S/517/61/064/000/003/006
D299/D301

On inequalities between ...

G is a region of the n-dimensional space $x = (x_1, \ldots x_n)$; the partial derivatives are of order k ($1 \leq k < r$). The problem is posed, which of the intermediate partial derivatives of f (mixed or non-mixed) have finite norm in the sense of $L_p(G)$ and whether they can be estimated by the norm (3). Several inequalities, related to this problem, are obtained. From these inequalities, it follows that if the two-dimensional region G is bounded and has a sufficiently smooth contour, then the inequality

$$\left\| \frac{\partial f}{\partial x} \right\|_{L_2(G)} + \left\| \frac{\partial f}{\partial y} \right\|_{L_2(G)} \leq c \left\| f \right\|_{W_2^{(r,r)}(G)} \qquad (4)$$

holds. This inequality, in conjunction with results obtained in the references, lead to a theorem about the region G, for which (under certain conditions) the inequality

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On inequalities between ...

$$\left\| \frac{\partial^2 f}{\partial x \partial y} \right\|_{L_p(G)} \leqslant c \left\| f \right\|_{W_2^{(2,2)}(G)},$$

where

$$\left\| f \right\|_{W_2^{(2,2)}(G)} = \left\| f \right\|_{L_2(G)} + \left\| \frac{\partial^2 f}{\partial x^2} \right\|_{L_2(G)} + \left\| \frac{\partial^2 f}{\partial y^2} \right\|_{L_2(G)} \quad (5)$$

holds. Further, two possible cases are considered of the two-dimensional region G meeting the contour Γ in the neighborhood of the point P_0. By imposing certain conditions on Γ, it is possible to find (by means of the Heine-Borel lemma) a finite number of open sets of type Λ_1 or Λ_2, whose sum meets Γ. If these sets are subtracted from G, then a set G' is left. In the following, G is expressed as the sum

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On inequalities between ...

$$G = G' + \Sigma\Lambda_1 + \Sigma\Lambda_2.$$

The inequalities are proved for each summand separately; hence they hold for G. The function f(x,y) on G is considered. This function is expanded in a Taylor series; thereupon, a linear system of equations is obtained. The determinant of the system is denoted by W. One obtains:

$$\frac{\partial^p f(x, y_0)}{\partial y^p} = \frac{1}{W} \sum_{i=1}^{r} W_{ip} \left[f(x, y_i) - \frac{1}{(p-1)!} \int_{y_0}^{y_i} (y_i - t)^{p-1} \frac{\partial^p f(x, t)}{\partial y^p} dt \right], \quad (5)$$

$$\frac{\partial^p f(x, y_0)}{\partial y^p} = \Phi + F; \quad (6)$$

the integrals in the right-hand side of Eq. (6) are estimated from above. After calculations, one obtains

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D299/D301

On inequalities between ...

$$\left\| \varkappa\lambda^{\frac{r}{p}} \frac{\partial^k f}{\partial y^k} \right\|_{L_p(G)} \leqslant c_{p,r} \left(\left\| \varkappa\lambda^{\frac{r}{p}} f \right\|_{L_p(G)} + \left\| \varkappa\lambda^{\frac{r}{p}} + r-k \frac{\partial^r f}{\partial y^r} \right\|_{L_p(G)} \right) \quad (12)$$

$(k = 1, 2, \ldots r - 1)$

where $\varkappa(x)$ is an arbitrary measurable function, and the constant $c_{p,r}$ depends only on r and p. By setting $\varkappa = \lambda^{-r/p}$, one obtains

$$\left\| \frac{\partial^k f}{\partial y^k} \right\|_{L_p(G)} \leqslant c_{p,r} \left(\left\| \lambda^{-k} f \right\|_{L_p(G)} + \left\| \lambda^{r-k} \frac{\partial^r f}{\partial y^r} \right\|_{L_p(G)} \right) \quad (13)$$

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On inequalities between ...

Further, the region Λ is considered, consisting of the points (x,y) for which

$$0 < x < 2, \quad \varphi(x) < y < \psi(x), \quad \lambda(x) = \psi(x) - \varphi(x) \tag{1}$$

A function f(x, y) is given on Λ, so that

$$\|f\|_{W_p^{(2,2)}(\Lambda)} = \|f\|_{L_p(\Lambda)} + \left\|\frac{\partial^2 f}{\partial x^2}\right\|_{L_p(\Lambda)} + \left\|\frac{\partial^2 f}{\partial y^2}\right\|_{L_p(\Lambda)} < \infty \tag{3}$$

It is required to find an estimate for $\left\|\frac{\partial f}{\partial y}\right\|_{L_p(\Lambda)}$ in terms of (3).

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On inequalities between ...

After calculations, one obtains

$$\lambda(x)^{-k}\frac{1}{x^{\alpha}}\int_{x^{\alpha}}^{x^{\alpha}}\int_{\varphi(x)}^{\varphi(x)}|f_{\rho}(x_1,\theta)|^{p}\,d\theta\,dx_1<$$

$$<c_{p}\frac{\lambda(x)^{p}}{\lambda(x^{\alpha})x^{\alpha}}\left\{\frac{1}{\lambda(x^{\alpha})^{p}}\|f\|^{p}_{\xi_{\varphi(x)}}+\lambda(x^{\alpha})^{p}\|f'_{\theta}\|^{p}_{\xi_{\varphi(x)}}\right\}. \qquad (\bar{10})$$

Finally, a proof is given to the theorem stated above. There are 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

Card 7/7

NIKOL'SKIY, S. M.

"On boundary properties of differentiable functions of several variables"

report submitted at the Intl Conf of Mathematics, Stockholm, Sweden, 15-22 Aug 62

NIKOL'SKIY, S.M.

On a problem of S.L.Sobolev. Sib.mat.zhur. 3 no.6:845-851 N-D '62. (MIRA 15:11)
(Topology)

NIKOL'SKIY, S.M. (Moskva)

Correction to the article "Properties of certain classes of functions of several variables on differentiable manifolds." (MIRA 15:8)
Mat. sbor. 57 no.4:527 Ag '62.
(Functions of several variables)

NIKOL'SKIY, S.M.

Properties of differentiable functions of several variables at the boundary. Dokl. AN SSSR 146 no.3:542-545 S '62. (MIRA 15:10)

1. Matematicheskiy institut im. V.A.Steklova AN SSSR.
Predstavleno akademikom S.L.Sobolevym.
(Functions of several variables)

NIKOL'SKIY, S.M.

First boundary value problem for a general linear equation.
Dokl. AN SSSR 146 no.4:767-769 O '62. (MIRA 15:11)

1. Predstavleno akademikom P.S. Novikovym.
(Boundary value problems)
(Linear equations)

NIKOL'SKIY, S.M.

Functions with a dominant mixed derivative satisfying Holder's multiple boundary condition. Sib mat. zhur. 4 no.6:1342-1364 N-D '63. (MIRA 17:9)

MATVEYEV, I.V.; NIKOL'SKIY, S.M.

Joining class $H_p^{(\alpha)}$ functions. Usp. mat. nauk 18 no.5:175-180 S-O '63. (MIRA 16:12)

NIKOL'SKIY, S.M.

Proof of uniqueness of the classical solution to the first boundary value problem for a general linear partial differential equation for a convex bounded region. Izv. AN SSSR. Ser. mat. 27 no.5:1113-1134 S-O '63. (MIRA 16:11)

NIKOL'SKIY, S.M. (Moskva)

Stable boundary values of a differentiable function of several variables. Mat. sbor. 61 (103) no.2:224-252 Je '63.
(MIRA 16:10)

S/020/63/148/005/004/029
B112/B186

AUTHOR: Nikol'skiy, S. M.

TITLE: The uniqueness of the solution to a boundary-value problem for a convex region

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 5, 1963, 1022-1025

TEXT: This paper is a continuation of two earlier papers by the same author (DAN, 146, No. 5 (1962), DAN, 146, No. 4 (1962)). The class $W_p^m = W_p^m(G;\ell)$ of solutions to the equation

$$Lu = \sum_{k,k'} (-1)^{|k|} D^{|k|}(a_{kk'}(x) u^{(k')}) = 0, \qquad (3)$$

$$(a_{kk'}(x) = a_{k'k}(x),\ |a_{kk'}(x)| \leq M,\ x \in G),$$

is investigated, for which the integral

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S/020/63/148/005/004/029
B112/B186

The uniqueness of the solution to a ...

$$D_G(f) = \int_G \sum_i |f_i(k)|^2 dG \qquad (1)$$

is finite. Conditions are derived under which the class M consists of a single element.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova Akademii nauk SSSR (Mathematical Institute imeni V. A. Steklov of the Academy of Sciences USSR)

PRESENTED: August 15, 1962, by I. M. Vekua, Academician

SUBMITTED: August 7, 1962

Card 2/2

NIKOL'SKIY, S.M.

Theorem on the representation of a class of differentiable functions of several variables by integral functions of the exponential type. Dokl. AN SSSR 150 no.3:484-487 My '63. (MIRA 16:6)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR. Predstavleno akademikom I.M. Vinogradovym.
(Functions of several variables)
(Functions, Entire)

ACCESSION NR: AP1019912 S/0020/64/159/003/0512/0515

AUTHOR: Nikol'skiy, S. M.; Lizorkin, P. I.

