AUTHOR: Dezin, A.A. SOV/20-123-4-4/53

TITLE: A Boundary Value Problem Formulated Correctly for Some Non Classical Operators (Korrektnaya granichnaya zadacha dlya nekotorykh neklassicheskikh operatorov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 595-598 (USSR)

ABSTRACT: Let $V = [0 \leq x_0 \leq 1] \times Q$, where Q is the ν-dimensional space of the variables $x_1, x_2, \ldots, x_\nu$. In V the author considers the equation

(1) $$au \equiv -D_0^3 u + bu = f \qquad D_0 \equiv \frac{\partial}{\partial x_0},$$

where b is an operator elliptic in the generalized sense with constant coefficients, i.e.

$$b \equiv \sum_{|\alpha| \leq m} b_\alpha D^{2\alpha}, \quad D_\varsigma = \frac{\partial}{\partial x_\varsigma}, \quad D^\alpha = D_1^{\alpha_1} \ldots D_\nu^{\alpha_\nu}, \quad |\alpha| = \alpha_1 + \ldots + \alpha_\nu .$$

All derivatives are understood in the sense of distributions. By construction of so-called S-extensions of the operator a, a boundary value problem can be formulated correctly for (1). The final result asserts that for all f of a certain class (1) has a unique generalized solution which, on the lateral

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area of V satisfies homogeneous boundary conditions depending on the operator b and the domain Q.
The paper contains 6 lemmas, 1 theorem, and 4 conclusions.
There are 7 references, 3 of which are Soviet, 3 American, and 1 Swedish.

ASSOCIATION: Matematicheskiy institut V.A.Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A.Steklov, AS USSR)

PRESENTED: July 3, 1958, by S.L.Sobolev, Academician

SUBMITTED: June 21, 1958

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Dezin, A. A.

16(1) PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy, t. 4: Kratkoye soderzhaniye sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow, vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tech. Ed.: G.N. Shevchenko; Editorial Board: A.A. Abramov, V.G. Boltyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, O. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

16(1) SOV/42-14-3-2/22

AUTHOR: Dezin, A.A.

TITLE: Existence- and Uniqueness Theorems for the Solutions of Boundary Value Problems for Partial Differential Equations in Functional Spaces

PERIODICAL: Uspekhi matematicheskikh nauk, 1959,Vol 14,Nr 3,pp 21-74(USSR)

ABSTRACT: The present paper is an introduction into the circle of ideas of S.L. Sobolev, K. Friedrichs and others, on the base of which there was developed the functional analytic method for the performance of existence- and uniqueness investigations for partial differential equations. The paper differs from a usual survey inasmuch as the author does not try to give a reproduction as exact as possible of the most extensive results. On the contrary he tries to discover the character of the treated questions by explicit proofs of trivial theorems and simplest examples. Many questions are not touched at all, e.g. the differential behavior of the obtained generalized solutions. The paper does not contain new results. The notations correspond about to those of Gårding. Contents : Introduction. Chapter I. Fundamental functional spaces. Operators and functionals. Chapter II. Weak generalized

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derivatives. Mean value operators. Chapter III. Symmetric systems of first order. Chapter IV. Equations of elliptic type. Chapter V. Equations of second order of hyperbolic and parabolic type. Chapter VI. A correct boundary value problem for a nonclassical operator. Chapter VII. Some general questions of the theory of differential operators.
M.I. Vishik is mentioned in the paper.
There are 28 references, 18 of which are Soviet, 5 American, 4 Swedish, and 1 French.

SUBMITTED: January 23, 1959

Card 2/2

16(1)

AUTHOR: Dezin, A.A. (Moscow)

SOV/39-49-4-5/6

TITLE: Boundary Value Problems for Some Symmetric Linear Systems of First Order

PERIODICAL: Matematicheskiy sbornik,1959, Vol 49,Nr 4,pp 459-484 (USSR)

ABSTRACT: The paper, in which boundary value problems for systems of linear partial differential equations are considered, contains a detailed representation of results already announced by the author in [Ref 1 - 3]. The functional theoretical method of the author is analogous to the method of Friedrichs [Ref 7]. § 1 General considerations connected with operators of first order. § 2 Energetic inequality. § 3 Averaging operators. § 4 Solvable boundary value problems.
Altogether there are 9 lemmata, 7 theorems, several remarks and examples. The author mentions S.L. Sobolev, M.I. Vishik, and Petrovskiy. - There are 12 references, 7 of which are Soviet, 4 American, and 1 Swedish.

SUBMITTED: March 1, 1958

Card 1/1

16(1)

AUTHOR: Dezin, A.A. SOV/20-127-3-4/71

TITLE: On a Special System of Equations

PERIODICAL: Doklady Akademii nauk SSSR,1959,Vol 127,Nr 3,pp 497-500 (USSR)

ABSTRACT: The author considers a special system of equations consisting of eight equations for eight unknown functions of four variables. The structure of the system is of interest inasmuch as the system represents a generalization of the Cauchy-Riemann differential equations and of some other classical equations which are in connection with the operators of field theory. The author uses the method of orthogonal expansions in Hilbert space and averages and proves the unique solvability of the considered system in several cases. Altogether the author gives 5 theorems and 4 lemmata.
There are 5 references, 4 of which are Soviet, and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A. Steklov,AS USSR)

PRESENTED: April 10, 1959, by S.L. Sobolev, Academician
SUBMITTED: March 17, 1959

Card 1/1

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AUTHOR: Dezin, A.A. S/020/60/130/06/001/059

TITLE: Systems of the First Order Defined in Riemannian Manifolds

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1183-1185 (USSR)

ABSTRACT: Let V be an n-dimensional compact unbounded Riemannian manifold, $\overset{p}{\omega}$-differential forms in V, $(\overset{p}{\omega}, \overset{p}{\chi})$-scalar product, d - operator of the outer differentiation, δ - the operator conjugated metrically with d, i.e. $(d\overset{p}{\omega}, \overset{p+1}{\chi}) = (\overset{p}{\omega}, \delta\overset{p+1}{\chi})$. In [Ref 1] the author considered certain systems K_n and K^*_n for n=3,4. Now analogous systems in the general case are given, e.g. for an even n:

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Systems of the First Order Defined in Riemannian Manifolds S/020/60/130/06/001/059

$$d\overset{1}{\omega}+\delta\overset{3}{\omega}=\overset{2}{\alpha}$$
$$d\overset{3}{\omega}+\delta\overset{5}{\omega}=\overset{4}{\alpha}$$
$$\cdots\cdots \quad (K_n)$$
$$d\overset{n-3}{\omega}+\delta\overset{n-1}{\omega}=\overset{n-2}{\alpha}$$
$$\delta\overset{1}{\omega}=\overset{0}{\alpha}$$
$$d\overset{n-1}{\omega}=\overset{n}{\alpha}$$

$$d\overset{0}{\omega}+\delta\overset{2}{\omega}=\overset{1}{\alpha}$$
$$d\overset{2}{\omega}+\delta\overset{4}{\omega}=\overset{3}{\alpha}$$
$$\cdots\cdots \quad (K^*_n)$$
$$d\overset{n-2}{\omega}+\delta\overset{n}{\omega}=\overset{n-1}{\alpha}$$

The unique solvability is guaranteed by the conditions

$$\int_V \overset{k}{\alpha}_i dV = 0; \quad \int_V \overset{k}{\omega}_i dV = 0, \quad k=0,1,\ldots,n, \quad i=1,\ldots,C_n^k .$$

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Therefrom there follows especially that the k-th Betti number of the n-dimensional torus is identical with C_n^k.

There are 6 references, 3 of which are Soviet, 2 French, and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V.A.Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A.Steklov AS USSR)

PRESENTED: November 5, 1959, by S.L.Sobolev, Academician

SUBMITTED: October 27, 1959

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S/020/60/132/06/06/068
C111/C222

AUTHOR: Dezin, A.A.

TITLE: Boundary Value Problems for Invariant Elliptic Systems

PERIODICAL: Doklady Akademii nauk SSSR,1960,Vol. 132,No. 6,pp. 1246-1249

TEXT: The systems of the class described by the author in (Ref. 1) are understood as systems of first order with constant coefficients in a bounded domain of the Euclidean space. The author formulates correct boundary value problems for it and under an essential use of the invariant character of the systems he proves two theorems on the existence and uniqueness of the solutions. Similar problems have been investigated by A.V. Bitsadze (Ref.5,6). There are 6 references: 4 Soviet, 1 French and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A. Steklov AS USSR)
PRESENTED: February 27, 1960, by I.N. Vekua, Academician
SUBMITTED: February 24, 1960

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S/020/60/135/005/004/043
C111/C222

AUTHOR: Dezin, A.A.

