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Change of the fluorescence spectra of magnesium perchlorate system and dehydrating as a result of the dark reaction. V. P. Gasharov (A. N. Bakh. Hurdern. Inst., Acad. Sci. USSR; Moscow), *Doklady Akad. Nauk S.S.S.R.*, 82, 729-731 (1972); *ibid.*, C. J., 44, 221W; 45, 419, 2246B.—On standing in the dark, the band of the fluorescence spectrum of an adsorbate of Mg perchlorate on MgO, obtained from a solid, in EtOH, showed gradual disappearance of the O_2 and the EtOH complexes, with only the unknown complex of the product of the reaction remaining. The same red complex with a main max. at 664 m μ was found with adsorbates obtained from solids, in EtO, Me₂CO, and CH₂Cl₂. An adsorbate (from EtOH) outgassed at 275° showed no fluorescence. Adsorption followed by immediate regeneration, of 60 min. of pure dry O_2 , gave rise to fluorescence with a main max. at 630 m μ , indicating the presence of O_2 complex only. Upon admission, followed by immediate removal, of 20 min. EtOH vapor, this spectrum disappeared, and was replaced by one with a main max. at 649 m μ , which did not change any further over 10 days. Increase of the vapor tension of EtOH over the adsorbate causes a reversible shift of the max. of the fluorescence to longer waves. If the EtOH complex is formed first, and O_2 adsorbed (and then immediately removed) subsequently, the original spectrum undergoes no change, the max. remaining at 673 m μ , even if the pressure of O_2 over the adsorbate is increased. This proves that O_2 is unable to displace the solvent from its complex with the dye. The same results were obtained with mixts. of solvents EtOH, EtO, and CH₂Cl₂. In some of these cases, was the 664 m μ complex observed. With H₂O vapor admitted to the O_2 complex, the reaction proceeds in 2 stages. In the 1st stage, the product with the max. at 660 m μ is formed almost instantaneously. This is followed by a 2nd, slow stage, which ends in the formation of the complex with the max. at 644 m μ , identical with the product of the dark reaction. This process takes place only in the presence of H₂O vapor. In the way of preliminary interpretation, the instantaneous reaction, leading to the 660-m μ complex, is attributed to hydrogenation of the O_2 complex at the expense of oxidation of the solvent bond; the 644-m μ max. may be due to the (KOH group bound with the dye). The O_2 complex is highly reactive, particularly in dehydrating solvent mix.

N. Tson

PLESHCHINSKAYA, Ye. G.; ROZENTHAL, Ye. L. ; GACHKOVSKIY, V. F.

Dextrines

Interaction between proteins and Δ -dextrines with varying length of terminal molecular branches. Dokl. AN SSR 86, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952 ~~1953~~, Uncl.

~~Absorption spectra and fluorescence spectra of chlorophyll and magnesium phthalocyanine in the adsorbed state.~~
 V. P. Gachnevich (A. N. Bach Biocem. Inst., Acad. Sci. U.S.S.R., Moscow), *Doklady Akad. Nauk S.S.S.R.* 93, 611-14 (1963); cf. *C.A.* 45, 3248; 46, 6340d.—Absorption spectra obtained by diffuse scattering from specimens of Mg phthalocyanine adsorbed on MgO in EtOH or Et₂O were observed after heating the adsorbate to 375° to remove the red fluorescence; the adsorbate initially has a blue color, which disappears on such heating. The specimens were subjected to action of O or various org. solvents, and the resulting spectra are shown. The results clearly show the same origin of both absorption and fluorescence spectra. When the vapors of Mg-free phthalocyanine are adsorbed on MgO, and the adsorbates are exposed to O, fluorescence does not occur. Similar expts. could not be run with chlorophyll owing to its low order of stability on MgO. However, repeated evacuation at 20° of adsorbates of chlorophyll on MgO from Et₂O gave specimens which displayed a widening of the main absorption max. in the direction of shorter wave lengths, while passage of O into such preps. increased the intensity of absorption in 625-60 mμ region for fluorescence and 620-40 for absorption spectra. Adsorption of EtOH, Et₂O, or H₂O onto such specimens, followed by evacuation, led to disappearance of the main fluorescence band and appearance of a sharp max. at 648 mμ, which corresponds to a max. of 606 mμ of the fluorescence spectrum of the product of the dark process; in case of H₂O this max. gradually shifts to 671 mμ. With Mg phthalocyanine the shift is to 684 mμ. Generally under conditions which preclude total destruction of the mol., the events observed with adsorbate of chlorophyll are paralleled by those of Mg phthalocyanine.

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GACHKOVSKIY, V. F.

Category: USSR / Physical Chemistry - Surface phenomena. Adsorption.
Chromatography. Ion exchange.

B-13

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30187

Author : Gachkovskiy V. F.

Inst : Academy of Sciences USSR

Title : Structure of Adsorbates of Magnesium Phthalocyanin on MgO, Al₂O₃,
ZnO, Glass and Their Fluorescence.

Orig Pub: Dokl. AN SSSR, ~~100~~, No 3, 408-410, 1956

Abstract: By means of the electron microscope a study was made of the distribution of magnesium phthalocyanin (I) at crystal faces of various sorbents (S). At S capable of actively combining with molecules of I, for example at MgO, Al₂O₃, ZnO, a rigorously oriented adsorption takes place; shape of the particles is not altered; I is not eluted into solution. On increase of the amount of adsorbate, following repeated consecutive adsorption, there is observed the occurrence of increased formations of conglomerated particles coated with the pigment. At this stage there is possible a desorption of I from the S, or its sublimation in vacuum. At inactive S (glass or

Card : 1/2

-6-

3 P. 259, 21 V.F.
PRIKHOT'KO, A.F.

24(7) p.3 PHASE I BOOK EXPLOITATION 509/1365
L'viv. Universytet

Materialy I Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'viv] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizichnyy sbirnyk, vyp. 1/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jaser, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lavsterg, O.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitakiv, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

- Yeliseyev, Yu. A., L.A. Igumina, and A.N. Shabadash. Vacuum Container for the ILS-1 Infrared Spectrometer 371
- Gashkovskiy, Ya.F. Complex Structure and Nature of the Absorption Spectra and Fluorescence of Magnesium Phthalocyanine and Chlorophyll 372
- Gurinovskiy, G.P., I.N. Yermolenko, A.N. Sevchenko, and K.N. Solov'yev. Electron Spectra of Chlorophyll and Pheophytins and Metal-derivatives 375
- Cherkasov, A.S. Effect of Spacing of Substituents on the Absorption Spectra and Fluorescence of Meso-derivatives of Anthracene 381
- Pinkel'shteyn, A.I., N.I. Malkina, and G.P. Machin. Absorption Spectra in the Ultraviolet Range and the Molecular Structure of Triazine Derivatives 385

