

L 4124(-66) ENT(m)/ERP(v)/I/ERP(j)

WI/RM

ACC NR: AP6023426 (A)

SOURCE CODE: UR/0190/66/008/007/1164/1168

AUTHOR: Kurilenko, A. I.; Aleksandrova, L. B.; Smetanina, L. B.

41
39
B

ORG: none

TITLE: Effect of grafting of polystyrene on the surface properties of polycaproamide and polyethylene terephthalate fibers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 7, 1966, 1164-1168

TOPIC TAGS: polyethylene terephthalate, polycaproamide, polystyrene, synthetic fiber, adhesive bonding

ABSTRACT: The effect of grafting of polystyrene to polycaproamide (capron) and polyethylene terephthalate (dacron) fibers on the strength of their adhesive bond with thermosetting polymers (pure oligomers MGF-9, PN-1, ED-5, E-41) was studied. The grafting was performed by the post-effect method from the gas phase. The adhesion of the grafted capron and dacron fibers to the four thermosetting polymers and the wettability of these fibers were shown to depend on the amount of grafted polystyrene and to change in symbatic fashion. The amount of grafted polymer was proportional to the duration of the grafting process, but the rate of grafting in the surface layer decreased with time. Qualitatively, the grafting of polystyrene to the fibers had the same effect on their adhesion to all four polymers: in all cases, the strength of the bond increased in the presence of less than 1% of grafted polystyrene, then dropped to

Card 1/2

UDC: 66.095.26+678.01:53/.54+678.674/.675

L 41746-66

ACC NR: AP6023426

2

values comparable to the initial ones at 2-3% of the grafted component. The results are discussed from the standpoint of the adsorption theory of adhesion. In conclusion, the authors thank L. B. Shchetinkina and G. V. Medyannikov, who participated in the experiments. Orig. art. has: 3 figures, 1 table, and 3 formulas.

SUB CODE: 11/ SUBM DATE: 25Feb65/ ORIG REF: 015/ OTH REF: 004

Card 2/2 MLP

RUDAKOV, Yu.A.; ALEKSANDROVA, L.F.; YEFREMOV, V.A.

Conveyer for the manufacture of upholstered furniture.
Der.prom. 11 no.3:19-20 Mr '62. (MIRA 15:2)

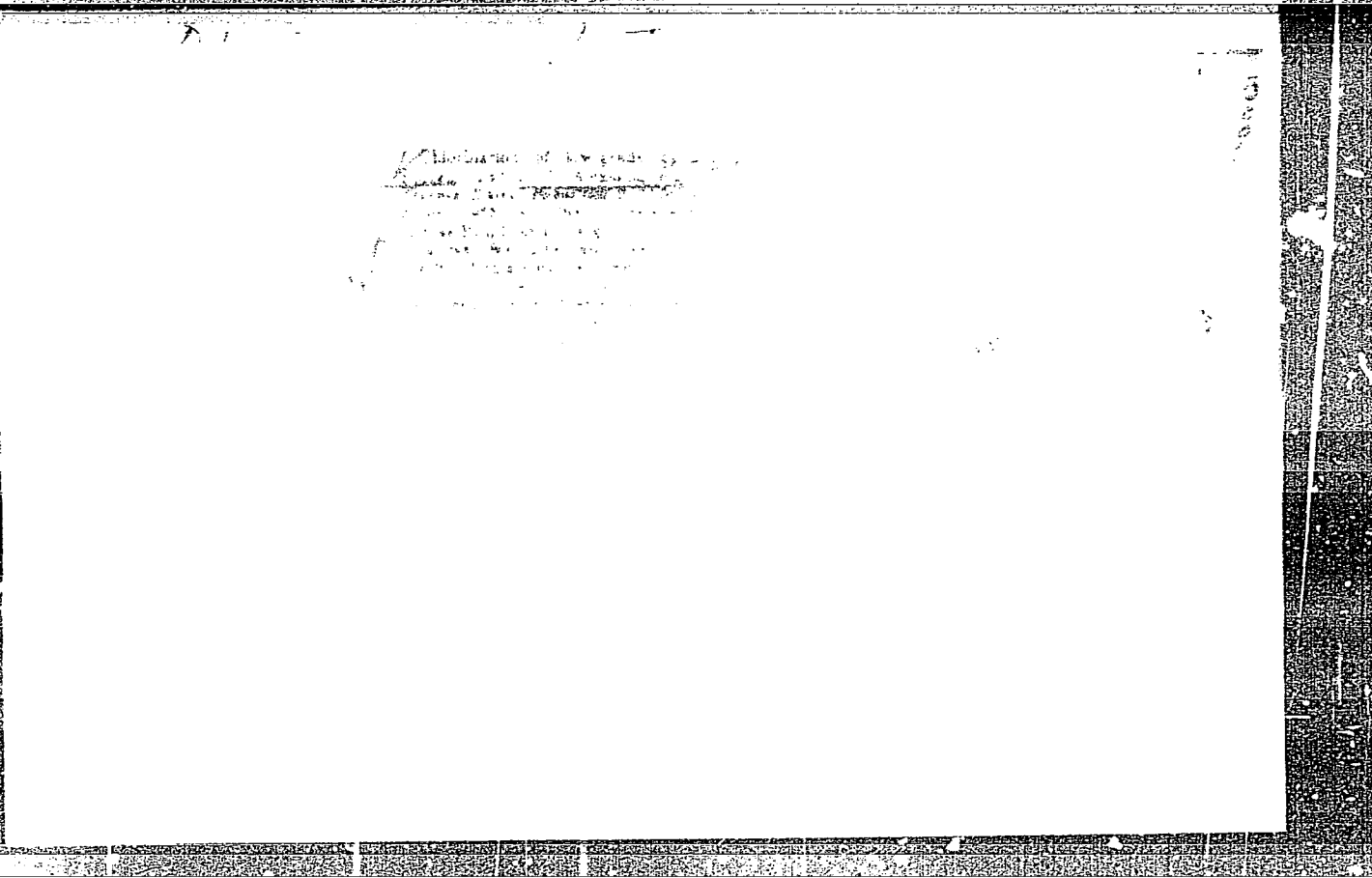
1. Armavirskiy mebel'no-derevoobrabatyvayushchiy kombinat.
(Upholstery)
(Assembly-line methods)

LEPIN, T.K.; ALEKSANDROVA, L.F.; KUZIN, A.M., *otv. red.*; MAKOGONOVA,
I.A., *tekh. red.*

[Bibliography on the use of radioactive and stable isotopes
in biology for 1950-1958] Ukazatel' literatury po primeneniui
radioaktivnykh i stabil'nykh izotopov v biologii za 1950-
1958 gg. Moskva, Izd-vo Akad. nauk SSSR, 1962. 406 p.

(MIRA 16:2)

1. Akademiya nauk SSSR. Sektor seti spetsial'nykh bibliotek.
2. Chlen-korrespondent Akademii nauk SSSR (for Kuzin).
(Bibliography—Radiobiology) (Bibliography--Isotopes)



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PROCESSES AND PROPERTIES INDEX

ALEXANDROVA, L. I. A-4

BC

Vestibular disturbances following electric shock. L. I. ALEXANDROVA and A. S. AIVAZOV (J. Neuropatologia i Psichiatria, 1939, 8, 61-65).— Patients suffering from injuries by electric current or lightning showed giddiness, headache, nausea, vomiting, fatigue, noise in the ears, marked neuro-vegetative disturbances, and very often during the acute stage a fine horizontal or horizontal-rotatory nystagmus. The cochlear apparatus was rarely affected, the vestibular apparatus was affected, in all the examined patients. Lumbar puncture and intravenous hypertonic solutions produced good therapeutic results. T. T.

COMMON ELEMENTS

OPEN MATERIALS INDEX

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

FROM SOURCE

ALPHABETIC

ALPHABETIC

114

Ca

ALEXANDROVA, I. I. PROCESSES AND PROPERTIES INDEX

Hematoencephalic barrier in patients with a chronic epidemic encephalitis and the effect of treatment with belladonna root decoction. T. A. Shutova, I. I. Aleksandrova and V. V. Kartasheva. *Archi sci. biol. (U. S. S. R.)* 59, No. 3, 37-40(1940).—The penetration quotient of sugar, Br, K, Ca and Cl does not change despite marked general improvement. T. Laanes

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

114

ALEKSANDROVA, L. I.

Aleksandrova, L. I. "Some neurological symptoms in skull wounds", In the collection:
Nevrologiya voyen. vremeni, Vol. I, Moscow, 1949, p. 50-56.

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949)

ALEXANDROVA, L. I.
ALEXANDROVA L. I. and MAKAROVA, L. G.