TITLE: Invariant Hyperbolic Systems and Goursat's Problem

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol.135, No.5, pp.1042-1045

TEXT: In (Ref.1) the author considered systems on arbitrary Riemannian manifolds. Elliptic systems (definite measure tensor) were considered in (Ref.2). The hyperbolic case (measure tensor with Lorentz-signature) is considered in the present paper. In accordance with (Ref.2), a system of essentially different coefficients of a differential form of degree p is denoted as covariant $\mathfrak{P}$. Under restriction to transformations which leave the direction x^n invariant ($x^1,\ldots,x^n$ - local coordinates, $x^n \equiv t$), $\overset{p}{\omega}$ decomposes into two covariants $\overset{p}{u}$ and $\overset{p-1}{u}$, where $\overset{p}{u}$ contains those components of $\overset{p}{\omega}$ which do not contain the index n. Let ∂ be the differentiation $\partial/\partial x^n$, d be the operator of the external differentiation, δ be the metrically adjoint operator; let the measure tensor satisfy the condition $g_{in} = 0$, $i=1,\ldots,n-1$; $g_{nn} = -1$. Then the invariant system (K_n^*) of (Ref.1) assumes the form

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Invariant Hyperbolic Systems and Goursat's Problem

$$(T)\qquad \begin{array}{ll} {}^{o}du + \delta {}^{2}u - \partial {}^{1}u = {}^{1}f, & {}^{1}\delta u + \partial {}^{o}u = {}^{o}f, \\ {}^{2}du + \delta {}^{4}u - \partial {}^{3}u = {}^{3}f, & {}^{1}du + \delta {}^{3}u + \partial {}^{2}u = {}^{2}f, \\ \cdots\cdots\cdots\cdots & \cdots\cdots\cdots\cdots \\ {}^{n-4}du + \delta {}^{n-2}u - \partial {}^{n-3}u = {}^{n-3}f\ ; & {}^{n-3}du + \delta {}^{n-1}u + \partial {}^{n-2}u = {}^{n-2}f\ , \\ {}^{n-2}du - \partial {}^{n-1}u = {}^{n-1}f\ ; & \end{array}$$

where d, δ relate to the variables $x^1,\ldots,x^{n-1}$. The system (T*) $T^*v = g$ is obtained from (T) by changing the signs of ∂.

Lemma 1: Every covariant which satisfies the homogeneous system (T), satisfies the system of second order

$$(1)\qquad (d\delta + \delta d)^{p}u + \partial^2\, {}^{p}u = 0 \qquad (p=0,1,\ldots,n-1).$$

Let

$$(2)\qquad Q = M \times 1$$

be the region of definition of the system (T), where M is a compact

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(n-1)-dimensional Riemannian manifold without a boundary and I is the interval $[0,1]$. Let exist a definite metric on M. On Q the coordinate t means a parameter. Let u be the totality of all covariants $\overset{p}{u}$ (p=0,1,...,n-1). Let the scalar product and the norm on Q be defined by

$$(3) \qquad (u,u) = \int_0^1 \sum_1^{n-1} (\overset{p}{u},\overset{p}{u})dt, \quad |u,H|^2 = (u,u),$$

where $(\overset{p}{u},\overset{p}{u})$ is the scalar product on M. Completing the set of smooth covariants in the sense of the introduced norm one obtains the Hilbert space H. On covariants satisfying one of the conditions

$$(\Gamma) \qquad u|_{t=0} = 0,$$

$$(\Gamma^*) \qquad v|_{t=1} = 0,$$

the weak and strong extension of the operators T, T* is defined in the usual manner (Ref.4). All assertions formulated for T relate also to T*. Lemma 2: The weak and the strong extensions of the operator T are equivalent. The covariant u which satisfies (T), where the operator is understood in the

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Invariant Hyperbolic Systems and Goursat's Problem

sense of the defined extension, is called a generalized solution of the system.

Lemma 3: For the generalized solution of (T) it holds

(Φ) $|u,H| \leq 2|Tu,H|$.

Theorem 1: The generalized solution of (T) exists and is unique for an arbitrary right side of H. Let the region G of the Euclidean space be bounded by the two cones

(S) $(x^1)^2+\ldots+(x^{n-1})^2-(x^n \pm 1)^2 = 0, \quad -1 \leq x^n \leq 1.$

Let S_1 be the lower part ($x_n \leq 0$) of S. Let A_n be the characteristic matrix in the elliptic case (cf.(Ref.1), system (K_n^*)); it is given by the recursion formula $A_2 = \begin{pmatrix} \varsigma_1 & \varsigma_2 \\ \varsigma_2 & -\varsigma_1 \end{pmatrix}$, $A_n = \begin{pmatrix} A_{n-1} & \varsigma_n E \\ \varsigma_n E & -A_{n-1} \end{pmatrix}$, where E is the unit matrix and the variable ς_k corresponds to the differentiation $\partial/\partial x^k$. Let

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Invariant Hyperbolic Systems and Goursat's Problem

$\hat{A}_n$ arise from A^n by replacing ξ_k by $\cos \hat{\nu x^k}$, where ν is the outer normal of (S). A generalized solution of T satisfying the boundary conditions

(6) $$(\hat{A}_{n-1}, E)u|_{S_1} = 0$$

is called a solution of the Goursat's problem for (T).
Theorem 2: The generalized solution of the Goursat's problem for the system (T) exists and is unique.
There are 4 references: 3 Soviet and 1 American.
[Abstracter's note: (Ref.1) is a paper of the author in Doklady Akademii nauk SSSR, 1960, Vol. 130, No. 6. (Ref.2) is a paper of the author in Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6. (Ref.4) is a paper of the author in matematicheskiy sbornik, 1959, Vol. 49, p. 459]

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

PRESENTED: July 2, 1960, by L.S.Pontryagin, Academician

SUBMITTED: June 24, 1960

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DEZIN, A. A.

Doc Phys-Math Sci - (diss) "Invariant differential operators in boundary problems." -Novosibirsk, 1961. 17 pp; (Academy of Sciences USSR, Siberian Division, Joint Academic Council for Physics-Mathematical and Technical Sciences); 220 copies; price not given; bibliography on pp 16-17 (18 entries); (KL, 6-61 sup, 191)

S/020/61/137/005/006/026
C111/C222

76.3500

AUTHOR: Dezin, A.A.

TITLE: Certain types of invariant systems of simplest structure

PERIODICAL: Akademiya nauk SSSR. Doklady, vol.137, no.5, 1961, 1038-1041

TEXT: It is shown that the set of invariant systems which can be investigated with the methods developed by the author (Ref.1: DAN, 132, no.6 (1960), Ref.2: DAN 135, no.5 (1960)) is not yet exhausted by the "strongly elliptic" and "strongly hyperbolic" cases considered in (Ref.1,2).
Beside of the systems considered in (Ref.1,2), the systems

$$D_1 u^0 - D_2 u^1 = f^1, \qquad D_1 u^0 - D_2 u^1 = f^1,$$
$$-D_1 u^1 + u^0 = f^0; \qquad -D_1 u^1 = f^0 \qquad (1)$$

where $D_i \equiv \frac{\partial}{\partial x^i}$, belong to the above mentioned set. In the first system every smooth solution of the corresponding homogeneous system satisfies the heat conducting equation. For the second system it is characteristic: although the unique solvability (for given boundary conditions) is

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Certain types of invariant systems...

trivial the usual energy inequality which estimates the L_2-norm of the solution by the L_2-norm of the right-hand side cannot be obtained.