Card 24/30

САХИРОВСКИЙ, У.Ф.
~~САХИРОВСКИЙ, У.Ф.~~

Nature of elementary photoreactions in the chlorophyll [with summary
in English]. Biofizika 2 no.6:756-763 '57. (MIRA 10:12)

1. Institut biokhimii im. A.N. Bakha AN SSSR, Moskva.
(CHLOROPHYLL) (LIGHT--PHYSIOLOGICAL EFFECT)

AUTHOR: Gachkovskiy, V. 20-119-2-40/60

TITLE: The Discrepancy of the Conception of Two Forms of Chlorophyll - a Fluorescent and a Non-Fluorescent - With the Spectral Properties of a Living Leaf [Nesootvetstviye kontseptsiy dvukh form khlorofilla (fluorestsiruyushchey i nefluorestsiruyushchey) spektral'nykh svoystvam zhivogo lista]

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 2, pp. 333-335 (USSR)

ABSTRACT: The red shifting of the absorption and fluorescence spectra of chlorophyll in vivo is explained by several authors as the result of the aggregated state of its molecules in the leaf cells. In spite of the fact that the absorption spectrum in the molecule aggregation is shifted in the direction of long waves while the same spectrum of the living leaf shows a red shifting, the state of the chlorophyll molecules in both of these cases is not at all identical as has been insistingly maintained. According to the opinion of the author the concepts on the chlorophyll state in vivo are uncorrectly based on the first type of the shifting (ref. 1). Moreover, the author gives a critical survey of the opinions

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The Discrepancy of the Conception of Two Forms of Chlorophyll - a Fluorescent and a Non-Fluorescent - With the Spectral Properties of a Living Leaf 20-119-2-40/60

in technical literature concerning this fact (ref. 1-6). According to this opinion the absorption bands of the aggregated non-fluorescent chlorophyll form should completely cover the not shifted fluorescence band of the monomer active form in the plant (fig. 1B). If it is assumed that a part of the band is not filtered (fig. 1A), the 2nd side maximum of the fluorescence of the monomer form should be in the range of the spectrum corresponding to the molecular solutions, that is at 720 m μ and 2) the distance between the axes of the absorption band and the bands of the "apparent" main maximum of fluorescence should be decreased (fig. 1 a, quantity a'). However, in nature neither the first nor the second happens. From the following it can be seen that the spectral properties of chlorophyll in the living leaf do not correspond to the above points: The correctness of the rule of reflecting symmetry was proved for complicated spectra of the chlorophyll and of magnesium phthalocyanine having oscillating structure (ref. 5-8). This rule is also valid after various changes of the absorption spectra which take place

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The Discrepancy of the Conception of Two Forms of 20-119-2 -40/60
Chlorophyll - a Fluorescent and a Non-Fluorescent - With
the Spectral Properties of a Living Leaf

due to chemical conversions of the magnesium complexes in the molecules of these dyes (ref. 6). Thus, all fluorescence bands caused by a red shifting of the absorption spectrum are shifted as a uniform whole in the direction of the long waves at the red shifting of the fluorescence band. This holds good for the whole extent also for the red shifting of the fluorescence spectrum of chlorophyll in vivo (with Hibiscus rosa chinensis, fig. 2, moreover, ref. 4, as compared to the data of tab. 1). These data show that the position of the main maximum of fluorescence in chlorophyll in vivo can be determined with sufficient preciseness according to the position of its side maximum ($\sim 738 \text{ m}\mu$ ref. 10). The "red shifting" of the latter reflects an actual "red shifting" of the main maximum in vivo. Thus, the shifting of the fluorescence spectrum in the living leaf in the red direction cannot be explained by an apparent shifting caused by a filtering effect. Since the fluorescence spectrum is connected with the absorption spectrum by the rule of mirror symmetry the

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Discrepancy of the Conception of Two Forms of Chlorophyll - a Fluorescent and a Non-Fluorescent - With the Spectral Properties of a Living Leaf

20-119-2-40/60

latter does not reflect the aggregated but the monomolecular state of chlorophyll in living leaf. Thus, the spectral properties of chlorophyll in vivo and in vitro make possible the determination of the monomolecular distribution of the chlorophyll molecules in the leaf cells of plants. Therefore, the concept of the "2 chlorophyll forms" has to be refused. This holds also for that of the "3 chlorophyll forms". There are 2 figures, 1 table, and 12 references, 5 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A. N. Bakha Akademii nauk SSSR (Institute for Biochemistry imeni A. N. Bakh, AS USSR)

PRESENTED: June 18, 1956, by V. N. Kondrat'yev, Member, Academy of Sciences AS USSR

SUBMITTED: January 4, 1957

Card 4/4

GACHKOVSKIY, V.

Discrepancy between conception assuming two forms of chlorophyll (fluorescent and nonfluorescent) and the spectral properties of live leaves. Dokl. AN SSSR 119 no.2:333-335 Mr '58. (MIRA 11:5)

1. Institut biokhimii im. A.N. Bakha AN SSSR. Predstavleno akademikom V.N. Kondrat'yevym.
(CHLOROPHYLL--SPECTRA) (LEAVES)

GAGIKOVSKIY, V.F.

Fluorescence spectra of photoreduced forms of chlorophyll and pheophytin [with summary in English]. Biofizika 4 no.1:19-26 Ja '59. (MIRA 12:1)

1. Institut biokhimii im. A.N. Bakha AN SSSR, Moskva.

(CHLOROPHYLL,

fluorescence spectra of photoreduced forms of chlorophyll & pheophytin (Rus))

S/020/60/133/006/008/016
B004/B064AUTHOR: Gachkovskiy, V. F.TITLE: The Effect of the Molecular Weight on the Luminescence^γ of High-molecular Compounds

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1358-1360

TEXT: The author reports on a qualitative analysis of the fluorescence spectra of polymers. Polyphenylacetylene, poly-p-carboxy phenyl methacrylamide, polystyrene, polymethacrylate, as well as amino acids, deoxyribonucleic acid, and ribonucleic acid were analyzed. The fluorescence excited with a ПPK -2 (PRK-2) lamp and a УФC -4 (UFS-4) light filter, was recorded on "Paninfra" plates by means of a spectrograph, and the spectrum was measured with an Mφ -4 (MF-4) microphotometer. Fig. 1 (insert after p. 1332) shows the fluorescence spectra of some of the compounds mentioned. The author notes the similarity of the structures of these spectra, which is particularly marked in compounds with conjugate double bonds. The spectra are continuous in the range of