4931

ALEXANDROVA L. I. and MAKAROVA, L. G. Neurol. Inst. U.S.S.R. med. Acad.
The dynamics of neurological symptoms and bio-currents in the brain of
patients with electric injuries. Nevropat. Psikhiat. 1950, 19/4 (17-22)
Graphs 5

On the basis of EEG studies of 40 cases of electrical injuries to various parts
of the body, mostly arms, it is concluded that such injuries, mild or severe,
always produce abnormal EEGs. Clinical manifestations, focal or general, may
be entirely absent and the patient may even be able to continue with his work
for some time. It is possible with the aid of the EEG to demonstrate aggrava-
tion or improvement in the patient's condition or clinical anomalies that can-
not be detected by any existing laboratory or clinical method. A still more
important conclusion is the the nervous manifestations occurring in electric
injuries are not functional but organic, the result of disturbances of the
dynamics of blood and cerebrospinal fluid. Hassin- Chicago (VIII, 2, 5)

SO: Excerpta Medica Section II, Vol 4, No. 9

ALEKSANDROVA, L.I.

Clinico-physiological analysis of the neurotic syndrome of the initial phase of hypertonic illness and the significance of sleep inhibition in this analysis. Zh. Nevropat. Psikhiat., '52, 52, no.9, 42-48. (MLRA 5:9) (PsA 27, no.8:6057 '53)

ALEKSANDROVA, L.I.; PROKHOROVA, Ye.S.

Result of sleep therapy in clinical nervous diseases. Zh. vysshei
nerv. deiat. 3 no.4:521-535 July-Aug 1953. (CIML 25:4)

1. Institute of Neurology, Academy of Medical Sciences USSR.

ALEKSANDROVA, L.I.; KABELYANSKAYA, L.G.; KONOVALOV, N.V., professor, deystvitel'nyy
chlen Akademii meditsinskikh nauk, direktor.

Neurologic characteristics of initial phases of hypertension. Klin.med. 31
no.9:43-46 S '53. (MIRA 6:11)

1. Institut nevrologii Akademii meditsinskikh nauk SSSR. 2. Akademiya medi-
tsinskikh nauk SSSR (for Konovalov). (Hypertension) (Nervous system)

ALEKSANDROVA, L.I.

[Role of normal sleep on the prevention of neuroses] Rol' normal'nogo
sna v preduprezhdenii nevrozov; radiolektsiia. Moskva, 1955. 7 p.
(NEUROSES) (SLEEP) (MIRA 11:4)

ALEKSANDROVA, L. I. Cand Med Sci -- (diss) "Hygienic requirements for
the daily ^{sub}complementary physical ^{exercises}~~and~~ work with schoolchildren of ~~the~~
~~beginners~~ ^{first} classes." Mos, 1957. 12 pp (Acad Ped Sci RSFSR. Sci Res Inst
of Physical Education and School Hygiene), 120 copies (KL, 43-57, 90)

-50a-

ALEKSANDROVA, L.I.

Effect of short daily exercise and games involving physical activity on the state of health and physical development of seven-year-old children. *Pediatrifa* no.5:70-72 My '57. (MIRA 10:10)

1. Iz Nauchno-issledovatel'skogo inatituta fizicheskogo vospitaniya i shkol'noy gigiyeny (dir. = chlen-korespondent Akademii pedagogicheskikh nauk RSFSR L.A. Markosyan) Akademiya pedagogicheskikh nauk RSFSR.

(PHYSICAL EDUCATION FOR CHILDREN)

SHMET, Ye.V., professor; ALEKSANDRCVA, L.I.

Rumanian neurology and Rumanian neurologists. Vest. AMN BSSR 12
no.4:79-83 '57. (MIRA 10:10)
(RUMANIA--NEUROLOGY)

USSR / Human and Animal Physiology. Physiology of Work and Sport. T

Abs Jour: Ref Zhurnal., No 22, 1958, 102330.

Author : Aleksandrova, L. I.

Inst : Not Given.

Title : On the Spatial Evaluation of the Active Movements of Children of the 7-year Age Group Under the Influence of Physical Exercises.

Orig Pub: Teoriya i praktika fiz. kul'tury, 1957, 20, No 8, 601-605.

Abstract: With the aid of Zhukovskiy's kinematometer the exactness of reproduction of passive abduction of one or both arms by 50° in the elbow joint was investigated. The perfecting of the musculoarticular reception under the influence of daily physi-

Card 1/2

114

ALEKSANDROVA, L.I., red.; TKACHEV, R.A., red.; GOTOVTSSEV, P.I., red.;
BOGACHEVA, Z.I., tekhn.red.

[Problems of the pathogenesis, clinical aspects, and treatment
of neuroses] Voprosy patogeneza, kliniki i lechenia nevrozov.
Pod red. L.I.Aleksandrovoi i R.A.Tkacheva. Moskva, Gos.izd-vo
med.lit-ry Medgiz, 1958. 204 p. (MIRA 13:1)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut nevrologii.
(NEUROSES)

ALEKSANDROVA, L. I., nauchnyy sotrudnik

Effect of daily physical exercises and active games on the working capacity of students [with summary in English]. Gig. i san. 23
no.5:37-42 My '58 (MIRA 11:6)

1. Iz Nauchno-issledovatel'skogo instituta fizicheskogo vospitaniya i shkol'noy gigiyeny APN RSFSR.
(PHYSICAL EDUCATION AND TRAINING, eff.
on work capacity of students (Rus))
(WORK,
capacity, eff. of phys. education & training of
students (Rus))

ALEKSANDROVA, A.I.

SHMIDT, Ye.V., ALEKSANDROVA, L.I. (Moscow)

Neurology in the Rumanian People's Republic. Zhur.nevr i psikh 58 no.2
249-254 '58. (MIRA 11:5)

(NEUROLOGY,
in Rumania (Rus))

TKACHEV, R.A., kand.med.nauk; ALEKSANDROVA, L.I., kand.med.nauk; PROKHOROVA, E.S.,
kand.med.nauk

Hypertensive cerebral crises. Vest.AMN SSSR 14 no.7:22-29
'59. (MIRA 12:9)

1. Institut nevrologii AMN SSSR.
(BRAIN blood supply)
(HYPERTENSION complications)

TKACHEV, R.A.; ALEKSANDROVA, L.I.; PROKHOROVA, E.S.

Intravenous use of papaverine in acute disorders of brain blood circulation. Sov.med. 23 no.10:106-109 0 '59. (MIRA 13:2)

1. Iz Instituta nevrologii (direktor - deystvitel'nyy chlen AMN SSSR prof. N.V. Konovalov) AMN SSSR.
(HYPERTENSION compl.)
(BRAIN blood supply)
(PAPAVERINE ther.)

TKACH'OV, R.A.; ALEKSANDROVA, L.I.; PROKHOROVA, E.S.

Hypertensive cerebral crisis. Suvrem med., Sofia no.7-8:11-20 '60.

1. Iz Instituta po neurologiia na AMN SSSR (Direktor prof. N.V. Konovalov)

(HYPERTENSION compl)

(CEREBRAL HEMORRHAGE etiol)

SHMIDT, Ye.V., prof.; ALEKSANDROVA, L.I.

Neuropathology in Bulgaria and Hungary. Vest. AMN SSSR 15 no. 5:67-
71 '60. (MIRA 13:9)

(BULGARIA—NERVOUS SYSTEM—DISEASES)

(HUNGARY—NERVOUS SYSTEM—DISEASES)

ANTROPOVA, M.V., kand.meditsinskikh nauk; ALEKSANDROVA, L.I., kand.med.nauk

Hygienic evaluation of fountain pens for first- to fourth-grade students. Gig. i san. 25 no.3:44-48 Mr '60. (MIRA 14:5)

1. Iz Nauchno-issledovatel'skogo instituta fizicheskogo vospitaniya i shkol'noy gigiyeny Akademii pedagogicheskikh nauk RSFSR.
(PENMANSHIP—HYGIENIC ASPECTS)

TKACHEV, R. A.; ALEKSANDROVA, L. I.; PROKHOROVA, E. S.

Hypertonic cerebral crises. Nauch. trudy Inst. nevr. AMN SSSR
no.1:35-43 '60. (MIRA 15:7)

1. Institut nevrologii AMN SSSR.

(CEREBROVASCULAR DISEASE) (HYPERTENSION)

SHMIDT, Ye.V.; ALEKSANDROVA, L.I.; GALUZO, N.V.; SUKHOVSKAYA, N.A.

Thermal receptor of the skin (functional mobility) in patients with
vascular diseases of the brain. Zhur. nerv. i psikh. 60 no. 6:665-671
'60. (MIRA 13:12)

1. Institut nevrologii (dir. - prof. N.V. Konovalov) AMN SSSR,
Moskva.

(BRAIN—BLOOD VESSELS)

(SKIN—INNERVATION)

SHMIDT, Ye.V.; ALEKSANDROVA, L.I. (Moskva)

Neurology in the Hungarian People's Republic and in the Bulgarian
People's Republic. Zhur.nevr.i psikh 60 no.8:1049-1053 '60.