The analogue of the first system (1) for arbitrary n (number of the unknown variables) is the system (n is even):

$$\begin{aligned}
&d\overset{0}{u} + \delta\overset{2}{u} - \partial\overset{1}{u} = \overset{1}{f}, && \delta\overset{1}{u} + \overset{0}{u} = \overset{0}{f},\\
&d\overset{2}{u} + \delta\overset{4}{u} - \partial\overset{3}{u} = \overset{3}{f}, && d\overset{1}{u} + \delta\overset{3}{u} + \overset{2}{u} = \overset{2}{f},\\
&\cdots\cdots\cdots\cdots && \cdots\cdots\cdots\cdots\\
&d\overset{n-4}{u} + \delta\overset{n-2}{u} - \partial\overset{n-3}{u} = \overset{n-3}{f}, && d\overset{n-3}{u} + \delta\overset{n-1}{u} + \overset{n-2}{u} = \overset{n-2}{f},\\
&d\overset{n-2}{u} - \partial\overset{n-1}{u} = \overset{n-1}{f}
\end{aligned} \qquad (P)$$

where $\partial \equiv \partial/\partial x^n$ and the operators d, δ with respect to the variables $x^1, \ldots, x^{n-1}$ are applied to the covariants $\overset{p}{u}$ which depend on x^n as parameters. Every component of $\overset{p}{u}$ satisfies the heat conducting equation. Let K be an elliptic operator of the left-hand part of the system (K) of (Ref.1), let K* be the formally adjoint operator, let $\dot{u}$ and $\ddot{u}$ be the

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Certain types of invariant systems...

sets of all covariants of odd and even degree; then the second system (1) can be written as

$$K\ddot{u} - \partial\dot{u} = \dot{f}, \quad K^{*}\dot{u} = \ddot{f}. \qquad (\hat{P})$$

Besides systems can be considered which originate from (P) by replacing some of the $\partial^{p}\dot{u}$ in the left-hand column by $^{p}\dot{u}$ or reversely by replacing some $^{p}\dot{u}$ in the right-hand column by $\partial^{p}\dot{u}$. One obtains "more elliptic" and "more hyperbolic" systems, respectively. Furthermore, systems between (P) and $(\hat{P})$ can be considered. Correct boundary value problems in the region $V \times e$ can be given for all these systems, where V has a smooth boundary and e is the unit interval. The author obtains theorems of existence and uniqueness according to the scheme of (Ref.2).
All systems considered until now have the common property that their properties were the same for all n that, however, the form of the equations changed for a transition from n to n+1. If in the given systems the n with the space dimension is not identified then e.g. still the following "two index systems" can be given:

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Certain types of invariant systems...

$$d^{p}\omega + \delta^{p+2}\omega - \partial^{p+1}\omega = f^{p+1}, \qquad \delta^{p+1}\omega + \omega^{p} = f^{p},$$
$$\dots\dots\dots\dots\dots \qquad d^{p+1}\omega + \delta^{p+3}\omega + \omega^{p+2} = f^{p+2},$$
$$d^{p+l-3}\omega + \delta^{p+l-1}\omega - \partial^{p+l-2}\omega = f^{p+l-2}, \qquad \dots\dots\dots\dots\dots \quad (P_l^p)$$
$$d^{p+l-1}\omega - \partial^{p+l}\omega = f^{p+l}; \qquad d^{p+l-2}\omega + \delta^{p+l}\omega + \omega^{p+l-1} = f^{p+l-1},$$

where i may assume the values $1,\dots,n-p$, and p may assume the values $0,1,\dots,n-i$.

The Maxwell equations and linearized equations of the rotating fluid are considered as examples. The latter read in the used invariant form:

$$\partial \overset{1}{v} - \nu(\overset{1}{v} \wedge \overset{1}{k}) + d\overset{0}{p} = \overset{1}{f}; \quad \eta\, d\overset{0}{p} - \delta \overset{1}{v} = \overset{0}{f}, \qquad (4)$$

where $\gamma_1 = 0$ for incompressible and $\eta = 1$ for compressible fluid; $\overset{1}{v}$ and $\overset{0}{p}$ are unknowns, $\overset{1}{k}$ is a given vector depending on the time.

There are 8 Soviet-bloc and 1 non-Soviet-bloc references.

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

PRESENTED: November 18, 1960, by S.L.Sobolev, Academician
SUBMITTED: November 11, 1960

Card 4/4

DEZIN, A.A.

Index in boundary value problems for invariant elliptic systems. Dokl. AN SSSR 141 no.3:535-538 N '61. (MIRA 14:11)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR. Predstavleno akademikom S.L. Sobolevym.
(Boundary value problems)
(Differential equations)
(Invariants)

S/020/63/148/005/003/029
B112/B186

AUTHOR: Dezin, A. A.

TITLE: The simplest solvable extensions of ultrahyperbolic and pseudoparabolic operators

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 5, 1963, 1013-1016

TEXT: The boundary-value problems

$$T_1 u = f, \quad u_0 + \lambda u_1 = 0,$$
$$T_2 u = f, \quad \partial u_0/\partial t + \lambda u_1 = 0$$

are considered, where $T_1 \equiv \partial/\partial t + L_x - L_y$, $T_2 \equiv \partial^2/\partial t^2 + L_x - L_y$, $L_x = \partial^2/\partial x_1^2 + \ldots + \partial^2/\partial x_m^2$, $L_y = \partial^2/\partial y_1^2 + \ldots + \partial^2/\partial y_n^2$. T_1 is said to be pseudoparabolic ($m \geqslant 1$, $n \geqslant 1$), T_2 ultrahyperbolic ($m \geqslant 1$, $n > 2$). The following theorem is derived: a strong extension of the operator T, which corresponds to a non-eigenvalue λ, defines a solvable extension.

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S/020/63/148/005/003/029
The simplest solvable extensions of ... B112/B186

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

PRESENTED: September 8, 1962, by P. S. Novikov, Academician

SUBMITTED: August 30, 1962

Card 2/2

DEZIN, A.A.; PETROVSKIY, I.G., akademik, otv.red.; MAKOGONOV, I.A, tekhn. red.

[Invariant differential operators and boundary value problems] Invariantnye differentsial'nye operatory i granichnye zadachi. Moskva, Izd-vo Akad. nauk SSSR, 1962. 87 p. (Akademiia nauk SSSR. Matematicheskii institut. Trudy, vol.68)

(MIRA 16:2)

(Operators (Mathematics)) (Boundary value problems)

DEZIN, A.A.

Simplest solvable extensions for ultrahyperbolic and pseudoparabolic operators. Dokl. AN SSSR 148 no.5:1013-1016 F '63. (MIRA 16:3)

1. Matematicheskiy institut im. V.A.Steklova AN SSSR. Predstavleno akademikom P.S.Novikovym.

(Operators (Mathematics))

DEZIN, A.A.

Theory of $\frac{d}{dt}$ -- A operators. Dokl. AN SSSR 164 no.5:963-966 O '65.
(MIRA 18:10)

1. Matematicheskiy institut im. V.A.Steklova AN SSSR. Submitted March 3, 1965.

STANKOWSKI, Jan; DEZOR, Andrzej

Apparatus for studies on paramagnetic electronic resonance.
Prace matem przyrod Poznan 11 no. 2:227-243 '64.

1. Department of Dielectrics, Institute of Physics, Polish Academy of Sciences, Poznan.

BRATEK-WIEWIOROWSKA, Maria D.; WIEWIOROWSKI, M.; REIFER, I.; GOLANKIEWICZ, K.; NOWACKI, E.; BOCZON, Wl.; DEZOR, Maria

Synthesis and degradation of alkaloids in lupin ontogenesis. Acta biochim. Pol. 12 no.4:395-412 '65.

1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warszawa; Department of Organic Chemistry, A. Mickiewicz University, Poznan; Institute of Plant Genetics, Polish Academy of Sciences, Poznan.

DEZORT, J.

The sugar beet, a new crop on our collective farm. p. 11 (Rolnicke Hlasy Vol. 11, no. 4, Apr. 1957 Praha)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

DEZSENYI, Gy.

66.097.3.017

43/60 Studies on the formation of titanium tetrachloride-aluminium alkyl catalyst systems. A. Simon, I. Kovács, Gy. Dezsényi, D. Lehoczky. *Magyar Kémiai Folyóirat*, Vol. 65, 1959, No. 5, pp. 197—201, 8 figs.

$Al(C_2H_5)_3$ and $TiCl_4$ were reacted in molar ratios of 0.5—6 and the reaction products were analyzed in order to establish the composition of the formed complex compounds. In the above range of molar ratios the starting materials gave compounds with almost constant Al and Ti contents; the formation of these compounds could be described with reaction equations which conformed well to the processes. A method was developed for measuring the gas evolution which accompanied the formation of the catalyst complexes; the measured amounts of gases did not correspond to the reaction equations because the gas undergoes further reactions which is also verified by the fact that the amount of gas produced decreases with time.

cas

SIMON, Artur; KOVACS, Lajos; KOLLAR, Laszlo; DEZSENYI, Gyorgy

Investigations into the development of titanium-tetrachloride aluminum alkyl catalyst systems in connection with the atmospheric polymerization of ethylene. III. Magy kem folyoir 66 no. 2:45-48 F '60.

