AL'PERIN, P.M., prof.; AGRANENKO, V.A.; RODINA, R.I.

Anemia in patients with acute renal insufficiency. Probl. gemat. i perel. krovi 10 no.1:11-16 Ja '65. (MIRA 19:1)

1. TSentral'nyy ordena Lenina institut gematologii i perelivaniya krovi (dir. - dotsent A.Ye. Kiselev) Ministerstva zdravookhraneniya SSSR, Moskva.

AGRANENKO, V.S.

Clinical phonocardiographic and morphologic indices of heart lesions in systemic lupus erythematosus. Sov. med. 28 no.9: 25-31 S '65. (MIRA 18:9)

1. Otdeleniye pogranichnykh form (zav. - kand. med. nauk V.A.Nasonova) Instituta revmatizma AMN SSSR (nauchnyy rukovoditel'deystvitel'nyy chlen AMN SSSR prof. Ye.M.Tareyev).

5(3)

AUTHORS: Agranomov, A.Ye., Patrikeyev, V.V. and Rudenko, A.P. SOV/55-58-3-24/30

TITLE: On the Inhomogeneity of the Structure of Silica Gel (O neodnorodnosti struktury silikagelya)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 3, pp 197-206 (USSR)

ABSTRACT: The silica gel ASK of the Chemical Combinate in Voskresensk was investigated. The structure is inhomogeneous inasmuch as different single pieces absorb differently strongly the phthalocyanin of copper from a solution. Using the color differences the authors obtained test pieces with homogeneous structure in mechanical way. It was stated that only those test pieces are able to absorb the phthalocyanin, the pore entrances of which are at least twice as great as the molecules of the coloring substance. Furthermore: the inhomogeneity originates by mixture of three different structures with dense particle packing and of several intermediate structures. The results of A.V. Kiselev, G.K. Boreskov, I.Ye. Neymark, R.Yu. Sheynfayn, and others are used.

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On the Inhomogeneity of the Structure of Silica Gel SOV/55-58-3-24/30

There are 5 figures, 4 tables, and 21 references, 9 of which are Soviet, 9 English, 2 American, and 1 German.

ASSOCIATION: Kafedra organicheskogo kataliza (Chair of Organic Catalysis)

SUBMITTED: June 17, 1957

Card 2/2

AGRONOMOV, A.Ye.; MISHCHENKO, A.P.

Activity of a Co/Al_2O_3 catalyst with various ratios of components. Vest.Mosk. un. Ser.2: Khim. 18 no.4:50-54 Jl-Ag '63. (MIRA 16:9)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Cyclohexane) (Hydrogenation) (Catalysts)

AGRANOMOV

SOV-135-58-11-17/21

AUTHOR: Sherstyuk, V.N., Engineer

TITLE: A Welding Conference of Pacific Coast Plants (Konferentsiya po svarke predpriyatiy Tikhookeanskogo basseyna)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 11, p 39 (USSR)

ABSTRACT: A welding conference of the Pacific coast plants convened at Vladivostok by the Scientific Technical Section of Water Transports. The following reports were delivered: Engineer V.N. Sherstyuk on "Further Development of Welding Practice in Far-East Plants"; Dotsent, Candidate of Technical Sciences M.S. Kulikov on the repair welding of crankshafts; Dotsent, Candidate of Technical Sciences, N.V. Barabanov on a rational design of welded ship hulls; Engineer S.N. Agranomov on the use of the latest methods in semi-automatic and automatic welding processes; Alekseyev, Gubskiy, Yung, Mallopuro, Tsirkul'nikov, Kagner and other plant workers made various valuable suggestions on the further development of the welding process in Far-East plants. The Conference decided to

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establish a welding laboratory on the Pacific coast, and resolved to take various measures to improve welding practice in this region.

1. Welding--USSR

AGRANOVIK, G.L.

Effect of strophanthin on the ballistocardiogram of patients with decompensated vitia cordis. Vrach.delo no.2:195 F '59. (MIRA 12:6)

1. Kafedra fakul'tetskoy terapii (i.o.zav.kafedroy - dotsent R.M.Ginzburg) Stalinskogo meditsinskogo instituta.
(BALLISTOCARDIOGRAPHY) (STROPHANTHIN)
(HEART--ABNORMITIES AND DEFORMITIES)

AGRANONIK, G. L.

Dynamics of the ballistocardiographic indices in thyrotoxicosis under the influence of conservative treatment. Vrach. delo no.3: 69-72 Mr '62. (MIRA 15:7)

1. Klinika fakul'tetskoy terapii (zav. - dotsent R. M. Ginzburg) Donetskogo meditsinskogo instituta i klinicheskaya bol'nitsa imeni Kalinina.

(BALLISTOCARDIOGRAPHY) (HYPERTHYROIDISM)

AGRANONIK, G.L.

Dynamics of the ballistocardiogram in patients with rheumatic heart disease. Vop.revm. 3 no.1:71-75 Ja-Mr. '63.
(MIRA 16:4)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. A.Ya.Gubergrits) Donetskogo meditsinskogo instituta.
(RHEUMATIC HEART DISEASE) (BALLISTOCARDIOGRAPHY)

AGRANONIK, Ye.Z., kand.tekhn.nauk; BELOV, A.N., dotsent; GLADKOV, A.M., inzh.; GLUSKIN, S.A., inzh.; IVANOV, L.V., dotsent, kand.tekhn. nauk; LIPKIN, Ye.V., kand.tekhn.nauk; NIKIFOROV, G.N., dotsent, kand.tekhn.nauk; PESENSON, I.B., inzh.; PREGER, Ye.A., dotsent, kand.tekhn.nauk; PYATOV, Ya.N., inzh.; ROKHCHIN, Ye.Z., inzh.; FEDOROV, N.F., prof., doktor tekhn.nauk; SHVARTS, K.B., inzh.; SHIGORIN, G.G., dotsent, kand.tekhn.nauk; SHIFRIN, S.M., prof., doktor tekhn.nauk; POPRUGIN, I.V., inzh., retsenzent; KATS, K.F., inzh., retsenzent; ROTENBERG, A.S., red.izd-va; VORONETSKAYA, L.V., tekhn.red.

[Manual of water-supply engineering and sewerage] Spravochnik po vodosnabzheniiu i kanalizatsii. Pod red. N.F.Fedorova. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 410 p. (MIRA 13:3)

1. Moscow. Gosudarstvennyy proyektnyy institut Vodokanalproyekt. Leningradskoye otdeleniye.
(Water-supply engineering) (Sewerage)

AGRANONIK, Ye.Z.

Water purification on low-capacity water-supply lines. Vod.i san.tekh. no.3:13-17 Mr '60. (MIRA 13:6)
(Water--Purification)

AGRANONIK, Ye.Z., kand.tekhn.nauk; BELOV, A.N., dotsent; GLADKOV, A.M., inzh.; GLUSKIN, S.A., inzh.; IVANOV, L.V., dotsent, kand.tekhn. nauk; LIPKIN, Ye.V., kand.tekhn.nauk; NIKIFOROV, G.N., dotsent, kand.tekhn.nauk; PESENSON, I.B., inzh.; PREGER, Ye.A., dotsent, kand.tekhn.nauk; PYATOV, Ya.N., inzh.; ROKHCHIN, Ye.Z., inzh.; FEDOROV, N.F., prof., doktor tekhn.nauk; SHVARTS, R.B., inzh.; SHIGORIN, G.G., dotsent, kand.tekhn.nauk; SHIFRIN, S.M., prof., doktor tekhn.nauk; ROTENBERG, A.S., red.izd-va; VORONETSKAYA, L.V., tekhn.red.

[Water-supply and sewerage manual] Spravochnik po vodosnabzheniiu i kanalizatsii. Pod red. N.F.Fedorova. Izd.2., ispr. i dop. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 420 p. (MIRA 13:12)

1. Moscow. Vodokanalproyekt. Leningradskoye otdeleniye. (Water-supply engineering) (Sewerage)

KASTAL'SKIY, Aleksandr Aleksandrovich, doktor tekhn. nauk, prof.; MINTS, Daniil Maksimovich, doktor tekhn.nauk, prof. Prinimali uchastiye: MIKHAYLOV, V.A., kand. tekhn. nauk; NOVAKOVSKIY, N.S.; ABRAMOV, N.N., doktor tekhn. nauk, prof., retsenzent; NIKIFOROV, G.N., kand. tekhn. nauk, dots., retsenzent; PREGER, Ye.A., retsenzent; BULYGIN, A.K., retsenzent; LIPKIN, Ye.V., retsenzent; VOZNAYA, N.F., kand. khim. nauk, retsenzent; BELOV, A.N., dots., retsenzent; AGRANONIK, Ye.Z., kand. tekhn. nauk, retsenzent; NOVIKOV, P.V., inzh., retsenzent; SHVARTS, R.B., inzh., retsenzent; KONYUSHKOV, A.M., kand. tekhn.nauk, nauchnyy red.; NIKOLAYEVA, T.D., red. izd-va; GOROKHOVA, S.S., tekhn. red.