(MIRA 13:9)

(HUNGARY—NEUROLOGY)

(BULGARIA—NEUROLOGY)

S/081/63/000/001/015/061
B101/B186AUTHORS: Dmitrevskiy, G. Ye., Aleksandrova, L. I., Pozitun, A. I.TITLE: Solubility in the ternary system $\text{CdCl}_2 - \text{KCl} - \text{H}_2\text{O}$ PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1963, 74, abstract
1B497 (Nauchn. yezhegodnik. Odessk. un-t. Khim. fak., Odessa,
no. 2, 1961, 12 - 15)

TEXT: The isotherms of reciprocal solubility in the system $\text{CdCl}_2 - \text{KCl} - \text{H}_2\text{O}$ were studied at 25 and 45°C. The general character of the isotherms suggests processes of complex formation. The formation of compounds having the compositions $\text{CdCl}_2 \cdot \text{KCl}$ and $\text{CdCl}_2 \cdot 4\text{KCl}$ was established. An analysis of the solid phase showed that the compound $\text{CdCl}_2 \cdot \text{KCl} \cdot \text{H}_2\text{O}$ was separated at 25°C, and $\text{CdCl}_2 \cdot \text{KCl}$ at 45°C. The solubility of pure CdCl_2 and KCl was determined at 25 and 45°C. [Abstracter's note: Complete translation.]

Card 1/1

ALEKSANDROVA, L.I., kand.med.nauk

Health and educational significance of extended school days.
Gig.i san. 26 no.1:50-54 Ja '61. (MIRA 14:6)

Iz Instituta fizicheskogo vospitaniya i shkol'noy gigiyeny
Akademii pedagogicheskikh nauk RSFSR.
(SCHOOL HYGIENE)

ALEKSANDROVA, L.I., kand.med.nauk (Moskva)

First aid in school accidents. Med. sestra 21 no.4:36-41 Ap '62.
(MIRA 15:4)

(FIRST AID IN ILLNESS AND INJURY) (SCHOOL ACCIDENTS)

TKACHEV, R.A.; ALEKSANDROVA, L.I.; PROKHOROVA, E.S.

Prognosis in hypertensive cerebral crises. Zhur.nevr.i psikh.
62 no.8:1143-1148 Ag '62. (MIRA 15:12)

1. Institut neurologii (dir. - prof. N.V.Konovalev) AMN SSSR,
Moskva.

(CEREBROVASCULAR DISEASE) (HYPERTENSION)

L 04151-67 EWT(d)/EWT(m)/EWP(c)/EWP(v)/EWP(j)/T/EWP(k)/EWP(h)/EWP(i)

ACC NR: AR6016531 IJP(c) DJ/RM SOURCE CODE: UR/0276/65/000/012/B151/B151

AUTHOR: Aleksandrova, L. I.

TITLE: Improving the accuracy of gear manufacturing

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 12B1179

REF SOURCE: Sb. Proyektir. i proiz-vo mekhan. peredach. Izhevsk, Udmurtiya, 1965. 133-136

TOPIC TAGS: gear cutting machine, machine tool industry, lathe

ABSTRACT: It is pointed out that manufacturing gears to the required degree of accuracy depends on the accuracy of the machine and cutting tool and also on the accuracy with which the workpiece is set up. The last factor depends on the concentricity of the cylindrical mounting area of the outer surfaces, and also on the perpendicularity of the mounting surface of the base end plane. Conditions are considered under which the workpiece is accurately set up. When the blanks are machined on a lathe, clamping devices are recommended with solid thin-walled cylindrical sleeves operating under the effect of a liquid filler. Reliable sealing is provided by using SM, DM and MATI-1-4 plastics as fillers. However, even the use of these hydraulic pump attachments was not successful. The experience of the Izhevsk machine building plant in using various types of mandrels is cited. The best results are obtained with the use

41
40
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Card 1/2

UDC: 621.831.002.2-187

L 04151-67

ACC NR: AR6016531

of a hydraulic mandrel in which engine oil is used as the filler. Turning of the outside diameter and facing of the blank before gear cutting are done on this mandrel. The design of the mandrel is given. 2 illustrations. Bibliography of 3 titles. V. Golubeva [Translation of abstract]

SUB CODE: 13

Card

2/2 *PLU*

S/123/59/000/010/006/068
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 10, p. 22, # 37347

AUTHORS: Mikhaylov, M.M., Aleksandrova, L.I., Erlikh, I.M.

TITLE: The Effects of Moisture on the Properties⁶ of Some Plastics

PERIODICAL: Radiotekhn. proiz-vo, 1957, No. 10, pp. 31-33

TEXT: The authors describe changes in properties of plastics, which are used as insulation materials, under the effect of moisture, particularly during operation in the open air. Polyethylene and polystyrene absorb only an extremely small quantity of moisture. Specimens of 100 mm diameter and 2 mm thickness absorbed 0.002-0.003 grams of moisture during 5 months in a medium of 98% relative atmospheric humidity. Such a quantity of moisture shows practically no effect on the electric properties of the material. Polymethylmethacrylate absorbed 0.02-0.4 grams of moisture. Also this deteriorated the electric characteristics only insignificantly. The properties of thermosetting phenolaldehyde plastics⁶ depend on the fillers and also on the pressing conditions (temperature, holding, pres-

Card 1/2

MIKHAYLOV, Mikhail Mikhaylovich, prof., doktor tekhn.nauk. Prinsipalni
uchastiyе: ALEKSANDROVA, L.I., kand.tekhn.nauk; TOLVINSKAYA, A.V.,
kand.tekhn.nauk; IVASHCHENKO, S.A., kand.tekhn.nauk; MELENT'YEVA,
N.N., inzh.; RODIONOVA, N.A., inzh.; FOGEL'GEZANG, Ye.V., inzh.
RENNE, V.T., prof., doktor tekhn.nauk; ZHITNIKOVA, O.S., tekhn.red.

[Moisture absorption by organic dielectrics] Vlagopronitsaemost'
organicheskikh dielektrikov. Pod red. V.T.Renne. Moskva, Gos.
energ.izd-vo, 1960. 162 p. (MIRA 13:10)
(Dielectrics)

ALEKSANDROVA, L.I., kand.tekhn.nauk; ERLIKH, I.M., kand.tekhn.nauk

Use of synthetic film materials for protecting components from
moisture. Izv. vys. ucheb. zav.; energ. 5 no.3:34-38 Mr '62.
(MIRA 15:4)

1. Leningradskiy politekhnicheskij Institut imeni M.I.Kalinina.
Predstavlena kafedroy elektroizolyatsionnoy i kabel'noy tekhniki.
(Protective coatings)

ALEKSANDROVA, Liya Isaakovna, kand. tekhn. nauk; ERLIKH, Iosif Moiseyevich, kand. tekhn. nauk; RUDYK, Aleksey Romanovich, inzh.; AKATOVA, N.V., inzh., red.; FOMICHEV, A.G., red. izd-va; GVIRTS, V.L., tekhn. red.

[Protection of electrical engineering apparatus against moisture by means of synthetic films] Zashchita elektrotekhnicheskoi apparatury sinteticheskimi plenkami ot uvlazhneniia. Leningrad, 1961. 9 p. (Leningr. Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seria: Zashchitnye pokrytiia metallov, no.5) (MIRA 14:12)
(Electric engineering--Materials) (Protective coatings)

ALEKSANDROVA, L.K.; SHEYER, E.A.

New methods for protective and decorative coating of sheet metal.
Mashinostroitel' no.5:43-44 My '61. (MIRA 14:5)
(Protective coatings)

S/852/62/000/000/020/020
B185/B102

AUTHORS: Sheyer, E. A., Aleksandrova, L. K., Shnol', R. B.

TITLE: New trends in protective and decorative coating techniques

SOURCE: Primeneniye polimerov v antikorrozionnoy tekhnike. Ed. by I. Ya. Klinov and P. G. Udyma. Moscow. Mashgiz, 1962, Vses. sovet nauchno-tekhn. obshchestv., 297 - 312

TEXT: The most suitable materials and methods for coating of metal parts have been selected and tested on the basis of published data. Special attention is paid to physical and mechanical properties, corrosion resistance and the easy realization of various decorative effects. PVC resin applied to aluminum sheets 0.5 to 1 mm thick was found to produce a very efficient PVC-Al laminate, called Vinylal. In the experiments, Soviet type PVC "M" ("M") and Al foils of the types AO (AO), AM₄ (AMts), AD 1 (AD1), AH (AN) were used. Technological manufacturing processes were investigated in detail. Physical properties such as strength, elongation, thermal expansion, elasticity, electric conductivity etc. were found to be modifiable by using various types of plasticizers and different concentrations of these. As efficient plasticizers tricresyl phosphate and dioctyl
Card 1/2

New trends in protective and...