TITLE: Some inequalities for functions from weight classes and boundary value problems with strong degeneration on the boundary

SOURCE: AN SSSR. Doklady*, v. 159, no. 3, 1964, 512-515

TOPIC TAGS: boundary value problem, Poincare equation, elliptic equation, variational method

ABSTRACT: The authors give a Poincare-type inequality for functions whose derivatives are p-summable in the region g with certain weights. The value of these inequalities lies in their application to the theory of boundary value problems for elliptic equations with degeneration on the boundary Γ of the region g. An analog of the first boundary value problem for a degenerating elliptic equation of order $2r$, $r \geq 1$ is studied. The degeneration is characterized by the

ACCESSION NR: AP4019912

national method. The case of inhomogeneous degeneration is also considered. In particular, let

$$\|\varphi\|_{L_p(\Omega)} = \left(\int_\Omega |\varphi|^p dx\right)^{\frac{1}{p}} \quad (1 \leqslant p < \infty). \qquad (1)$$

and $f \in W^{(r)}_{p,\alpha}(\Omega)$ if

$$\|f\|_{W^{(r)}_{p,\alpha}(\Omega)} = \|f\|_{L_p(\Omega)} + \sum \left\|\frac{f^{(k)}}{\rho^\alpha}\right\|_{L_p(\Omega)} < \infty. \qquad (2)$$

Theorem 1. For the functions $f \in W^{(r)}_{p,\alpha}(\Omega)$,

$$\|f\|_{L_p(\Omega)} \leqslant c\left(\sum_{k=0}^{r-1} \left|\frac{\partial^k f}{\partial n^k}\right|_{L_p(\Gamma)} + \sum \left\|\frac{f^{(k)}}{\rho^\alpha}\right\|_{L_p(\Omega)}\right), \qquad (3)$$

where c is independent of f. Now let

$$E(f, h) = \int_\Omega \sum a_{k_1 \ldots k_n}(x) f^{(k)}(x) h^{(k)}(x)\, dx, \qquad (4)$$

and let $\mathfrak{M}$ be the class of functions $f \in W^{(r)}_{2,\alpha}(\Omega)$ with boundary values

$$\left.\frac{\partial^k f}{\partial n^k}\right|_\Gamma = \varphi_k \in B_1^{(r-k-\frac{1}{2})}(\Gamma) \qquad (5)$$

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ACCESSION NR: AP4049912

Problem A: Find the minimum of the functional

$$E(f, f) - 2(F, f). \qquad (6)$$

in the class $\mathfrak{M}$, where $f \in L_2(g)$ and (F,f) denotes scalar product in $L_2(g)$.

Theorem 2. Problem A has a unique solution $u \in \mathfrak{M}$. The function u satisfies (in the mean) conditions (5) and is a generalized solution of

$$L(u) \equiv \sum_{|\alpha|,|\beta|\leq r} (-1)^{|\alpha|} D^{(\alpha)}(a_{\alpha\beta} u^{(\beta)}) = F(x) \qquad (7)$$

in the sense that

$$E(u, v) - 2(F, v) = 0 \qquad (8)$$

for any function $v \in W_{2,\alpha}^{(\phi)}$ having zero boundary values (5) ($v \in \mathfrak{M}_0$). Orig. art. has: 16 formulas.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova, Akademii nauk SSSR (Mathematical Institute, Academy of Sciences, SSSR)

SUBMITTED: 14May64 ENCL: 00

SUB CODE: MA NO REF SOV: 007 OTHER: 001

SOLONNIKOV, V.A.; PETROVSKIY, I.G., akademik, otv. red.; NIKOL'SKIY, S.M., prof., zamestitel' otv. red.; LADYZHENSKAYA O.A., red.

[Boundary value problems for linear parabolic systems of differential equations of the general type.] O Kraevykh zadachakh dlia lineinykh parabolicheskikh sistem differentsial'nykh uravnenii obshchego vida. Moskva, Naukka, 1965. 162 p. (Akademiia nauk SSSR. Matematicheskii institut. Trudy, vol.83) (MIRA 18:11)

L 34651-66 EWT(d)/T IJP(c)

ACC NR: AT6024714 SOURCE CODE: UR/2517/65/077/000/0143/0167

AUTHOR: Lizorkin, P. I.; Nikol'skiy, S. M.

ORG: none

TITLE: Classification of differentiable functions on the basis of spaces with dominant mixed derivatives

SOURCE: AN SSSR. Matematicheskiy institut. Trudy, v. 77, 1965, 143-167

TOPIC TAGS: function analysis, minimization, mathematic space, coordinate system, functional equation

ABSTRACT: In the study of functions of several variables their smoothness may be characterized by specifying their differential properties along the coordinate axes. Such an approach has led to the functional spaces $W_p^{(r_1, \ldots, r_n)}$, $H_p^{(r_1, \ldots, r_n)}$, $B_p^{(r_1, \ldots, r_n)}$, and L_p^r (see, e.g., P.I. LIZORKIN, Matem. sb. [Mathematics Symposium], 1963, v. 60(102):3, pp 325-353). However, during certain operations like the minimization of the functional

$$\iint\left[\left(\frac{\partial^2 u}{\partial x^2}\right)^2+\left(\frac{\partial^2 u}{\partial y^2}\right)^2+\left(\frac{\partial^2 u}{\partial x\,\partial y}\right)^2\right]dx\,dy,$$

one encounters the need for the study of different types of spaces.

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ACC NR: AT6024714

In the above-quoted example, one must investigate a space dominated by the role of mixed derivatives. Consequently, instead of specifying the derivatives along the coordinate axes, one is required in the more general case to determine the functional space by specifying a certain set of derivatives (see, e.g., S.M. NIKOL'SKIY, Sib. matem. zhurnal [Siberian Mathematics Journal], 1963, v. IV, No. 6, pp 1342-1363; Matem. sb. [Mathematics Symposium], 1963, 61(103): 2, pp 224-252; N.S. BAKHILOV, Vestnik MGU (Bulletin of the Moscow State University], ser. I, Matem. mekh. [Series I, Mathematics and Mechanics], 1963, No 3, 7-16). The present paper is, in a sense, a continuation of the above papers. The authors study the spaces of the function $S_p^{r_1}, \ldots, r^{m}$ defined in E_n (in particular, the periodic cases), p - additive together with their generalized derivatives and belonging to a certain set $\mathfrak{M} = \{D^{r^1} f, \ldots, D^{r^M} f\}$ of derivatives which are not necessarily of integral order. To avoid certain pathological properties, they impose the requirement that, together with the $D^{r^1} f$ derivatives $r^1 = (r_1^1, \ldots,$

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ACC NR: AT6024714

r_n^i), $i \in \{1, \ldots, N\}$ contains also all derivatives corresponding to the projection of r^i on all the possible coordinate hyperplanes. All conditions of the $sr_p^1, 111, r^N$ are "convex" - as are those of of the space L_p^r, which is a special case of those under study. Basic "bricks" of the $S^{r^1}_p, 111, r^N$ space are $S^{r^i}_p$ spaces with a dominant mixed derivative $D^{r^i}f$, for which the set M consists - in addition to the D^{r^i} of the "supporting" $D^{r^i}f$ derivatives discussed above. The first section outlines the auxiliary information, presents basic definitions, establishes the $S^r_p(\Delta)$ space for the periodic case, and derives the integral representation of the functions in $S^r_p(\Delta)$. The second section investigates functions addible with a power in E_n. The generalized derivative is defined in the sense of an earlier discussion (first quoted reference) using the theory of generalized functions. The last section is devoted to the spaces $S^{r^1}_p, \ldots, r^N$ in general. Orig. art. has: 43 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: none / ORIG REF: 009

Card 3/3

SHAFAREVICH, I.R.; AVERBUKH, B.G.; VAYNBERG, Yu.R.; ZHIZHCHENKO, A.B.; MANIN, Yu.I.; MOYSHEZON, B.G.; TYURINA, G.N.; TYURIN, A.N.; PETROVSKIY, I.G., akademik, otv. red.; NIKOL'SKIY, S.M., prof., zamestitel' otv. red.

[Algebraic surfaces.] Algebraicheskie poverkhnosti. Moskva. Nauka, 1965. 214 p. (Akademiia nauk SSSR. Matematicheskii institut. Trudy, vol. 75) (MIRA 18:5)

FA 22/49T71

NIKOL'SKIY, S. N.

USSR/Medicine -- Ticks
Medicine -- DDT

Sep 48

"Effects of DDT and Hexachlorane on Ixodic Ticks," S. N. Nikol'skiy, Cand Vet Sci, Stavropol'sk Agr Inst, and Stavropol'sk NIVOS, 4½ pp

"Veterinariya" No 9

Describes eight experiments to test effects of DDT and hexachlorane on Ixodidae.

22/49T71

NIKOL'SKIY, S.N.

