetoacetic esters, the esters of cinnamic acid and benzene acetone. The reaction takes place effectively for the ethylidene-, propylidene-, isoamilidene-, and benzolidene-malonic esters. The acid hydrolisis of the phthalimide derivatives of the alkilidene malonic esters leads to the corresponding β-amino acids. By employing this method β-aminoisoenanthic acid, β-aminobutyric acid, β-aminovaleric acid, and β-amino-β-phenylpropionic acid were synthetized for the first time. There are 2 tables and 6 references, 1 of which is Soviet.

Card 1/2

The Deposition of Phthalimide on the Esters of α-, β-Unsaturated Acids SOV/156-58-3-37/52

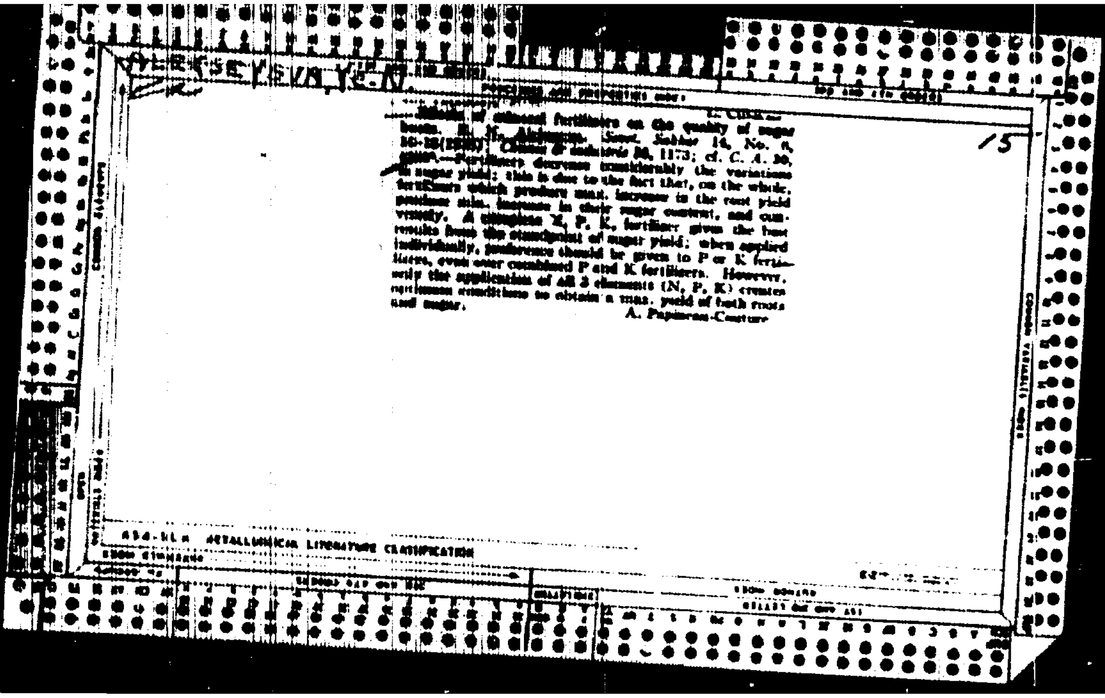
ASSOCIATION: Kafedra organicheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta im.D.I.Mendeleyeva (Chair of Inorganic Chemistry at the Moscow Chemical and Technological Institute imeni D.I.Mendeleyev)

SUBMITTED: November 19, 1957

Card 2/2

[illegible], Sergey Petrovich; [illegible], [illegible], red.

[Semiconductor rectifiers for charging storage batteries] Poluprovodnikovye vypriamiteli dlia zariadki akkumuliatorov. Izd.2., ispr. i dop. Izhevsk, Udmurtskoe knizhnoe izd-vo, 1962. 55 p. (MIRA [illegible])



ALEKSEYEVA, YE. N.