[Water treatments for drinking and for industrial uses]Podgotovka vody dlia pit'evogo i promyshlennogo vodosnabzheniia. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 557 p. (MIRA 16:1)

1. Kafedra vodosnabzheniya Leningradskogo inzhenerno-stroitel'nogo instituta (for Nikiforov, Preger, Bulygin, Lipkin, Voznaya, Belov, Agranonik).

(Water--Purification)

AGRANOV, D.M.; FRIDMAN, V.Ye.

Simple signalling circuit for the case of the deviation of controlled parameter. Priborostroenie no.10:25-26 O '63. (MIRA 16:11)

[illegible], Kh.I., [illegible] I.V.

Universal photocolorimetric tape-type gas analyzer. Zav. lab. 30 no.5:626-628 '64. (MIRA 17:5)

1. Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN SSSR.

AGRANOV, Kh.I.; REYMAN, L.V.

Automatic gas analyzer for determining the microconcentrations of Freon. Khol.tekh. 42 no.2:20-23 Mr-Ap '65.

(MIRA 18:5)

1. Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN SSSR.

AGRANOV, N.A., inzh.

Six-spindle pipe-cutting machine. Suggested by N.A.Agranov. Rats.i izobr.predl.v stroi. no.14:82-84 '60. (MIRA 13:6)

1. Po materialam tresta Santekhmontazh-62 Glavleningradstroya, Leningrad, kanal Griboyedova, 36.
(Pipe cutting)

AGRANOV, N.N.; MIRONKOV, B.A., inzh., red.; ROTENBERG, A.S., red.; PUL'KINA, Ye.A., tekhn.red.

[Conveyer system of manufacturing and assembling tubular parts and units used in sanitary engineering] Izgotovlenie i sborka trubnykh detalei i uzlov santekhsistem na konveiere. Leningrad, Gos.izd-vo lit-ry po stroit.i arkhit., 1957. 41 p. (MIRA 11:1)
(Pipe fittings)

AGRANOV, N.N. (Leningrad).

Mechanized fitting of pipes for sanitary engineering systems. Vod. i san. tekh. no.4:1-5 Ap '57. (MLRA 10:6)
(Pipe cutting)

AGRANOV, N.N. (Leningrad)

Modernization of a pipe-bending machine of the Kalinin Plant.
Vod.i san.tekh.no.7:31 Jl '57. (MIRA 10:11)
(Pipe)

AGRANOV, Ye.N., inzhener; YEL'SINOVSKIY, V.B., inzhener.

Reinforced concrete centrifuged poles for electric transmission lines. Mekh. stroi. 14 no.2:14-18 F '57. (MLRA 10:4)
(Electric line--Poles) (Precast concrete)

AGRANOVA, N.N.

Pipe cutting machine tool. Biul. tekh. inform. 4 no.5:28 My '58.
(MIRA 11:8)

1. Glavnyy inzhener zavoda "Santekhoborudovaniya" No.4.
(Pipe cutting)

AGRANOVA, V.; FEDOROV, R.

All-Russian Meeting of Young Technicians. IUn.tekh. 5 no.10:1-15 O '60. (MIRA 13:12)

(Students' societies) (Technical education)

AGRANOVA, V.

Youth relay race. IUn.tekh. 6 no.9:72-75 S '61. (MIRA 14:10)
(Moscow--Technical education) (Electronic calculating machines)

L 55874-65 EWT(1)/T/EEC(b)-2 Pi-4 IJP(c) GG
ACCESSION NR: AP5015941 GE/0017/65/013/005/0175/0210

AUTHOR: Agranovic, V. M.; Ginzburg, V. L.

TITLE: Some problems in crystal optics with spatial dispersion and the exciton theory

SOURCE: Fortschritte der Physik, v. 13, no. 5, 1965, 175-210

TOPIC TAGS: crystal optics, exciton, crystal structure, crystal theory

ABSTRACT: The purpose of this article, which was translated from the Russian by F. H. Herrmann, was to provide additional data and clarification for the authors' article published earlier in Fortschritte der Physik v. 11, 1963, p 163. The salient features of both the original article and the present article are scheduled for early publication by John Wiley and Sons. The following subjects are discussed: introduction of the $\varepsilon_{ij}(\omega, k)$ tensor for crystals, separation of this tensor from the transverse field E, dispersion relations for the refraction index of light waves in the medium, ray direction and group velocity in an absorbing medium, relations between the refraction index of light waves and frequency considering spatial dispersion and adsorption both in optically active and

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ACCESSION NR: AP5015941

optically inactive media, the boundary conditions, and the macroscopic theory of surface excitons. Orig. art. has: 79 formulas and 7 figures.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OP

NO REF SOV: 022 OTHER: 006

Card 2/2

AGRANOVICH, V.M.; ODINTSOV, D.D.

Dependence of the ion-electron emission of single crystals on the temperature of the target. Dokl. AN SSSR 162 no.4:778-780 Je '65. (MIRA 18:5)

1. Submitted December 12, 1964.

Use of penicillin in combination with ecmolin in clinical practice. Z. V. Ermol'eva, M. D. Hnitseva, G. E. Valsberg, T. I. Balezina, and A. I. Agranovich. *Trudy Akad. Med. Nauk S.S.S.R., Antibiotiki i Ikh Primenenie* 22, No. 1, 143–57(1952).—In combination with ecmolin and procaine, penicillin (I) remains in the blood at therapeutic level for 12 hrs. Ecmolin with I maintains a therapeutic I level in the blood for 6 hrs. A. S. Mitkin

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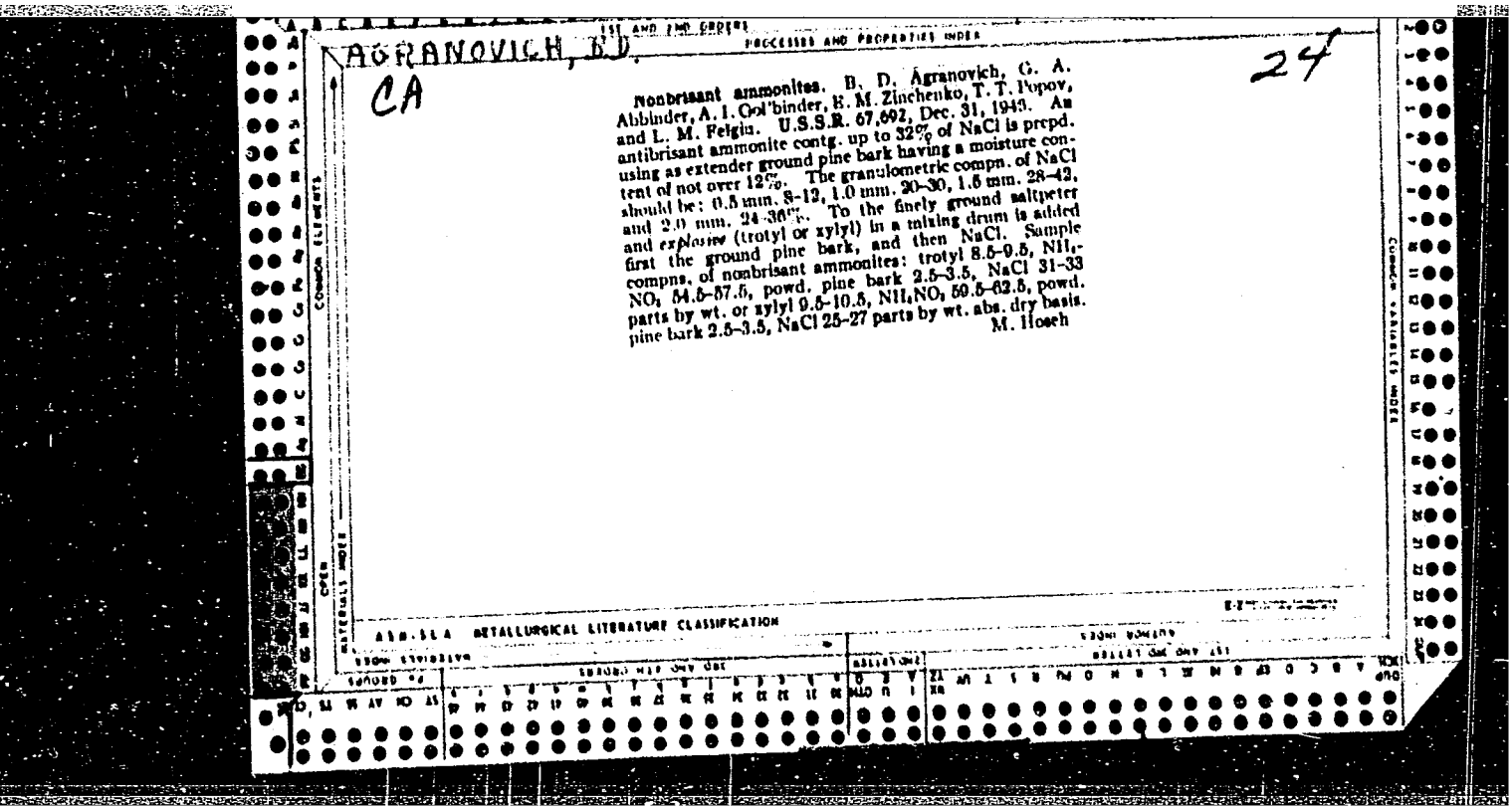

AGRANOVICH, B. D.