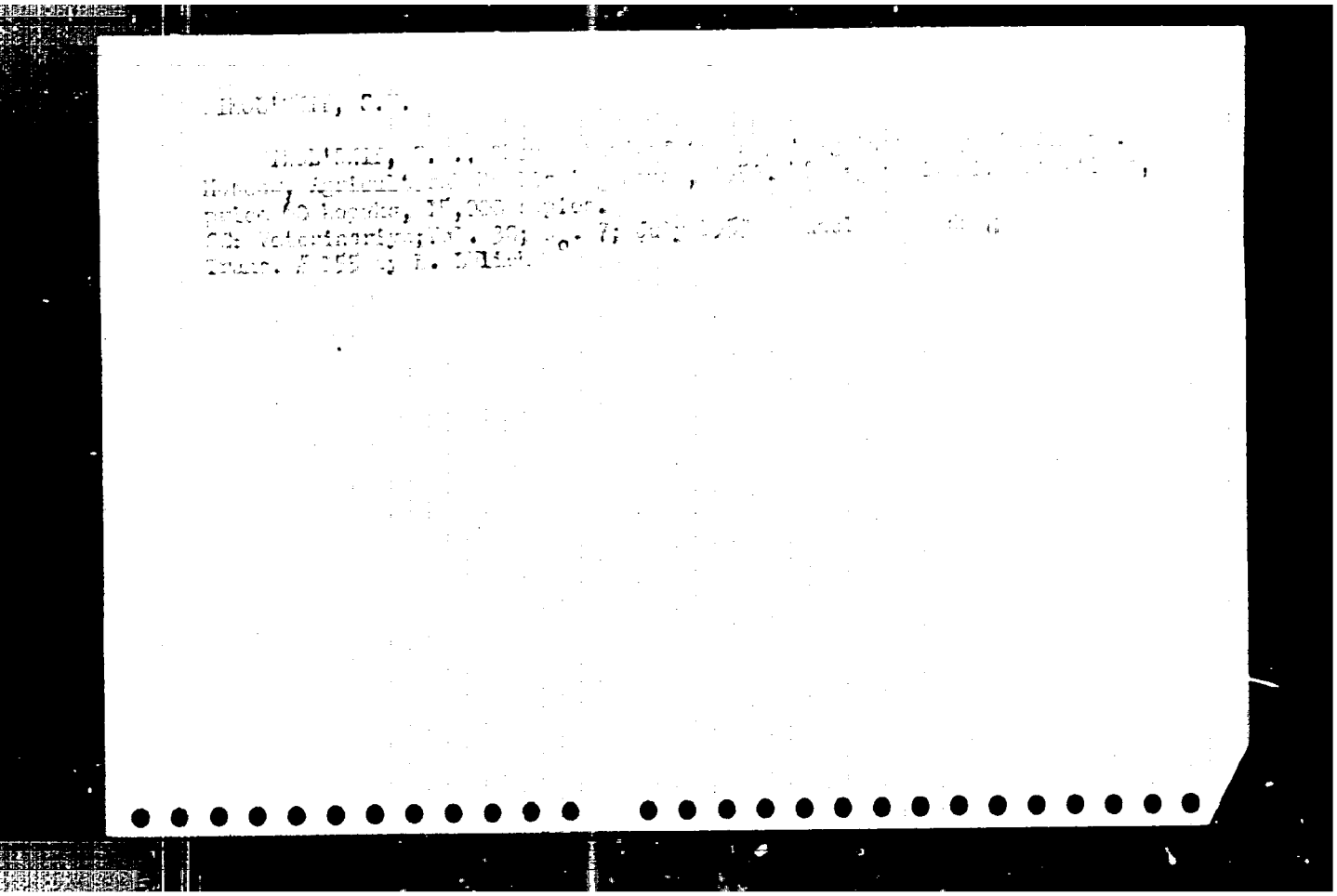
A

A

Action of DDT and [illegible] on mites. S. N. Nikol'skii (Agr. Inst., Stavropol). Veterinariya [illegible], No. [illegible] (1948). Mites, carriers of hemosporidioses of farm animals, are controlled by DDT and hexachloroethane. A 10 [illegible] hour [illegible] suffices for larvae than for the imago stage. A 7 10-day period of protection after treatment is noted. G. M. K.

NIKOL'SKIY, G.N.; GOLOVUSHIN, V.P.; CHERNOVA, N.I.
Stavropol Krai Scientific Research Vet. Experimental Station
"Use of hexachloran in veterinary practice." Preliminary report.
SO: Vet. 27 (2) 1950, p. 37

NIKOL'SKIY, S. N., Prof.
"Actual problems of using hexachloran in the fight against mange of sheep."
SO: Veterinariia 28(9), 1951, p. 42



NIKOL'SKIY, S.N.

Methods and problems of controlling hemosporidiosis in horses.
Veterinariia 31 no.11:56-59 N '54. (MLRA 7:11)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.
(HEMOSPORIDIA) (HORSES--DISEASES)

NIKOL'SKIY, S.N., professor; ZOLOTUSOVA, A.I., kandidat veterinarnykh nauk.

Penicillin in coccidiosis and pullorum disease in poultry. Veterinariia 32 no.7:65 Jl '55. (MLRA 8:9)

1.Stavropol'skiy SKhI.
(PENICILLIN) (COCCIDIOSIS) (PULLORUM DISEASE)

USSR/Human and Animal Physiology. Blood

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65169

Author : Nikol'skiy S.N.
Inst : The Stavropol Agricultural Institute
Title : Agglutination of Erythrocytes in Infectious Anemia

Orig Pub : Tr. Stavropol'sk. s.-kh. in-ta, 1956, Vyp. 7, 363-371

Abstract : A method is proposed for the diagnosis of infectious anemia and its differentiation from similar diseases which is based on the agglutination of the erythrocytes of horses afflicted with infectious anemia. Horse serum with a high titer was pipeted into test tubes (1 ml of dilutions of 1:50, 1:100, 1:200, 1:400, and 1:800). Then 2.2 ml of a 1:10 dilution of a suspension of erythrocytes washed two or three times with physiological saline was added. After vigorous mixing the test tubes were allowed to stand for a day at 18-22°. The test was considered positive if the physiological solution remained clear upon shaking, and clumps of agglutinated

Card : 1/2

NIKOL'SKIY, S.N., professor.

Use of benzene hexachloride HBK "617" 'hot cups' for the control of Argas ticks. Veterinariia 33 no.5:67 My '56. (MLRA 9:8)
(Benzene hexachloride) (Ticks)

USSR/Zooparasitology, Ticks and Insects - Vectors of G
Causal Organisms. Ticks.

Abs Jour: Ref. Zhur. - Biol., No 23, 1958, 104121

Author : Nikol'skiy, S. N.

Inst : All-Union Institute of Experimental Veterinary Medicine.

Title : The Significance of Domestic and Wild Animals in the Balance of Boophilus calcaratus Ticks.

Orig Pub: Tr. Vses. in-ta eksperim. veterinarii, 1957, 21, 270-274

Abstract: It is impossible to include all animals on which it has been found as hosts of Boophilus calcaratus ticks; particularly, this applies to the finding of the pre-imago phases of the tick. In determining the role of a given

Card 1/2

51

NIKOL'SKIY, S.I., doktor veterinarnykh nauk.; GLUKHOV, V.F.; POKIDOV, I.I.

Treating cattle with hexachloran to control ticks. Nauk. Akad. sel'khoz. 22 no.2:42-48 '57. (MLRA 10:5)

1. Stavropol'skiy sel'skokhozyaystvennyy institut. Predstavlena akademikom S. N. Muromtsevym.

(Hexanes hexachloride) (Ticks)
(Cattle—Diseases and pests)

NIKOL'SKIY, S.N., prof.; GLUKHOV, V.F., aspirant.

Complications in cattle being treated with acaricidal emulsions.
Veterinariia 34 no.2:64-69 F '57. (MLRA 10:11)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.
(Disinfection and disinfectants) (Cattle--Diseases and pests)

NIKOL'SKIY, S.N., professor.; GLUKHOV, V.F., aspirant.

Acaricide emulsions for controlling ixodid tick invasions in cattle. Veterinariia 34 no.3:49-57 Mr '57. (MLRA 10:4)

1. Stavropol'skiy sel'skokhozyaystvennyy institut.
(Insecticides) (Veterinary medicine)

ORLOV, I.V., doktor veter. nauk; AGRINSKIY, N.I., doktor veter. nauk, prof.; NIKOL'SKIY, S.N., zasl. deyatel' nauki, doktor veter. nauk, prof.; BESKHLEBNOV, Yu.A., red.; PROKOF'YEVA, L.N., tekhn. red.

[Handbook on veterinary parasitology] Praktikum po veterinarnoi parazitologii. Moskva, Izd-vo sel'khoz.lit-ry zhurnalov i plakatov, 1962. 318 p. (MIRA 15:4)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Orlov).
(Veterinary parasitology)

NIKOL'SKIY, S.N., prof.; SEVOST'YANOV, A.Z., assistent; LUBOVIY, S.Z., kand. veterin.nauk; PASECHNYY, N.V., veterinarnyy vrach; ZABLUDSKIY, B.M., veterinarnyy vrach

Use of hexachloran against Psoroptes infestation of sheep. Veterinariia 41 no.8:87-90 Ag '64. (MIRA 18:4)

1. Stavropol'skiy sel'skokhozyaystvennyy institut (for Nikol'skiy, Sevost'yanov). 2. Ministerstvo proizvodstva i zagotovok sel'skokhozyaystvennykh produktov (for Pasechnyy). 3. Respublikanskaya veterinarnaya laboratoriya Checheno-Ingushskoy ASSR (for Zabludskiy).

NIKOL'SKIY, S.N.; MESHCHERYAKOVA, V.[illegible]

Epizootiology of [illegible] . Veterinariia 41 no.[illegible]
(MIRA [illegible])
[illegible]

1. Stavropol'skiy sel'skokhozyaystvennyy institut.

ACC NR: AP6031058 (N) SOURCE CODE: UR/0394/66/004/009/0058/0059

AUTHOR: Nikol'skiy, S. N.; Sevost'yanov, A. Z.