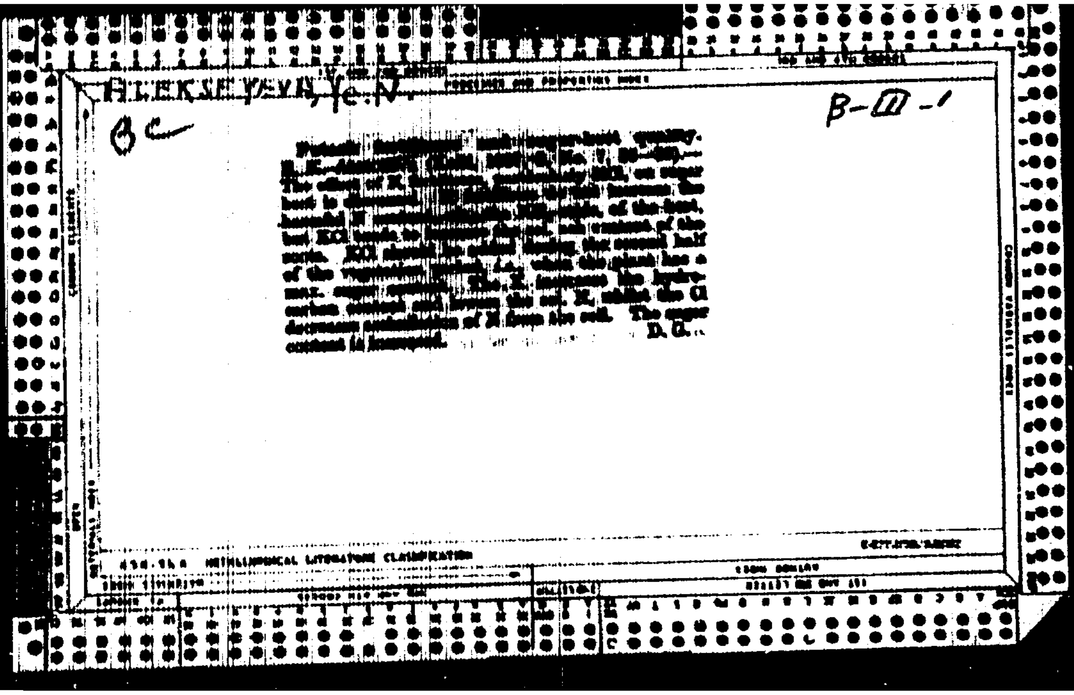
PROCESSES AND PROPERTIES INDEX

15

Influence of mineral fertilizers on the quality of sugar beets. E. N. Alekseeva. Sovet. Sakhar 14, No. 6, 30-33([illegible]); Chimie & industrie 38, 1173; cf. C. A. 30, [illegible].—Fertilizers decrease considerably the variations in sugar yield; this is due to the fact that, on the whole, fertilizers which produce max. increase in the root yield produce min. increase in their sugar content, and conversely. A complete N, P, K, fertilizer gives the best results from the standpoint of sugar yield; when applied individually, preference should be given to P or K fertilizers, even over combined P and K fertilizers. However, only the application of all 3 elements (N, P, K) creates optimum conditions to obtain a max. yield of both roots and sugar.

A. Papineau-Couture

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION



ALEKSEYEVA, Ye. N.

B-III-1

[illegible] quality.
[illegible]
The effect of K [illegible] on sugar
beet [illegible]
[illegible] of the beet.
[illegible] KCl [illegible] content of the
[illegible] second half
[illegible] KCl [illegible] has a
of the [illegible] K increases the hydro-
[illegible] K, while the Cl
carbon [illegible]
decreases [illegible] of K from the soil. The sugar
content is lowered. D. G.

METALLURGICAL LITERATURE CLASSIFICATION

1. ALEKSEYEVA, YE.N.

2. USSR (600)

4. Fertilizers and Manures

7. Action of fertilizers in grassland crop rotation on deep moderately leached chernozem, Sov.agron. 11 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

ALEKSEYEVA, Ye.N.

Foliar nutrition of sugar beets. Sakh.prom.29 no.5:29-42 '55.
(MLRA 8:11)

1. Ramonskaya opytno-selektsionnaya stantsiya
(Sugar beets) (Fertilizers and manures)

SHIROBOKOV, Stepan Ivanovich; ALEKSEYEVA, Ye.N., red.; VORONTSOVA, Z.Z.,
tekhn. red.

[The Udmurt A.S.S.R.; economic and geographical features] Udmurtskaia ASSR; ekonomiko-geograficheskaia kharakteristika. Izhevsk, Udmurtskoe knizhnoe izd-vo, 1961. 214 p. (MIRA 15:1)
(Udmurt A.S.S.R.—Economic geography)

BURKSER, Ye.S. [Burkser, IE.S.]; ALEKSEYEVA, Ye.N. [Alekseieva, K.M.];
VEYNSHTEYN, V.Ye.; GOL'DENFEL'D, I.V.; DAVYDYUK, L.A. [Davydyuk, L.O.];
DEMIDENKO, S.G. [Demydenko, S.H.]; YELISEYEVA, G.D. [IEliseieva, H.D.];
LECHEKHLEB, V.R. [Lechekhlib, V.R.]; SHCHERBAK, M.P.

Accurate determination of the absolute age of rocks by the lead
method. Geol.zhur. 21 no.5:48-57 '61. (MIRA 14:10)