1. Szerves Vegyipari es Muanyagipari Kutato Intezet, Budapest.

BEZSENYI, Gyorgy, okleveles gepeszmernok

Exciting effects of torsional vibrations occurring on the crankshaft of internal combustion engines. Jarmu mezo gep 8 no.6:206-213 Je '61.

1. Muszaki Egyetem.

SIMON, Artur; KOVACS, Lajos; DEZSENYI, Gyorgy; LEHOCZKY, Daniel

Investigations on the formation of titanium tetrachloride-aluminum alkyl catalyst systems in connection with the atmospheric polymerization of ethylene. Pt. 2. Magy kem folyoir 65 no. 5: 197-201 My '59.

1. Szerves Vegyipari es Muanyagipari Kutato Intezet, Budapest.

DEZSENYI, Gyorgy

Oscillations of the crankshafts of internal combusion engines. Jarmu mezo gep 7 no.10:386-392 '60.

DEZSENYI, Istvan; KNEFFEL, Sandor, okleveles mernok, fotechnologus; VAJDA, Zoltan, okleveles mernok, fomernok, docens

Prefabrication of ferroconcrete channels with large sections. Melyepitestud szemle 13 no.9:397-406 S '63.

1. Kozlekedesi Epito Vallalat (for Kneffel).
2. Kozlekedesi Epito Vallalat; Epitoipari es Kozlekedesi Muszaki Egyetem (for Vajda).

SZEKELY, Andras, dr., egyetemi adjunktus; BULLA, Bela, dr., egyetemi tanar; MAJOR, Jeno, dr.; KOCH, Ferenc, dr., egyetemi tanar; TOTH, Aurel, kozepiskolai tanar; KAZAR, Leona, tanszekvezeto tanar; DUDAR, Tibor; RADO, Sandor, egyetemi tanar, a foldrajztudomanyok doktora; DEZSENYI, Janos, dr.; KARLOCAI, Janos, dr.; LANG, Sandor, dr., egyetemi docens, a foldrajztudomanyok kandidatusa (Szeged); KORPAS, Emil, dr., egyetemi docens, a foldrajztudomanyok kandidatusa (Szeged); PENZES, Istvan, dr. (Szeged); KOLTA, Janos, dr.; SZABO, Pal Zoltan, dr., foldrajzi tudomanyok kandidatusa; PINCZES, Zoltan, dr.; KADAR, Laszlo, dr.; FRISNYAK, Sandor; PEJA, Gyozo, dr., foldrajztudomanyok kandidatusa

Reports on the work of the Divisions and country sections at the 82d general assembly of the Hungarian Geographical Society. Foldr kozl 8 no.3:323-336 '60.

1. Magyar Foldrajzi Tarsasag valasztmanyi tagja (for Szekely, Toth, Kazar, Karlocai, Lang, Korpas, Kolta, Szabo, Pinczes, Peja). 2. Magyar Foldrajzi Tarsasag tarselnoke (for Bulla, Koch and Rado). 3. "Foldrajzi Kozlemenyek" szerkeszto bizottsagi tagja (for Koch and Rado). 4. Magyar Tudomanyos Akademia levelezo tagja (for Bulla). 5. Magyar Foldrajzi Tarsasag Termeszeti Foldrajzi Szakosztaly elnoke (for Bulla).

(Continued on next card)

SZEKELY, Andras---(continued) Card 2.

6. Magyar Foldrajzi Tarsasag Termeszeti Foldrajzi Szakosztaly titkara (for Szekely). 7. Magyar Foldrajzi Tarsasag Gazdasagi Foldrajzi Szakosztaly elnoke (for Koch). 8. Magyar Foldrajzi Tarsasag Gazdasagi Foldrajzi Szakosztaly titkara (for Major). 9. Magyar Foldrajzi Tarsasag Oktatasmodszertani Szakosztaly elnoke, es Kozponti Pedagogus Tovabbkepzo Intezet (for Major). 10. Magyar Foldrajzi Tarsasag Oktatasmodszertani Szakosztaly titkara, es szakfelugyelo (for Toth). 11. Magyar Foldrajzi Tarsasag Terkepeszeti Szakosztaly elnoke (for Rado). 12. Magyar Foldrajzi Tarsasag Terkepeszeti Szakosztaly elnoke (for Rado). 13. Magyar Foldrajzi Tarsasag Termeszetjaro Csoport (for Dezsenyi and Karlocai). 14. Vallalati jogtanacsos (for Karlocai). 15. Magyar Foldrajzi Tarsasag Szegedi Osztalya elnoke (for Lang and Korpas). 16. Magyar Foldrajzi Tarsasag Szegedi Osztalya titkara (for Penzes). 17. Magyar Foldrajzi Tarsasag Del-Dunantuli Osztalya elnoke, es tudomanyos intezeti igazgato, Pecs (for Szabo). 18. Magyar Foldrajzi Tarsasag Del-Dunantuli Osztalya titkara, es tudomanyos munkatars, Pecs (for Kolta).

(Continued on next card)

SZEKELY, Andras--(continued) Card 3.

19. Magyar Foldrajzi Tarsasag Tiszantuli Osztalya elnoke (for Kadar). 20. Magyar Foldrajzi Tarsasag Tiszantuli Osztalya titkara (for Pinczes).
21. Magyar Foldrajzi Tarsasag Miskolci Osztalya Elnoke, es Kossuth-dijas gimnaziumi igazgato (for Peja).
22. Magyar Foldrajzi Tarsasag Miskolci Osztalya titkara (for Frisnyak).

DEZSENYI, Miklos (Budapest)

Navigation on the Danube and the Hungarian shipbuilding industry.
Term kud kozl 7 no.12:554-558 D '63.

ZSADON, Bela; DEZSERI, Eszter

Data on the examination of the decomposition of narcotoline. Magy kem folyoir 70 no.3:126-129 Mr '64.

1. Chair of Chemical Technology, Lorand Eotvos University, Budapest.

SZAKASITS, Arpad; DEZSERI, Laszlo

Gifts to the delegates of the Conference. Magy kisipar 6 no.14:1 12 Jl '62.

1. Orszagos Beketanacs elnoke (for Szakasits). 2. Orszagos Beketanacs fotitkara (for Dezseri).

DEZSERY, L.

"Organization and Results of Independent Accounting in Workshops of the Dorog Coal-Processing Chemical Enterprise", P. 11. (TORETTYELES, Vol. 8, No. 8, Aug. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

DEZSI, Albert

Announcement of contest. Cukor 15 no.11:4 of cover N '62.

1. Terimpex Allat- es Termenyforgalmi Kulkereskedelmi Vallalat vezerigazgatoja.

DEZSI, Irene

The γ, ϵ, β, and δ (spectroscopic) bands of the nitrogen oxide molecule. Irén Dézsi (MTA Spektroszkópiai Osztály, Budapest, Hung.). *Magyar Tudományos Akad. Központi Fiz. Kutató Intézetének Közleményei* 4, 5–24(1956). —A review with 56 references. G. J. Ernyei

DEZSI, Istvan; ERDELYSZKY, Zsigmond; NAGY, Lajos; ORIENT, Otto

Danys type spectrometer with semicircular focusing. Koz fiz kozl MTA 8 no.2/3:173-179 '60. (EEAI 10:4)

1. A Magyar Tudomanyos Akademia Kozponti Fizikai Kutato Intezete (for Dezsi). 2. Muszaki Egyetem Atomfizikai Tanszek (for Erdelyszky) 3. Muszaki Egyetem, Fizikai Intezet (for Nagy). 4. Kozponti Elelmiszeripari Kutato Intezet (for Orient)
(Spectrometer)

BERKES, Istvan; DEMETER, Istvan; DEZSI, Istvan; L. FODOR, Ilona; KESZTHELYI, Lajos

Investigations in the field of the background reduction of scintillation counters. Koz fiz kozl MTA 9 no.3:165-169 '61.