ORG: Stavropol Agricultural Institute (Stavropol'skiy sel'skokhozyaystvennyy institut)

TITLE: Use of certain chemical compounds in the control of ticks in pastures

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 9, 1966, 58-59

TOPIC TAGS: chemical compound, insecticide, pesticide, animal parasite, pest control/ Fenkapton pesticide, Saifos pesticide, Eradex pesticide, Keltan pesticide, Sovin pesticide

ABSTRACT: The chemicals shown in the table were tested for their acaricidal activity. As shown by the table, the compounds tested were excellent contact poisons for larvae at nearly all concentrations tested. All experiments were performed under laboratory conditions.

Card 1/3 UDC: 632.654:636.22/.28

ACC NR: AP6031058

Table 1. Acaricidal action of pesticides on larvae of *D. marginatus* and nymphs of *H. plumbeum* when given in food.

Compound	Concentration - % -	Kill larvae %	Kill nymphs %
Fenkapton[O,O-diethyl-S(2,5-dichlorophenyl chlo methyl)dithiophosphate]	0.5	100	3.3
	0.05	100	0
	0.005	52	—
Saifos[O,O-dimethyl S(4,6-diamine-1,3,5-triazine-2-yl)methyldithiophosphate]	0.5	87.5	0
	0.05	50	0
	0.005	20	—
Eradex(quinoline-2,2,3-trichlocarbonate)	0.5	100	13.3
	0.05	100	0
	0.005	36	—
Keltan[1,1,1-trichloro-2,2-bis(4-chlorophenyl) ethanol]	0.5	100	0
	0.05	58	0
	0.005	0	—
Preparation 952	0.5	100	100
	0.05	100	63.2
	0.005	100	3.3
Sevin(1-napthyl-N-methylcarbamate)	0.5	100	100
Gamma isomer of hexachlorocyclohexane	0.025	100	100
Control (water)	—	20.8	0

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ACC NR: AP6031058

Except for preparation 952, sevin, and the gamma isomer of hexachlorocyclohexane which yielded 100% kills, there were few significant results with the other compounds when applied to nymphs.

[WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: 07Jan66/

Card 3/3

S/113/60/000/006/003/006
D269/D302

AUTHORS: Zakharenko, B. A., Magarik, K. N. and Nikol'skiy, S. S.

TITLE: Determination of the wear of a piston ring with the help of radioactive indicators

PERIODICAL: Avtomobil'naya promyshlennost', no. 6, 1960, 23-26

TEXT: The author deals with experimental research carried out on the wear of an engine piston ring during the starting-and-heating-up period by the use of radioactive indicators. The tests were conducted on a two-cylinder engine operating with a 5A2-24 8.5/11 (5D2-2ch 8.5/11) compressed ignition and having a capacity of 10 h.p. at 1,500 rpm. No constructional changes were performed on the engine, merely the fine and rough oil-purification filters had been removed. A diagram of the experimental installation is shown. The serially-produced upper piston packing ring was subjected to activation with the help of irradiation in a nuclear reagent. After irradiating it for four weeks with a 10^{12} neutron/cm^2.sec neutron flow and after an additional period of one month needed

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S/113/60/000/006/003/006
D269/D302

Determination of the wear...

for the disintegration of M_n^{54}, P^{32}, etc., highly-active isotopes, the ring became gamma-active by Fe^{59}. Before the beginning of tests, the specific activity of the ring was less than 0.05 m/curie/g. An irradiation of more than 24 days did not yield any substantial results. The activity of the wear products was measured by allowing the oil to circulate continuously through the computing device. For this purpose, an outside oil circulation system was assembled on the experimental installation. To prevent the wear products from settling, the computing chamber on the computing device was built in the form of a coil. A specially-designed scintillation computing device permitted one to increase the efficiency of measuring the oil radioactivity by 53 times. The experiment revealed that the speed of the ring wear stops decreasing and remains constant after the engine has run for 55-60 hours. To determine the effect of the thermal state of the engine on the dynamics of the ring-wear process during the starting period, the temperature of the oil was changed from 9 to 20°C, and that of the water from 3 to 19°C. At the end of each test day, the oil was purified from the wear products with the help of a felt filter. The following three types of oil were used: (1) MC-20 (MS-20), GOST 1013-49(A) (GOST

Card 2/4

S/054/62/000/001/010/011
B121/B138

AUTHORS: Shchkarev, S. A., Vasil'kova, I. V., Korol'kov, D. V., Nikol'skiy, S. S.

TITLE: Thermodynamic study of molybdenum dibromide

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 1, 1962, 148-153

TEXT: The actual isobaric specific heat of solid molybdenum dibromide and the temperature dependence of entropy, enthalpy, and free energy of formation of solid $MoBr_2$ were calculated. In addition the thermal stability of $MoBr_2$ was studied. $MoBr_2$ was diluted, after bromination of metallic molybdenum in bromine vapor, with an inert gas at 600-700°C. The isobaric specific heat was determined in a calorimetric apparatus with a sensitivity of 0.00005°C. When solid $MoBr_2$ is heated to 800°C in a vacuum no melting occurs, and there is disproportionation which mainly follows the equation $MoBr_{2(solid)} \rightarrow 1/3\ Mo_{(KR)} + MoBr_{3(g)}$. The values for enthalpy, entropy, and free energy obtained in solid $MoBr_2$ formation are as follows:

Card 1/3

S/054/62/000/001/010/011
B121/B138

Thermodynamic study of molybdenum ...

ΔH^{o}_{298} formation $MoBr_{2(solid)}$ = 62.4 kcal/mole

ΔS^{o}_{298} formation $MoBr_2$ = -51.4 e.u.

ΔF^{o}_{298} formation $MoBr_{2(solid)}$ = -55.0 kcal/mole.

The temperature dependence of the specific heat of solid $MoBr_2$ from 298-773°K is expressed by the equation ΔC^{o}_{p} $MoBr_2$ formation (solid) $= -5.80 + 30.2 \cdot 10^{-3}T + 0.63 \cdot 10^{5}T^{-2}$ cal/mole·deg

The temperature dependence of the actual specific heat of some chemically resistant glasses such as pyrex, pyrex chemical resistant glass and the chemically resistant Russian glass type П-15 (P-15) studied and the following values were obtained: for pyrex $C_p = 0.174 + 5.60 \cdot 10^{-4}$ cal/g of degrees t; for pyrex chemical resistant glass $C_p = 0.178 + 5.15 \cdot 10^{-4}$ cal/g·degrees t, and for P-15 glass $C_p = 0.181 + 2.09 \cdot 10^{-4}$ cal/g·degrees t. There are 2 figures, 2 tables, and 7 references: 3 Soviet and 4 non-Soviet. The three references to

Card 2/3

SHCHUKAREV, S.A.; VASIL'KOVA, I.V.; KOROL'KOV, D.V.; NIKOL'SKIY, S.S.

Thermodynamic study of molybdenum dibromide. Vest. LGU 17 no.4: 148-155 '62. (MIRA 15:3)
(Molybdenum bromides—Thermal properties)

S/279/63/000/001/023/023
B039/B452

AUTHOR: Nikol'skiy, S.S. (Leningrad)

TITLE: The diffusion coefficient in the niobium-carbon system

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i gornoye delo. no.1, 1963, 199-200

TEXT: The fundamental diffusion relations are discussed and a solid solution with a composition AB_x is examined, where x is the fraction of places in the sublattice occupied by the introduced atoms B. Simplifying assumptions made are: 1) the mobility of A atoms is very much less than that of B atoms, 2) the vacancies in which B atom transitions can occur are sublattice vacancies and not lattice defects, 3) the lattice is densely packed, 4) in a single unit cell it is not possible for more than one transition to occur at a time, 5) all possible transitions from stable to unstable positions are equally probable and there are always eight (the number of tetrahedral spaces surrounding an octahedron), 6) all possible transitions from unstable to stable positions are equally probable and vary in number from 4 to 1. An expression is derived for the transmission coefficient x

Card 1/2

NIKOL'SKIY, S.S.

Retrograde solidification in binary systems. Zhur. fiz. khim. 37 no.11:2426-2431 N'63. (MIRA 17:2)

1. Leningradskiy gosudarstvennyy institut prikladnoy khimii.

NIKOL'SKIY, S.E.

Interpolation of the properties of solutions as functions of the composition. Part 1: Effect of the number of components and degree of equation on the number of experimental data required. Teoret. i eksper. khim. 1 no.4:468-472 '65.
(MIRA 18:10)

1. Institut prikladnoy khimii, Leningrad.

NIKOL'SKIY, B.P.

Thermodynamics of interstitial solid solutions. Report No.1: Energy of formation. Poresh. met. 5 no.3:22-34 Mr '65. (MIRA 18:5)

1. Gosudarstvennyy ordena Trudovogo Krasnogo Znameni institut prikladnoy khimii, Leningrad.

NIKOL'SKIY, B.S.

Thermodynamics of interstitial solid solutions. Report No.2. Porosh. met. 5 no.4:61-74 '65. (MIRA 18:5)

1. Gosudarstvennyy ordena Trudovogo Krasnogo Znameni institut prikladnoy khimii, g. Leningrad.

SHABALIN, A.A.; GANZHA, V.Ya., inzh.; NIKOL'SKIY, V.A. [deceased];
LAPINSKIY, L.G., inzh.; IVANKOV, A.G.; SHOL'YAKOV, R.T.;
TURIANSKIY, G.M.; SHMIDT, N.E.; GRECHISOV, P.P., red.;
MAKHOVA, N.N., tekhn. red.; BALLOD, A.I., tekhn. red.