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B185/B102

sebacate were used. In certain cases, fillers and pigments (caolin; carbon black, titanium oxide, blue phthalocyanine) were used to prepare suitable pastes. Data and recipes for 21 trial pastes were tabulated. Four pastes containing mixtures of the "M" type resin, the above two plasticizers, caolin and carbon black were found to be the most suitable in application. Additives to prevent decomposition by UV light are mentioned. Preparatory treatment of Al foils of the pastes to be applied were carefully examined with a view to an optimum adhesion. Adhesion could be improved by using vinylite type resins as undercoatings or buffer layers. This resin was dissolved in cyclohexane to eliminate the use of the highly toxic dichloro ethane. Triangle test methods were employed to check the adhesion of the finished laminates. Finally, possible applications of Vinylal for domestic and industrial purposes (automotive, shipbuilding, radio manufacturing, RR car construction industries etc.) are mentioned. There are 11 figures and 2 tables.

Card 2/2

ALEKSANDROVA, L.K., inzh.; BEREZOVSKIY, V.V., inzh.; VITKIN, A.I., doktor
tekhn.nauk; KEGELES, A.S., inzh.; SHEYER, E.A., inzh.; SHNOL', R.B.,
inzh.; SHUMNAYA, V.A., inzh.

Coating thin steel strips with plastics. Sbor. trud. TSNIICHM
no.34:70-81 '63. (MIRA 17:4)

9 (2)

SOV/112-59-1-146

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 1, p 16 (USSR)

AUTHOR: Verbitskaya, T. N., Aleksandrova, L. M., Kul'tsep, V. P., and
Obukhov, A. A.

TITLE: Ferroelectric-Ceramic Capacitors or Variconds

PERIODICAL: Radiotekhn. proiz-vo, 1957, Nr 12, pp 3-17

ABSTRACT: Ferroelectric capacitors (variconds) made of type VK-1 ceramic
have the following fundamental characteristics:

Card 1/3

SOV/112-59-1-146

Ferroelectric-Ceramic Capacitors or Variconds

Capacitor type	Capacitance, μuf	Voltage, volts		Diameter, mm
		DC	AC 50 cps	
VK1-0	100	250	160	1.6
VK1-1	510	250	160	4
VK1-1	1,500	250	160	4
VK1-2	2,700	250	160	9
VK1-2	5,100	250	160	9
VK1-3	6,800	250	160	16
VK1-3	1.2×10^4	250	160	16
VK1-B	1.5×10^5	300	160	25
VK1-B	2×10^5	300	160	25

Card 2/3

SOV/112-59-1-146

Ferroelectric-Ceramic Capacitors or Variconds

The capacitor capacitance can deviate from its rated value +100%, -40%; the ratio of the capacitance at 80-150 v to the capacitance at 5 v is 4 or more. The insulation resistance of VK1-B is 10^9 ohms, that of other types, higher. For each type of capacitor, a voltage can be selected at which the capacitance changes but little within a certain temperature range. Four-electrode capacitors having the shape of a parallelepiped can be used for ultrashort waves; one pair of electrodes is fed with DC, another pair with AC. The capacitor mechanical strength is secured by a resinous or plastic sheathing. For low voltages, a film-type capacitor with 0.2-mm dielectric can be used. The above nonlinear capacitors can be used for dielectric amplifiers, frequency multipliers, pulse generators, voltage stabilizers, etc.

D. M. K.

Card 3/3

24(3)

AUTHORS:

Verbitskaya, T. N., Aleksandrova, L. M. — 80/48-22-12-32/33

TITLE:

Piezoelectric Ceramics With a Dielectric Constant up to 45 000
(Segnetokeramika s dielektricheskoy pronitsevemost'yu do 45 000)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958,
Vol 22, No 12, pp 1534-1536 (USSR)

ABSTRACT:

Polycrystalline piezoelectric ceramics with high ϵ -values is widely used for the manufacture of small condensers. ϵ depends on temperature and the electric field tension. In order to obtain high ϵ -values under normal conditions materials with a Curie (Kyuri) point near room temperature or with distinctly marked nonlinear properties are produced. For any piezoelectric a corresponding field-tension value may be chosen at which ϵ attains the maximum in one or another temperature range. In general, the higher ϵ is, in the smaller temperature range it maintains this high value. With BaTiO_3 and T-7500 ϵ does not exceed, irrespective of any field tension change, the order of 10 000 at any point within the temperature range of +60 to -60°C. With VK-1 ϵ may attain, within this range, values up to 20 000 — 25 000 at optimum field tension. Among all kinds of

Card 1/2

Piezoelectric Ceramics With a Dielectric
Constant up to 45 000

SOV/48-22-12-32/33

piezoelectric ceramics hitherto known the highest values ϵ_{max} (45000) were determined with VK-2, which is a new piezoelectric material. At given electric-field tension very high specific capacity values are attained for VK-2 samples in one or other temperature range by change of the dielectric thickness. Other VK-2 properties are not influenced in any way by high nonlinear or ϵ -values. VK-2 is a good dielectric; in the large temperature range (100--500°) its volume resistivity is higher by one magnitude than with polycrystalline BaTiO₃ (Fig 4). This material may be used for the manufacture of subminiature condensers as well as new "Varikond" (varikond) types that so far possess the most distinctly marked nonlinear properties. There are 4 figures.

Card 2/2

HEADLINE DRAWING, 2/11/11

PHASE I BOOK EXPLOITATION SOV/479

Vassilyanina konferentsiya po fizike dielektrikov. 2d. 1938

Fizika dielektrikov; trudy vostochnykh konferentsiy (Physics of Dielectrics; Transactions of the 2d All-Union Conference on the Physics of Dielectrics) Moscow, Izdatvo M SSSR, 1960. 512 p. Zhivite slip insertad. 5,000 copies printed.

Sponsoring Agency: Academy and USSR. Priblenny Institute Iamni P. M. Iobedova. Ed. of Publishing House: Ye. L. Starobinskiy; Tech. Ed.: I. S. Dorobinin; Editorial Board: (Sagp. Ed.) G. I. Danov, Doctor of Physics and Mathematics (deceased), and K. V. Filippov, Candidate of Physics and Mathematics.

FRANSI: This collection of reports is intended for scientists investigating the physics of dielectrics.

CONTENTS: The Second All-Union Conference on the Physics of Dielectrics held in Moscow at the Institute of Physics of the USSR Academy of Sciences from 1938 to 1939 was attended by representatives of the principal scientific centers of the USSR and of several other countries. This collection contains most of the reports presented at the conference and summaries of the discussions which followed. The reports in this collection deal with dielectric properties, losses, and polarization, and with specific features of various crystals, chemical compounds, and ceramics. Photoelectricity, ferroelectric crystals, and various radiation and irradiation effects on dielectrics are investigated. The volume contains a list of other papers presented at the conference dealing with polarization, losses, and breakdown of dielectrics, which were published in the journal *Izvestiya M SSSR, seriya fizicheskaya*, Nos. 1 and 2, 1960. No personalities are mentioned. References accompany each report.

Author: G. A. V. A. I. Gerasimov, V. A. Impey, and S. M. Lomonosov. Ferromagnetic Crystals of Complex Composition [Institute of Semiconductors, M. I. Lomonosov] 339

Author: Ye. A. Gerasimov. Medal for the Description of Polymorphic Phase Transitions in Crystals [Physics Division, Moscow State University Iamni M. I. Lomonosov] 347

Konstantinov, Ye. P., I. M. Sil'vitskiy, and E. G. Akhmedov. Some Structural and Certain Physical Properties of Polarized Triglycine Sulfate Crystals [Institute of Crystallography, Academy of Sciences USSR, Moscow] 351

Saika, A. S., and Dolobov, I. A. Some Crystallochemical Problems of Ferroelectric Crystals With a Spyrates Bond [Institute of Crystallography, M SSSR, Moscow] 366

Vorobeyev, I. A., M. A. Ushakov, and L. S. Gulyayva. Effect of Chemical Order on the Electrical Properties of Barium Titanate 372

Chemist, B. K. Electrical Properties of the BaTiO₃ - CaCO₃ System [Dipropetovskiy konsal'tsevskiy universitet (Impropetovskiy State University)] 385

Dobolov, I. A., I. S. Saika, Ye. P. Glukhii, V. M. Gerasimov, I. A. Vorobeyev, and A. A. Filizov. Dielectric Properties of Calcium-Aluminum-Sulfate-Barium Titanate (CASB) [Institute of Crystallography, Central Scientific-Research Laboratory of Physicochemistry, Institute of Crystallography, M SSSR, Moscow] 393

Sizakov, Ye. Y., and O. A. Smagorov. Effect of Small Addition Agents NO₂ on the Electrical Properties of Polycrystal BaTiO₃ [Dnepropetrovsk State University] 404

Abas, I. S., and V. M. Gerasimov. Problem of the Connection Between Electric Conductivity of Ferroelectric Crystals and Ferroelectricity [Central Scientific-Research Laboratory of Physicochemistry, Moscow] 410

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85020

9.2110(1385,1043,1153)

S/048/60/024/010/029/033
B013/B063AUTHORS: Verbitskaya, T. N., Aleksandrova, L. M., and Sinitsyna, L. S.TITLE: Provisional Communication on Piezoceramic Materials¹⁾ With a Dielectric Constant of 80,000 \div 100,000PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 10, pp. 1291-1293