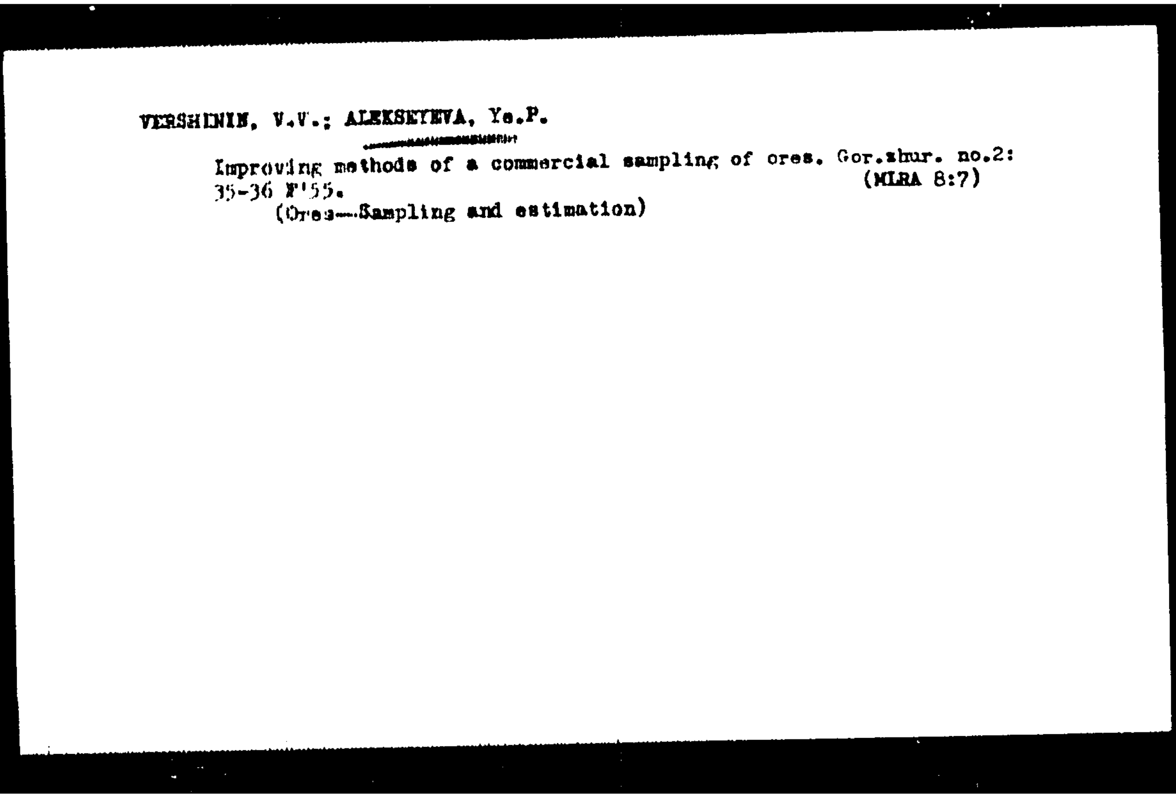
1. Institut geologicheskikh nauk AN USSR.
(Geological time) (Mineralogy)

BICHUKIN, Filipp Demidovich; KAZACHENOK, Vladimir Isidorovich;
HABANETEV, F.Sh., inzh., retsenzent; ALEKSEYEVA, Ye.N., red.

[Low-waste precision forging] Malootkhodnaia i tochnaia shtampovka. Izhevsk, Udmurtskoe knizhnoe izd-vo, 1961. 92 p.
(MIRA 17:4)

GORBOV, Mikhail Ivanovich; ALEKSANDROV, A.A., kand. ist. nauk, red.; ALEKSEYEVA, Ye.N., red.

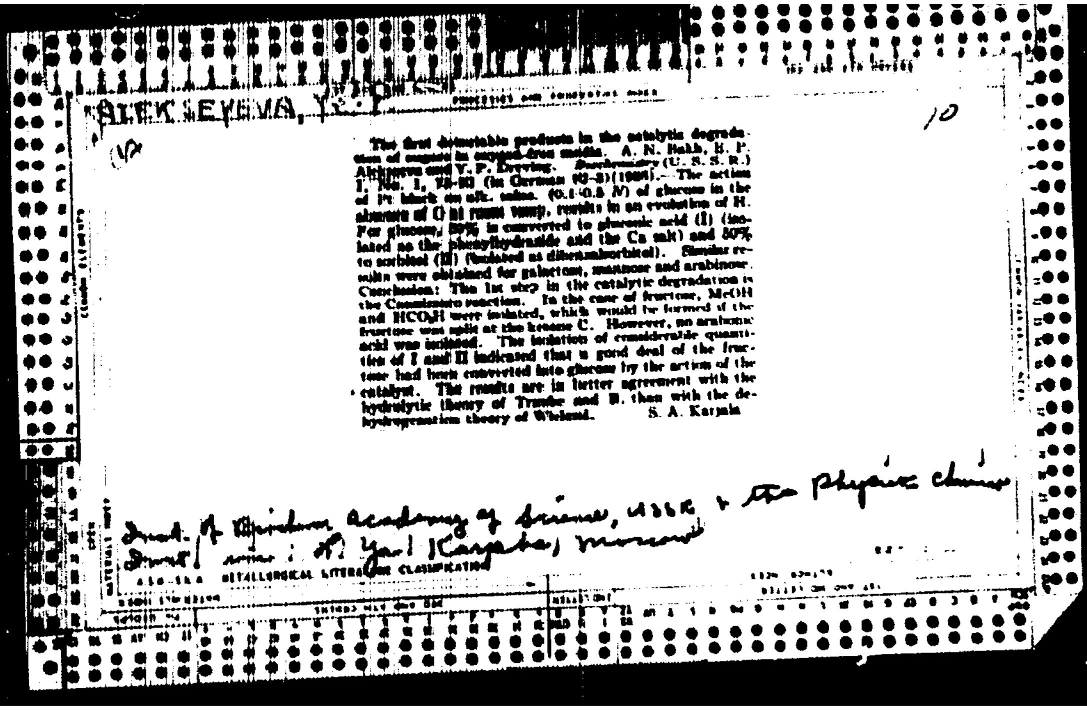
[Gunsmiths of Izhevsk] Izhevskie oruzheiniki. Izhevsk, Udmurtskoe knizhnoe izd-vo, 1963. 102 p. (MIRA 17:4)