1. Magfizikai Laboratorium I.

IMRE, Lajos; FABRY, Gyula; DEZSI, Istvan

New method for preparing RaD standard products. Koz fiz kozl MTA 9 no.4:233-250 '61.

1. Kossuth Lajos Tudomanyegyetem Fizikaokemiai Tanszek, Debrecen (for Fabry).

TEXT: The number of atoms of RaD was determined by an absolute measurement of the quantity of Rn required in preparing RaD. The fraction of RaD which passes into solution from the walls of a vessel containing Rn was determined by measuring the β-activity. Conversion to curies was obtained by measuring the growth rate of α-activity of polonium in RaE specimens without a carrier, in 4π geometry.

DEMETER, Istvan; DEZSI, Istvan; KESZTHELYI, Lajos

Measurements by means of the Mossbauer-effect. Koz fiz kozl MTA 10 no.1:21-30 '62.

DEZSI, Istvan; FEHER, Istvan

Absolute measurement of radioactive substances. Pt. 2.
Magy fix folyoir 11 no. 6: 517-528 '63.

1. Kozponti Fizikai Kutato Intezet, Budapest.

DEZSI, Istvan; FEHER, Istvan

Absolute measuring of radioactive substances. Pt.1.
Magy fiz folyoir 11 no.4:285-294 '63.

1. Kozponti Fizikai Kutato Intezet, Budapest.

DEZSI, I.; HRYNKIEWICZ, A. Z.; KULGAWCZUK, D. S.

Zeeman splitting of the 14.4 keV gamma line of ^{57}Fe in $CoFe_2O_4$ investigated by the Mössbauer effect.

Inst fiz jadr report no. 269: 1-3 '63

1. Instytut Fizyki Jadrowej, Krakow 23, also Central Research Institute for Physics, Budapest (for Dezsi).

DEZSI, Istvan; KESZTHELYI, Lajos; CSER, Laszlo; KLAMM, Katalin

57 57

Co^{57}-Fe sources for measuring the Mossbauer effect. Koz fiz kozl MTA 12 no.1:110-118 '64.

CSER, Laszlo; DEZSI, Istvan; KESZTHELYI, Lajos; PAL, Lenard

Study on the antiferromagnetic-ferromagnetic transformation of Fe-Rh alloys by means of the Mossbauer effect. Koz fiz kozl MTA 12 no.2:119-124 '64.

1. Corresponding member, Hungarian Academy of Sciences (for Pal).

HUNGARY/Cultivated Plants - Grains M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82268

Author : Dezsi, Kaszlo
Inst : —
Title : The Influence of the Density of the Plant Stand on the Winter Wheat Yield.

Orig Pub : Növenytermeles, 1957, 6, No 1, 45-52

Abstract : Data of the experiment of the Institute of Plant Physiology at the Otvos Lorant (Budapest) University on the influence of the density of plant stands on productive clustering, the weight of grains in the spike and the yield. The sparser the density of the plant stand in uniform planting, the higher the productive clustering and the yield.

Card 1/1

PALFI, G.; DEZSI, L.

The translocation of nutrients between fertile and sterile shoots of wheat. Acta bot Hung 6 no.1/2:65-74 '60. (EEAI 10:3)

1. Research Institute for Agriculture, Szeged, and Institute of Phytophysiology, L.Eotvos University, Budapest.
(Wheat)

DEZSI, Laszlo

Evaluation of the system of agrotechny relating to winter wheat on the ground of crop analyses. Botan kozl 48 no.3/4:188-197 '60.

DEZSI, L.; FARKAS, G.L.

Effect of kinetin on enzymes of glycolic acid metabolism in cereal leaves. Acta biol. acad. sci. Hung. 14 no.4:325-332 '64.

1. Plant physiology laboratory, Hungarian Academy of Sciences, Alsogod. (Head: G.L. Farkas).

DEZSI, Laszlo; FARKAS, Gabor

Effect of kinetin on the glycolic acid oxidase system. Botan kozl 51 no.2/3:119-125 Ag '64. (MIRA 17:10)

1. Research Group on Plant Physiology, Hungarian Academy of Sciences, Alsogod.

DEZSI, Z.

"Investigation of radioactive contamination occurring during the process of obtaining krypton from the air." p. 279

MAGYAR FIZIKAI FOLYOIRAT. (Magyar Tudomanyos Akademia) Budapest, Hungary
Vol. 3, No. 3, 1955.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959.
Uncl.

DEZSI, Z.

DEZSI, Z. - Co^{60} radioactive isotopes in the examination of welding. p. 271
Vol. 8, no. 7, July 1956 - GEP, Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4 - April 1957

DEZSI, Zoltan; SZALAY, Sandor, dr., prof.; BANHALMI, Jozsef

An emanometer for determining the radium emanation content of natural waters. ATOMKI kozl 4 no.1:51-55 My '62.

1. Magyar Tudomanyos Akademia levelezo tagja, es a Magyar Tudomanyos Akademia Atommag Kutato Intezete igazgatoja, Debrecen (for Szalay).

DEZSI, Zoltan

Investigations of the uranium, radium and radium emanation content of natural waters with high uranium content. ATOMKI kozl 4 no.2:93-96 Ag '62.

DEZSI Z

SZABO, St., conf.; DEZSI, Z., conf.; BOES, M., conf.

The effect of cerebral excitation states on a non-conditioned vascular reflex. Rev. st. med., med. int., Bucur. 6 no.1:41-47 Jan-Mar 54.

1. I.M.F. Tg. Mures - Lab. de Fiziologie.

(REFLEX
vascular, non-conditioned, eff. of emotion 7 thinking)
(THINKING
eff. on non-conditioned vascular reflex)
(EMOTIONS
eff. on non-conditioned vascular reflex)

HADNAGY, Csaba; DEZSI, Zoltan ; ADORJAN, Ilelka

Experimental studies on the antibody content of lymphocytes. Kiserletes orvostud. 8 no.4:343-345 July 56.

1. Marosvasarhelyi Vertarolo es Veratomleszto kozpont es Elettani Intezet.

(LYMPHOCYTES
antibody transport, eff. of lymphocyte disintegration on titer (Hun))
(ANTIGENS AND ANTIBODIES
antibody transport in lymphocytes, eff. of lymphocyte disintegration on titer (Hun))

DEZSI, Z.

Country : RUMANIA V
Catogory : Pharmacology and Toxicology. Tranquilizers

Abs. Jour. : Ref Zhur-Biol, No 19, 1958, No 89800

Author : Dezsi, Z.; Lorincz, E. A.; Hadnagy, C.
Institut. :
Title : Suppression of the Effect of Certain Drugs upon the Vegetative Nervous System with Largactil

Orig Pub. : Rev. med. (RPR), 1957, 3, No 2, 24-29

Abstract : A 240 mcg.% solution of Largactil depresses contractions of the isolated intestine of a rabbit and decreases its tonus. Largactil blocks the effect of adrenalin, acetylcholine, pilocarpine, physostigmine, arecoline, aconitine, and also the combined effect of physostigmine and acetylcholine. Preliminary administration of Largactil prevents the development of the action of the mentioned drugs. The effect of Largactil is not modified by atropine and

Card: 1/2

Category : \

Abs. Jour. : Ref Zhur-Biol, No 19, 1958, No 89800

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : ergotamine. Barium chloride, the effect of which is not prevented even after addition of nicotine, fails to produce contractions of the intestine under the action of Largactil.-- From the authors' resume

Card: 2/2

V - 4

Country : Rumania
Category : Human and Animal Physiology, Thermoregulation

Abs. Jour. : Ref Zhur - Biologiya, No. 2, 1959, No. 7867

Author : Szabo,I.; Hadnagy,C.; Dezsi,Z.; Incze D.
Institut. : --
Title : The Effect of Hypothermia on Experimental Hemolytic Shock.

Orig Pub. : Rev. med. (RPR), 1957, 3, No. 4, 22--27

Abstract : Chlorpromazine in a dose of 5 mg/kg exerted no significant effect on the hemolytic shock induced in dogs by intravenous injection of heterogenous blood. The rectal temperature of the animals treated with chlorpromazine was reduced to 25--27° by immersing them in cold water at 2--4°, the severity of the reaction diminished, and in the majority of cases signs of shock were not detected. In rats the eosinopenic reaction as well as the hyperventilation produced by a transfusion of heterogenous blood were not diminished by the action of chlorpro-

Card:1/2

Country : Rumania T
Category : Human and Animal Physiology, Thermoregulation

Abs. Jour. : Ref Zhur - Biologiya, No. 2, 1959, No. 7867

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : mazine (5 mg/100gm). In the presence of hypothermia the effect of injecting heterogenous blood was considerably reduced.