CA

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Nonbrisant ammonites. B. D. Agranovich, G. A. Abbinder, A. I. Col'binder, E. M. Zinchenko, T. T. Popov, and L. M. Felgin. U.S.S.R. 67,692, Dec. 31, 1945. An antibrisant ammonite contg. up to 32% of NaCl is prepd. using as extender ground pine bark having a moisture content of not over 12%. The granulometric compn. of NaCl should be: 0.5 mm. 8–12, 1.0 mm. 20–30, 1.5 mm. 28–42, and 2.0 mm. 24–30%. To the finely ground saltpeter and explosive (trotyl or xylyl) in a mixing drum is added first the ground pine bark, and then NaCl. Sample compns. of nonbrisant ammonites: trotyl 8.5–9.5, NH_4NO_3 54.5–57.5, powd. pine bark 2.5–3.5, NaCl 31–33 parts by wt. or xylyl 9.5–10.5, NH_4NO_3 59.5–62.5, powd. pine bark 2.5–3.5, NaCl 25–27 parts by wt. abs. dry basis.

M. Hoseh

AGRANOVICH, B. Ya.; and GOL'DMAN, L. N.

Opyt uspeshnogo lecheniya aktinomikoza legkikh penitsillinom.

Klinich. Meditsina, #12, 1947, pp 56-62 - Bibliogr: 16 nazv.

Letopis' Zhurnal'nykh Statey, #3, 1948, item 1895

ARGANOVICH, B. Ya.

Zelenin, V. F. and Arganovich, B. Ya. "The principles and the future of the treatment of hypertonic disease", Trudy Chetvertoy sessii Akad. Med. nauk SSSR, Moscow, 1948, p. 66-79.

SO: U-2888, 12 Feb. 53, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949).

AGRANOVICH, I. YA.

Sulfanilamide therapy. Moskva, Medgiz, 1949. 157 p. (Biblioteka prakticheskogo vracha)

DAFM

USSR :

Reprocessing of condensed water formed in manufacturing of synthetic fatty acids. N. K. Man'kovskaya, I. G. Arapovich, and N. T. Solodova. *Maslobolno-Zhirovaya* [illegible] No. 8, 23–4(1954).—Salting out of synthetic fatty acids, with distd. water contg. Na_2SO_4 removes HOAc and HCOOH. Use of satd. salt soln. or addn. of salt directly to I produced the same results. The product after salting out contained HOAc plus CHOOH 1.5; PrOOH, BuOOH, plus valeric acid 25–30%; with the remainder comprising the higher mol. wt. acids, esters of these, and unsaponifiable matter. Vladimir N. Krukovsky

AGRANOVICH, I.G., inzh.

Determining ethyl alcohol content. Masl.-zhir.prom. 29 no.1:36 Ja '63.
(MIRA 16:2)

1. Shebekinskiy kombinat sinteticheskikh zhirnykh kislot i zhirnykh spirtov.
(Ethyl alcohol)

AGRANOVICH, I.G., inzh.

Shebekino Combine of Synthetic Fatty Acids and Fatty Alcohols.
Masl.-zhir. prom. 29 no.5:5 My '63. (MIRA 16:7)

(Shebekino--Chemical industries)

AGRANOVICH, L.G., inzhener.

Testing the tightness of welded seams by using vacuum gauges. Nov. tekh. i pered. op. v stroi. 19 no.2:19-21 F '57. (MLRA 10:4)
(Vacuum gauges) (Welding--Testing)

AGRANOVICH, L.G., inzh.

Testing the tightness of welded volumetric right-angled structures. Nov.tekh.mont.i spets.rab.v stroi. 21 no.5:14-15 My '59. (MIRA 12:7)

(Welding--Testing) (Vacuum gauges)

HODGE, W.V.D.; GOLOVINA, L.I. [translator]; GOLOVIN, O.N. [translator]; UZKOV, A.I., redaktor; AGRANOVICH, M.S., redaktor; KORNILOV, B.I., tekhnicheskiy redaktor.

[Methods of algebraic geometry] Metody algebraicheskoi geometrii. Moskva, Izd-vo inostrannoi lit-ry. Vol. 1. 1954. 461 p.(MLRA 7:11)
(Geometry, Algebraic)

AGRANOVICH, M.S.

[redacted]

Simultaneity of certain methods of summation. Uch.zap.Mosk.un. 165:169-194 '54. (MLRA 8:2)
(Series) (Matrices)

SANTALO, L.A.; SHESTOPAL, M.G. [translator]; LOPSHITS, A.M., redaktor; YAGLOM, I.M., redaktor; AGRANOVICH, M.S., redaktor; GRIBCVA, M.P., tekhnicheskiy redaktor

[Introduction to integral geometry. Translated from the English] Vvedenie v integral'nuiu geometriiu. Perevod s angliiskogo M.G. Shestopal. Pod red. A.M.Lopshitsa i I.M.IAgloma. S dop. I.M. IAgloma. Moskva, Izd-vo inostrannoi lit-ry, 1956. 183 p.
(Geometry, Differential) (MLRA 10:1)

GEL'FAND, Izrail' Moiseyevich,; SHILOV, Georgiy Yevgen'yevich,; AGRANOVICH, M.S., red.; STEBAKOVA, L.A., red.; GAVRILOV, S.S., tekhn. red.

[Spaces of fundamental and generalized functions] Prostranstva osnovnykh i obobshchennykh funktsii. Moskva, Gos. izd-vo fiziko-matematicheskoi lit-ry, 1958. 307 p. (Obobshchennye funktsii, no. 2). (MIRA 11:12)

(Functional analysis)

AUTHOR: Agranovich, M.S. SOV/140-58-4-1/30

TITLE: Some General Formulas for the Solutions of Partial Differential Equations With Constant Coefficients (Nekotoryye obshchiye formuly dlya resheniy uravneniy v chastnykh proizvodnykh s postoyannymi koeffitsiyentami)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Ministerstva vysshego obrazovaniya SSSR, Matematika, 1958, Nr 4, pp 3-20 (USSR)

ABSTRACT: The author considers the partial differential equation

$$(1) \quad P\left(\frac{\partial}{\partial x}\right)u(x) \equiv P\left(\frac{\partial}{\partial x_1}, \ldots, \frac{\partial}{\partial x_n}\right)u(x_1, \ldots, x_n) = 0,$$

where $P(t)$ is a polynomial with constant coefficients. Over the space $K(a)$ the author seeks the general form of the linear functional $u(x)$ which satisfies (1). Here $K(a)$ is a countably normalized space of the infinitely often differentiable complex-valued functions $\varphi(x) = \varphi(x_1, \ldots, x_n)$ which vanish identically outside of the n-dimensional cube A: $|x_\nu| < a$ $(\nu = 1, \ldots, n)$. The principal result of the author consists in the assertion that every solution of (1) is a finite sum of generalized derivatives of certain functions given by an explicit integral representation.