VERSHININ, V.V.; ALEKSEYEVA, Ye.P.

Improving methods of a commercial sampling of ores. Gor.zhur. no.2: 35-36 F'55. (MLRA 8:7)

(Ores--Sampling and estimation)



ALEKSEYEVA, Y. P.

10

The first detectable products in the catalytic degrada-
tion of sugars in oxygen-free media. A. N. Bakh, B. P.
Alekseeva and Y. P. Dreving. Biochemistry (U. S. S. R.)
1, No. 1, 73-80 (in German 80-3)(1936).—The action
of Pt black on alk. solns. (0.1-0.5 N) of glucose in the
absence of O at room temp. results in an evolution of H.
For glucose, 50% is converted to gluconic acid (I) (iso-
lated as the phenylhydrazide and the Ca salt) and 50%
to sorbitol (II) (isolated as dibenzalsorbitol). Similar re-
sults were obtained for galactose, mannose and arabinose.
Conclusion: The 1st step in the catalytic degradation is
the Cannizzaro reaction. In the case of fructose, MeOH
and HCO₂H were isolated, which would be formed if the
fructose was split at the ketone C. However, no arabonic
acid was isolated. The isolation of considerable quanti-
ties of I and II indicated that a good deal of the fruc-
tose had been converted into glucose by the action of the
catalyst. The results are in better agreement with the de-
hydrolytic theory of Traube and B. than with the de-
hydrogenation theory of Wieland. S. A. Karjala

Inst. of Biochem Academy of Science, USSR + the Physic. Chem. Inst. [illegible] : L. Ya. Karpov, Moscow

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

ALEKSEYEVA, Ye.P.; SHOSHINA, O.Yu.

Comparing interferometers of the institutes of the committee. Trudy inst.Kom.stand.,mer i izm.prib no.47:63-79 '61. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D.I.Mendeleyeva.

(Interferometers—Testing)

ALEKSEYEVA, Ye.P.; SHOSHINA, O.Yu.

Comparing interferometers of the institutes of the committee. Trudy inst.Kom.stand.,mer.i izm.prib.no.63-79 '61. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D.I.Mendeleyeva.

(Interferometers—Testing)

22194

S/048/61/025/004/043/048
B117/B209

24.3500

AUTHOR: Alekseyeva, Ye. P.

TITLE: Luminescence of LiF crystals activated with uranyl nitrate

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 545-547

TEXT: The present paper has been read at the 9th Conference on Luminescence (Crystal Phosphors). The author has studied the absorption and luminescence spectra as well as the thermoluminescence of LiF crystals activated with uranium salts. The crystals were excited by X-rays from an X-ray tube (V = 50 kv, I = 20 ma) with a tungsten cathode and beryllium windows. The absorption spectra were studied by means of an CФ-4 (SF-4) spectrometer. The absorption bands of the activator have maxima at λ_1 = 2500 A and $\lambda_2 <$ 2100 A. An increase in activator concentration causes the maximum at λ_1 = 2500 A to shift to 2600 A, and a new band with its maximum at λ_3 = 3150 A appears. The fluorescence spectra of activated LiF were taken

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with an ИСП-53 (ISP-53) spectrograph with an ФЭП-1 (FEP-1) recorder. The phosphor was excited by light from a ПРК-2 (PRK-2) lamp with a УФС-2 (UFS-2) filter. At room temperature, the fluorescence spectra showed a number of individual bands in the green region. When the activator concentration is varied, the shape of the curves remains in general the same. The individual spectra differ as to the relative intensity of the individual bands. The comparison of present results with those obtained by P. P. Feofilov (Ref. 2: Materialy V Soveshchaniya po lyuminestsentsii, Izd. AN EstSSR, Tartu, 1957) for the luminescence spectra of CaF_2-U^{6+} shows a fairly good agreement of the characteristic wavelengths of these spectra. For this reason, the luminescence of a phosphor activated with uranyl salts may also be considered a radiation of the uranium ion which has been transformed through the crystal lattice. The author found that the excitation of LiF phosphors with uranyl admixtures by X-rays entails the formation of the same color centers as the action of an ionizing radiation upon pure LiF crystals. When the concentration of the activator (of the order of 0.2%) is sufficiently high, a new absorption band with its maximum at λ = 5700 A appears, giving the crystal a violet color. This