Card: 2/2

SABO, I.; DEZSI, Z.; VASH, Y.; D'YERDYAI, F. (Tyrgu-Muresh, Rumyniya)

Effect of silicic acid on carbohydrate metabolism in animals. Pat.fiziol. i eksp. terap. 5 no.3:76 My-Je '61. (MIRA 14:6)

1. Iz nauchno-issledovatel'skoy bazy Akademii nauk Rumynskoy narodnoy Respubliki i kafedry fiziologii Mediko-farmatsevticheskogo instituta.

(SILICIC ACID) (BLOOD SUGAR)

UJHELYI, Csaba; SCHADEK, Janos; DEZSI, Zoltan; NAGY, Janos

Ionization chamber measuring device for determining the activity of gamma radiant preparations with the strength of 10-4-1 Curie. ATOMKI kozl 2 no. 3:237-241 '60.

1. Magyar Tudomanyos Akademia Atommag Kutato Intezete, Debrecen.

DEZSI, Zoltan

Investigations into the radioactive content of natural waters.
Fiz szemle 13 no.10:298-304 0'63

1. Kiserleti Fizikai Intezet, Debrecen. Jelenlegi munkahely:
Orvostudomanyi Egyetem, Debrecen.

HUNGARY

DEZSI, Zoltan, Dr; Roentgen Clinic of Debrecen Medical University (acting director: Docent Dr Gabor JONA)

"Determination of the Isodose Curves with the Aid of Dose Gradient Lines, in the Case of Co-60 Irradiation."

Budapest, Magyar Radiologia, Vol 18, No 3, Jun 66, pp 166-169

Abstract [author's Russian and English summaries, modified]: In telecobalt deep therapy with a Gravicert type apparatus, the dose gradient lines introduces by P. G. Orchard form straight lines, and with their aid the isodose curves are quickly determined. Five Western references.

1/1

DEZSI, Zoltan

Construction of the Debrecen working men's hotel was finished at the end of last year. Vasut 15 no.1:15 Ja '65.

DEZSI, Zoltan

Task of physicists in the British center of radiotherapy.
Fiz szemle 15 no.3:87-91 Mr '65.

1. X-ray Clinic of the Debrecen Medical University, Debrecen.

Distr: 4E2c(j)/4E3d

468/60. 678.742.2.02 : 542.952.6

Studies on the formation of titanium tetrachloride-aluminium alkyl catalyst systems in connection with the atmospheric polymerization of ethylene, III.* A. Simon, L. Kovács, L. Kollár, Gy. Deszényi. *Magyar Kémiai Folyóirat*, Vol. 66, 1960, No. 2, pp. 46—48, 2 figs., 1 tabs.

Based upon results obtained thus far, the process of polymerization may be described by a series of reaction equations which correspond well to the molar ratio of the starting components and to the changes in catalyst composition. A general form of an equation system of this kind is *e.g.* for the Al : Ti molar ratios of 1.5 and 3: $x\ Al(C_2H_5)_3 + 2\ TiCl_4 \rightarrow AlTi_2Et_nCl_{7-n} + y\ AlEt_2Cl + z\ AlEtCl_2 + 4\ C_2H_6$, where $n = 1, 2$ or 3; $x = 3, 4, 5$ or 6; $x = y+z+1$. Substitution of the corresponding values yields such equation which, if all possibilities are considered, agree very well with the experimental results. However the amount of gas found experimentally is exactly one-half of the gas required by the equation and this experience is the same over the entire range of molar ratios studied. Further investigations were directed to explain the difference between the theoretical and experimental amounts of gas and to compare the previously measured reduction state of titanium with the described process of preparing the catalyst. These investigations seem to confirm the results obtained thus far. The difference between the theoretical and actual gas formation is explained by the fact that part of the gas polymerizes instantly into polyethylene which can be detected. The extent of the methane reduction agrees well with the calculated value.

* *H. T. A.*, Vol 11, 1959, No. 2, abstr. 37 and abstr. 43/60.

1-BW (BAI)
2-Jaf (NIS) (May)
2

IMRE, Lajos, a kemiai tudonayok doktora; FABRY, Gyula; DEZSI, Istvan

Significance of radioactive absolute measurements from the point of view of nuclear chemistry. I. Kem tud kozl MTA 19 no.1:1-24 '63.

1. Kossuth Lajos Tudomanyegyetem Fizikai Kemiai Tanszeke, Debrecen.

BOTTYAN, Olga; DEZSO, Gyula; EIBEN, Otto; FARKAS, Gyula; RAJKAI, Tibor; THOMA, Andor; VELI, Gyorgy

Observations on the beginning of the menstruation in Hungary. Elovilag 9 no.2:16-18 Mr-Ap '64.

L 15524-66 EWA(j)/EWA(b)-2 RO

ACC NR: AT6007389 SOURCE CODE: HU/2505/65/026/00X/0017/0017

AUTHOR: Kover, A.; Szabolcs, M.; Dezso, Gy.

41
B+1

ORG: Central Research Laboratory, Institute of Physiology, Medical University of Debrecen (Debreceni Orvostudomanyi Egyetem, Elettani Intezet, Kozponti Kutato Laboratorium); Institute of Pathophysiology, Medical University of Debrecen (Debreceni Orvostudomanyi Egyetem, Korelettani Intezet)

TITLE: Effects of cholinesterase inhibitor and receptor blocking agents on the Ca sup ++ uptake of the vesicular relaxation system [This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July, 1964]

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 17

TOPIC TAGS: calcium, enzyme, radioisotope, drug effect, pharmacology, animal physiology

ABSTRACT: The vesicular relaxation system was prepared according to the method of NAGAI et al. (1960). From the fraction, 0.1 mg of protein was applied to a cellulose column followed by 5 ml

Card 1/2

L 15524-66

ACC NR: AT6007389

of an incubating solution containing Ca^{45} and 8 ml of a Ca^{++}-free incubating fluid. The specific activity of the Ca^{45} stock solution was 1.26 mC. The activity of the fluid which had passed through the column was determined after evaporation, and the Ca^{++} uptake was computed from the decrease in the impulse count. The impulse count obtained without the application of the fraction or without the use of ATP served as the control. It was found that the Ca^{++} uptake of the fractions prepared ranged from 8-14 μM Ca^{++}/mg protein. The Ca^{++} uptake by the vesicular relaxation system was inhibited by 1×10^{-3} M of d-tubocurarine completely, by 1×10^{-2} M of physostigmine to 70-80 per cent, and by 1×10^{-3} M of neostigmine to 60-70 per cent. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 2/2

DEZSO, I.

Problems of our professional terminology. p. 471. (MAGYAR TEXTILTECHNIKA, Budapest, Hungary), No. 11/12, Dec. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955.

DEZSO, I.

Magyar Textiltechnika - No. 4, Apr. 1955.

Problems of our professional language. p. 163.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

LEZSO, I.; JOZAK, L.

LEZSO, I.; JOZAK, L. What we should consider in establishing standards for colorfastness. p. 372.

No. 10, Oct. 1955.
MAGYAR TEXTILTECHNIKA.
TECHNOLOGY
Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

DEZSO, I.

Problems of our professional language. p. 39.
MAGYAR TEXTILTECHNIKA (Texilipari Muszaki es Todomanyos Egyesulet) Budapest.
nol 1, Jan 1956.

SOURCE: Vol 5, no. 7, July 1956.

DEZSO, I.; JOZAN, D.

Preparation of samples being tested for colorfastness. p. 92. No. 3, March, 1956. MAGYAR TEXTILTECHNIKA. Budapest.

SOURCE: East European Accessions List, (EEAL) Library of Congress, Vol. 5, No. 8, August, 1956.

DEZSO, I.

Questions of our technical language. P. 156 MAGYAR TEXTILECHNIKA Budapest No. 4, Apr. 1956

SOURCE: East European Accessions List (EEAL) Library of Congress Vol. 5, no. 8, August 1956

DEZSO, I.

Problems of pure technical language, p. 270, MAGYAR TEXTILTECHNIKA (Textilipari Muszaki es Tudomanyos Egyesulet) Budapest, No. 7, July 1956

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 11, November 1956

DEZSO, I.