[Handbook for the state farm construction worker] Spravochnik sovkhoznogo stroitelia. Moskva, Sel'khozizdat, 1962.
598 p. (MIRA 15:9)
(State farms) (Construction industry)

NOVITSKIY, V A

CZECH

[illegible] ester of orthotitanic acid. VI. N. Andreev and V. A. Nikitina. Zhurnal Obshchei Khimii 7 [illegible] 1428-31 (1937).—The best yield of $(EtO)_4Ti$, 70%, is in the reaction of EtOH (600 ml.) and Na (31 g.) with $TiCl_4$ is obtained at −20°. A more satisfactory process is as follows: mixing equal vols. of $TiCl_4$ and EtOH with ice cooling gave a ppt. of $TiCl_2(OEt)_2$.EtOH; but if 40 ml. $TiCl_4$ is allowed to react with 200–600 ml. EtOH a yellowish soln. is obtained, which is dild. with 2 vol. EtOH, treated with Na (15–40% of the amount needed in the 1st method) and the mixt. is filtered after several hrs.; distn. gave 40% $(EtO)_4Ti$ if the reaction mixt. is chilled to −10° during reaction. To diluted EtOH at −10° was slowly added 20 ml. $TiCl_4$ while NH_3 was bubbled through the mixt. at 2–3 bubbles/sec.; after filtration or decantation from NH_4Cl, the liquid was distd. to remove EtOH, but the residue decompd. on attempted distn. An improved procedure was developed as follows: into 150 ml. $TiCl_4$ in 250–300 ml. $CHCl_3$ was passed NH_3 to form from $TiCl_4$.$4NH_3$, and after 10–15 min. the NH_3 stream entering the flask was diverted through a container of EtOH; after transfer of 6 moles EtOH and when the mixt. became neutral, the gas stream was stopped, the mixt. filtered and the filtrate distd. yielding 70–75% $(EtO)_4Ti$, b$_{15}$ 145–7°, b$_{10}$ 128–9°, n$_D$ 1.4965. Cf. Noguis, *et al.*, C. A. 44, 8854i.

G. M. Kondratev

11.1160
11.1230

44351

S/195/62/003/006/006/011
E075/E436

AUTHORS: Koltunov, V.S., Nikol'skiy, V.A., Agureyev, Yu.P.

TITLE: The kinetics of oxidation of hydrazine with nitric acid in aqueous solution

PERIODICAL: Kinetika i kataliz, v.3, no.6, 1962, 877-881

TEXT: The oxidation of hydrazine was investigated to establish its stechiometry and kinetics. The rate of the reaction was measured by the decreasing concentration of hydrazine. Nitric acid was used in concentrations ranging from 2.2 to 8.2 mole/litre. Analysis of the oxidation products indicated that the reaction is

$$17N_2H_4 + 16HNO_3 = 4NH_4NO_3 + 4HN_3 + 4N_2O + 11N_2 + 32H_2O$$

Since log $[N_2H_4]$ decreases linearly with the time of oxidation, the reaction is of the first order. The reaction is however of the third order in respect of H^+ and NO_3^- ions and the experimental data are satisfactorily described by the equation

$$-\frac{d(N_2H_4)}{dt} = k_2[N_2H_4][HNO_3]^3\gamma_{\pm}^3$$

Card 1/2

NIKOL'SKIY, V.A.

Thermite-furnace welding of steel wires. Avtom., telem. i sviaz' 2 no.9:35-37 S '58. (MIRA 11:10)

1.Starshiy inzh. otdela svyazi TSentral'nogo upravleniya signalizatsii i svyazi.

(Wire--Welding)

NIKOL'SKIY, V.A.

Use of the VE-3 apparatus. Avtom. telem. i svias' 3 no.11:29-30 N '59
(MIRA 13:3)

1. Starshiy inzhener otdela svyazi Glavnogo upravleniya signalizatsii i svyazi.
(Railroads--Electronic equipment) (Shielding (Electricity))

NIKOL'SKIY, V.A., starshiy inzhener

Let us improve the quality of the principal means of communication. Avtom.telem.i aviaz' 4 no.8:20-22 Ag '60. (MIRA 13:8)

1. Otdel svyazi Glavnogo upravleniya signalizatsii i svyazi Ministerstva putey soobshcheniya.
(Railroads--Communication systems)
(Telecommunication)

NIKOL'SKIY, V.A.

Use of dismantled [illegible]-3/4 apparatus. Avtom., telem. i sviaz' 4 no.10: 11-15 O '60. (MIRA 13:10)

1. Starshiy inzhener otdela svyazi Glavnogo upravleniya signalizatsii i svyazi.

(Railroads—Electronic equipment)

KRYUCHKOV, Vladimir Feofanovich; NIKOL'SKIY, Vladimir Aleksandrovich; USTIMENKO, P.I., inzh., retsenzent; MOVIKAS, M.N., inzh., red.; USENKO, L.A., tekhn. red.

[This is what the telephone operator of railroad transportation should know] Chto dolzhna znat' telefonistka transportnoi aviasi. Moskva, Transzheldorizdat, 1963. 128 p. (MIRA 16:4)

(Telephone) (Railroads--Communication systems)

GRYZOV, I.S., inzh; BYSTRITSKIY, V. Ya., inzh.; NIKOL'SKIY, V.A., inzh.; CHERKASOV, A.A., inzh.

New method of turbodrilling without raising the drilling pipes. Bezop. truda v prom. 8 no.9:39-41 S '64 (MIRA 18:1)

1. Ob"yedineniye Saratovgazneft'.

42729. EDDIN, P. I. i NIKOL'SKIY, V. A. O Vnutriposvonochnykh Opukholyakh Bez Likvornogo Bloka. Trudy In-ta Neyrokhirurgii Im. Burdenko, T. I, 1948, s. 42-49.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

NIKOL'SKIY, V. A. (PROF.)

Neuralgia

Clinical and surgical observations in the treatment of neuralgia of the trigeminal nerve by section of its spinal root. Vop. neirokhir. 16 No. 4, 1952.

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

Nikol'skiy V.A.

NIKOL'SKIY, V.A., professor; TEMIROV, K.S.

Angiography of the brain using cardiotrast. Vop.neirokhir. 19 no.5:25-28 S-O '55. (MLRA 8:11)

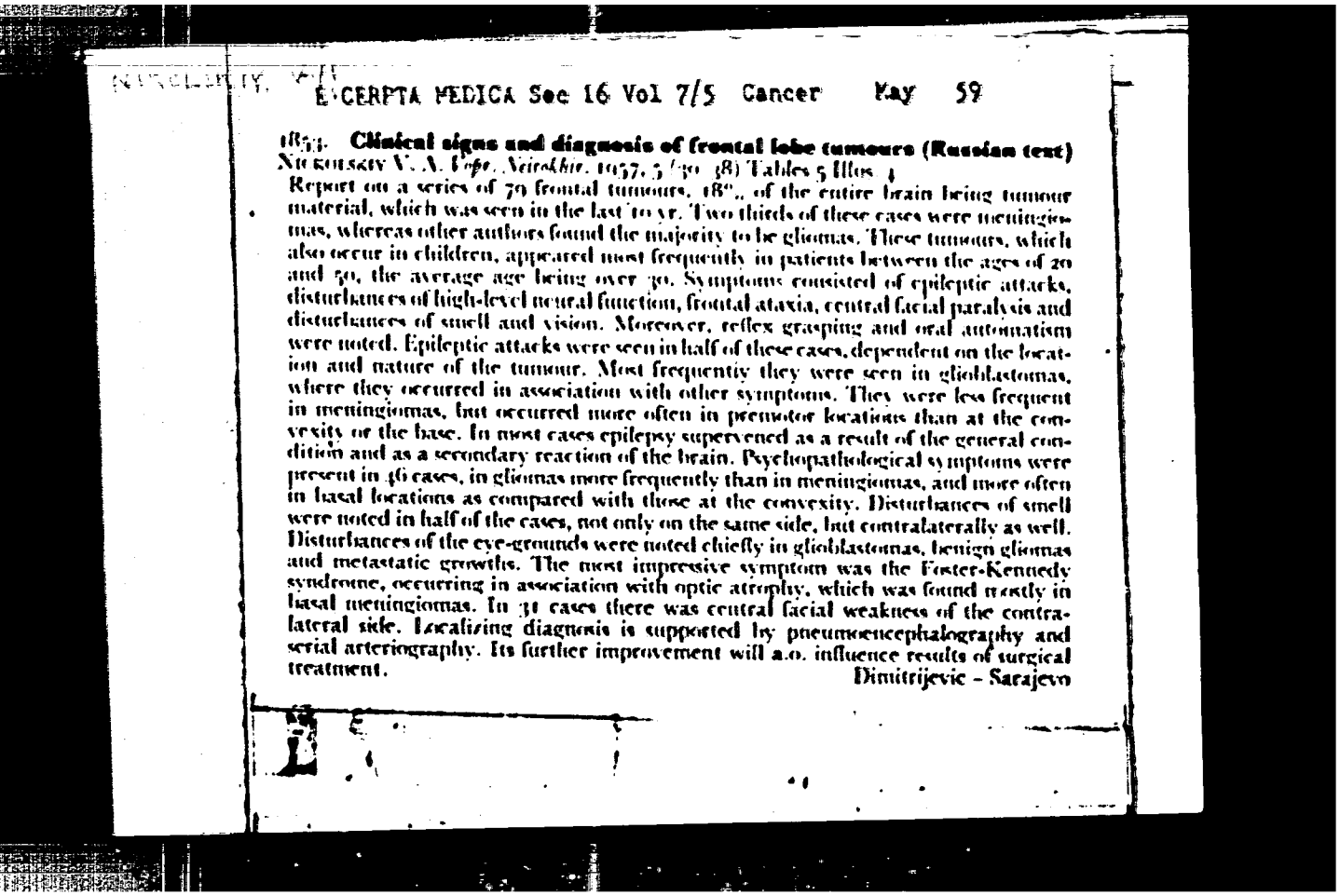
1. Iz kliniki nervnykh bolezney i neyrokhirurgii Rostovskogo-na-Donu meditsinskogo instituta.