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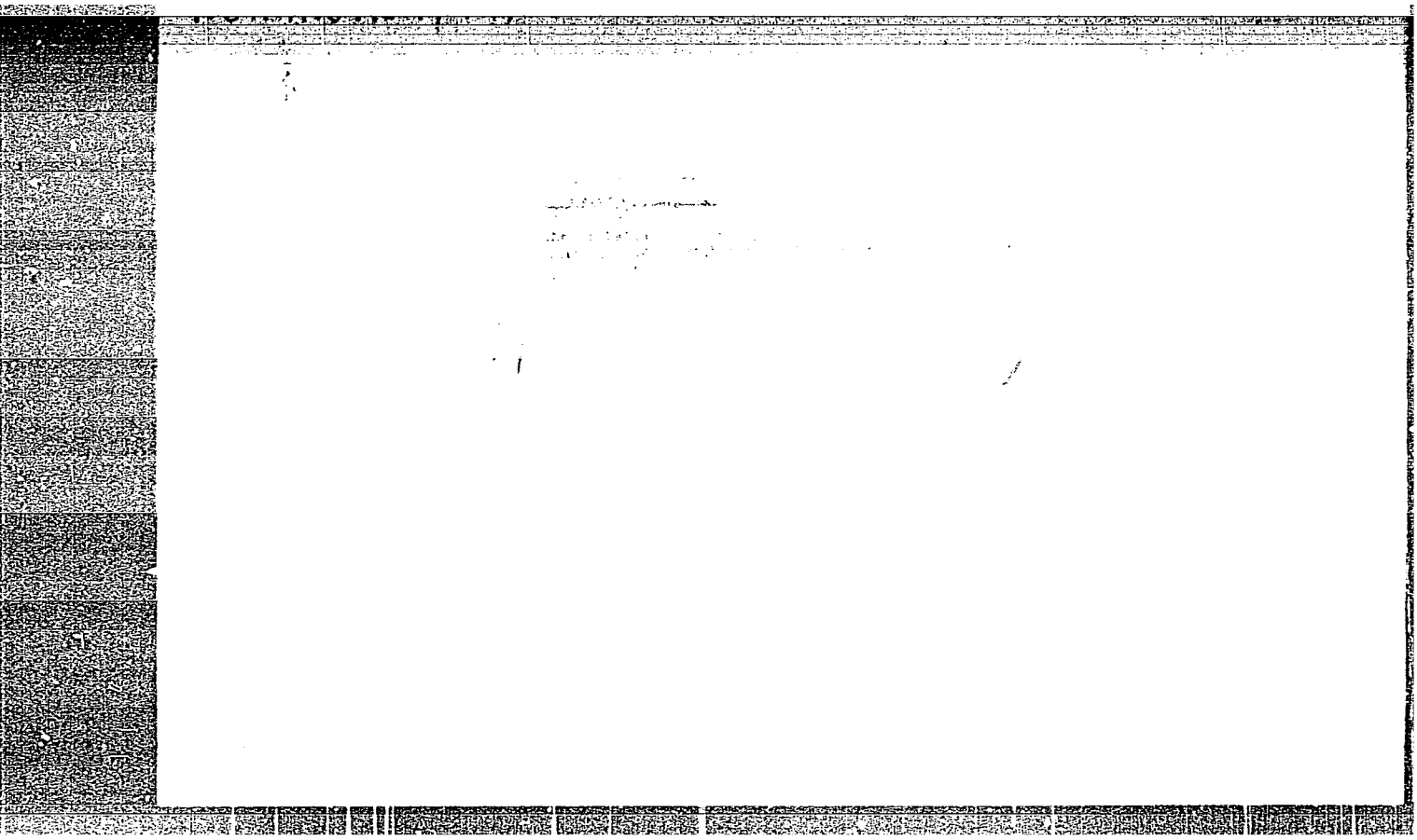
Some General Formulas for the Solution of Partial Differential Equations With Constant Coefficients SOV 140-58-4-2/30

The results overlap with those of Malgrange [Ref 5] and, on the one hand, they are more special since the author considers more special function spaces and domains than Malgrange, but on the other hand they are more extensive since the author succeeds in giving explicitly the structure of the solutions (by the above mentioned integral representations).
There are 7 references, 2 of which are Soviet, 3 French, 1 American, and 1 Hungarian.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

SUBMITTED: February 27, 1958

Card 2/2



APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100520015-7"

AUTHOR: Agranovich, M. S. SOV/20-123-1-1/56

TITLE: General Solutions of Differential-Difference Equations With Constant Coefficients (Obshchiye resheniya differentsial'no-raznostnykh uravneniy s postoyannymi koeffitsiyentami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 9-12 (USSR)

ABSTRACT: In the present paper, at the suggestion of I. M. Gel'fand and with the assistance of G. Ye. Shilov, the author considers the equation

$$(1)\ \sum_{k=0}^{l} P_k\left(\frac{\partial}{\partial x}\right) u(x-h_k) = f(x).$$

where $x=(x_1, \ldots, x_n)$ is a point of the n-dimensional real space , $\frac{\partial}{\partial x} = \left(\frac{\partial}{\partial x_1}, \ldots, \frac{\partial}{\partial x_n}\right)$; P_k are polynomials with constant complex coefficients; $h_k = (h_{k_1}, \ldots, h_{k_n})$ are fixed points in $\mathcal{R}$, whereupon $h_0 = 0$ and $h_k \neq h_j$ at $k \neq j$. Let A and B be bounded regions in $\mathcal{R}$, whereupon all the $x + h_k \in B$ if $\in A$. Let K_A and K_B be spaces of infinitely differentiable complex-valued functions $\varphi(x)$, which vanish outside of A and B respectively, with the usual topology. Let K'_A and K'_B be the spaces of the linear continuous functionals over K_A and K_B, respectively. Under the assumption $u \in K'_B$, $f \in K'_A$, $\varphi \in K_A$ the author seeks the general

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form of the solution u (x), where (1) has to be understood in the sense

$$(u(x), \sum \overline{P_k} \left(-\frac{\partial}{\partial x}\right) \varphi(x+h_k)) = (f(x), \varphi(x)).$$

The coefficients of $\overline{P_k}$ are conjugate to those of P_k.

According to Gel'fand and Shilov [Ref 1,2] a Fourier transformation F is carried out for which the spaces K_A, K_B, K'_A, K'_B go over into the spaces Z_A, Z_B, Z'_A, Z'_B and (1) assumes the form

$$Q(s)v = g,$$

i.e. $$(v, \overline{Q(s)}\psi(s)) = (g, \psi(s)),$$

where $v = F[u]$, $g = F[v]$, $Q(s) = \sum P_k (-is) \exp(h_k is)$ and $\overline{Q(s)} = \sum \overline{P_k}(s) \exp(h_k, -is)$. Further investigations are based on

General Solutions of Differential-Difference Equations With Constant Coefficients SOV/20-123-1-1/56

the representation of the Fourier transform by integrals over several contours. It is shown that every functional $u \in K'_B$ which satisfies (1) with $f = 0$ over K_A, can be represented as a finite sum of generalized derivatives of the ordinary solution, where the ordinary solution is given by a double integral. Therefrom there follows the theorem of Schwartz that if all sufficiently smooth solutions are infinitely often differentiable, then this remains true for all solutions.
Several further similar results are given.
There are 5 references, 3 of which are Soviet, and 2 French.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

PRESENTED: June 25, 1958, by S.L.Sobolev, Academician

SUBMITTED: June 24, 1958

Card 3/3

AGRANOVICH, M. S. Cand Phys-Math Sci -- (diss) "On certain classes of solutions of equations in partial derivatives with constant coefficients." Mos, 1959. 7 pp (Mos Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov), 150 copies. Bibliography at end of text (13 titles) (KL, 45-59, 142)

~~16(11)~~ 16.3500 68036

AUTHOR: Agranovich, M.S. SOV/55-59-3-1/32

TITLE: The Existence of Solutions of Partial Differential Equations With Constant Coefficients in Some Classes of Functions

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 3, pp 3-14 (USSR)

ABSTRACT: The author considers the equation

(1) $P\left(\frac{\partial}{\partial x}\right)u(x) = f(x)$,

where $x = (x_1,\ldots,x_n)$ is a point of the real R^n and $u(x)$, $f(x)$ are complex-valued ordinary or generalized functions. Let K' be the space of linear continuous functionals over the space K of infinitely often differentiable finite functions $\varphi(x)$. Let PF be the set of functions $P\left(\frac{\partial}{\partial x}\right)f(x)$, where $f(x)$ runs through the class F. Generalized functions are elements of K'. The following theorems of existence for solutions defined on the whole R^n are already known: 2) $PK'_\alpha \supset K'_\beta$, where $\alpha = \beta + \text{const}$ and K'_α is the space of the generalized functions of the order [Ref 3,4]; 3) $PC^\alpha \supset C^\beta$, $\alpha = \beta + \left[\frac{n}{2}\right]+1$, where C^α is the space of

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The Existence of Solutions of Partial Differential Equations With Constant Coefficients in Some Classes of Functions

functions continuously differentiable up to the order [Ref 4]; 4) $PC^{\infty} = C^{\infty}$ [Ref 3,4]. The author completes these theorems in the following manner: 2a) it is shown that if the generalized function satisfies the relation $(f(x), \varphi(x)) = \sum_{q \leq p} \int F_q(x) \frac{\partial^q \varphi}{\partial x^q} dx$, where $F_q(x)$ in infinity does not increase quicker than $\exp \|x\|^{A+\varepsilon}$, $\varepsilon > 0$; then the equation (1) has a solution with an analogous structure (here $\frac{\partial^q \psi}{\partial x^q} \equiv \frac{\partial^{q_1+\ldots+q_n} \varphi}{\partial x^{q_1} \partial x_2^{q_2} \ldots \partial x_n^{q_n}}$). 4a) If $f(x)$ is differentiable infinitely often and if all its derivatives in infinity do not increase quicker than $\exp \|x\|^{A+\varepsilon}$ ($\varepsilon > 0$), then there exists a solution with the same properties. 3a) analogous as 4a) but the appearing functions are continuously differentiable only up to a certain order. There are 2 theorems. The paper was written under the leading

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The Existence of Solutions of Partial Differential Equations With Constant Coefficients in Some Classes of Functions SOV/55-59-3-1/32

of Professor G.Ye.Shilov whom the author thanks.
There are 10 references, 2 of which are Soviet, 2 American, 1 Japanese, 3 Swedish, and 2 French.

ASSOCIATION: Kafedra teorii funktsiy i funktsional'nogo analiza (Chair of Theory of Functions and Functional Analysis)

SUBMITTED: January 21, 1959

Card 3/3

16(1)

AUTHOR: Agranovich, M.S.