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The Effect of the Molecular Weight on the
Luminescence of High-molecular Compounds

S/020/60/133/006/008/016
B004/B064

300 - 700 $\mu\mu$, with constant maxima in the red range and a broad diffuse peak in the blue-violet range. From the change in the spectra of polyphenylacetylene with rising molecular weight (1100, 1300, 1500) as shown in Fig. 2, the author concludes that it is possible to determine the molecular weight of polymers in the solid state on the basis of fluorescence spectra. The changes consist in a bathochromic shift, in a decrease of intensity of the broad blue-violet band, and in an increase of the intensity of the red band with rising molecular weight. The total light intensity of the fluorescence spectrum decreases with increasing molecular weight. The spectra of polystyrene (Fig. 3) with molecular weights of 300,000; 250,000; and 180,000 show the same behavior. The author thanks M. I. Cherkashin and O. G. Sel'skaya for the polyphenylacetylene samples placed at his disposal, and P. Yu. Butyagin, A. M. Dubinskaya and I. O. Kolbanov for polystyrene samples. There are 3 figures and 1 Soviet reference. ✓

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

Card 2/3


The Effect of the Molecular Weight on the
Luminescence of High-molecular Compounds

S/020/60/133/006/006/016
B004/B064

PRESENTED: April 14, 1960, by V. N. Kondrat'yev, Academician

SUBMITTED: April 5, 1960

Card 3/3



35570

S/020/62/143/001/025/030
B101/B147

AUTHOR: Gachkovskiy, V. F.

TITLE: Universal fluorescence spectra of polymers

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 1, 1962, 150 - 152

TEXT: The quantitative examination of the spectra (Fig. 1) was conducted with an ISP-73 (ISP - 73) sensitometer. The spectra are assumed to reach into the near infrared, an assumption being studied at present. The apparent "shift" of the maxima toward longer waves with increasing molecular weight (M_w) is caused by a change in the intensity distribution in non-resolved fluorescence bands (e. g. of the 450 m. maximum). Solution of this problem with an apparatus of higher resolution is necessary. Chain elongation shifts the maximum intensity toward longer waves without affecting the bands. Thus, not the energy, but only the intensity of electron transfers changes. There are 1 figure and 1 Soviet-reference.

Card 1/3

Universal fluorescence ...

S/020/62/143/001/025/030
B101/B147 .

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

PRESENTED: October 16, 1961, by V. N. Kondrat'yev, Academician

SUBMITTED: October 11, 1961

Fig. 1. Universal fluorescence spectra (in relative equienergetic units).
(a) polyphenyl acetylene with average MW: (1) 1200; (2) 1300; (3) 1500
(slit 0.3 mm, exposure 15 min); (c) polystyrenes, MW: (1) 180.000;
(2) 250.000; (5) 300.000 (exposure 3 min); (i) poly-para-carbethoxy phenyl-
-methacryl amide, fractionate MW: (1) 220.000; (2) 355.000; (3) 870.000
(exposure 12 min); (u) polyhexines, MW: (1) 8000 (exposure 24 min);
(2) 80.000 (exposure 60 min).

X

Card 2/3

ACCESSION NR: AT4020715

S/0000/63/000/000/0253/0259

AUTHOR: Benderskiy, V. A.; Kogan, B. Ya.; Gachkovskiy, V. F.; Shlyapnikova, I. A.

TITLE: Electrical and magnetic properties of polymers with conjugated bonds.
1. Polyphenylacetylenes

SOURCE: Karbotsepnyye vyssokomolekulyarnyye soyedineniya (Carbon-chain macromolecular compounds); sbornik statey. Moscow, Izd-vo AN SSSR, 1963, 253-259

TOPIC TAGS: polymer, conjugated polymer, polymer electrical property, polymer magnetic property, polyphenylacetylene, paramagnetic resonance, phenylacetylene polymerization

ABSTRACT: This work initiates a study of the nature of paramagnetic centers, the mechanisms of conductivity and the relationship between the two characteristics in conjugated polymers. The electron paramagnetic resonance spectra, the electrical conductivity and the optical centers were investigated in fractions of the product of thermal polymerization of phenylacetylene (atomic weight 670). The benzene- and toluene-soluble fractions, with atomic weights ranging from 340 to 1870, were obtained by successive sedimentation. In the tests conducted in nitrogen at 90-370 K and, in part, in a $2 \cdot 10^{-5}$ mm vacuum, a 975 kcps IKhF-2 paramagnetic resonance spectrometer was used. The paramagnetic center concentration and the saturation

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ACCESSION NR: AT4020715

factor determined from the electron paramagnetic resonance spectra, were found to increase as the molecular weight increases. The duration T_1 of spin-lattice relaxation and its dependence on temperature were determined. The signal intensity in unsaturated electron paramagnetic resonance absorption strictly follows the Curie law, the line center having the Lorentz form and the line wings being described by the Gaussian curve. A form analysis showed that a paramagnetic center contains at most 11 equivalent protons. It is concluded that the paramagnetism of the polymers stems from small local centers rather than from molecules of the basic substance, the activation energy of dark conductivity is independent of molecular weight, and the carriers' birth results from the thermal ionization of luminescent centers. "In conclusion, we would like to thank L. A. Blyumenfel'd for discussion of our work." Orig. art. has: 4 graphs and 14 formulas.

ASSOCIATION: INSTITUT KHIMICHESKOY FIZIKI AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 18Jul62

DATE ACQ: 20Mar64

ENCL: 00

SUB CODE: 00

NO REF SOV: 012

OTHER: 004

Card 2/2

FPR/EWP(j)/EPP(c)/EWT(l)/EWT(m)/BDS--AFFTC/ASD--Ps-l/Pc-l/Pr-l--RM/WW

L 11216-63

ACCESSION NR: AP3001630

S/0192/63/004/003/0424/0432

92
77

AUTOR: Gachkovskiy, V. F.