(ANGIOGRAPHY,
cerebral, with cardiotrast)
(BRAIN, blood supply,
angiography, with cardiotrast)
(CONTRAST, MEDIA,
cardiotrast in cerebral angiography)

NIKOL'SKIY, V.A., professor

Modern methods of diagnosing intracranial neoplasms. Vop.neirokhir. 20 no.6:9-13 N-D '56. (MLRA 10:2)

1. Is klinikl nervnykh bolezney i neyrokhirurgii Rostovskogo-na-Donu meditsinskogo instituta.
(BRAIN NEOPLASMS, diagnosis,
(Rus))



EXCERPTA MEDICA Sec 16 Vol 7/5 Cancer May 59

1855. **Clinical signs and diagnosis of frontal lobe tumours (Russian text)**
Nikolaev V. A. *Vopr. Neirokhir.* 1957, 5 (30-38) Tables 5 Illus. 4

Report on a series of 70 frontal tumours, 18% of the entire brain being tumour material, which was seen in the last 10 yr. Two thirds of these cases were meningiomas, whereas other authors found the majority to be gliomas. These tumours, which also occur in children, appeared most frequently in patients between the ages of 20 and 50, the average age being over 30. Symptoms consisted of epileptic attacks, disturbances of high-level neural function, frontal ataxia, central facial paralysis and disturbances of smell and vision. Moreover, reflex grasping and oral automatism were noted. Epileptic attacks were seen in half of these cases, dependent on the location and nature of the tumour. Most frequently they were seen in glioblastomas, where they occurred in association with other symptoms. They were less frequent in meningiomas, but occurred more often in premotor locations than at the convexity or the base. In most cases epilepsy supervened as a result of the general condition and as a secondary reaction of the brain. Psychopathological symptoms were present in 46 cases, in gliomas more frequently than in meningiomas, and more often in basal locations as compared with those at the convexity. Disturbances of smell were noted in half of the cases, not only on the same side, but contralaterally as well. Disturbances of the eye-grounds were noted chiefly in glioblastomas, benign gliomas and metastatic growths. The most impressive symptom was the Foster-Kennedy syndrome, occurring in association with optic atrophy, which was found mostly in basal meningiomas. In 31 cases there was central facial weakness of the contralateral side. Localizing diagnosis is supported by pneumoencephalography and serial arteriography. Its further improvement will a.o. influence results of surgical treatment.

Dimitrijevic - Sarajevo

NIKOL'SKIY, V.A., MARTIROSYAN, V.V., TEMIROV, E.S.

Carbohydrate metabolism in the brain and muscles in brain tumors. [with summary in French]. Zhur. nevr. i psikh. 58 no.5:560-566 '58 (MIRA 11:7)

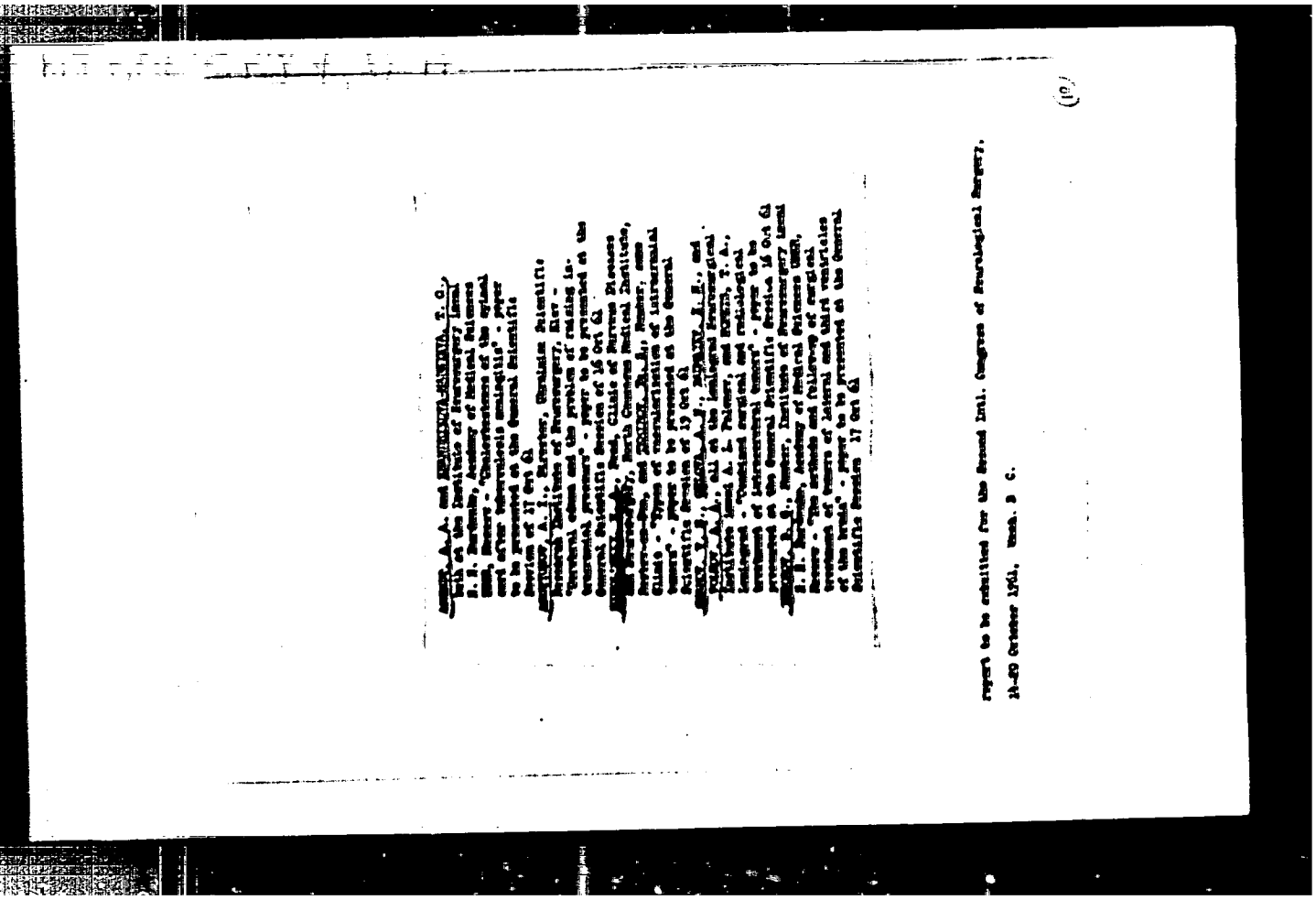
1. Klinika nervnykh bolezney i neyrokhirurgii (zav. kafedroy - prof. V.A. Nikol'skiy) Rostovskogo-na-Donu meditsinskogo instituta.

(MUSCLES, metabolism,
carbohydrates, in brain tumors (Rus))
(BRAIN, metabolism,
same (Rus))
(BRAIN NEOPLASMS, metabolism
carbohydrates in brain & musc. (Rus))
(CARBOHYDRATES, metabolism
brain & musc., in brain tumors (Rus))

NIKOL'SKIY, V.A.; TEMIROV, Ye.S.

Chronic subdural hematomas. Vop.neirokhir. 24 no.4:10-15 Jl-Ag '60. (MIRA 13:12)

(BRAIN—HEMORRHAGE)



NIKOL'SKIY, V.A., prof. (Rostov-na-Donu)

Surgery of gigantic calcified intracranial echinococcic cysts. (MIRA 15:1)
Vop.neirokhir. 25 no.1:73-76 '62.

1. Iz kliniki nervnykh bolezney i neyrokhirurgii Rostovskogo gosudarstvennogo meditsinskogo instituta.
(SKULL—HYDATIDS) (NERVOUS SYSTEM—SURGERY)

ARENDT, A.A., prof.; ARKHANGEL'SKIY, V.V., kand. med. nauk; BOGDANOV, P.R., prof.; BONDARCHUK, A.V., prof.; KOPYLOV, M.B., prof.; KORNEV, P.G., zasl. deyatel' nauki RSFSR, prof.; KUSLIK, M.I., prof.; LEYBZON, N.D., doktor med. nauk; MAKAROV, M.P., kand. med. nauk; NIKOL'SKIY, V.A., prof.; PODGORNAYA, A.Ya., doktor med.nauk; [redacted]., prof.[deceased]; ROSTOTSKAYA, V.I., kand. med.nauk; TUMSKOY, V.A., kand. med.nauk; UGRYUMOV, V.M., prof.; FISHKIN, V.I., kand. med. nauk; KHRAPOV, V.S., kand. med. nauk; CHIKOVANI, K.P., prof. [deceased]; SHLYKOV, A.A., prof.; PETROVSKIY, B.V., prof. zasl. deyatel' nauki RSFSR, otv. red.; YEGOROV, B.G., zasl. deyatel' nauki RSFSR prof., red. toma; MIRONOVICH, N.I., doktor med. nauk, zam. red.; PARAKHINA, M.L., tekhn. red.