SOV/20-124-6-1/55

TITLE: On Analytic Solutions of Partial Equations With Constant Coefficients (Ob analiticheskikh resheniyakh uravneniy v chastnykh proizvodnykh s postoyannymi koeffitsiyentami)

PERIODICAL: Doklady Akademii nauk SSSR,1959,Vol 124,Nr 6,pp 1183-1186(USSR)

ABSTRACT: The author considers the partial differential equation

$$(1)\quad P(D)u(x)\equiv \sum_{0\leq \nu\leq m} a_\nu D^\nu u(x)\equiv \sum_{0\leq \nu_k\leq m_k} a_{\nu_1\ldots\nu_n}\frac{\partial^{\nu_1+\ldots+\nu_n}u(x)}{\partial x_1^{\nu_1}\ldots\partial x_n^{\nu_n}} = f(x)$$

He supposes that $f(x)=\sum b_\mu x^\mu$ and $u(x)=\sum c_\mu x^\mu \equiv$

$\equiv\sum c_{\mu_1\ldots\mu_n} x_1^{\mu_1}\ldots x_n^{\mu_n}$, where

$$(2)\quad |c_\mu|\leq C_\varepsilon(a+\varepsilon)^\mu \mu^{-p\mu}\equiv C_{\varepsilon_1\ldots\varepsilon_n}\prod(a_k+\varepsilon_k)^{\mu_k}\mu_k^{-p_k\mu_k},\quad \varepsilon>0.$$

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Theorem: Let $u(x)$ be analytic solution of (1) which satisfies the condition (2). Then it is

$$(3)\quad u(x)=(2\pi i)^{-n}\sum_{\gamma}\sum_{-\gamma\leq\nu\leq m} d_{\gamma\nu}\int_{T_{\gamma+\nu}} P(s)^{-1}s^{-\gamma-1}e^{(x,s)}ds,$$

where $(x,s)=x_1s_1+\ldots+x_ns_n$, $|x_k|<a_k^{-1}$, if $p_k=0$ and $a_k>0$, $d_{\gamma\nu}=a_\nu c_{\mu,\mu}!$ $(\mu=\gamma+\nu\geq 0)$, so that it holds $\sum_\nu d_{\gamma\nu}=b_\gamma\cdot\gamma!$,

$$(4)\quad |d_{\gamma\nu}|\leq C_\varepsilon'(a+\varepsilon)^\mu e^{-\mu}\mu^{(1-p)\mu}.$$

If for a sequence of solutions it tends $C_\varepsilon\to 0$, then it holds $C_\varepsilon'\to 0$ too. On the other hand: If the numbers $d_{\gamma\nu}$ satisfy the condition (4), then (3) is an analytic solution of (1).

The integration in (3) has to be carried out along rather a circumstantially given system of contours T_i. The author considers several special cases of the theorem and a similar Cauchy problem. The results partially overlap with

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On Analytic Solutions of Partial Equations With Constant Coefficients SOV/20-124-6-1/5

the results of A.G.Kostyuchenko, L.Ehrenpreis and V.I.Protasov. The author thanks Professor G.Ye.Shilov for his assistance.
There are 5 references, 2 of which are Soviet, 2 American, and 1 French.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

PRESENTED: October 31, 1958, by A.N.Kolmogorov, Academician

SUBMITTED: October 30, 1958

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SOV/20-128-3-1/58

16(1)

AUTHOR: Agranovich, M.S.

TITLE: Several Theorems on Partial Differential Equations With Constant Coefficients

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 3, pp 439-442 (USSR)

ABSTRACT: Let $x=(x_1,\ldots,x_n)$ be a point of the real R_x^n; $P(\partial/\partial x)=P(\partial/\partial x_1,\ldots,\partial/\partial x_n)$ a polynomial of degree m with complex coefficients in $\partial/\partial x_j$; $\partial^r/\partial x^r=\partial^{|r|}/\partial x_1^{r_1}\ldots\partial x_n^{r_n}$, where $|r|=r_1+\ldots+r_n$; $\|x\|=\sum x_i^2$; K the space of the finite ∞-smooth functions.

Theorem 1: $P(\partial/\partial x)$ is assumed to possess the fundamental solution $E(x)$ which is on K a generalized function of order N:

$$(1)\qquad (E,\varphi)=\sum_{|r|\leqslant N}\int e_r(x)\,\frac{\partial^r\varphi(x)}{\partial x^r}\,dx,$$

where $e_r(x)$ are continuous functions. Let Ω and Ω' be bounded domains, $\bar{\Omega}\subset\Omega'$. Let the generalized function $u(x)$ satisfy in Ω' the equation

$$(2)\qquad P(\partial/\partial x)u(x)=f(x).$$

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Several Theorems on Partial Differential Equations With Constant Coefficients

Let $f(x) \in C^{p+N}$ in Ω' $(p \geqslant 0)$ and $u(x) \in C^{m+p+N}$ in the boundary strip $\Omega' \setminus \overline{\Omega}$. Then it is $u(x) \in C^{p}$ in Ω'.
Under certain conditions three further theorems give the extension of theorem 1 to unbounded domains and some special cases. The last theorem 5 describes all the solutions of (2), if $f(x) \in C^{\infty}$.
The results can be extended to systems of equations and partially to some equations with convolution.
I.G.Petrovskiy is mentioned. The author thanks Professor G.Ye.Shilov for the guidance of the paper.
There are 10 references, 5 of which are Soviet, 2 Swedish, 1 French, 1 American, and 1 Japanese.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

PRESENTED: June 3, 1959, by A.N.Kolmogorov, Academician
SUBMITTED: June 2, 1959

ITO, Kiyosi [ITO, Kiyoshi]; VENTTSEL', A.D. [translator]; VERBA, S.A. [translator]; DYNKIN, Ye.B., red.; AGRANOVICH, M.S., red.; IOVLEVA, N.A., tekhn.red.

[Probability processes] Veroiatnostnye protsessy. Pod red. E.B.Dynkina. Moskva, Izd-vo inostr.lit-ry. No.1. 1960. 133 p. (MIRA 14:1)
Translated from the Japanese.
(Probabilities)

KARLEMAN, Torsteyn, matematik[Carleman, T.]; KARABEGOV, V.-K.I. [translator]; BOGOLYUVOV, N.N., red.; AGRANOVICH, M.S., red.; PRIDANTSEVA, S.V., tekhn. red.

[Mathematical problems in the kinetic theory of gases. Translated from the French] Matematicheskie zadachi kineticheskoi teorii gazov. Pod red. N.N.Bogoliubova. Moskva, Izd-vo lit-ry, 1960. 120 p.
(Gases, Kinetic theory of) (MIRA 14:7)

AGRANOVICI, M.S. [Agranovich, M.S.]

Differential equations with constant coefficients. Analele mat 16 no.1:3-74 Ja-Mr '62.

23575
S/042/61/016/002/001/005
C 111/ C 222

16.3500

AUTHOR: Agranovich, M. S.

TITLE: On partial differential equations with constant coefficients

PERIODICAL: Uspekhi matematicheskikh nauk, v. 16, no. 2, 1961, 27-93

TEXT: § 1. Introduction. § 2. Theorems on the smoothness of the solutions. Theorems on the uniqueness and the increase of the solutions. § 3. General solutions in the bounded region. § 4. The finding of all solutions with aid of the smooth solutions. § 5. General solutions in the whole space. § 6. Analatic solutions.

The author considers general partial differential equations with constant coefficients

$$P\left(\frac{\partial}{\partial x_1}, \ldots, \frac{\partial}{\partial x_n}\right) u(x_1, \ldots, x_n) = f(x_1, \ldots, x_n) \qquad (1.1)$$

where $P(s_1, \ldots, s_n)$ is a polynomial. The pricipal contents of the paper is a detailed representation of results annonnced without proof

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On partial differential equations ...

by the author in earlier papers (Ref. 40: Nekotoryye obshchiye formuly dlya resheniya uravneniy v chastnykh proizvodnykh s postoyannymi koeffitsiyentami [Some general formulas for the solution of partial differential equations with constant coefficients] Izv. vuzov. ser. "Matematika", no. 4 (5) (1958),3-20; Ref. 41: Obshchiye resheniya differentsial'no - raznostnykh uravneniy s postoyannymi koeffitsiyentami [General solutions of differential - difference equations with constant coefficients] DAN 123, no. 1 (1958) 9-12; Ref. 42: Ob analiticheskikh resheniyakh uravneniy v chastnykh proizvodnykh s postoyannymi koeffitsiyentami [On analytic solutions of partial differential equations with constant coefficients] DAN 124, no. 6 (1959), 1183-1186; Ref. 43: Neskol'ko teorem ob uravneniyakh v chastnykh proizvodnykh s postoyannymi koeffitsiyent [Some theorems on partial differential equations with constant coefficients] DAN 128, no. 3 (1959), 439-442; Ref. 44: O nekotorykh klassakh resheniy uravneniy v chastnykh proizvodngkh s postoyannymi koeffitsiyentami, [On some classes of solutions of partial differential equations with constant coefficients] kandidatskaya dissertatsiya, MGU, 1959.