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band is stable and is conserved for several months when the samples are stored at room temperature. It is undoubtedly related to the addition of the activator, as it does not appear in pure crystals, not even in the case of very long exposure. The thermoluminescence of pure and activated crystals was investigated, too. The luminescence of the activator was isolated by means of a special filter. The thermoluminescence curve characteristic of a non-activated crystal was found to exhibit a number of maxima, corresponding to the following temperatures: 110°, 163°, 215°, 300°, and 360°C (for $\beta = 0.7$ deg.sec^{-1}). Moreover, the activation of crystals was found to change the interrelations between these maxima, without, however, giving rise to any new maxima. This leads to the conclusion that the light sums in this case are accumulated on the trapping levels of the base substance, just like in the case of other alkali halide crystals. Finally, the author thanks L. M. Belyayev and Z. P. Perekalina for having supplied the samples. In the discussion to this paper, Z. P. Perekalina stated that luminescent LiF crystals activated with uranyl salts were grown in air according to the method of Kyropoulos at the Institut kristallografii (Institute of Crystallography). Crystals grown in vacuo did not exhibit any luminescence. This is proof

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Luminescence of LiF crystals ...

that U^{6+} has to be contained in activated LiF to produce luminescence centers. The luminescence and absorption centers of LiF-U crystals were studied for various uranium concentrations. At concentrations of 0.01 ÷ 0.02% by weight in the melt, intensity is redistributed in the bands of the luminescence spectra: Bluish-green luminescence changes over into yellowish-green luminescence. At the same time, the absorption spectrum is changed, too: the absorption bands shift into the long-wave region. This paper was read at the Conference on Alkali-halide Compounds at Tartu, July, 1959. There are 1 figure and 8 references: 4 Soviet-bloc and 4 non-Soviet-bloc. The four references to English-language publications read as follows: C. Delbeck, P. Pringsheim, J. Chem. Phys., 21, 5 (1953); F. Morehead, F. Daniels, J. Chem. Phys., 27, 6 (1957); J. Sharma, Phys. Rev., 78, 3, 535 (1952); D. F. Saunders, F. Morehead, F. Daniels, J. Amer. Chem. Soc., 75, 3096 (1953).

ASSOCIATION: Irkutskiy universitet (Irkutsk University)

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S/076/62/036/007/008/010
B101/B138

AUTHORS: Yemel'yanenko, G. A., and Alekseyeva, Ye. P.

TITLE: Effect of temperature on the electrodeposition of some metals

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 7, 1962, 1532 - 1536

TEXT: To find the optimum temperatures for the electrodeposition of Cu, Zn, and Ag from various electrolytes, the curves log i versus 1/T were plotted. The following electrolytes were used: 12.5 g/l $CuSO_4 \cdot 5H_2O$ + 2.5 g/l H_2SO_4 (I); 200 g/l $CuSO_4 \cdot 5H_2O$ + 50 g/l H_2SO_4 (II); 450 g/l $ZnSO_4 \cdot 7H_2O$ + 50 g/l $Al_2(SO_4)_3 \cdot 18H_2O$ (III); 17 g/l $AgNO_3$ (IV), and 40 g/l AgCl + 200 g/l $K_4[Fe(CN)_6] \cdot 3H_2O$ + 20 g/l K_2CO_3 (V). A deviation from linearity was observed for the function log i = f(1/T). It occurred at certain polarizations and temperatures and was more distinct at high polarization. It lies at 40 mv, 40-50°C, for electrolyte I; at 50 mv, 50-60°C, or 100 mv, 40°C, for II; at 50 mv, 30-40°C, for III; at 10 mv,

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40°C, or 20 mv, 35°C, for IV; and at 30 mv, 35°C or 100 mv, 45°C, for V. The activation energy W for electrolytes I-IV is much lower above than below the bend in the curve, whereas V shows the opposite behavior to W. The deviation from linearity and the drop in W for I-IV are attributed to transition from chemical to concentration polarization. The deviation of V is attributed to the fact that Ag^+ ions are discharged at low polarization, but complex silver ions at high polarization. Conclusion: This transition from chemical to concentration polarization must be allowed for when deciding the optimum temperature. Optimum temperatures for a rapid and irreversible process with prevailing chemical polarization are: for I (no data); II 60 mv, up to 40°C; III 50 mv, 18-25°C; IV (no data); V 250 mv, 60-80°C. There are 5 figures and 2 tables.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: May 29, 1961

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ACCESSION NR: AP4025093 S/0139/63/000/006/0110/0116

AUTHOR: Alekseyeva, Ye. P.