TITLE: Universal fluorescence of polymers. 1. Results of qualitative measurement

SOURCE: Zhurnal strukturnoy khimii, v. 4, no. 3, 1963, 424-432

TOPIC TAGS: fluorescence of polymers, fluorescence spectra, polyphenylacetylenes, polypropylene, polyethylene, polyvinyl alcohol

ABSTRACT: The fluorescence spectra of the following polymers in solid state was investigated: polyphenylacetylenes, polyhexene, poly-p-diethynylbenzene, poly-p-phenylene, poly-p-xylylene, poly-styrene, polyacrylonitrile, polymethymethacrylate, poly-o- and poly-p-carbethoxyphenylmethacrylamides, polypropylene, polyethylene, polyvinyl alcohol, and polyvinyl chloride. The universal character of their fluorescence spectra was shown as well as the individuality of the dependence of the structural change of the fluorescence spectra on the degree of polymerization. This characteristic leads to the suggested method of determining the molecular weight of polymers of a homologous series by displacement of the blue-violet bands of the fluorescence spectra, or by changing their intensity. "The author expresses

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L 11216-63

ACCESSION NR: AP3001630

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appreciation to M. I. Cherkashin, O. G. Sel'skaya, A. A. Slinkin, M. G. Krakovyak, L. V. Kolbanov, P. Yu. Butyagin, N. M. Cherkov, V. I. Tsvetkova and L. N. Raspopov for their gracious provision of polymer samples, and to A. M. Dubinskaya and R. R. Filatova for ultrasonic degradation of polyacrylonitriles." In conclusion, the author expresses deep appreciation to N. N. Semenov for permitting the execution of this work and to L. A. Blumenfel'd for constant interest in it." Orig. art. has: 8 figures and 2 formulas.

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

SUBMITTED: 04May62

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 004

OTHER: 005

Card

2/2

L 61647-65 EWT(m)/EPF(c)/EWP(j)/T Pc-l/Pr-l RM
ACCESSION NR: AP:015597 UR/0062/65/000/005/0932/0933
541.67+547.672

42
41
0

AUTHOR: Mulikov, V. F.; Gafurov, Kh. M.; Gachkovskiy, V. F.; Parini, V. P.;
Blyumenfel'd, L. A.; Berlin, A. A.

TITLE: Effect of paramagnetic centers on some of the physical properties of
anthracene 1

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1965, 932-933

TOPIC TAGS: anthracene, paramagnetic resonance, electron spin resonance, fluores-
cence, photoconductivity

ABSTRACT: It has been shown earlier that the presence of local magnetic centers affects the chemical behavior of compounds with conjugated bonds, particularly their reactivity (effect of local activation). The authors found that the presence of magnetic centers also has a considerable effect on the physical properties of such compounds. The soluble paramagnetic fraction (MW ~1000, ESR signal intensity 2.6×10^{18} spin/g) separated from the thermolysis products of anthracene was introduced into anthracene purified by zone melting. Samples of anthracene doped in this manner contained paramagnetic centers in concentrations of

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L 61647-55

ACCESSION NR: AP5015597

10^{10} - 10^{17} spin/g, which corresponds to one unpaired spin for 10^{11} - 10^7 anthracene molecules. In all samples, light-excited fluorescence and the kinetics of the photoconductivity drop were studied. The relationships obtained indicate that both effects are due to the same impurity centers. The character of these relationships changes in the range of paramagnetic center concentrations from 10^{11} - 5×10^{12} spin/g.

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

SUBMITTED: 15Feb55

ENCL: 00

SUB CODE: OC,NP

NO REF SOV: 001

OTHER: 000

Card

2/1

L 1137-66 EWT(m)/EPF(c)/EWP(j)/T WW/RM

ACCESSION NR: AP5021680

UR/0192/65/006/004/0849/0851

54
51
44.55 541.67 44.55 44.55

AUTHOR: Gafurov, Kh. M.; Mulikov, V. F.; Gachkovskiy, V. F.; Parini, V. P.
Berlin, A. A.; Blyumenfel'd, L. A.

TITLE: Effect of local paramagnetic centers on the optical and photoelectric properties of anthracene

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 4, 1965, 649-651

TOPIC TAGS: anthracene, paramagnetism, pyrolysis, optic property, photoelectric property

ABSTRACT: Soluble products of the pyrolysis of anthracene at 450C were subjected to thin layer chromatography on aluminum oxide and the fraction with a mean molecular weight of approximately 1000 was separated out. The intensity of the signal in the temperature interval from -15C to 25C obeyed Curie's law. The width of the symmetrical electron paramagnetic resonance line was about 6 oersteds. The elemental composition of the polymer fraction was: C = 92.98%; H=5.06%. The anthracene was purified by zone melting and was blended with the polymer fraction by mixing benzene solutions of both components. After holding for two days, the solution was chilled and the benzene was eliminated in vacuum.

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L 1137-66

ACCESSION NR: AP5021680

3

The samples were then evacuated for 8 hours at a vacuum of 10^{-6} mm Hg. The electron spectra of the samples, taken in chloroform, were a superposition of the spectra of anthracene and the fraction with paramagnetic centers. Measurements of the fluorescence spectra and of the time characteristics of the decay of the photocurrent indicate that both of these quantities are extremely sensitive to very small amounts of paramagnetic centers. The symbatic change of the yields of fluorescence and photocurrent with a change in the concentration of paramagnetic centers permits the assumption that these centers affect these characteristics by the same mechanism. Orig. art. has: 3 figures

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR) *44.55*

SUBMITTED: 15Feb65

ENCL: 00

SUB CODE: 00, 00

NR REF SOV: 020

OTHER: 001

M. G. K.
Card 2/2

GAFUROV, Kh.M.; MULIKOV, V.F.; GACHKOVSKIY, V.F.; FARINI, V.P.; BERLIN, A.A.;
BLYUMENFEL'D, L.A.

Effect of local paramagnetic centers on the optical and photo-
electric properties of anthracene. Zhur. strukt. khim. 6 no. 4:
649-651 J1-Ag '65 (MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR. Submitted February 15,
1965.

GACHOK, V.P.

Principle of weakening correlations in quantum field theory.

Ukr.mat.zhur. 13 no.2:216-217 '61.

(MIRA 14:8)

(Quantum field theory)

22141

S/056/61/040/003/021/031
B112/B214

24. 4500

AUTHOR: Gashok, V. P.