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On partial differential equations ...

The systematic representation of the mentioned results overlaps sometimes with well-known results of Ehrenpreis, Malgrange, Shirota, Hörmander and others.

The main theorem of § 2 contains the following assertion: Let Ω' and Ω be two bounded regions, where the closure of the first region lies in the interior of the second one. If then in (1.1) the right-hand side f(x) is infinitely often differentiable in Ω and the solution u(x) is infinitely often differentiable in the boundary strip $\Omega \setminus \Omega'$ then u(x) is infinitely often differentiable everywhere in Ω. Furthermore, the author proves a stronger theorem in which the moothness (or the order) of u in Ω is estimated by the smoothness (or order) of f in Ω and u in $\Omega \setminus \Omega'$. It is shown that the maximum of the amount of the solution in a region can be estimated by the maximum of the amount of the right-hand side and some of its derivatives in this region and by the maximum of the solution and some of its derivatives in the boundary strip. In exceptional cases the order of increase of the solution in a region can be estimated by the order of increase of the right-hand side in the

region and by the order of increase of the solution in the boundary strip.

In § 3 the author constructs the general solution of the equation (1.1) in the space of the generalized function $K'(\Omega)$ where Ω is a bounded region with a sufficiently regular boundary. If especially $f \equiv 0$ then then general solution has the form

$$u(x) = \sum_{|q|\leq q_0} \int_{y\in\Gamma} \frac{\partial^q E(x-y)}{\partial x^q} \, d\mu_q \qquad (3.18)$$

where $E(x)$-- fundamental function determined according to the formula of Hörmander-Trêves, Γ -- boundary of Ω, μ_q --measures on it. Thus the general solution depends on an arbitrary system of measures on Γ. From (3.18) it is concluded: in a convex polyhedron every solution of (1.1) ($f \equiv 0$) is a finite sum of generalized functions which satisfy the equation in halfspaces containing Ω and bounded by hyperplanes

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going through the lateral faces of the polyhedron.

In § 4 it is shown that all generalized solutions and all ordinary solutions with a small reserve of smoothness in several spaces can be obtained from the ordinary arbitrarily smooth solutions by a differentiation in the sense of the generalized functions and by formation of finite sums.

In § 5 the author uses a modification of the method of Shirota in order to describe all solutions of (1.1) in the classes K', K'_F and C^∞ (K'-- space of all functionals of finite order), e.g.: Let $\{f_\nu(x)\}$ be an arbitrary system of functions of C^∞ ($\nu=(\nu_1,\dots,\nu_n)$; $\nu_j = 0, \pm 1, \pm 2, \dots$), where

$$\sum_\nu f_\nu(x) \equiv f(x) \qquad (5.5)$$

and $f_\nu(x) = 0$ outside the n-dimensional cube $\nu \leq x \leq \nu + 3$. Let $F_\nu(s)$ be the Fourier transform of $f_\nu(x)$. Let $C_{q\nu}$ be constants so that

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On partial differential equations ...

$$\left| \frac{\partial^q f_\nu(x)}{\partial x^q} \right| \leq C_{q\nu} \qquad (5.7)$$

holds for all q and ν. Then there exists a system $\{ H_\nu \}$ (depending only on $\{ C_{q\nu} \}$) of Hörmander-steps for $P(-is)$ so that the general solution of (1.1) belonging to C^∞ is given by

$$u(x) = \frac{1}{(2\pi)^n} \cdot \sum_\nu \int_{H_\nu} \frac{F_\nu(s)}{P(-is)} e^{-i(x,s)} \, ds \qquad (5.8)$$

In § 6 the author constructs general solutions in different classes of analytic functions. He uses contoures being analogous to the Hörmander-steps which, however, do not replace the product of n straight lines but the product of n circles $|s_1| = \varrho_1, \ldots, |s_n| = \varrho_n$.

Here the general solution depends on a countable number of constants

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On partial differential equations ...

which satisfy certain simple conditions.

The author mentions M. J. Vishik, G. Ye. Shilov, J. G. Petrovskiy, V. P. Palamodov, T. A. Kokareva, A. G. Kostyuchenko, J. M. Gel'fand, Z. Ya. Shapiro, V. A. Borovikov, L. A. Chudov, V. V. Grushin, V. M. Borok and V. G. Protasov.

There are 22 Soviet-bloc and 23 non-Soviet-bloc references. The references to the four most recent English-language publications read as follows: H. Busemann, Convex surfaces, New York, London, 1958; L. Ehrenpreis, Solutions of some problems of division, IV, Amer. Journ. of Math., 82, No. 3 (1960), 522-587; L. Hörmander, Differential operators of principal type, Math. Ann. 140, No. 2 (1960), 124-146; F. Trèves, Differential polynomials and decay at infinity, Bull. Amer. Math. Soc. 66, No. 3 (1960), 184-186.

SUBMITTED: October 10, 1960

Card 7/7

AGRANOVICH, M.S.

Index of elliptic operators. Dokl. AN SSSR 142 no.5:983-985 F '62. (MIRA 15:2)

1. Vsesoyuznyy zaochnyy mashinostroitel'nyy institut.
Predstavleno akademikom I.G. Petrovskim.
(Operators(Mathematics))

S/020/62/146/003/003/019
B172/B186

AUTHORS: Agranovich, M. S., Dynin, A. S.

TITLE: General boundary value problems for elliptic systems in multi-dimensional regions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 511-514

TEXT: The results reviewed here, have already been published for the case of one single equation (A. S. Dynin: DAN, v. 141, no. 2, (1961)).

Consideration is given to a region G of R^n, the operator

$$Au = A(x,D)u(x)$$

in G, and the operator

$$Bu = B(x,D)u(x)$$

on the boundary Γ, where A is a matrix of the order p, $D = (D_1,\dots,D_1)$, $D_j = -i\frac{\partial}{\partial x_j}$, and B is a matrix with $r = ps/2$ rows and p columns. The elements of A and B are linear partial differential operators. The

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S/020/63/149/002/001/028
B112/B180

AUTHORS: Agranovich, M. S., Vyshik, M. I.

TITLE: Elliptic boundary value problems depending on a parameter

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 2, 1963, 223-226

TEXT: The boundary value problem under consideration is due to I. G. Petrovskiy. It reads

$$Au \equiv \sum_{\alpha+|\beta|\leqslant s} a_{\alpha\beta}(x)\, q^{\alpha} D^{\beta} u(x) = f(x) \quad \text{в } G, \tag{1}$$

$$B_{\nu}u \equiv \sum_{\alpha+|\beta|\leqslant m_{\nu}} b_{\nu\alpha\beta}(y)\, q^{\alpha} D^{\beta} u(x)\big|_{x=y} = g_{\nu}(y) \quad (y \in \Gamma,\ \nu = 1, \ldots, r). \tag{2}$$

and is investigated in a bounded region G of the n-dimensional space R^n. The coefficients of the system and of the boundary operators are assumed to be dependent on a parameter $q \in Q$, where Q is an angular region of the complex plane with the vertex in the coordinate origin. Algebraic

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conditions (to be fulfilled by the system and by the boundary operators) are derived which are sufficient for the unambiguous solvability of the problem for large $|q|$.

PRESENTED: October 12, 1962, by I. G. Petrovskiy, Academician

SUBMITTED: October 8, 1962

AGRANOVICH, M.S.; VISHIK, M.I.

Elliptic problems with a parameter and parabolic problems of a general type. Usp. mat. nauk 19 no.3:53-161 My-Je '64. (MIRA 17:10)

ACCESSION NR: AP4025103 S/0020/64/155/003/0495/0498

AUTHOR: Agranovich, M. S.