[Manual on surgery] Mnogotomnoe rukovodstvo po khirurgii. Moskva, Medgiz. Vol.4. [Neurosurgery; the sequelae of lesions of the central nervous system. Diseases of the spine, the spinal cord and its membranes. Diseases of the vegetative nervous system] Neirokhirurgiia; posledstviia povrezhdenii tsentral'noi nervnoi sistemy. Zabolevaniia pozvonochnika, spinnogo mozga i ego obolochek. Zabolevaniia vegetativnoi nervnoi sistemy. 1963. 667 p. (MIRA 16:10)

1. Deystvitel'nyy chlen AMN SSSR (for Petrovskiy, Yegorov, Kornev). 2. Chlen-korrespondent AMN SSSR (for Bogdanov).
(NERVOUS SYSTEM—SURGERY) (SPINE—SURGERY)

NIKOL'SKIY, V.A.; [illegible]

Clinical aspects and surgery of [illegible] (MIRA [illegible])

Vop. neirokhir. no.5:[illegible] '64.

1. Klinika nervnykh bolezney [illegible]

NII [illegible]

124-57-1-1052

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 148 (USSR)

AUTHOR: Nikol'skiy, V. D.

TITLE: Application of the Kinematic Method to the Calculation of Framework Scaffold Bridges by Means of the Displacement Method (Primeneniye kinematicheskogo metoda k raschetu ramnykh mostov estakadnogo tipa metodom peremeshcheniy)

PERIODICAL: Tr. Dnepropetr. in-ta inzh. zh.-d. transp., 1956, Nr 25, pp 335-347

ABSTRACT: The usual method to be employed in the construction of the influence lines of the bending moments, the longitudinal forces, and transverse forces as deflection lines are given. The problem is solved by means of the method of displacements. For the crossbars of frames with parallel braces the ordinates of the influence lines M, N, and Q are expressed in terms of the angles of rotation of the frame joints and the tabulation functions well known in literature, which permit consideration of the presence of brackets.

1. Bridges--Construction--Mathematical analysis L. N. Vorob'yev

Card 1/1

SOV/124-57-7-8312

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 7, p 133 (USSR)

AUTHOR: Nikol'skiy, V. D.

TITLE: Calculation of Trestle-type Bridge Trusses by the Moment-distribution Method (Raschet mostovykh ram estakadnogo tipa metodom raspredeleniya momentov)

PERIODICAL: Tr. Dnepropetr. in-ta inzh. zh.-d. transp., 1956, Nr 25, pp 348-363

ABSTRACT: The author sets forth a method for plotting the influence lines in single-story multibay trusses for the two cases in which the trusses contain either rigidly fixed struts or pin-jointed struts.

N. L. Kuz'min

Card 1/1

NIKOL'SKIY, V.D.; SHMIDT, V.S.

Extraction of ruthenium from nitric acid solutions by organic solvents. Report No.1. Zhur. neorg. khim. 2 no.12:2746-2751 D '57. (MIRA 11:2)

(Ruthenium) (Nitric acid)

ZVYAGINTSEV, O. E., NIKOLSKIY, V. D., STAROSTIN, S. M., KURBANOV, A. and SHMIDT, V. S.

"Chemistry of Radioruthenium,"

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, 1 - 13 Sept 58.

AUTHORS: Nikol'skiy, V. D., Shmidt, V. S. SOV/78-3-11-8/25

TITLE: Investigation of the Extraction of Nitroso-Trinitrate Ruthenium With Tributyl Phosphate (Issledovaniye ekstraktsii nitrozotrinitrata ruteniya tributilfosfatom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 11, pp 2467 - 2471 (USSR)

ABSTRACT: The distribution coefficient of nitroso-trinitrate ruthenium was determined in the case of its extraction with tributyl phosphate. The distribution coefficient of $RuNo(No_3)_3(H_2O)_2$ for the system nitric acid solution-tributyl phosphate depends on various factors. Radioactive ruthenium Ru^{106} was used for the work. The dependence of the distribution coefficient of nitroso trinitrate ruthenium was investigated for the system nitric acid solution- solution of tributyl phosphate in kerosene in dependence on the tributyl phosphate concentration. The distribution coefficient of ruthenium is reduced in consequence of the displacement of the nitric acid from the organic phase with an increase in acidity of the

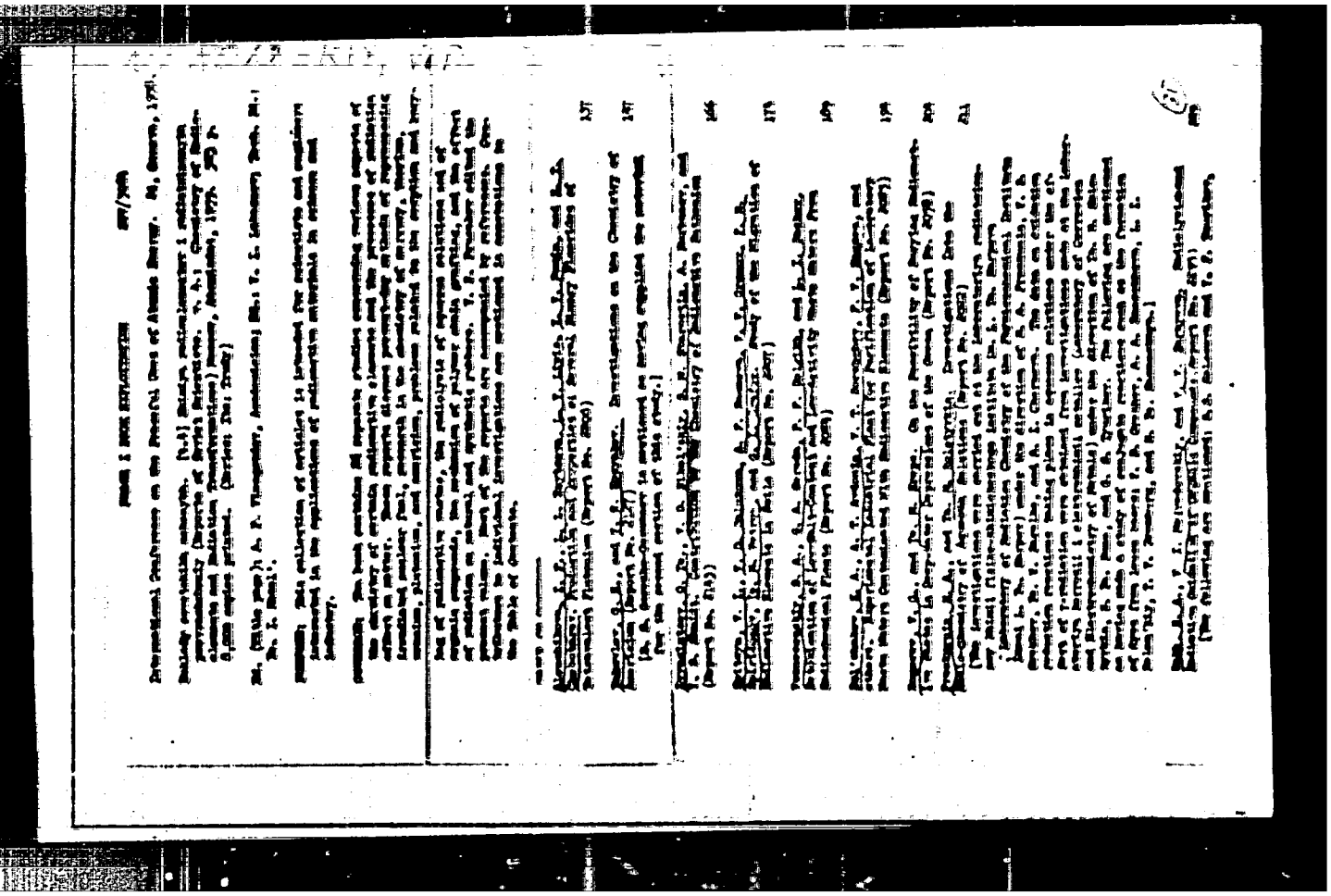
Card 1/2

Investigation of the Extraction of Nitroso-Trinitrate Ruthenium With Tributyl Phosphate SOV/78-3-11-8/25

aqueous phase. A molecular compound of nitroso-trinitrate ruthenium with 2 molecules tributyl phosphate, which correpsonds to the reaction Ru NO $(NO_3)_3(H_2O)_2$ + + 2 T.B.P. → Ru NO $(NO_3)_3 \cdot (T.B.P.)_2 \cdot 2\ H_2O$, is produced in the extraction. This complex is completely solutle in the organic phase. There are 2 figures and 3 references, 2 of which are Soviet.

SUBMITTED: August 3, 1957

Card 2/2



KREVINSKAYA, M.Ye.; NIKOL'SKIY, V.D.; POZHARSKIY, B.G.; ZASTENKER, Ye.Ye.