TEXT: A new substance, designated as BK-5 (VK-5), with very high ϵ -values, $\epsilon_{\max} = (80,000 \div 100,000)$ has been developed. The basic characteristics, measured at room temperature, of piezoceramic materials ($\epsilon_{\text{initial}}$, ϵ_{\max} , and E_{\max}) were compared with the corresponding characteristics of barium titanate. It may be seen from Fig. 1 that the degree of nonlinearity rises noticeably on a regular transition of barium titanate to VK-1, VK-2, and VK-5. VK-5 exhibits nonlinear properties in a wide temperature range. On a temperature drop from room temperature down to $-140 \div -150^{\circ}\text{C}$ the nonlinearity coefficient becomes considerably larger

Card 1/3

85020

Provisional Communication on Piezoceramic
Materials With a Dielectric Constant of
80,000 \div 100,000

S/048/60/024/010/029/033
B013/B063

(from 40 \div 50 to 320 \div 360). An increase of K_{\sim} , caused in the range of negative temperatures chiefly by a noticeable decrease of the initial ϵ -value, takes place with VK-2 and barium titanate as well. The quantity E_{\max} becomes a little larger with a temperature drop, and becomes smaller on a temperature rise above room temperature. Proceeding from this fact, the authors determined K_{\sim} with the aid of a corresponding E_{\max} value at

different temperatures. In the investigation of the temperature dependence of ϵ in fields with different field strengths, four maxima of the dielectric constant were ascertained. These maxima are specially marked at a field strength of 60 \div 100 v mm⁻¹. In this case, ϵ attains about 80,000. A definite relationship was found between the nonlinearity and the coefficient of orthogonality (koeffitsient pryamougol'nosti) K_{hyst} .

The higher the K_{\sim} , the higher will be K_{hyst} . (Figs. 2 and 3). Not even in VK-5, K_{hyst} at room temperature even exceeds 60 \div 65%, whereas it rises up to 80% at extremely low temperatures. The present paper was read at the

Card 2/3

85020

Provisional Communication on Piezoceramic
Materials With a Dielectric Constant of
80,000 ÷ 100,000

S/048/60/024/010/029/033
B013/B063

Third Conference on Piezoelectricity, which took place in Moscow from
January 25 to 30, 1960. There are 3 figures, 1 table, and 3 references:
2 Soviet and 1 German.

X

Card 3/3

L 7832-66 EWT(l)/EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EWA(d)/EPA(w)-2/EWP(t)/EWP(z)/
 ACC NR: AP5028131 EWP(l)/EWA(s) SOURCE CODE: UR/0048/65/029/011/2104/2106
 IJP(c) JD/GG/NH
 AUTHOR: Verbitskaya, T. N.; Aleksandrova, L. M.; Shirobokova, Ye. I. ⁵⁵
 44, 55 85
 ORG: none
 TITLE: Electric properties of "Varikond" films with square hysteresis loops ⁵⁵ Report,
 Fourth All-Union Conference on Ferro-electricity held at Rostov-on-the Don 12-16
 September 1964
 SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 11, 1965, 2104-2106
 TOPIC TAGS: ^{21, 44, 55} ferroelectric material, ceramic material, ceramic film, Curie point,
 dielectric constant, nonlinear effect, electric polarization, hysteresis loop
 ABSTRACT: In an effort to obtain a ferroelectric ceramic with a highly nonlinear ^{15, 44}
 dielectric constant and a nearly rectangular dielectric hysteresis loop, the authors
 have investigated materials with a nearly cubic rhombohedral perovskite structure and
 have synthesized by undisclosed techniques a (possibly barium titanate base) ceramic
 of undisclosed composition with they call "VK-6" and which has the following proper-
 ties: Curie point, above 200°C; coercive field ⁶ 5-7 kV/cm, total polarization, 18-20
 $\mu\text{C cm}^2$; resistivity, 10^{12} ohm cm at 100°C; nonlinearity factor (ratio of maximum to
 low-field dielectric constant), 20-50; and hysteresis loop squareness ratio (T.N.
 Verbitskaya, L.M.Aleksandrova, and L.S.Sinitsyna, Izv. AN SSSR. Ser. fiz., 24, No. 10,
 1291 (1960)), 0.85-0.94. Disadvantages of this material are its high coercive and
 Card 1/2

L 7832-66

ACC NR. AP5028131

control fields. In an effort to eliminate these disadvantages, thin (5 to 100 μ) films of VK-6 were produced by an undisclosed technique and their ferroelectric properties were investigated. The Curie points, weak-field dielectric constants, squareness ratios, and saturation polarizations were approximately the same for the thin films as for the bulk material. The maximum dielectric constant was reduced from 2×10^4 for the bulk material to 10^4 for the 5-10 μ films, and the nonlinearity factor was therefore correspondingly reduced. The potential at which the dielectric constant was maximum, however, was reduced from 250 V for the bulk material to 10-20 V for the 5-10 μ films, and the saturation voltage was reduced from 600-800 V to 60-100 V. The pulse amplitude controlling switching was 30-60 V for the 10 μ films, and the switching time on a 10 ohm line was 0.3-0.7 μ sec. It is concluded that thin films of VK-6 can be produced which retain the high nonlinearity and hysteresis loop rectangularity of the bulk material and have considerably reduced controlling and switching voltages. Orig. art. has: 3 figures and 1 table.

SUB CODE: SS, EM

SUM. DATE: 00/

ORIG. REF: 003 OTH REF: 002

Card 2/2 ^{5/10}

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

ALEX SANDROVA, L.N.

15

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Soil formation on the colored clays of Transural. L. N. Alexandrova. *Tyazh. Dobuchov Soil Inst.* 10, No. 3, 28-40(1934). The clays were formed by the alialic weathering of massive cryst. rocks during the Tertiary period. The content of bases is low, while that of R_2O_3 is high. The HCl-sol. fraction is small in comparison with that of laterites. The present soils are of the podzolic type, but are thin and show no great humus accumulation. B. C. A.

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

ALEKSANDROVA, L. IV. 15

CA

PROCESSES AND PROPERTIES INDEX

The properties of carbohydrates in the organic substance of chernozem soils. L. N. Aleksandrova. *Vchenye Zapiski Leningrad. Gosudarst. Univ.* 1939, No. 7 (No. 34), 318-49; *Khim. Referat. Zhur.* 1940, No. 1, 42-3. In the upper horizon of luvial chernozem of the Anichin Isptl. Station total content of carbohydrates was 20.3% of the total org. substance. Carbohydrates in the org. ext. composed for 67% of the total water-sol. org. substance. They consisted mainly of mono- and disaccharides and of a small amt. of uronic acids. The org. substance extd. with 0.5% $(NH_4)_2C_2O_4$ contained only 10-20% of carbohydrates (the remainder consisted of humic substance and humification products). Of these carbohydrates 72% were polysaccharides. The org. substance extd. with 4% NaOH contained 47.8% of carbohydrates consisting of hexosans (76%) and pentosans (18%). The total amt. of carbohydrates in the soil decreases, owing to the sharp decrease of pentosans. The amts. of hexosans and uronic acids in the soil and in plant wastes were identical. W. R. Hein

ASB-35A METALLURGICAL LITERATURE CLASSIFICATION

SECTION #1 **SECTION #2** **SECTION #3** **SECTION #4**

SECTION #1 **SECTION #2** **SECTION #3** **SECTION #4**

SECTION #1 **SECTION #2** **SECTION #3** **SECTION #4**

SECTION #1 **SECTION #2** **SECTION #3** **SECTION #4**

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

ALEKSANDROVA, L.-N. PROCESSES AND PROPERTIES INDEX

CA 23

The method of determining cellulose in plant materials and soil. L. N. Aleksandrova and A. M. Myasnikova, *Pedology (U. S. S. R.)* 1940; No. 9, 70-6 (in German, 76-7). --To det. cellulose in plants it is necessary to sep. it from hemicellulose and lignin with dil. solns. of alkali and chlorination. Schweizer reagent is used for soils and plants. Waksman's method of detg. cellulose is not applicable to soils; it gives a high value. Direct treatment of soils with Schweizer reagent for cellulose detn. is not applicable because of the adsorption of the Cu-NH₄-cellulose complexes by the highly dispersed soil and by the humus. To ext. all the cellulose it is necessary to remove the humus substances by chlorination. J. S. Joffe

COMMON ELEMENTS

MATERIALS INDEX

COMMON VARIABLES INDEX

ASH-51A METALLURGICAL LITERATURE CLASSIFICATION

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

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

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

ALEXSHANDROVA, L.N. 15

CA

The composition of the humus of the saline soil complex.
 L. N. Aleksandrova. *Pedology* (U.S.S.R.) 1944, No. 10,
 471-80 (English summary 480-1).--A. reports the content
 and compn. of humic acid, fulvic acid, and humin of the
 profiles of a solonchak, soloncheta, and solonch. J. S. J.

ASB-51.4 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	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
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ALEKSANDROVA, L.N.