DEZSO, I. The fastness of color in textile goods. p. 293, No. 8, Aug. 1956.
MAGYAR TEXTILTECHNIKA.
Budapest

SOURCE: EAST EUROPEAN ACCESSIONS LIST (EEAL) VOL 6 NO 4 April 1957

DEZSO, I.

A new system for size marking of yarn; the Tex. p. 195.

MAGYAR TEXTILTECHNIKA. (Textilipari Muszaki es Tudomanyos Egyesulet)
Budapest, Hungary, Vol. 11. no. 5, May 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,
August 1959.
Uncla.

DEZSO, Imrene; MAUL, Ferenc

Studies in the nutritive value of corn(maize). Agrokem talajtan 10 no.3:335-352 S '61.

1. Agrartudomanyi Egyetem Talajtani Tanszek, Godollo.

HUNG.

24. Micromethods for the identification and colorimetric determination of manganese(II) by a catalytic reaction. — Gy. Almássy, T. Dezső. (*Magyar Kémiai Folyóirat* — Vol. 60, 1954, No. 7, pp. 215—219, 3 figs., 5 tabs.)

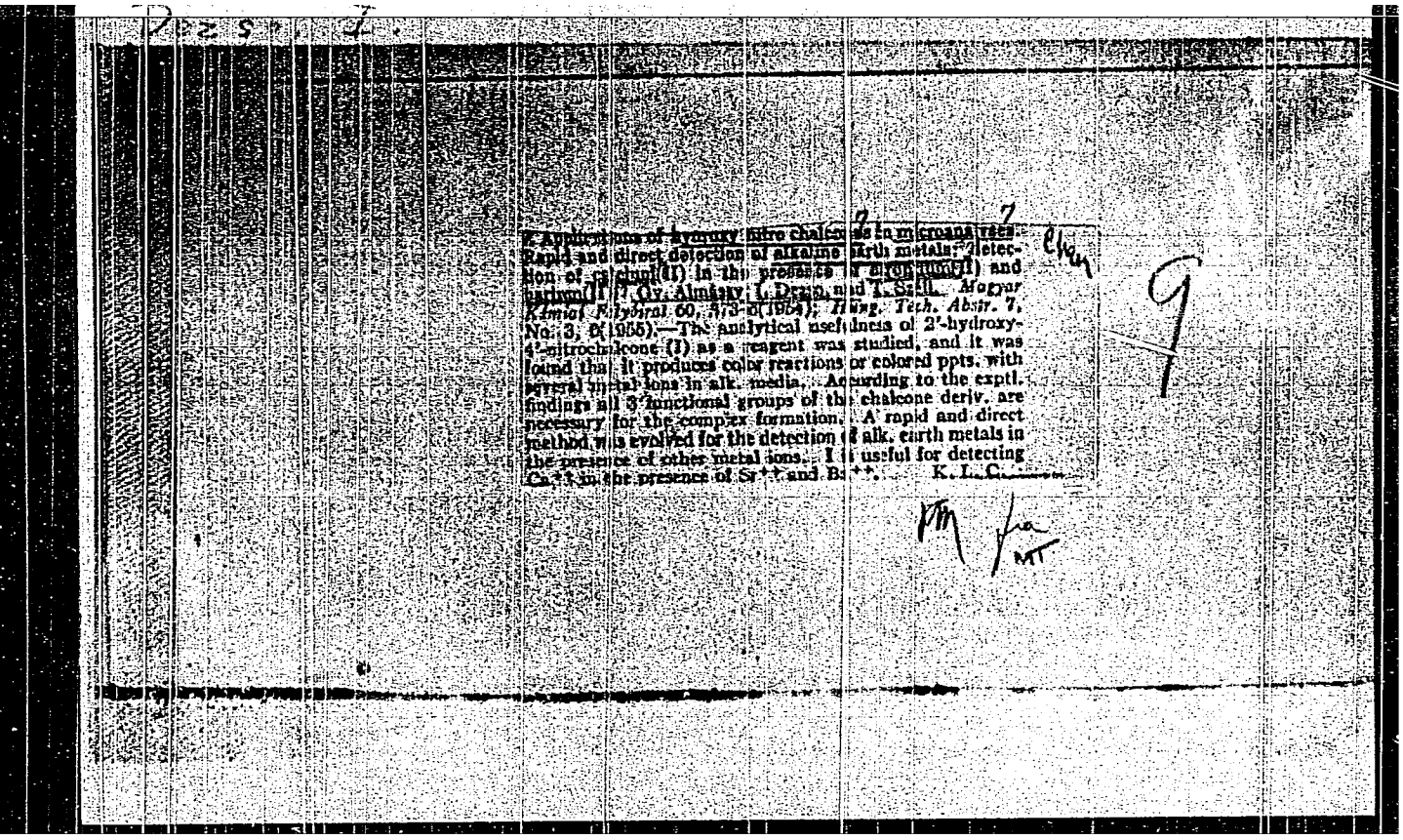
Manganous ions are oxidized by potassium dichromate in the presence of oxalate ions, in a phosphoric acid solution, to complex manganic oxalate ions. These in turn, heated to 100°C, are reduced to manganous ions simultaneously liberating carbon dioxide. These manganous ions are oxidized again to the trivalent state by the dichromate present and, by the multiple repetition of this process, the dichromate is finally reduced, yielding green chromic ions. The process may be represented as follows:

$$Mn(II) + C_2O_4^{2-} \xrightarrow{100^\circ C,\ Cr(VI) + C_2O_4^{2-}} Mn(III)\text{ oxalate} + Cr(III)$$

$$\downarrow$$

liberation of CO_2

Colorimetric determination of the manganous ion content of the sample is possible — using a Pulfrich photometer with an S 47 colour filter — since the reaction rate of the process i.e. the intensity of the formed green colour depends upon the concentration of the dissolved manganous ions. Foreign ions in higher concentrations interfere, therefore, the method is unsuitable for the analysis of rocks or alloys. However, it is very useful for the determination of the manganese(II) content of foodstuffs and water. Sensitivity of the reaction is 0.5 μg manganese per ml.



Application of 4-nitro chalcones in microanalysis. Rapid and direct detection of alkaline [illegible] metals. Detection of calcium(II) in the presence of [illegible](II) and barium(II). G. Almásy, L. Dragu, and T. Sajó. *Magyar Kémiai Folyóirat* 60, 373-5(1954); *Ilung. Tech. Abstr.* 7, No. 3, 6(1955).—The analytical usefulness of 2'-hydroxy-4'-nitrochalcone (I) as a reagent was studied, and it was found that it produces color reactions or colored ppts. with several metal ions in alk. media. According to the exptl. findings all 3 functional groups of the chalcone deriv. are necessary for the complex formation. A rapid and direct method was evolved for the detection of alk. earth metals in the presence of other metal ions. I is useful for detecting Ca^{++} in the presence of Sr^{++} and Ba^{++}. K. L. C.

DEZSO, I.

Microdetection and colorimetric microdetermination of manganese(II) by a catalytic reaction. Gy. Almássy and I. Dezso (Med. Univ., Debrecen). *Acta Chim. Acad. Sci. Hung.* 8, 11-21(1955)(In English).--If Mn^{++} ions are oxidized in aq. soln. by $K_2Cr_2O_7$ in the presence of oxalate a red Mn(III) oxalate is formed. This oxalate decomp. instantaneously at 100° with formation of CO_2 and Mn^{++}. The newly formed Mn^{++} ions are again oxidized by $Cr_2O_7^{--}$ ions and the cycle takes place again. When all $Cr_2O_7^{--}$ is reduced to Cr^{+++}, the reaction ceases and the green color of the Cr^{+++} ions serves as a qual. test for the presence of Mn^{++} ions. The limit of detectability was 0.5 Mn/ml. Interference by colored ions could be eliminated by pretreatment of the soln. with ZnO. If the visual observation of the green Cr^{+++} color is replaced by photometric measurements the reaction can be used for quant. Mn^{++} detns. *Procedure.* Take 10 ml. of a slightly acid soln. contg. not more than

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20 γ Mn^{++} in a 15-ml. volumetric flask and add 1 ml. of 10% Na_2CO_3 soln. followed by 0.5 ml. H_3PO_4 (sp. gr. 1.67), 2 ml. satd. Na oxalate soln., and finally 1 ml. of 1% $K_2Cr_2O_7$ soln. After shaking, heat the flask for 10 min. in a boiling water bath, then cool and make up to vol. Measure the extinction in a Pulfrich photometer with filter S 47 against water as reference soln. The light absorption does not follow Beer's law so that the amt. of Mn present in the sample has to be read from a reference curve. The method is less suitable for Mn detns. in rocks or alloys but lends itself as a quick and satisfactory method for Mn detns. in water, plants, and particularly in foods. Results of such detns. are tabulated. 10 references.