Properties of plutonyl solutions in nitric acid. Part 1: hydrolysis of plutonyl nitrate. Radiokhimiia 1 no.5:548-553 '59. (MIRA 13:2)

(Plutonyl nitrate)

KREVINSKAYA, M.Ye.; NIKOL'SKIY, V.D.; POZHARSKIY, B.G.

Properties of plutonyl solutions in nitric acid. Part 2: Complex formation of plutonyl in nitric acid solutions. Radiokhimiia 1 no.5: 554-561 '59. (MIRA 13:2)
(Plutonium--Spectra) (Nitric acid)

KRETINSKAYA, M.Ye.; NIKOL'SKIY, V.D.; POZHARSKIY, B.G.; ZASTENKER, Ye.Ye.

Preparation and properties of plutonyl nitrate. Radiokhimiia 1 no.5:562-566 '59. (MIRA 13:2)
(Plutonyl nitrate)

NIKOL'SKIY, V.D.; POZHARSKAYA, M.Ye.; POZHARSKIY, B.G.

Properties of nitric acid solutions of plutonyl. Part 3: Stability of plutonyl in nitric acid solutions. Radiokhimiia 2 no.3:320-329 '60. (MIRA 13:10)

(Plutonyl compounds)

NIKOL'SKIY, V.D., kand.tekhn.nauk, dotsent

Using the method of angular focal quotients in designing scaffold-type bridge frames. Trudy DIIT no.31:155-179 '61. (MIRA 15:5)

(Structural frames)

NIKOL'SKIY, V.D., kand.tekhn.nauk, dotsent

Design of continuous beams by the method of angle distribution. (MIRA 15:5)
Trudy DIIT no.31:180-192 '61.
(Beams and girders, Continuous)

NIKOL'SKIY, V.D.; POZHARSKAYA, M.Ye.

Extraction of thorium from hydrochloric and perchloric acid solutions by diisoamyl ester of methylphosphonic acid. Ekstr. teor., prim. no.2:160-164 '62. (MIRA 15:9)
(Thorium) (Phosphonic acid)

S/186/63/005/001/012/013
E075/E436

AUTHORS: Zastenker, Ye.Ye., Bedina, O.L., Nikol'skiy, V.D.
Pozharskaya, M.Ye.

TITLE: Oxidation of plutonium dioxide with atmospheric oxygen

PERIODICAL: Radiokhimiya, v.5, no.1, 1963, 141

TEXT: PuO_2 was fused with NaOH and KOH at 550 to 600°C in the presence of atmospheric O_2. After washing with ethyl alcohol the residue was a dark-brown crystalline powder, soluble in mineral acids. Chemical and spectroscopic analyses indicated that the powder consists of alkali metal plutonates having the composition of Me_2PuO_4 to Me_6PuO_6. It was concluded that $Pu^{(IV)}O_2$ was oxidized to $Pu^{(VI)}O_3$ which reacted with the hydroxides and formed the alkali metal plutonates.

SUBMITTED: October 31, 1962

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MI[illegible]SKIY, V.D.; FEDULOVA, A.A.

Synthesis of plutonyl carbonates. Radiokhimiia 5 no. 6:74[illegible]-747 '63. (MIRA 17:[illegible])

NAUMOV, N.P.; NIKOL'SKIY, V.G.

Some general characteristics of the dynamics of animal populations. (MIRA 15:11)
Vop. ekol. 4:63-64 '62.

1. Gosudarstvennyy universitet, Moskva.
(Animal populations)

NIKOL'SKIY, V. G., LEVINKOV, Y. Y., [illegible] and [illegible], T. B.

"Measurement of Polarization of Protons from (D D) Reaction."

Inst. of Chemical Physics.

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

S/020/60/134/001/017/021
B004/B060

AUTHORS: Nikol'skiy, V. G., Buben, N. Ya.

TITLE: Radiothermoluminescence of Organic Compounds

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 1, pp. 134 - 136

TEXT: Many substances become luminescent on heating if previously irradiated at a low temperature with gamma rays or fast electrons. The authors wanted to study this phenomenon, and examined high-pressure polyethylene, low-pressure polyethylene, paraffin, octadecane, nonane, polyethyl siloxane, teflon, rubber, polyisobutylene, and cyclohexane. The samples were irradiated with fast electrons (1.5 Mev, 5.10^3 rad/sec) in nitrogen atmosphere at 100°K, and then heated at a rate of 15 degrees per minute. The luminescence taken by means of a photomultiplier of the type ФЭУ-19 (FEU-19) was recorded by a recording potentiometer of the type ЭПП-09 (EPP-09) as a function of temperature. The spectral composition of emitted light has not yet been investigated. Two maxima were observed in high-pressure polyethylene. The first one, at about -120°C,

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is supposed to be connected with the structural transitions observed by other investigators (Refs. 3-6) in this temperature range. The second maximum at about -40°C corresponds to the vitrification temperature. The first maximum only arises in low-pressure polyethylene. The authors established furthermore that the position of the maxima, especially that of the second one, is dependent on the irradiation dose, the previous thermal history of the sample, and the heating rate. The shift of the second maximum corresponds to the shift in vitrification temperature. For polyethylene (Fig. 1) the authors conclude that the appearance of thermoluminescence is related to the reactivation of the inhibited molecular motion. In the other substances irradiated with 10^6 rad, the authors carried out only orientative studies, the results of which are compiled in Table 1, and which are compared with various physical data of these substances. Thermomechanical curves were drawn for rubber and polyisobutylene under a stress of 0.7 kg/cm^2 and a heating rate of 1 degree per minute (Fig. 2). The authors arrived at the conclusion that the occurrence of molecular motions and variations in the crystal lattice may be inferred from the form of the luminescence curve. They thank L. I. Golubenkova, co-worker of the Institut plastmass (Institute

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of Plastics) for her investigation of the thermomechanical properties of polyisobutylene and rubber. There are 2 figures, 1 table, and 19 references: 2 Soviet, 14 US, 2 British, and 1 French.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: April 28, 1960, by V. N. Kondrat'yev, Academician

SUBMITTED: April 22, 1960

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S/844/62/000/000/092/129
D204/D307

AUTHORS: Nikol'skiy, V. G. and Buben, N. Ya.

TITLE: Radiothermoluminescence of organic compounds

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 536-539

TEXT: The dependence of the position of maxima (T_M) on luminescence curves or irradiated high-pressure polyethylene (PE) and paraffin was studied in relation to (1) the degree of cross-linking in PE, (2) the rate of warming up and (3) the dose of irradiation, following earlier work (DAN SSSR, 134, 134 (1960)), in which it was shown that several organic compounds exhibited maxima on their luminescence curves in temperature regions where the molecules recovered their mobility, partially or totally. (1) The specimens were irradiated with fast electrons at 100°K with doses of 1 - 100 Mrad, were then warmed up to 293°K, cooled again to 100°K and re-irradiated with a dose of 0.5 Mrad. The value of T_M for PE became

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In studying the position of T_M in dependence of the dose of irradiation, it was found that T_M decreased (almost linearly) with increasing dose, e.g. from $\sim -43^{\circ}C$ at 0 to $\sim -81^{\circ}C$ at 70 Mrad. The polymer was plasticized by its own products of radiolysis; it was confirmed that the amount of plasticizer, at the temperature of structural transition, was lowered by decreasing the rate of warming up. There are 4 figures and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

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S/190/62/004/006/022/026
B101/B110

AUTHORS: Nikol'skiy, V. G., Buben, N. Ya.

TITLE: Radiothermoluminescence of organic compounds. II

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 922-925

TEXT: In order to relate the position of the maximum on the thermoluminescence curve with the temperatures of the phase transitions, high-density polyethylene, paraffin, butadiene rubbers, teflon, and polyisobutylene were irradiated with fast electrons at 77°K by a method already described (Dokl. AN SSSR, 134, 134, 1960). Results: (1) Preliminary irradiation (10^6-10^8 rad), heating to room temperature (cessation of luminescence), recooling to 100°K, and re-irradiation with $5 \cdot 10^7$ rad resulted in a shift of the maximum temperature, T_m, on the luminescence curve toward higher temperatures in the case of polyethylene, paraffin, and butadiene rubbers. Irradiation with doses $> 5 \cdot 10^7$ rad did not change T_m any more. With teflon, T_m remained unchanged; with polyisobutylene, it shifted toward lower temperatures. Thus the change of T_m reflects the

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S/190/62/004/006/022/026
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structural changes of polymers caused by irradiation: with cross linking, T_m increases, with degradation, it remains unchanged or drops. This was also observed with thermally degraded (150-300°C) polyisobutylene and polyethylene. (2) Cold stretching, too, increased T_m of polyethylene by 10-12°C. (3) The dependence of T_m on the heating rate ω (deg/sec) follows the equation $1/T_m = c_1 - c_2 \log\omega$. For the constants $c_1 \cdot 10^5$ deg^{-1} and $c_2 \cdot 10^5$ deg^{-1}, the following values were found: paraffin 4.38, 35; polyethylene 4.275, 15.5; polyethylene crosslinked by 10^2 Mrad, 4.18, 12.7, respectively. The activation energy extrapolated to 0°K (kcal/mole) for these three substances was 15 ± 1.5; 29 ± 2; 36 ± 2, respectively. There are 2 figures and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: March 19, 1961

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