TITLE: Luminescence of activated LiF-crystals

SOURCE: IVUZ. Fizika, no. 6, 1963, 110-116

TOPIC TAGS: lithium fluoride, single-crystal luminescence, uranyl salt, absorption spectra, spectrophotometer, activator concentration, M-center absorption, thermoluminescence

ABSTRACT: A detailed investigation has been made of lithium fluoride single-crystal luminescence activated with uranyl salt, copper, magnesium, and iron. Absorption spectra were obtained by means of the SF-4 spectrophotometer in wave lengths from 2050 to 8000 Å. The specimen was a plane parallel plate 1 mm thick. The absorption spectra of the activated crystal show three maximum absorption bands. Increasing the activator concentration shifts the maxima towards long wave lengths. Auxiliary absorption of LiF is discussed, and the M-center absorption is noted under continuous and intermittent x-ray irradiation at 120C. The effect of ionizing radiation on activator centers is analyzed in the LiF-U crystal phosphor. It is

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found that green fluorescence brightness in LiF-U decreases under x-ray irradiation. The thermoluminescence of LiF-Mg shows two maxima at 80 and 110C temperatures, whereas in LiF-Cu the thermoluminescence maximum occurs above 215C. In LiF-Fe the maximum moves up to 300C, and LiF-U maxima occur both at high and low temperatures. "The author is grateful to Professor I. A. Parfianovich under whose guidance this work was done." Orig. art. has: 6 figures.

ASSOCIATION: Irkutskiy gosuniversitet imeni A. A. Zhdanova (Irkutsk State University)

SUBMITTED: 30Jun62	DATE ACQ: 14Feb64	ENCL: 00
SUB CODE: PH	NO REF SOV: 008	OTHER: 013

Card 2/2

ACC NR: AP6030719 SOURCE CODE: UR/0368/66/005/002/0216/0220

AUTHOR: Alekseyeva, Ye. P.

ORG: none

TITLE: Dependence of thermoluminescence curves of LiF phosphors on the nature of impurity, preliminary thermal treatment, and x-ray irradiation dose

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 2, 1966, 216-220

TOPIC TAGS: lithium fluoride, crystal phosphor, thermoluminescence, radiation dosimeter, crystal impurity, x ray irradiation

ABSTRACT: This study was made because LiF phosphors might be used as radiation dosimeters. The thermoluminescence of doped and undoped LiF crystals irradiated by x-rays was studied at room temperature. The experimental results show that the magnitude of the sum of light, accumulated at the individual capture levels, is substantially affected by the irradiation time of the crystal, by the annealing of the crystal prior to irradiation, and by the presence of impurities in the crystal. This paper was read at the Twelfth All-Union Conference on Luminescence of Crystal Phosphors, held in Lvov in January 1964. The author thanks Prof. I. A. Parfianovich for setting up the problem and directing the work. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 25Jan65/ ORIG REF: 009/ OTH REF: 005

Card 1/1 UDC: 535.377

ACC NR: AP7004986 SOURCE CODE: UR/0048/66/030/009/1506/1508

AUTHOR: Alekseyeva, Ye.P.

ORG: none

TITLE: M band stimulation of luminescence in x-irradiated LiF crystals /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no.9, 1966, 1506-1508

TOPIC TAGS: luminescent crystal, lithium fluoride, luminescence spectrum, excitation spectrum, luminescence center

ABSTRACT: The author has recorded the excitation spectrum of the red luminescence of LiF crystals colored by x irradiation. The resulting spectrum was similar to that obtained by C.Klick (Phys. Rev., 112, 1620 (1950)): the red luminescence was stimulated not only by irradiation in the M band (at 4450 Å), but also by irradiation at certain other wavelengths, namely, at 2200, 2500, 3200, 3800 and 4050 Å. Three of these stimulation peaks are close to the F, R_1, and R_2 induced absorption peaks at 2450, 3150 and 3800 Å, respectively, and it has been suggested that the red luminescence is stimulated at these wavelengths by transfer of energy from F, R_1, and R_2 centers to M centers. The author proposes an alternative explanation, based on the calculations of A.Meyer and R.F.Wood (Phys.Rev., 133, A1436 (1964)) of the energy

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ACC NR: AP7004986

levels of an M center in a LiF crystal. Differences between the energies of some of those levels correspond to wavelengths of 2220, 4050, and 2520 Å, and it is suggested that the M centers are excited by direct absorption of photons of the corresponding energies. The temperature dependences of the stimulation of the red luminescence by 4450, 3800, 2220 and 2520 Å radiations were found to be very similar, indicating that in all these cases the stimulation is effected by transitions in the same centers. By identifying the 4450 Å "ordinary" M absorption peak with a transition involving one state whose energy had not been calculated, the author was able to account also for the 3800 Å excitation peak. On the basis of this identification, however, one would expect the 3200 Å excitation peak to occur at 3380 Å; this discrepancy cannot be explained at present. The author thanks I.A. Parfianovich for his guidance of and interest in the work. Orig. art. has: 2 figures.

SUB CODE: 20 : SUBM DATE: none ORIG. REF: 005 OTH REF: 004

Card 2/2

ALEKSHYEV, Ye. S.