Ernst M. Goldstein

DEZSO, I.

154. The micro-detection and colorimetric micro-determination of the oxalate ion by means of an activated reaction. G. Ilinszky and I. Dezső (*Magyar Kém. Folyó.*, 1955, 61 [4], 107–[illegible]).—Numerous oxidation-reduction reactions that are catalysed by oxalate ions and are accompanied by colour change were examined. For qual. testing, the V^V-aniline reaction was used; the quant. method is based on the oxidation, by Cr^{VI}, in the presence of oxalate ions and in H_3PO_4 soln., of Mn^{II} to Mn^{III} oxalate. On being boiled, Mn^{III} is reduced to Mn^{II} and CO_2 is evolved; this process is repeated as long as oxalate is present. The excess of Cr^{VI} is determined by the diphenylcarbazide method (*Anal. Chem.*, 1953, 24, 1016). *Procedure*.—To 1 ml of an oxalate soln., containing > 0·1 *N* mineral acid, add 5 drops of *N* HCl, 3 drops of a charcoal-treated and filtered soln. of 10 ml of aniline oil in 40 ml of conc. HCl and 50 ml of H_2O, and add also 3 drops of 0·1 *N* V^V soln. (9·1 g of V_2O_5 dissolved in a soln. of 25 g of NaOH in 100 ml of H_2O, acidified with 75 ml of conc. HNO_3 and diluted to 1 litre with H_2O). In the presence of oxalate, a greenish-blue colour, and later a ppt., appears. The detection of 1 μg of oxalate ion in a 1-ml sample is possible. A blank test gives a greenish-yellow colour. With 1 μg. the colour appears in 5 to 10 min. Most metals do not interfere; neither does Co^{II}, Ni^{II}, Cr^{III} or Cu^{II} in 1-mg quantities. The presence of many foreign ions decreases the reaction velocity. For quant. estimation, dilute a Na oxalate solution (0·5 to 10 ml, containing 10 μg of oxalate per ml) to 10 ml; add conc. H_3PO_4 (0·5 ml), 10 per cent. $Na_2CO_3.H_2O$ (1 ml), and 1 ml of Mn^{II} soln. containing 1000 μg. and 0·02 per cent. $K_2Cr_2O_7$ (0·5 ml). Heat at 100° C for 10 min., add diphenylcarbazide reagent (2 ml), dilute to 50 ml and determine photometrically after 5 min. (Si3 filter). Distilled water is used as a blank. The Beer-Lambert law is not obeyed. Limiting concentrations are 0·5 to 10 μg of oxalate per ml; > 5 μg of oxalate are needed. Optimum conditions and effect of other ions have been studied.

A. G. Peto

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37. Separation of copper from other metals by paper chromatography — G. Almássy, Dezső. (Magyar Kém. Folyóirat — Vol. 61, 1955—No. 7. pp. 158—160, 2 figs., 2 refs.)

An efficient mixture was prepared for the paper chromatographic separation of copper. The solvent mixture was composed of 17 ml of ethanol, 3 ml of concentrated hydrochloric acid and 80 ml of ether. A solution containing 5% potassium ferrocyanide was used as spray reagent in the absence of uranium while in its presence a 0.5% alcoholic solution of rubeanic acid was employed. By this procedure 0.1 μg of copper in 0.1 ml solution could be separated and identified. If a reference solution is run simultaneously on the paper strip a semiquantitative estimation of the copper is possible by comparing the area and colour intensity of the spots.

1550. The application of standard methyl orange solution in micro-analysis: helianthometry. Helianthometric micro-determination of ferric ions and hydrogen peroxide. G. Almássy and L. Dezsö (Med. Univ. of Debrecen, Hungary). *Magyar Kém. Folyóirat*, 1955, 61 (10), 300–304.—Chromate ions oxidise methyl orange (I), in the presence of oxalate and ferric ions and light, in a buffered acid soln., to a colourless product. The reaction is carried out in u.v. light, as the consumption of I depends on the light intensity. The method is also used for the determination of reducing agents. The equiv. ... of I depends on the vol. of the original soln and on the concn. of Fe^{III}. *Procedure*—A soln. of $FeCl_3.6H_2O$ is prepared by dissolving 5 g in conc. HCl (1 ml) and diluting to 100 ml with H_2O. For the determination of Fe^{III}, the soln. (1 to 5 ml), $\geqslant$0·1 *N* acid, is added to a mixture of 0·001 *N* $K_2Cr_2O_7$ (1 ml) and conc. H_3PO_4 (sp. gr. 1·7; 0·5 ml) and the soln. is diluted to 5·5 ml; the oxidation requires 1 min. Ferric chloride soln. (0·1 ml), 10 per cent. Na_2CO_3 (1 ml) and saturated Na oxalate (0·5 ml) are added. The soln. is immediately titrated with 0·001 per cent. I soln. by adding 0·5 ml portions and after each ... the soln. ... 20 to 30 ... when the colour turns green; after the end-point it remains red. A second accurate titration is carried out similarly, but the last 0·5 ml is added dropwise. In a blank, the Fe ... soln. is replaced by H_2O. The sensitivity is ... µg of Fe^{III} per ml. The following do not interfere: Ca.., Mg.., Ni.., Cd.., Zn.., Al..., Cu.., Fe.., Co.., alkali metals, Cl', SO_4'', PO_4''' and NO_3'. For the determination of H_2O_2, to a mixture of 0·001 *N* $K_2Cr_2O_7$ (1 ml) and conc. H_3PO_4 (sp. gr. 1·7; 0·5 ml) the unknown soln. (0·5 to 1 ml, acidity $\geqslant$0·1 *N*) is added and then diluted to 5·5 ml with H_2O. After 15 min., the three reagents are added (as above) and the soln. is titrated as before. The same ions, except Fe..., do not interfere. The sensitivity is 0·3 µg of H_2O_2 per ml.

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Hungary/Analytical Chemistry - General Questions, G-1

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61798

Author: Almassy, Gyula; Dezso, Istvan

Institution: None

Title: On the Influence of Concentration of Acids in the Paper Chromatography of Inorganic Substances. Conditions of Formation of Well Defined Spots

Original Periodical: Az oldoszer savkoncentraciojanak szerepe az anorganikus papirkromatografiaban. Tomor folt kepzodesenek feltetele, Magyar kem. folyoirat, 1956, 62, No 2, 60-64; Hungarian; German resumé

Abstract: Study of correlation between nature of displacement of ions of different metals and the content of acid or water in the developer, it being ascertained that length of spot decreases with increase in acid content and the spots becoming more clearly defined. Increase in water content of developer induces at first no changes

Card 1/2

Hungary/Analytical Chemistry - General Questions, G-1

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61798

Abstract: but on reaching a certain definite water content the spots become shorter as a rule. Investigated were also alcoholic developers free from water and it is shown that Fe^{3+} spots depending on the distance over which they move become divided into a number of separate spots. For this reason use of developers containing no water is not recommended for separation of metal ions. Shortening of the spots on increase of the content of acid and water in the developer takes place also on use of other developers which are miscible with water.

Card 2/2

FULOP, Tibor, dr.; DEZSO, Istvan, dr.

Relationship of age to iron absorption, I. Orv. hetil. 97 no7: 173-176 12 Feb 56.

1. A Hajdu-Bihar Megyei Korhaz (igaz. Varkonyi Pal dr.) Megyei Verkonzervalo Allomasanak (foorvos: Asszodi Lili dr.) es a Debreceni Tudoman. Orvosi Vegytani Intezetenek (igaz. Straub Janos dr. egyet. tanar) kozl.

(IRON, metab.
absorp. in various age groups, determ. in blood (Hun))
(BLOOD
iron absorp., determ. in various age groups. (Hun))
(AGING, physiol.
age factor in iron absorp. in blood. (Hun))