TITLE: Asymptotic behavior of Green's function in quantum field theory

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 3, 1961, 879-884

TEXT: N. N. Bogolyubov (Ref.3: Preprint OIYaI, 1960) has formulated a principle for the reduction of the correlation between particles of a system in statistical equilibrium. The present paper gives a generalization and proof of this principle for the quantum field theory. The author starts from a neutral scalar field represented by a Hermitian operator $A(x)$ satisfying causality, translation invariance, and Lorentz invariance. It is assumed that there exists a unique, normalized vacuum state $|0\rangle$ but no state with a negative energy. A system M consisting of $n+1$ points x_1 is considered which is decomposed into two systems M_1 and M_2 with the points x_1, \dots, x_i and x_{i+1}, \dots, x_{n+1} . If each of these partial systems is

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22141

S/056/61/040/003/021/031
B112/B214

Asymptotic behavior of...

placed in a sphere of finite radius and if these spheres are so moved against each other that the point configurations change only inside the corresponding sphere, a principle analogous to that of Bogolyubov for the reduction of the correlation holds: The vacuum mean value $f(x_1, \dots, x_{n+1}) = \langle 0 | A(x_1) \dots A(x_i) A(x_{i+1}) \dots A(x_{n+1}) | 0 \rangle$ is decomposed into a product $\langle 0 | A(x_1) \dots A(x_i) | 0 \rangle \langle 0 | A(x_{i+1}) \dots A(x_{n+1}) | 0 \rangle$ of vacuum mean values if M_1 and M_2 are at an infinite distance from each other. For the proof, $f(x_1, \dots, x_{n+1})$ is decomposed into $\langle 0 | A(x_1) \dots A(x_i) | 0 \rangle \langle 0 | A(x_{i+1}) \dots A(x_{n+1}) | 0 \rangle$ and f_1 , and it is shown that $\lim_{R \rightarrow \infty} R^m f_1 = 0$ for an arbitrary,

positive integral m if R is the distance between the two spheres. The proof consists in studying some singular functions introduced by G. Källén and N. Wilhelmsson (Ref.6: Dan. Mat. Phys. Medd., 1, 9, 1959). Finally, Green's function for an infinite distance between the spheres is studied and it is found that $\langle 0 | T(x_1, \dots, x_{n+1}) | 0 \rangle = \sum \theta(x_1 - x_2) \dots$

$\dots \theta(x_n - x_{n+1}) \langle 0 | A(x_1) \dots A(x_{n+1}) | 0 \rangle = \langle 0 | T(x_1, \dots, x_i) | 0 \rangle \langle 0 | T(x_{i+1}, \dots, x_{n+1}) | 0 \rangle$ for $R \rightarrow \infty$, which confirms the hypothesis of E. Freese
Card 2/3

22141

S/056/61/040/003/021/031
B112/B214

Asymptotic behavior of...

(Ref. 1: Nuovo Cimento, 11, 51, 1955). There are 10 references:
1 Soviet-bloc and 9 non-Soviet-bloc.

ASSOCIATION: Institut matematiki Akademii nauk Ukrainskoy SSR (Institute
of Mathematics of the Academy of Sciences, Ukrainskaya SSR)

SUBMITTED: September 27, 1960

X

Card 3/3

GACHOK, V.P.

3829

24.4400

S/021/62/000/004/002/012
D299/D302

AUTHOR: Gachok, V.P.

TITLE: On a consequence of the weakened local-commutativity condition

PERIODICAL: Akademiya nauk UkrRSR. Dopovidi, no. 4, 1962, 431-433

TEXT: The causal properties of field operators are considered. A theorem is proved on the equivalence between relativistic quantum field-theory which satisfies certain conditions, and free field-theory. In the references, it was shown that the theory of clothed operators which contains the local-commutativity condition, is equivalent to free field theory. In the following theorem, a stronger equivalence criterion is established; thereby the relaxed condition of local commutativity plays an essential part. The theorem proves that the causal properties of clothed operators cannot be described by the commutation condition of field operators. The proof is based on A.S. Wightman's functions (Ref. 5: Phys. Rev., 101, 860, 1956). From the theorem it is evident to what extent the relaxed condition of local commutativity replaces the condition of local commutativity-
Card 1/3

S/021/62/000/004/002/012
D299/D302

On a consequence of the weakened ...

ty. The relativistic field-theory is considered, described by the Hermitian operator $A(x)$. It is assumed that certain conditions are satisfied, with respect to the Lorentz group representation of Hilbert space, the existence of a normalized vacuum state. Ψ_0 and negative-energy states, as well as the asymptotic condition for $A(x)$.
Theorem: The relativistic field-theory which satisfies the above conditions and the commutativity condition

$$[A(x^0, \vec{x}), A(x^{0'}, \vec{x}')] = 0; \quad x^0 = x^{0'}, \quad \vec{x} \neq \vec{x}', \quad (\vec{x} - \vec{x}') \in D, \quad (4)$$

where D is an open region of 3-dimensional space with nonzero measure, is equivalent to free field-theory. The proof of the theorem is outlined. There are 9 references: 2 Soviet-bloc and 7 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: O.W. Greenberg and S.S. Schweber, Nuovo C., 8, 378, 1958; P.G. Federbush and K.A. Jonson, Phys. Rev., 120, 1926, 1950; D.W. Hall and A.S. Wightman, Dan. Mat. Fys. Medd. 31, 5, 1957; W. Zimmermann, Nuovo C., 10, 597, 1958.

Card 2/3

On a consequence of the weakened ...

ASSOCIATION: Instytut matematyki AN URSS (Institute of Mathematics
of the AS UkrRSR)

PRESENTED: by Academician Yu.O. Mytropol's'kyy, AS UkrRSR

SUBMITTED: June 30, 1961

S/021/62/000/004/002/012
D299/D302

✓

Card 3/3

16.4600

37962
S/056/62/042/005/013/050
B104/B102AUTHOR: Gachok, V. P.

TITLE: Dressed operators and the commutivity condition

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
no. 5, 1962, 1225-1232

TEXT: Results obtained by the author (UMZh, 13, 22, 1961) and by P. G. Federbush et al. (Phys. Rev., 120, 1926, 1960) are generalized, and the properties of the operators in the relativistic field theory are studied. A more rigid equivalence criterion is set up with the dressing condition. The assumption of a commutivity condition for an arbitrary range of the three-dimensional \vec{x} -space is essential for this study. A criterion is derived which excludes the establishment of a satisfactory relativistic field theory with a dressing condition and a commutivity condition for an arbitrary range of the \vec{x} -space. J

ASSOCIATION: Institut matematiki Akademii nauk Ukrainskoy SSR (Institute of Mathematics of the Academy of Sciences Ukrainskaya SSR)

Card 1/2

GACHOK, Y.P. (Kiyev)

Models in a relativistic field theory and Mandelstam's representations. Ukr. mat. zhur. 16 no.2:225-232 '64. (MIRA 17:3)

GACHOK, V.P.