ALEKSHYEV, Ye. S.: "Local varieties of [illegible] in [illegible] Oblast and measures to improve them." Min Higher Education Ukrainian SSR. Kiev Order of Labor Red Banner Agricultural Academy. Kiev, 1956. (Dissertation for the Degree of Candidate in Agricultural Sciences)

So: Knizhnaya Letopis' No 3[illegible], 19[illegible]. Moscow

ALEKSEYEVA, Ye.S.

Selecting parental types for developing hybrids of Hungarian millet. Agrobiologiia no. 3:383-385 My-Je '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kormov imeni V.R. Vil'yamsa.
(Millet breeding)

ALEKSEYEVA, Ye. S., Cand Agr Sci -- "Creation of hybrid starting material for the cultivation of new ~~species~~ varieties of Italian millet in northern regions." Mos, 1960 (All-Union Sci Res Inst of Fodders im V.R. Vil'yams). (KL, 1-61, 200)

S/020/61/139/005/009/021
B104/B201

AUTHORS: Berestnev, V. A., Razikov, K. Kh., Alekseyeva, Ye. S., and Kargin, V. A., Academician

TITLE: Structure of oriented polymers

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 5, 1961, 1093-1094

TEXT: The structure of polymers includes a so-called supermolecular formation which reaches beyond the molecular dimensions. The authors used an electron microscope to examine this supermolecular formation on thread sections cut by a microtome. Longitudinal and cross sections were prepared, and special care was taken to save the structure from damages in the cutting process. In this process, all threads were found to split into small fibers with diameters ranging between 1 and 10μ. The fibers had partly a nonoriented, coarse spherulitic structure, and fine globular formations; others had nonoriented macroformations. The authors base on these results to assume that the structure of chemical threads consists of anisodiametric elements. the fibers. The fibers do not contain any

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Structure of oriented polymers S/020/61/139/005/009/021
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oriented microstructural elements. The anisotropy of thread properties is evidently caused by the fiber shape. From a micropicture of a fiber (not reproducible) in which there is a hole the authors infer from the fact that this hole is neither circular nor elliptic that there are stress inhomogeneities in the fibers. The results yielded by examinations of fibers by a polarization microscope (400 - 600 - fold magnification) cause the authors to conclude that some fibers lack an orientation of the molecular structure; an orientation of the surface layer of the fiber was established in a number of cases. Thus, the structure of chemical threads appears to consist of fibers having a nonoriented regular macroformation. The anisotropy of a number of properties in these materials is caused by the fibrous structure. There are 4 figures and 3 Soviet references.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
(Physicochemical Institute imeni L. Ya. Karpov)

SUBMITTED: April 18, 1961

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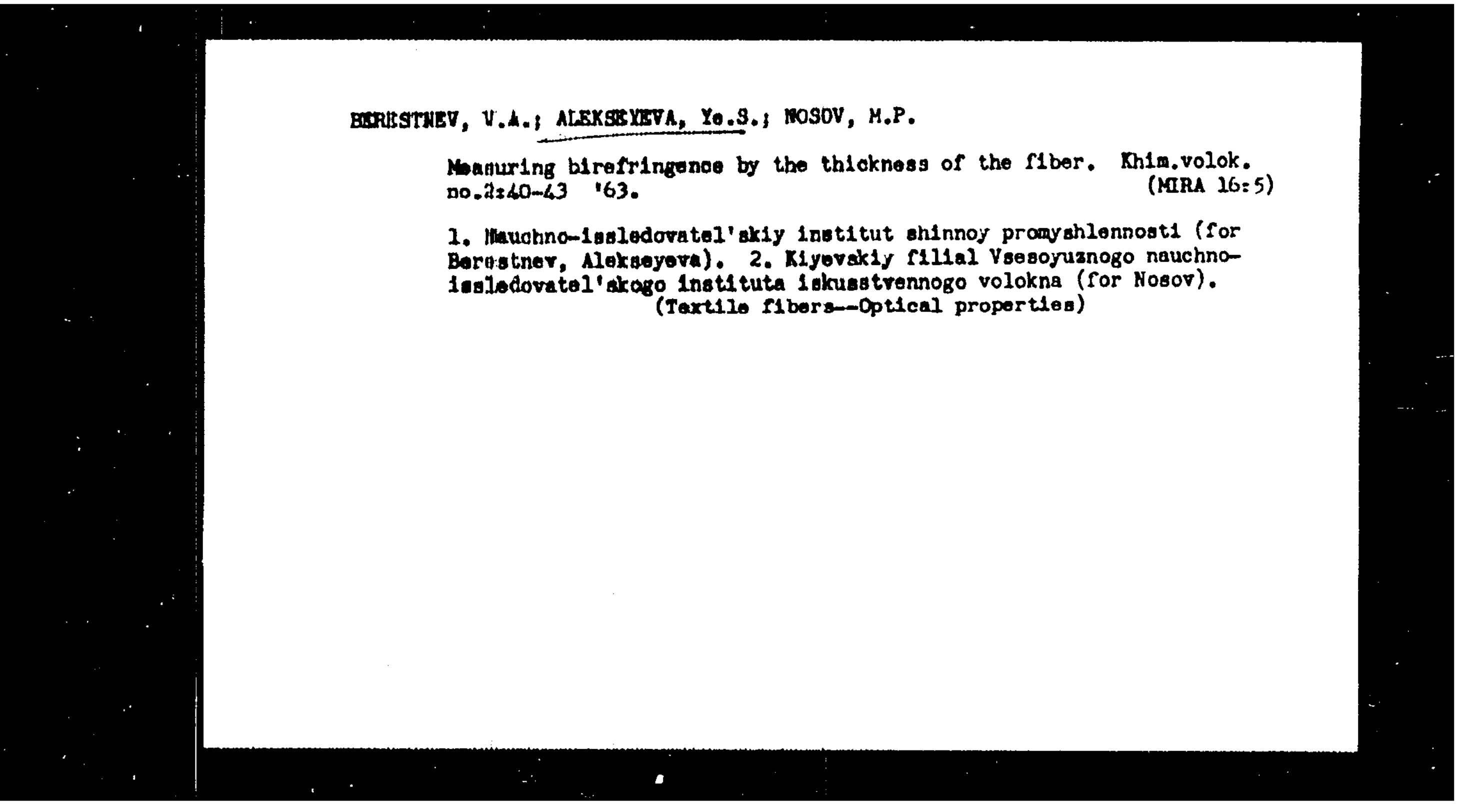