TITLE: General boundary value problems for integral-differential elliptical systems

SOURCE: AN SSSR. Doklady*, v. 155, no. 3, 1964, 495-498

TOPIC TAGS: boundary value problem, elliptical system, integral differential elliptical system, Euclidean space, differential elliptical system, Dirichlet problem, mathematical analysis

ABSTRACT: A class of singular integral-differential elliptical systems in a bounded domain G of an n-dimensional Euclidean space R^n is described. The operator

$$Au(x) = M \sum_{|\alpha| \leq s} a_\alpha D^\alpha L\, u(x). \qquad (1)$$

is examined in the domain G. In this particular case, $x = (x^1, \ldots, x^n)$; L is the operator for extending the function from G to R^n, restricted within the valuations $\| \ \|_K$, $0 \leq K \leq 1$,; M is the operator for contracting the function from R^n to G; $D^\alpha = D_1^{\alpha_1} \ldots D_n^{\alpha_n}$ where $D_\nu = -i\partial/\partial x^\nu$; $|\alpha| = \Sigma \alpha_\nu$. The operator A can be any differential opera-

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ACCESSION NR: AP4025103

tor with smooth coefficients. Set $U = (A,B) = (A, B_1, \ldots\ldots, B_r)$. The operator $\mathfrak{U}$ will be called elliptical if A is truly elliptical and if A and B_ν are implied in each point $X \in \Gamma$ by the condition (π). If $\mathfrak{U}$ is an elliptical operator, then, for $u \in H_t(G)$, the apriori estimate

$$\|u\|_{t,G} \leqslant C\left(\|Au\|_{t-s,G} + \sum \|B_\nu u\|_{t-m_\nu-1/p,\Gamma} + \|u\|_{t,G}\right), \qquad (5)$$

where C is a constant independent of u, is valid. $\mathfrak{U}$ is the Φ- operator from $H_l(G)$ into $H_l(G,\Gamma)$ $(l_0 \leq l \leq l_1)$. If $\mathfrak{U}$ is an elliptical operator continuously dependent upon t, $0 \leq t \leq 1$, then the index kappa $(\mathfrak{U})$ does not depend upon t. If (A, B') and (A, B") are elliptical operators with one and the same A, then kappa (A, B') - x(A,B") = x(S) where S is some system r of singular integral equations with r unknown functions in Γ. If (A', B) and (A",B) are elliptical operators with one and the same B, where the symbols $\sigma_{A'}$, and $\sigma_{A''}$ of the operators A' and A" coincide with $x \in \Gamma$, then x(A',B) - x(A",B) = x(S), where S is a system of ρ singular equations in R^n with unknown functions. The results are basically valid if G is a smooth manifold with an extremity G and l is not necessarily an integral. Orig. art. has: 7 .. equations.

ASSOCIATION: none

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ACCESSION NR: AP4025103

SUBMITTED: 09Dec63 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: MA NR REF SOV: 014 OTHER: 002

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L 26691-66 EWT(d) IJP(c)

ACC NR: AP6016904 SOURCE CODE: UR/0042/65/020/005/0003/0120

AUTHOR: Agranovich, M. S.

ORG: none

TITLE: Singular elliptic integro-differential operators

SOURCE: Uspekhi matematicheskikh nauk, v. 20, no. 5, 1965, 3-120

TOPIC TAGS: integral operator, differential operator, Dirichlet problem

ABSTRACT: This article is a state-of-the-art survey of the field. It includes a survey of the literature and discussions of: the spaces W_2 and $C_p B$; expansions in spherical functions; singular integral operators in R^n; singular integro-differential operators in R^n and on manifolds without boundaries; singular integro-differential operators in halfspaces and on manifolds with boundaries-the relationships between the property of being Noetherian, regularizers, and a priori evaluations; eliptic operators in R^n, elliptic operators on manifolds without boundaries; the Shapiro-Lopatinskiy conditions; a priori evaluations for evaluations for elliptic problems in R_+^n; ellipticity on manifolds with boundaries; several index theorems; and the Dirichlet problem. The author thanks all the mathematicians (I. M. Gel'fand, M. I. Vishik, L. R. Volevich, A. I. Vol'pert, A. S. Dynin, I. M. Zinger, Z. Ya. Shapiro, S. D. Eydel'man) with whom he discussed the problems of elliptical theory. Orig. art. has: 18 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 14Jun64 / ORIG REF: 074 / OTH REF: 037

Card 1/1 BLG UDC: 517.43

AGRANOVICH, R. I.

USSR/Medicine - Antibiotics

Jan 51

"Application of Penicillin Together With Ekmolin and Novocain in Clinical Practice," Prof Z. V. Ermol'yeva, Corr Mem, Acad Med Sci USSR, G. Ye. Vaisberg, M. D. Braytseva, R. I. Agranovich, Moscow, Therapeutic Clinic and Surg Clinic, Cen Clinical Hosp imeni N. A. Semashko, Min of Transp

"Klin Med" Vol XXIX, No 1, pp 43-48

Antibiotic ekmolin, isolated b y Prof Z. V. Ermol'yeva and L. K. Valedinskaya, enhances antibacterial effect of penicillin or streptomycin and suppresses development of resistant forms of bacteria. Cites detailed clinical data which show this and demonstrate that higher concn of penicillin or streptomycin is retained in the blood when the antibiotic is administered in combination with ekmolin and novocain. Carried out intramuscular injections of 100,000 units of penicillin, 1 ml of 0,5% ekmolin, and 1 ml of 1% novocain.

186T72

AGRANOVICH, R. I.

USSR/Medicine - Antibiotics May 51

"Inhalation of Penicillin in Therapeutic and Surgical Practice," G. Ye. Vaysberg, R. I. Agranovich, M. D. Braytseva, Cen Clinical Hosp imeni Semashko, Min Transp

"Klin Med" Vol XXIX, No 5, pp 76-79

Inhalation of penicillin aerosol has good effect in treatment of suppurative processes of lungs (particularly acute conditions), of acute bronchitis, of early stages of bronchiectasis, and in expediting healing in cases of pneumonia. Inhalation results in high concn of penicillin in the blood for 8-12 hr.

183T66

BULANKIN, I.N. [Bulankin, I.M.] [deceased]; PARINA, Ye.V. [Paryna, IE.V.]; AGRANOVICH, R.I. [Ahranovych, R.I.]; LYUBARTSEVA, L.A. [Liubartseva, L.O.]; KOLESNIK, L.S. [Kolesnyk, L.S.]

Role of disulfide groups in the formation of gels during acid-alkaline denaturation of egg albumin. Ukr. biokhim. zhur. 33 no.3: 307-314 Je '61. (MIRA 14:6)

1. Kafedra biokhimii Khar'kovskogo gosudarstvennogo universiteta im. A.M.Gor'kogo.
(DISULFIDE GROUP) (ALBUMIN) (COLLOIDS)

GORELOV, N.S.; AGRANOVICH, B.I.

Wolff-Parkinson-White syndrome and myocardial infarct.
Kaz. med. zhur. no.6:46-47 N-D '63. (MIRA 17:10)

1. Bol'nitsa Ministerstva zdravookhraneniya RSFSR pri Vystavke dostizheniy narodnogo khozyaystva SSSR (glavnyy vrach - Ye.A. Kudryavtsev).

ALEKSANYANTS, R.A.; AGRANOVICH, R.I.

Indole content in the blood and urine of psychiatric patients. Zhur. nevr. i psikh. 62 no.1:108-113 '62. (MIRA 15:4)

1. Ukrainskiy nauchno-issledovatel'skiy psikhonevrologicheskiy institut, Khar'kov.
(INDOLE) (PSYCHOSES) (SCHIZOPHRENIA)

AGRANOVICH, R.I.

POOL-1 apparatus in the determination of residual pulmonary volume by means of a closed system using helium. Nov. med. tekh. no.3: 120-124 '65. (MIRA 19:1)

AGRANOVICH, R.M.

Case of a fibrinous body in the pleural cavity. Vest. rent. i rad. 28 no.2:61-62 Mr-Ap'63. (MIRA 16:9)
(PLEURA--FOREIGN BODIES)

AGRANOVICH, R.M.

Case history on gastric calculi. Vest. rent. i rad. 39 no.1:65-66 Ja-F '64. (MIRA 18:2)

AGRANOVICH, R.M.

Case of chorioma of the stomach. Vest. rent. i rad. 40 no.4:68-69 Jl-Ag '65. (MIRA 18:9)

AGRANOVICH, S.A.; BOBROVSKAYA, M.I.; YEGOROVA, Ye.V.

Experience in using electroencephalography in the clinical treatment of pulmonary tuberculosis. Probl. tub. 34 no.1:19-26 Ja-F '56 (MLRA 9:5)

1. Iz kafedry tuberkuleza Belorusskogo instituta usovershenstovovaniya vrachey i Instituta nevrologii, neyrokhirurgii i fizioterapii.
(TUBERCULOSIS, PULMONARY, physiol.
EEG)
(ELECTROENCEPHALOGRAPHY, in various dis.
tuberc., pulm)

AGRANOVICH, S.A., dots.

Control of tuberculosis and morbidity dynamics in rural regions of Minsk Province [with summary in French]. Probl.tub. 35 no.5: 13-17 '57. (MIRA 10:11)

1. Iz Minskogo oblastnogo protivotuberkuleznogo dispansera.
(TUBERCULOSIS, PULMONARY, prev. and control in Russia, in rural areas)

AGRANOVICH, S.A., dotsent; DEGTYAR', V.M.

Aerosoltherapy using antibiotics in the clinical treatment of tuberculosis. Zdrav. Belor. 6 no.6:38-40 Je '60. (MIRA 13:8)

1. Iz Minskogo oblastnogo protivotuberkuleznogo dispansera glavnyy vrach - dotsent S.A. Agranovich.
(AEROSOL THERAPY) (ANTIBIOTICS)
(TUBERCULOSIS)

AGRANOVICH, V.

Letter to the editor. Opt. i spektr. 9 no. 6:798 D '60.
(MIRA 14:1)

(Excitons)

AGRANOVICH, V.

All-Union Conference on the Theory of Solids. Atom. energ. 17 no.2:152-153 Ag '64 (MIRA 17:8)

S.A.