24987 ALEKSANDROVA, L.N. Gumus Kak Sistema Polimernykh Soyedineniy. Trudy
Yubileynoy Sessii, Posvyashch. Stoletiyu So Dnya Rozhdeniya Dokuchayeva,
M.L., 1949. s. 225-32.-Bibliogr: S. 232.

So: Setopis 'N. 33, 1949

ALEKSANDROVA, L. N.

24109

ALEKSANDROVA, L. N. Metodika zol'nogo analiza pri pochvennykh issledovaniyakh. Problemy sov. poyavovedeniya, sb. 15, 1949, S. 55-70. - Bibliogr: 10 nazv.

SO: Letopis, No. 32, 1949.

- AL. ANDREJA, L. N.

Nature and properties of the products of the reaction of humic acid and humates with sesquioxides. L. N. Aleksandrova *Izv. Vsesoyuzn. Nauchn. Issled. Inst. Khim. i Fiz. Tver. 1954, No. 1, 14-29.*— Products obtained by treatment of sol. humic acid or its salts of strong bases with Fe or Al salts have a smaller base-absorption capacity than had the original acid. In these compounds Fe is in the anion and takes no part in exchange reactions. In Al compounds part of the Al is exchangeable and part occurs within the anion. In the primary reaction an exchange occurs between the cations of some of the functional groups of humic acids and the basic groups of the sesquioxide molecule also involves intermolecular bonds. Gels formed by the reaction of humic humates with sesquioxide acids do not show a lowered base-absorption capacity since only intermolecular bonds are concerned in their formation. Hydrated Fe and Al gels may be peptized after saturation with NH_4^+ , K^+ or Na^+ ; if the sesquioxide content is high partial peptisation is possible only in alkaline solutions. Ability to be peptized decreases rapidly with degradation of the gels. *SOILS & FERT. J.A.C.P.I.*

ALEXANDROV, E. N.

USSR

... (grad). *Precedents in soil.* A refutes the contention of Myers (C.I. 32, 1029) that soil humic acid is taken up by the mineral component of the soil as polar adsorption of org. colloids on mineral colloids. His own data clearly show that the process is that of chem. reciprocity. A then proceeds with a report of expts. illustrating the chem. reactions between humic acid and Na humate in contact with ascanite, kaolinite, soils of the zone of podsolization, and of chernozem. A shows how the exchangeable Ca ion enters in a reaction with the humic acid and how the R_2O forms combinations with humic acid giving rise to gel membranes. The procedure of extg. humic acid, methods used, and discussion of results are given in detail.

J. S. Joffe

Country : USSR
Category: Soil Science. Soil Biology.

J

Abs Jour: RZhBiol., No. 14, 1958, No 63032

Author : Aleksandrova, L.N.
Inst : Leningrad Agricultural Institute
Title : The Composition and Nature of the Ash Content of
Humic Acid

Orig Pub: Zap. Leningr. s.-kh. in-ta, 1956, vyp. 11, 100-105

Abstract: Presented are the results of studying the composition and nature of ashes in the humic acids of chernozem and podzolic soil. The soils and the methods of extracting the acids are described in a previous work by the author (Zapiski LSKhI, 1955, vyp. 9). In ashes' composition, the humic acids of cher-

Card : 1/3

Country : USSR
Category: Soil Science. Soil Biology.

J

Abs Jour: RZhBiol., No 14, 1958, No 63032

nozen consist mainly of SiO_2 , Al_2O_3 and Fe_2O_3 , which constitute up to 70% of the total mass of the ashes; the SO_3 content reaches 10-13%, P_2O_5 , 4-7%, and an insignificant quantity of Ca and Mg is found. In the ashes of podzolic soil, humic acids, Fe_2O_3 and the associated P_2O_5 constitute 70-75%. There is less Al_2O_3 and SiO_2 and very little SO_3 (5-4%), and there are n. bases at all. The ash elements of the humic acids are bound to their molecules and form organic-mineral compounds. When isolating humic acid preparations, the destruction of some bond configurations is observed, in connection with which the quantity and composition of the ashes are variable and reflect only the most stable organic-

Card : 2/3

J-12

Country : USSR

J

Category: Soil Science Soil Biology.

Abs Jour: RZhDiol., No 14, 1958, No 63033

Author : Aleksandrova, L.N.; Naydenova, O.M.; Shumakova, M.F.

Inst : Leningrad Agricultural Institute

Title : Dynamics of Group and Fractional Composition of Humus
in the Yearly Cycle of the Soil-f rming Process in
Sod-podzolic Soils

Orig Pub: Zap. Leningr s.-kh in-ta, 1956, vyp. 11, 106-111

Abstract: A three-year observation of the seasonal dynamics
of the group composition of humus in cultivated sod-
podzolic soils in the vicinity of the city of Pushkin
in the Leningrad oblast' showed that during the
spring-summer period, intensive processes of forma-
tion of humus acids occurred with a predominance of

Card : 1/3

J-13

Country : USSR
Category: Soil Science. Soil Biology.

J

Abs Jour: RZhBiol., No. 14, 1958, No 63033

humic acid synthesis. With the onset of the relatively cold autumn period, crenic acids accumulated in the soils and the content of humic acids noticeably decreased. In laboratory experiments with a 70-day decaying of meadow hay and clover and an excess of moisture (200% of total moisture capacity), the synthesis of humic acids sharply decreased and the content of crenic acids increased. During the vegetative period the bulk of the humic acids is represented by movable fractions because of their imperfect condensation, impoverishment of the arable horizon by colloids and periodic over-humidification of the soil. The bulk of the crenic

Card : 2/3

ALEXANDROVA, LY

ALEXANDROVA, Lyudmila Nikolayevna; NAYDENOVA, Ol'ga Aleksandrovna;
VOROB'YEVA, F.I., red.; CHUNAYEVA, Z.V., tekhn.red.

[Practical laboratory experiments in soil science] Laboratorno-
prakticheskie zaniatiia po pochvovedeniiu. Moskva, Gos. izd-vo
sel'khoz.lit-ry, 1957. 214 p. (MIRA 11:1)
(Soils--Analysis)

GORSHENIN, Konstantin Pavlovich, prof., laureat Leninskoy premii;
ALEKSANDROVA, Lyudmila Nikolayevna; ANTIPOV-KARATAYEV, Ivan
Nikolayevich; GARKUSHA, Ivan Fedoseyevich; SOBOLEV, Sergey
Stepanovich; PLESHKOV, B.I., red.; SOKOLOVA, N.N., tekhn.red.

[Soil science] Pochvovedenie. Pod obshchei red. K.P.Gorshenina.
Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 438 p. (MIRA 12:8)

1. Omskiy sel'skokhoz.institut (for Gorshenin). 2. Leningradskiy
sel'skokhoz.institut (for Aleksandrova). 3. Pochvennyy institut
Akademii nauk SSSR (for Antipov-Karatayev, Sobolev). 4. Belorusskaya
sel'skokhoz.akademiya (for Garkusha).
(Soils)

ALEKSANDROVA, L.N.; NAD', M.

Nature of organomineral colloids and methods of their study
[with summary in English]. Pochvovedenie no.10:21-27 3 '58.
(MIRA 11:10)

1. Leningradskiy sel'skokhozyaystvennyy institut.
(Soil colloids)

ALEKSANDROVA, L.N.

"On the Condition of Humic Substances and the Nature of
Organic Mineral Colloids in Soils."

(Leningrad Agricultural Institute)

report to be presented at the 7th Intl Soil Science Congress, Madison, Wisconsin,
15-23 Aug 1960

ALEKSANDROVA, L.N.

Use of sodium pyrophosphate to separate free humus substances
and their organic-mineral compounds from soils. Pochvovedenie
no.2:90-97 F '60. (MIRA 15:7)

1. Leningradskiy sel'skokhozyaystvennyy institut.
(Soils--Analysis) (Sodium pyrophosphates) (Humus)

BLAGOVIDOV, N.L.; SIMAKOV, V.N.; PONOMAREVA, V.V.; MARCHENKO, A.I.;
ALEKSANDROVA, L.N.; SOKOLOV, N.N.; ROZHNOVA, T.A.; TSYGANENKO,
A.F.; MIKHAYLOVSKAYA, O.N.; PETROV, A.P.; KHANTULEV, A.A.;
SAPOZHNIKOV, N.A.

Zinaida Iul'evna Shokal'skaia obituary. Izv. Vses. geog. ob-va
93 no.4:347-348 J1 - Ag '61. (MIRA 14:7)
(Shokal'skaia, Zinaida Iul'evna, d. 1961)

TYURIN, I.V., akademik, glav. red.; ZONN, S.V., prof., otv. red.;
ALEKSANDROVA, L.N., red.; ANTIPOV-KARATAYEV, I.N., red.;
VERNANDER, N.V., red.; VOLOBUYEV, V.R., red.; DARASELIYA, M.K.,
red.; IVANOVA, Ye.N., red.; KACHINSKIY, N.A., red.; KONONOVA, M.M.
red.; NOGINA, N.A., red.; RODE, A.A., red.; SOBOLEV, S.S., red.;
SOKOLOV, A.V., red.; MARKOV, V.Ya., red. izd-va; ASTAF'YEVA, G.A.,
tekh. red.