Problem of moments in quantum field theory. Dokl. AN SSSR
165 no.3:506-509 N '65. (MIRA 18:11)

1. Institut matematiki AN UkrSSR. Submitted March 27, 1965.

GACHOK, V.P. (Klyev)

Self-adjoint field operators and the problem of moments. Ukr.
nat. zhur. 17 no.5:3-13 '65.

(MIRA 18:12)

1. Submitted July 18, 1964.

SAMOCHOWIEC, L.; KOKOT, F.; KLEINBOK, Z.; GACHOWSKI, Z.

Investigations on hypotensive properties of some galenical preparations of *Viscum album* genus Lorantraceae. *Farm. polska* 11 no.6;128-132 June '55.

1. Z Zakładu Farmakologii Śląskiej Akademii Medycznej w Rokitnicy Bytomskiej, Kierownik: doc.dr. J.Jeske.

(PLANTS,

Viscum album genus Lorantraceae, hypotensive properties)

KOKT, Franciszek; KLEINROT, Zdzislaw; GACHOWSKI, Zbigniew

Effect of prolonged administration of luminal and veronal on oxygen consumption by various tissues in rat. Pat. polska 8 no.1:41-45
Jan-Mar 57.

1. Z Zakladu Farmakologii Eksperymentalnej Sl. A. M. w Zabrze-Rokitnicy
Kierownik: doc. dr J. Jeske. Adres autora: Zabrze, ul. K. Marksa 19.

(BARBITURATES, effects,

on oxygen consumption by various tissues (Pol))

(METABOLISM, TISSUE, effect of drugs on,

barbiturates, oxygen consumption by various tissues (Pol))

POLAND/Pharmacology and Toxicology - Tranquillizers. V-2

Abstr Jour : Ref Jour - Biol., No 18, 1953, 66217

Author : Chrusciel, T., Kleinrok, B., Chrusciel, M., Zinkora, J., Gachowski, Z., Juszkiewicz, R.

Inst :

Title : Studies in the Field of Experimental Atherosclerosis. VI, The effect of Chlorpromazine on the Course of Experimental Atherosclerosis in Pigeons.

Orig Pub : Patol. polska, 1957, 8, No 4, 329-338.

Abstract : The administration of 2.3 and 5 mg/kg of chlorpromazine (I) with meals to pigeons with experimental atherosclerosis resulting from the addition of cholesterol (2 g/kg) with plant oil (5g/kg), to their rations, lowered the level of fatty acids and cholesterol in the blood serum. The duration and intensity of the effect of I was proportional to its dosage. Following the concurrent use of I with meals for 4 months, there were less pronounced macroscopic

Card 1/2

- 6 -

POLAND/Pharmacology and Toxicology - General Problems. V-2

Abstr Jour : Ref Jour - Biol., No 18, 1953, 66217

and microscopic manifestations of atherosclerosis than in the pigeons which did not receive I.

GACH'YA, P., Cand of Med Sci -- (diss) "Angiopneumography for Lung Cancer and Some
Other Diseases of the Lung and Mediastinum," Leningrad, 1959, 18 pp (First
Leningrad Medical Institute im Academician I. P. Pavlov) (KL, 8-60, 119)

GRZELAK, Z., inzh.; GACIAG, J., inz.

New types of knee type milling machines. Mechanik 35 no.5:249-
251 My '62.

1. Zaklady Przemyslow 1. Maja.

GACIAG, Jan, inz.

FA modernized milling machines. Mechanik 34 no.10:513-517 '61.

1. Zaklady Przemyslowe 1 Maja, Pruszkow.

GACIAG, Jar, inz.

The FN-32 milling machine. *Mechanik* 37 no. 5:245-250 1964.

JANKOWSKI, Wladyslaw, mgr., inz.; KUBICKI, Jerzy, mgr., inz.; JANUSZEWICZ,
Krystyna, mgr., inz.; DOMANSKA, Hanna, mgr., inz.; SAWICKI, hipolit.,
mgr., inz.; GACIARZ, Kazimierz, mgr., inz.

A chemical combine for Turkey. Architektura Pol no.10:384-385 '61.

GACINOVIC, O. M.
SURNAME (in Cyrillic); Given Name

Country: Yugoslavia

Academic Degrees: not given

Affiliation: Health Physics Division, Institute of Nuclear Sciences
"Boris Kidrich"

Source: Belgrade-Vintcha, Bulletin of the Institute of Nuclear Sciences
"Boris Kidrich", Vol 11, Mar 1961, pp 189-197.

Data: "Adsorption of Sr⁺⁺ Ion in Presence of Various Cations on the
Montmorillonite-Type Clay."

Co-author:

MICIC, O. I., Health Physics Department, Institute of Nuclear
Sciences "Boris Kidrich".

GACINOVIC, O.M.; MICHIC, O.I.

Adsorption of Sr^{++} ions in the presence of various cationites
on montmorillonite. Bul Inst Nucl 11:189-197 '61.

1. Institute of Nuclear Sciences "Boris Kidrich," Health
Physics Division, Vinca.

GIRSTEA, D.; COJOCARU, I.; GACIU, S.; OGREZANU, St.; TUNCIU, V., Ing.;
TOME, Gh., Ing.

Investigations on the dynamic and thermal stability of trans-
formers in case of an abrupt short circuit. Energetica Rum 13
no.1:17-28 Ja '65.

1. Chief Engineer, "Electropatere" Plant (for Girstea,
Cojocaru, Gaciu, Grezianu). 2. Head of the Transformer
Technical Department, "Electropatere" Plant (for Tunciu). 3.
Head of Homologation Department, M.I.G.V. (for Tome).
Submitted July 20, 1964.

MOLDOVAN, I.; MOSCOVICI, Ana; Teodorescu, C.; GACIU, V.

Semi-industrial installation for manufacturing high-purity
germanium. Rev chimie Min petr 15 no.8:510-513 Ag '64

GACJA, Petrit, kand. i shkenc. mjek.

A rare complication of intratracheal anesthesia: necrotico-hemorrhagic tracheitis of croupal type. Bul. univ. shtet. Tirane [Mjek] 3:56-60 '62.

(ANESTHESIA, INTRATRACHEAL) (TRACHEITIS)

GACJA, Petrit, kandidat i shkencave mjekesore.

A case of protracted apnea caused by the use of scoline (succinylcholine). Bul. univ. shtet. Tirane [Mjek] 2:60-62 '63.

1. Katedra e Kirurgjise Pergjithshme, Universitetit Shteteror te Tiranës (shafi katedres Llambi Zicishti).

GACKOWSKI, J.