BERESTNEV, V.A.; ALEKSEYEVA, Ye.S.; NOSOV, M.P.

Measuring birefringence by the thickness of the fiber. Khim.volok. no.2:40-43 '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (for Berestnev, Alekseyeva). 2. Kiyevskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Nosov).
(Textile fibers--Optical properties)

DUBOVA, L.S.; BERESTNEV, V.A.; NAGDASEVA, I.P.; Prinimali uchastiye:
ALEKSEYEVA, Ye.S.; PRYAMIKOVA, T.S.

Studying the double refraction of some polyamide fibers.
Khim.volok. no.5:52-55 '64. (MIRA 17:10)

1. Nauchno-issledovatel'skiy institut shveynoy promyshlennosti.

BERESTNEV, V.A.; LUBOVA, L.S.; ALEKSEYEVA, Ye.S.

Structure of polyamide fibers studied by the etching test. Khim. volok. no.5:29-31 '63. (MIRA 16:10)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

1. ALEKSEYEVA, YE.V.

2. USSR (600)

4. Dairy Cattle - Feeding and Feeding Stuffs

7. Useful pamphlet ("Practice of leaders in widespread feeding for milk production." N. P. Semenov. Reviewed by YE. V. Alekseyeva), Sots.zhiv. 15 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

FALINA, N.N.; MASLOVA, R.A.; YAKIMOV, P.A.; ANDREYEVA, S.M.; ALEKSEYEVA, Ye.V.

Some results of studying Basidiomycetes as a source for obtaining feed proteins and diet-deficient amino acids. Rast. res. 1 no.1: 122-127 '65. (MIRA 18:6)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR, Leningrad.

SOV/137-58-7-14118

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 20 (USSR)

AUTHORS: Levenshteyn, S. A., Alekseyeva, Ye. V.

TITLE: Possibilities for the Utilization of "Biscuit" Clays in the Binder Component of Fireclay (O vozmozhnosti primeneniya sukharnykh glin v svyazuyushchey chasti shamotnykh mass)

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1957, Nr 43, pp 99-105

ABSTRACT: Studies performed establish that it is possible to introduce up to 15% nonplastic, "biscuit"-type Borovichi clays into the mix of fireclay refractories without impairing the quality of the latter, thus making possible economies in plastic binder clays.

S. G.

1. Refractory materials--Preparation 2. Refractory materials--Binders 3. Clays--Applications

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ALEKSEYEVA, YE. V., BARANTSEV, R. G. (Leningrad)

"A Circular Plate in Almost Free-Molecule Flows."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

BARANTSEV, R.G.; ALEKSEYEVA, Ye.V.

Highly rarefied monatomic gas flow past bodies. Aerodin. razrezh. gaz. no.1:183-194 '63.

Highly rarefied gas flow around a mirror-image reflecting sphere. Ibid.:195-211 (MIRA 17:3)

RYABCHUK, A.F.; YUR'YEV, A.M.; PLETNIKOV, K.V., redaktor; ALEKSEYEVA, Ye.Ye., redaktor; MATISSEN, Z.M., tekhnicheskiy redaktor

[Some 16mm sound motion-picture apparatus] Uzkoplenochnye zvukovye kinoustanovki. Pod obshchei red. K.V.Pletnikova. Izd. 2-oe, perer. i dop. Moskva, Gos. izd-vo "Iskusstvo," 1956. 193 p. 96 illus. 1. (Motion-picture projectors) (MLRA 10:2)