[Problems of soil research] Problemy pochvovedeniya. Moskva,
Izd-vo Akad. nauk SSSR, 1962. 287 p. (MIRA 15:7)

1. Vsesoyuznoye obshchestvo pochvovedov. 2. Prezident Vsesoyuznogo
obshchestva pochvovedov (for Tyurin).
(Soil research)

ALEKSANDROVA, L.N.; ANDREYEVA, I.M.

Transformation of humus substances in the soil, Pochvovedenie
no.7:20-26 JI '63. (MIRA 16:8)

1. Leningradskiy sel'skokhozyaystvennyy institut.
(Humus)

ALEKSANDROVA, L.N.; KONONOVA, M.M.

Soil chemistry at the 8th International Congress of Soil Scientists
(2nd Commission). Pochvovedenie no.5:79-85 My '65.

(MIRA 18:5)

ALEKSANDROVA, L. P. Cand. Tech. Sci.

Dissertation: "Diatoms as Salinity Indicator of Water in Reservoirs." All-Union Sci Res Inst of Water Supply, Sewerage, Hydraulic Structures and Engineering Hydrogeology, "VODEO", 8 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

ALEKSANDROVA, L.P.

USSR:

Reaction of lupinine and diethylaminoethanol with copper chlorides. V. V. Il'ovayko and L. P. Aleksandrova (Central Asia State Univ., Tashkent). *Sovetskaya Khim. Obshch. Khim.* 2, 1120-3 (1953).—Lupinine and dry $CuCl_2$ in abs. EtOH form brown $CuEt_2NOH \cdot CuCl_2$, decomp. 125° , which slowly decomposes on exposure to air. If twice the proportion of lupinine is used, there is obtained a green alcoholate $CuEt_2NO \cdot CuCl_2$ (I), m. 215° (from $ClCH_2CH_2Cl$), while the evapd. filtrate yields lupinine HCl salt, m. 211.5° . I also forms on mixing abs. EtOH soln. of lupinine with $CuCl_2$ in contact with atm. O_2 . Addn. of abs. EtOH soln. of $Et_2N \cdot CH_2CH_2OH$ to EtOH soln. of $CuCl_2$ gave green $Et_2NCH_2CH_2OCuCl_2$, m. 159° (from $ClCH_2CH_2Cl$), while evapn. of the soln. gave the amine HCl salt. Thus the original adduct is transformed into the alcoholate under action of excess amino alc., which results in loss of HCl and formation of I analog and amine HCl salt. G. M. Kasolapoff.

6/

W-24

ALEXSANDROVA, L. P

6920 Aleksandrova, L. P. ^{Stoknye} Stokhryye Vody gidroliznoy promyshlennosti
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628.37(016.3)

SO: Knizhnaya Letopis' No. 6, 1955

ALFKSANDROVA, L. P.

Aleksandrova, L. P. -- "The Pressure of a Saturated Pair of Ternary Stratified Systems: Formic Acid -- Water -- Dichloroethane and Formic Acid -- Water -- Benzol." Acad Sci Ukrainian SSR. Inst of Physical Chemistry imeni L. V. Pisarzhevskiy. Kiev, 1955. (Dissertation For the Degree of Candidate in Chemical Sciences).

So; Knizhnaya Letopis', No. 11, 1956, pp 103-114

AUTHORS: Udovenko, V. V., Aleksandrova, L. P. SOV/76-32-8-26/37

TITLE: The Solubility in the System Formic Acid - 1,2-Dichloro Ethane - Water (Rastvorimost' v sisteme murav'inaya kislota - 1,2-dikhlorethan - voda)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 8, pp. 1889-1892 (USSR)

ABSTRACT: The mutual solubility in the above mentioned ternary system was investigated within the temperature range of from 20 to 70° according to the polythermal method by V. F. Alekseyev. The data of the mutual solubility of water and dichloro ethane were taken from other publications. In the determinations of the solubility eight polythermal lines were taken at different constant ratios between formic acid and dichloro ethane, and the results obtained were given in a table. There exists a greater laminated section in the system which decreases on an increase in temperature. For determining the intersections in the system the compositions of the layers of equilibrium were determined by a titration of the acid in both layers at 30, 45 and 60°C. The kinetic points of the mutual solubility on the curves of the separation of layers were determined according

Card 1/2

The Solubility in the System Formic Acid - 1,2-Dichloro Ethane - Water SOY/76-32-8-26/37

to the method mentioned above. The coefficients of distribution were calculated. The difference observed between the system $H_2O-C_2H_5OH-C_2H_4Cl_2$ and that investigated was explained by the greater coefficient of distribution of formic acid as compared to that of ethanol. There are 5 tables and 3 references, 2 of which are Soviet.

ASSOCIATION: Kiyevskiy politekhnicheskij institut (Kiyev Polytechnical Institute)

SUBMITTED: March 25, 1957

Card 2/2

UDOVENKO, V.V.; ALEKSANDROVA, L.P. (Kiev)

Vapor pressure of three-component systems. Part 3: The system formic acid - 1,2-dichloroethane - water. Zhur. fiz.khim. 34 no.6:1366-1372 Je '60. (MIRA 13:7)

1. Kiyevskiy politekhnicheskii institut.
(Formic acid) (Ethane) (Vapor pressure)

ALEKSANDROVA, L.P.

Relation of certain forms of the relief of western Tuva to tectonic ruptures. Dokl. AN SSSR 146 no.5:1147-1149 0 '62. (MIRA 15:10)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom
A.L.Yanshinym.

(Tuva A.S.S.R.--Geology, Structural)

ALEKSANDROVA, L.P.; VANGENGEYM, E.A.; GERBOVA, V.G.; GOLUBEVA, L.V.;
RAVSKIY, E.I.

New data on a section of Quaternary sediments of Mount Tologoy
(western Transbaikalia). Biul.Kom.chetv.per. no. 28:84-101 '63.
(MIRA 17:5)

RAVSKIY, E.I.; ALEKSANDROVA, L.P.; VANGENGEYM, E.A.; GERBOVA, V.G.;
GOLUBEVA, L.V.; PEYVE, A.V., glavnyy red.; NIKIFOROVA, K.V.,
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[Quaternary sediments in the south of Eastern Siberia.]
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ALEKSANDROVA, I. F.

Sedimentation and zoning of the paleolandforms of the Lake
Baikal region and western Transbaikalia in the Lower Eopleisto-
cene. Biul. Kom. chetv. per. no.29:149-155 '64. (MIRA 17:8)

UDOVENKO, V.V.; ALEKSANDROVA, L.P.

Vapor pressure of three-component systems. Part 4. Zhur.fiz.khim.
37 no.1:52-56 Ja '63. (MIRA 17:3)

1. Kiyevskiy politekhnicheskii institut.

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"Course and Treatment of Malaria in Children." Dr Med Sci, Tashkent Medical
Inst, Tashkent, 1953. (RZhBiol, No 8, Dec 54)

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ALEKSANDROVA, L.S., prof.

Malaria and its treatment in children. Med. zhur. Uzb. no.9:18-22
Ag '61. (MIRA 15:1)

1. Iz kafedry gosital'noy pediatrii pediatricheskogo fakul'teta
Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(MALARIA)

Aleksandrova, L.S.

JPRS: L-974-B
CSO: 1743-B

U/L-1

THEORY AND PRACTICE OF THE APPLICATION OF ION-

EXCHANGE MATERIALS

Teoriya i Praktika Primeneniya Ionobmennykh Materialov, Moscow, 1955, pp 1-164. K. V. Chmutov

TABLE OF CONTENTS

Foreword 1

Mitrova, Ye. A., Paramova, V. I. Physico-chemical Characteristics of Ion-exchangers 3

Aleksandrova, L. S., Chmutov, K. V. Investigation of the Physico-chemical Properties of Ion-exchange Resins for their Rating Exchange . . . 16

Trubnitskaya, N. B., Gev, I. P. Cation Exchange Sorbents 31

Loskutov, P., Kaplina, A. S., Trostyanskaya, Ye. B. Concerning the Problem of the Structure of Sulfophenol-formaldehyde Ion Exchange Sorbents 40

Davydov, A. K. Concerning the Laws Governing Ion Exchange by Domestic Ion Exchangers 48

Elvachko, V. A. Concerning the Problem of the Selective Extraction of Ions out of Solutions 59

Prakoborov, V. G. Anion Exchanger Aging and the Problem of Water Desalination 73

Griigorov, O. M., Vol'k, I. V. Results of the Investigation of Ion Exchange Adsorbents of Humic Substances 110

Rachunskiy, V. Y. Concerning the Use of the Radiochromatographic Method in the Study of Sorption Processes 130

Krasnaya, A. Vasil'yev, A. I., Okhrimenko, O. I. Method of Quantitative Determination of the Sulfio Group and Carboxyl Group Content of Cation Exchangers by Titration 145

Chernobrov, S. M., Zel'des, V. Ya., Gorylik, Ye. M. Nickel Ion Exchange by Cation Exchangers 150

~~German Navy Espionage in the Mediterranean - 1953~~
~~in Arab Ports - Middle East~~

ALEKSANDROVA, L.S.; YELOVICH, S.Yu.