Sect. A

535.343.2-15 : 548.7

1647. The influence of the surface of a molecular crystal on the excitation by light of intermolecular vibrations. V. M. AGRANOVICH AND A. S. DAVYDOV. *Zh. Eksper. Teor. Fiz.*, 21, 677–83 (No. 6, 1951) *In Russian.*

Theoretical. The equation of motion of an infinite 1-dimensional chain is set up and leads to an expression for the limiting frequency at which the chain can be excited. The equation is then solved for a bounded chain of N links and gives a range of N limiting frequencies which are excited with amplitudes rapidly decreasing with distance from the limiting frequency of the infinite chain. This result explains the dependence of the d.r. spectrum of polymers on chain length. The treatment is extended to 3 dimensions and it is found that in the case of thin crystals with large absorption, a large part of the energy goes into the excitation of the band of frequencies near the limiting frequency for infinite thickness. That is, the surface can be said to cause a broadening of the band of frequencies excited.

Such a broadening has been observed by Prikhotko for naphthalene crystals 0·1 μ thick. A. L. MACKAY

"Some Questions of Dispersion in Molecular Optics." Cand Phys-Math Sci, Chair of Theoretical Physics, Kiev State U imeni T. G. Shevchenko, Min Higher Education USSR, Kiev, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)

USSR/ Physics - Optics

Card : 1/1 Pub. 22 - 11/48

Authors : Agranovich, V. M.

Title : Dispersion of the natural optic property of crystals with inactive (optically) molecules

Periodical : Dok. AN SSSR 97/5, 797 - 800, August 11, 1954

Abstract : Dispersion of optical properties of crystals having molecules which can not rotate the plane of polarization is described. An equation, expressing dependance of the dispersion on the frequency of the falling light, is derived. Six references (1937-1952).

Institution : ...

Presented by : Academician L. S. Landsberg, April 8, 1954

USSR/Optics - Physical Optics, K-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35749

Author: Agranovid, V. M., Davydov, A. S.

Institution: None

Title: Absorption and Luminescence Spectra of Polyatomic Molecules

Original Periodical: Nauk. zap. Kiivs'k. un-t., 1955, 14, No 8, 15-20

Abstract: Starting with the idea that the polyatomic molecule can be considered to some approximation as a complex system, obeying statistical laws, a determination was made of the shape of the absorption bands and of the fluorescence bands of bomplicated molecules, characterized by not too strong an interaction between the electronic and oscillatory states (Neporent, B. S., Eksperim. i teor. fiziki., 1951, 21, 172). It is shown that the Levshin mirror-symmetry law should hold for such molecules.

NAUKOVI ZAPISKI
Kiev Derzhav. Univ. im T. G. Shevchenka.

Card 1/1

AGRANOVICH, V.M.; KUCHEROV, I.IA. [Kucherov, I.IA.]; FAYDISH, A.N. [Faidysh O.N.]

Diffusion displacement length of excitons in anthracene crystals.
Nauk povid. KDU no.1:25-27 '56. (MIRA 11:4)
(Anthracene) (Excitons)

ALEKANOVICH, V.N.

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AGRANOVICH, V. M.

Category: USSR / Physical Chemistry - Crystals B-5

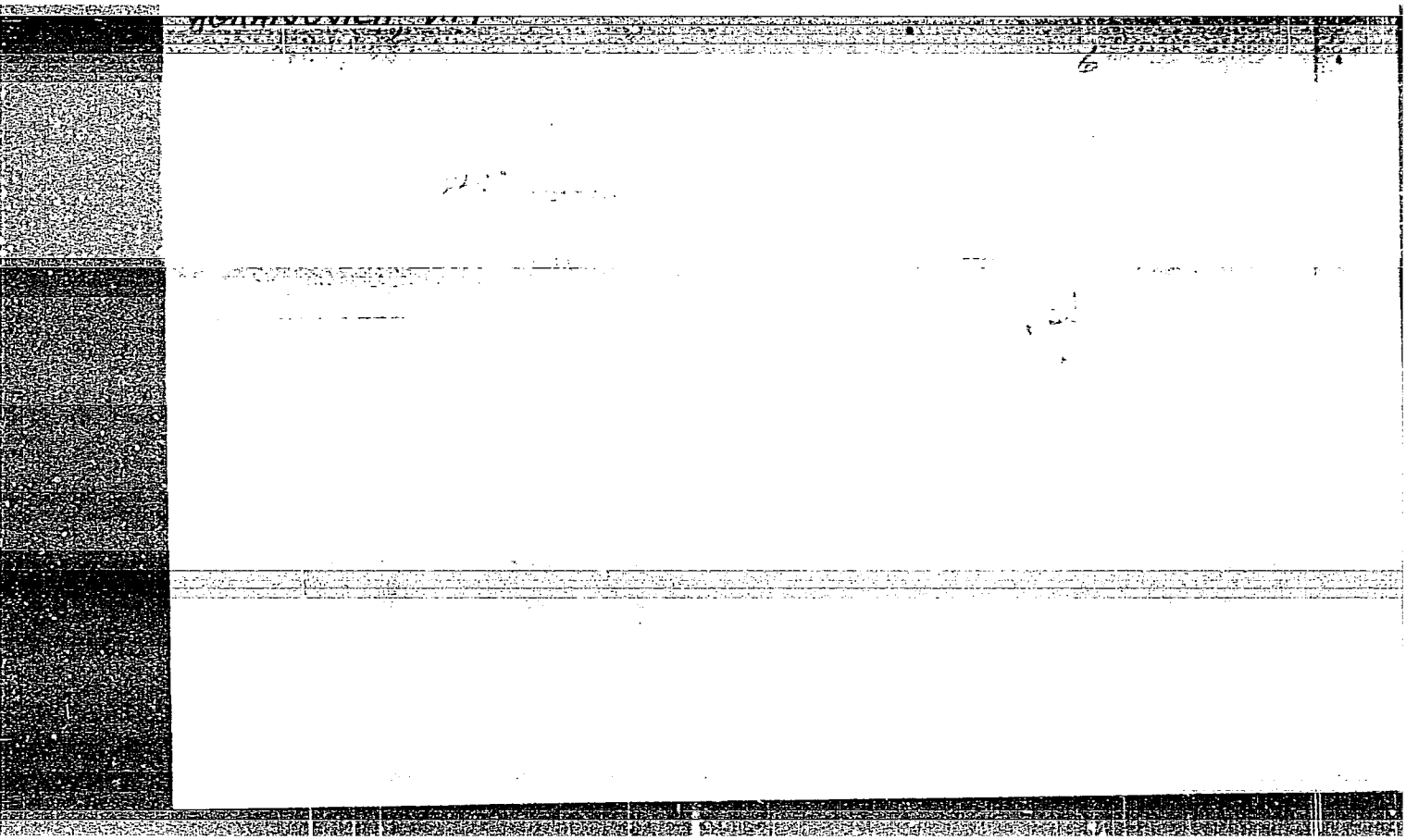
Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29735

Author : Agranovich V. M., Faydysh A. N.
Inst : not given
Title : Effect of Reabsorption on Quantum Yield of Luminescence of Solid Solutions of Organic Compounds

Orig Pub: Optika i spektroskopiya, 1956, 1, No 7, 885-895

Abstract: The assumption is made that reabsorption increases considerably the effectiveness of energy transfer from base substance to admixture, since the excitons having undergone de-excitation in the base substance are restored anew as a result of transformation of short-wave photons of base substance luminescence into excitons ("captivation of radiation"). On the basis of the assumption of a diffusion nature of the motion of excitons and taking into account the reabsorption, the authors have derived expressions for quantum yields of luminescence of admixture and base substance, in solid solutions of organic compounds.

Card : 1/1 -30-



AGRANOVICH, V. M. (Acad. Sci. USSR)

with DAVYDOV, A. S. "Optical Model of Nucleons-nuclei Interaction in the Resonance Region of the Compound Nucleus,"

with STAVINSKIY, V. S., "On the Theory of the Photonuclear Cross Section," paper submitted at the All-Union Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

Agranovich, V. M.

B-5

USSR/Physcial Chemistry - Crystals.

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3674.

Author : V.M. Agranovich, I. Ya. Kucherov, O.M. Faydish.
Inst : Kiev State Univ
Title : Diffusion Shift Length of Exitons in Anthracene Crystals.

Orig Pub: Ukr. fiz. zh., 1957, 2, No 1, 61-67.

Abstract: Continuing the previously published studies (RZhKhim, 1956, 57373), the dependence of the relative luminescence quantum yields B of solid naphthacene (I) solutions in anthracene (II) in the I concentration in the range from 1.5×10^{-6} to 4.7×10^{-6} mole per mole and at the excitation with $\lambda = 365$ mμ was investigated. B of pure II was assumed to be 1. Within the above mentioned range, $B_{//}$ changes from 0.84 to 0.04, and $B_{\perp}$ changes from 0.08 to 0.715. Also the dependence of B on light absorption factor k for $\lambda = 313$, 366 and 405 mμ was investigated. $B_{//}$ rises with the rise of k, but $B_{\perp}$ drops.

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Card : 1/2