"The Cough Is Not Always a Sign of Tuberculosis. p. 23 (ZDROWIE) Vol. 5, No. 1/2, 1953
Warszawa, Poland .

SO: Monthly List of East European Accessions L.C., Vol. 2, No. 11, Nov. 1953, Uncl.

MISIEWICZ, Janina i wspolpracownicy: RATYCKI, W.; BURACZEWSKI, O.; GACEKOWSKI, J.;
GURTAT, B.; KOBIERSKA, H.; KOZAKOW, H.; KRZYSZKOWSKA, A.; KURYLOWICZ, W.;
KUZNIECOW, A.; MULLER, H.; RAFINSKI, T.; ROMANOWSKA, I.; SITEK, K.;
STOPNICKA, M.; SZCZEPANAKI, W.; SZUSTROWA, J.; WIERZBOWSKA, M.;
WIKTOROWICZ, J.

Early results of vaccination against tuberculosis with vaccines prepared
from four different BCG strains. I. Gruzlica 25 no.3:243-250 Mar 57.

1. Z Instytutu Gruzlicy w Warszawie Dyrektor: prof. dr J. Misiewicz.
Adres: Warszawa, ul Plocka 26.

(BCG VACCINATION, statist.
comparison of 4 strains (Pol))

GACKOWSKI, Jozef; KOSTRZENSKI, Wladyslaw; PAKLERSKA-POBRATYN, Hanna

Bacteriological diagnosis of tuberculosis in an open medical service.
Gruzlica 26 no.2:127-138 Feb 58.

1. Z Pracowni Bakteriologicznej Wojewodzkiej Przychodni Przeciwgruzliczej
w Warszawie. Kierownik Pracowni: mgr W. Kostrzanski. Dyrektor W.P.P.:
dr J. Gackowski. Adres: Warszawa, ul. Pasteura 10.

(TUBERCULOSIS, diag.
bact. diag. (Pol))

GACKOWSKI, Josef; KOSTRZENSKI, Wladyslaw; PAKLERSKA-POBRATYN, Hanna

Cytochemical tests in the diagnosis of tuberculosis. Gruzlica
27 no.6:483-491 June 59.

1. Z Pracowni Bakteriologicznej Kierownik: mgr W Kostrzanski
Wojewodzkiej Pradni Przeciwgruzliczej w Warszawie Dyrektor: dr.
J. Gackowski
(TUBERCULOSIS, diag.)

KOSTRZENSKI, Wladyslaw; PAKLERSKA-POBRATYW, Hanna; SYROWATKA, Tadeusz;
GACKOWSKI, Jozef.

Studies of a new tuberculostatic compound from the group of
arylides of aromatic hydroxyacids. Arch. immun. ther. exp.
12 no.2:242-251 '64.

1. Bacteriological Laboratory of the Provincial Tuberculosis
Dispensary, Warsaw.

GACKOWSKI, Zbigniew mgr. inz.; KOTALIK, Z., inz. [translator]

Use of automatic computers in Poland. Podn org 18 no.8:
374-375 Ag '64.

1. Research Institute of Machine Industry Organization, Warsaw.
(for Gackowski).

GACOWNA, JADWIGA

Reactions of cyanoguanidine with aromatic acids. III.
2,4-Dihydroxy-7-nitroquinazoline from 4-nitroanthranilic acid and cyanoguanidine. Ludczysz Urbański, Barbara Skowrońska-Serafińska and Jadwiga Gacowna (Inst. Technol. Tuberculosis, Warsaw). *Recombinatio* 27, 167-9 (1953) (English summary); *Ch. C.A.* 48, 13647d. --When heated with HCl, 4-nitroanthranilic acid and cyanoguanidine yield 2,4-dihydroxy-7-nitroquinazoline (I), tautomeric with 2,4-dioxo-7-nitrotetrahydroquinazoline. I has been prepd. in another way by Huntress and Gladding (*C.A.* 37, 650). Clayton F. Holdway

MS
205

GORBENKO, V.I., inzh.; GACRYSHCHENKOV, G.P., inzh.

Redesigning of the drop sprinkler of a cooling tower. Energetik
11 no.10:14-15 0 '63. (MIRA 16:11)

HUNGARY

BERTA, Gyula; GACS, Gyula; FIGYI, Andras; Institute of Physiology of the Medical University (Orvostudományi Egyetem Elettani Intézete), Pécs.

"Determination of Serum Insulin Concentration by Means of Rat Epididymal Fat Tissue."

Budapest, Kisérletes Orvostudomány, Vol 14, No 5, Oct 62, pp 545-548.

Abstract: [Authors' Hungarian summary] The rat epididymal fat tissue test for the quantitative determination of insulin was investigated. It was found that the normal insulin value of fasting humans is 0.10-0.30 microunits per ml, while in dogs it is 0.05-0.15 microunits per ml. The rates of glucose metabolism were also investigated and it was found that maximal glucose uptake is reached in the first hour. [16 references, predominantly Western.]

L
1/1

GACS, Istvan

MOPED projector lamps with xenon charge for small motorcycle. Musz
elst 15 no.11:10 My '60. (EEAI 9:9)
(Hungary--Motorcycles)
(Xenon)

GACS, Istvan, okleveles gepeszmernok

From carbon filament incandescent lamps to krypton lamps.
Villamosag ll no.9:272-276 S '63.

GMS, Istvan, oklevelen gepaszmarnek

Correct illumination by incandescent lamps. Villamosag 12 no.8:
234-236 Ag '64.

GACS, Istvan

Correct illumination by incandescent lamps. Musz elet 19
no.23:15 5 N '64.

GACS, Istvan; DEBRECZENI, Gabor

Illumination of picture galleries with special regard to the
damaging effect of light. Villamosag 13 no.1:16-23 Ja '65.

GACS, Istvan, okleveles gépészmernok (Budapest, VI., Izebella u. 71)

Illuminated umbrellas. Musz élet 20 no.4:6 25 F '65.

GACS, Janosne

BECK, Otto, dr.; GACS, Janosne, dr.; UNGAR, Imre, dr.

Exercise therapy of pulmonary tuberculosis. Tuberk. kerdesei 7
no.2:28-31 Apr 54.

1. Az Allami Koranyi Tudohetegyogyintezet (igazgato: Dessauer
Pal, dr.) kozlemenye.

(TUBERCULOSIS, PULMONARY, ther.

*exercise ther.)

(EXERCISE THERAPY, in various dis.