Effect of temperature on the exchange of cobalt and copper ions on organic cationites [with summary in English]. Koll.shur. 20 no.6: 687-693 N-D '58. (MIRA 12:2)

1. Institut fizicheskoy khimii AN SSSR, Moskva.
(Cobalt) (Copper) (Ion exchange)

5(4)

AUTHORS:

Aleksandrova, L. S., Yelovich, S. Yu., Chmutov, K. V.

SOV/76-33-3-19/41

TITLE:

Dynamics of the Sorption of Ions on Various Types of Cation Exchangers. I (Dinamika sorbtsii ionov na kationitakh raznykh tipov. I)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 627 - 635 (USSR)

ABSTRACT:

The attempt is made to clarify several rules governing the first stage of the separation process on ionic exchange resins and especially the dynamics of adsorption of ionic mixtures. The effect of temperature and flowing velocity of the solution upon sorption and mutual displacement of the Cu^{2+} - and Co^{2+} -ions is investigated. The cation exchangers MSF, SBS, KM, RF and KU-2 (SDV-3) were used as adsorbers. The investigation of Cl^- and CNS^- anions was carried out on the anion exchangers MMG-1, NO, and EDE-10. Solutions of equinormal mixtures of $\text{Co}(\text{NO}_3)_2$, and $\text{Cu}(\text{NO}_3)_2$, pH = 4.0-4.5 were used.

Cobalt nitrate solution was marked with Co^{60} . The present paper describes the experimental results obtained in the case

Card 1/3

Dynamics of the Sorption of Ions on Various Types of
Cation Exchangers. I

SOV/76-33-3-19/41

of dynamics of sorption of the Co- and Cu-ions and KU-2 (in hydrogen form). The two cation exchangers vary greatly with respect to their properties (Ref 1). KU-2 is a sulfonated condensation-product of styrene with divinyl benzoyl with a highly acid HSO_3^- group. RF belongs to the resorcin formaldehyde cation exchangers with a weakly acid $\text{PO}(\text{OH})_2^-$ group. Experimental results obtained in connection with the latter show (Fig 3) that the front of adsorption varies continuously, the cobalt ions migrating in front of the copper ions and the Cu-ions taking the place of the Co-ions. The chromatograms on KU-2 vary greatly from the above-mentioned by the fact that exchange constants of Co and Cu do in this case little differ from one another (Fig 4). The adsorption front of the ions moves parallel and constant in accordance with the rules found by N. A. Shilov. Two experimental series dealing with the dynamics of sorption as a function of the velocity of filtration and the size of grains at three different temperatures led to the finding (Figs 5,6) that the

Card 2/3

Dynamics of the Sorption of Ions on Various Types of Cation Exchangers. I SOV/76-33-3-19/41

effect observed on RF, is not due to a diffusion retardation but to the character of the functional group of RF through which under certain conditions adsorption kinetics is brought about, which is not in equilibrium. In the case of KU-2 an increase in temperature leads to an acceleration of the migration of Cu- and Co-ions. There are 6 figures, 1 table, and 5 references, 4 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva
(Academy of Sciences, USSR, Institute of Physical Chemistry, Moscow)

SUBMITTED: July 24, 1957

Card 3/3

5(4)

SOV/76-33-5-24/33

AUTHORS: Aleksandrova, L. S., Yelovich, S. Yu., Chmutov, K. V. (Moscow)

TITLE: The Dynamics of the Sorption of Ions on Various Types of Cation Exchangers (Dinamika sorbtsii ionov na kationitakh raznykh tipov). 2. The Diffusion Kinetics of the Dynamics of Sorption (2. Diffuzionnaya kinetika dinamiki sorbtsii)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 5, pp 1119 - 1125 (USSR)

ABSTRACT: The sequence of adsorption stages is typical of cation exchangers such as the KU-2 used: 1) diffusion of the ion towards the place of sorption, 2) process of sorption, 3) diffusion of the displaced ion into the liquid. Publications give no data on the size of the concentration gradients which appear in the dynamics of sorption under various testing conditions. An attempt is made in this work to estimate these gradients in connection with the sorption of the copper ion on the cation exchanger KU-2. Copper nitrate solution was filled into the column which was filled with the adsorbent. The initial curves show that a stable state occurs already with a layer of 7.1 cm. The form of the front of the Cu and

Card 1/3

The Dynamics of the Sorption of Ions on Various
Types of Cation Exchangers. 2. The Diffusion Kinetics of the Dynamics of
Sorption

SGV/76-33-5-24/33

H ions remains constant. The quantity $\varphi = \frac{c_o}{c_n}$ is defined as being characteristic of the course of the diffusion at the wave front. (c_o = concentration of the ion in the liquid, c_n = equilibrium concentration of the ion at the place of sorption). With $\varphi = 1$ the process takes place without diffusion inhibitions in the kinetic range. $\varphi \gg 1$ means that a considerable concentration gradient is present and the reaction takes place in the diffusion range. The desorption of the displaced ion takes place together with the exchange sorption, a concentration gradient appears from the place of desorption towards the liquid ($\varphi < 1$). A table shows the concentration gradients for the front of the Cu ions. Hence it appears that on the place of adsorption the concentration of the displaced H ions do not differ considerably from their concentration in the liquid; thus, no diffusion gradient exists for H ions, and their process takes place in the kinetic range ($\varphi_H \approx 1$). The estimation of Cu shows $\varphi > 1$, thus the adsorption process of the

Card 2/3

The Dynamics of the Sorption of Ions on Various
Types of Cation Exchangers. 2. The Diffusion Kinetics of the Dynamics of
Sorption SOV/76-33-5-24/33

Cu ions takes place in the diffusion range. A second experiment with increased effect of the diffusion inhibitions (diffusion increased six times) showed, in principle, the same results (Fig 2). There are 2 figures, 1 table, and 10 references, 6 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR institut fizicheskoy khimii Moskva
(Academy of Sciences of the USSR Institute of Physical Chemistry, Moscow)

SUBMITTED: November 2, 1957

Card 3/3

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S/062/60/000/05/02/008
B004/B066

5,2100

AUTHORS: Aleksandrova, L. S., Chmutov, K. V.

TITLE: Separation of Niobium and Tantalum by Means of the Chromatographic Adsorption-complex Method

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 5, pp. 801-805

TEXT: In the introductory part of the paper the authors discuss the various methods of separating Ta and Nb described in publications, and refer in this connection to papers by Ya. A. Chernikhov and Vendel'shteyn (Ref. 4), V. S. Bykova (Refs. 5,6), and V. I. Chastukhina (Ref. 8). The authors used in this investigation the method suggested by T. B. Gapon and A. M. Gurvich (Ref. 15). As the carrier a substance is applied which contains the separating agent already in the adsorbed state. A ДАУХ (DAU^h) charcoal served as carrier on which phenyl arsonic acid, tannin or o-hydroxyquinoline were adsorbed as precipitant. The adsorptive capacity of the charcoal for these reagents was determined in

Card 1/3

Separation of Niobium and Tantalum by Means of
the Chromatographic Adsorption-complex Method

81553

S/062/60/000/05/02/008
B004/B066

preliminary experiments. The further experiments were performed with phenyl arsonic acid which forms with Nb and Ta the complex compound $[R_2O_4(C_6H_5AsO_3)_2]H_2$. The niobium compound remains dissolved in the presence of mineral acids and oxalic acid. A HCl concentration of between 0.3 - 3 N does not exert any influence upon the reaction. Nb_2O_5 and Ta_2O_5 were molten in a platinum crucible with potassium pyrosulfate and dissolved in ammonium oxalate. The concentration of the initial and of the equilibrated solutions were measured by means of Nb^{95} and Ta^{182} (Table). It may be seen from Figs. 1-3 that Nb passes over to a practically quantitative extent into the filtrate. The Nb-tail was washed out by a mixture of ammonium oxalate and HCl. The filtrates were measured in an AC-1 (AS-1) counter. The tantalum was washed out by means of KOH or oxalic acid (Figs. 1,2). Oxalic acid was more effective but displaced only 60 per cent of tantalum. Under the experimental conditions (length of the chromatographic column 250 mm, diameter 12 mm) the quantity of $Nb_2O_5 + Ta_2O_5$ must not exceed 25 mg. There are 3 figures, 1 table, and 16 references: 8 Soviet, 3 British, 1 Dutch, 1 French, 1 German, and

Card 2/3

Separation of Niobium and Tantalum by Means of
the Chromatographic Adsorption-complex Method

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2 American.

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

SUBMITTED: November 17, 1958

Card 3/3