*tuberc., pulm.)

GACS, J.
GÉRO, Sándor; BAUMAN, Miklos; JAKAB, Mihaly; ROHONY, Belane; GACS, Janos

Antilipemic effects of heparin. I. Electrophoretic studies; the problems of the prealbumin fraction. *Magy. belorv. arch.* 10 no.5-6:129-138 Oct-Dec 57.

1. A Budapesti Orvostudományi Egyetem III sz. Belklinikájának (igazgató: Gomori Pál) és a Magyar Tudományos Akadémia Elektronmikroszkopni Laboratóriumának (vezető: Guba Ferenc) közleménye.

(HEPARIN, eff.)

lipemia clearing mechanism, electrophoretic blood lipoprotein changes & appearance of pre-albumin fraction (Hun))

(LIPIDS, in blood)

lipemia clearing mechanism of heparin, electrophoretic blood lipoprotein changes & appearance of pre-albumin fraction (Hun))

Gacs J.

GERO, Sandor; PERENYI, Iaszlo; JAKAB, Mihaly; GACS, Janos

Mechanism of the reversal of heparin clearance. Kiserletes orvostud.
10 no.1:52-55 Feb 58.

1. Budapesti Orvostudományi Egyetem III. sz. Belklinikája.

(HEPARIN, eff.

lipemia clearing, mechanism of reversal in vitro (Hun))

(LIPIDS, in blood

lipemia clearing by heparin, mechanism of reversal in vitro
(Hun))

FOGEL, Maria; SOMOGYI, Zsuzsa; GACS, Janos

Transposition of the pulmonary vein. *Magy. radiol.* 10 no.3:147-154 Sept 58.

1. A Budapesti Orvostudományi Egyetem III. Belklinika (Igazgató: Gomori Pal dr. egyet. tanár) és III. Sebészeti Klinika (Igazgató: Rubanyi Pal dr. egyet tanár) röntgenosztályának (Vezető: Fogel Maria dr.) közleménye.

(VEINS, PULMONARY, abnorm.

transposition, x-ray diag., case report (Hun))

GACS, Janos, dr.; POGATSA, Gabor, dr.

A study of blood circulation in cardiac shock. Orv. hetil. 102 no.37:
1735-1738 10 S '61.

1. Budapesti Orvostudományi Egyetem, II es III Belklinika.

(MYOCARDIAL INFARCT physiol)
(BLOOD CIRCULATION physiol)

GACS, Janos, dr.; KEREKES, Erno, dr.; WURFER, Bela, dr.

On Wilson's disease (Hepatolenticular degeneration). Orv. hetil.
106 no.20:935-938 16 My'65.

1. Budapesti Orvostudományi Egyetem, III. Belklinika (igazgató:
Gero, Sandor, dr.) és Országos Traumatológiai Intézet (igazgató:
Szanto, György, dr.).

Nuclear Medicine

HUNGARY

GACS, Janos, Dr. KELLER, Laszlo, Dr. PAL, Imre, Dr. TORKO, Janos, Dr; Medical University of Budapest, III. Medical Clinic (director: GERO, Sandor, Dr) (Budapesti Orvostudományi Egyetem, III. Belklinika), and National Atomic Energy Commission, Isotope Institute (director: TETENYI, Pal, Dr) (OAB -- Országos Atomenergetikai Bizottság --, Izotop Intézet).

"Study of the Mg^{28} Metabolism of Individuals With Coronary Sclerosis."

Budapest, Orvosi Hetilap, Vol 107, No 35, 28 Aug 66, pages 1644-1645.

Abstract: [Authors' Hungarian summary] The disappearance from the plasma and excretion through the urine of i.v.-administered Mg^{28} was studied in 8 individuals with coronary sclerosis and 7 controls. The excretion of Mg^{28} in the urine was found to be significantly decreased in coronary sclerosis. 2 Hungarian, 12 Western references.

KOVACS, Jozsef, dr.; GACSALYI, Marta

Measuring radioactive contamination of some Hungarian foodstuffs.
Elelm ipar 15 no.12:367-370 D '61.

1. Fovarosi Vegyeszeti es Elelmiszervizsgalo Intezet, Budapest.

KALANTAR, N.G.; GLAZUNOV, V.I.; MANNAFOVA, V.S.; Prinimali uchastiye:
GABSATAROVA, S.A.; YUSUPOVA, F.S.

Composition and properties of transformer oil distillates from
Tuymazy petroleum. Khim.i tekhn.topl.i masel 7 no.5:43-49 My
'62. (MIRA 15:11)

1. Bashkirskiy filial AN SSSR.
(Tuymazy region—Petroleum) (Insulating oils)

RISKO, Tibor, dr.; GACSI, Ilona, dr.

Parturition in women with bone tuberculosis. Orv.hetil. 101
no.41:1450-1452 9 0 '60.

1. Allami Fodor Jozsef Tbc. Gyogyintezet, I. sz. Sebeszeti
Osztaly.
(TUBERCULOSIS OSTEOARTICULAR in pregn)

HUNGARY

NYUL-TOTH, Pal, Dr., KOVACS, Laszlo, Dr., GROSSI, Ilona, Dr.; State Fodor Jozsef TB Sanitarium (Allami Fodor Jozsef TBC Gyogyintezet).

"The Role of X-Ray Examinations in the Present Treatment of TB of the Hip Joint."

Budapest, Orvosi Hetilap, Vol 103, No 45, 11 Nov 62, pages 2130-2133.

Abstract: [Authors' summary] The authors call attention to the progress made in the treatment of TB of the joints in the last 10 years. The cooperation of X-ray specialists and clinicians as well as the use of antibiotic therapies made the possibilities of surgical treatment much greater. Healing is possible now with movable joints, ankylosis is speedier and more complete and the patient is released in a shorter time to his everyday living.

[2 German, 1 Hungarian, 1 Western reference]

1/1

GACSI, Jozsef, tudományos segédmunkatárs

Experiences with birds inhabiting the middle-aged oak forest in the Great Hungarian Plain. Erdo 12 no.11:514-518 N '63.

1. Erdészeti Tudományos Intézet, Kerekegyháza.

ZSOLNAI, Laszlo (Budapest); GACSO, Elek (Budapest); DENES, Vilmos
(Budapest)

Forum of innovators. Ujit lap 16 no. 4:30 25 F '64.

WOYKE, Halina; GACZYNSKA, Jadwiga

The influence of the time of sowing on the quantity and quality of the yield of snap beans. Rezs nauk roln rosl 83 no.3:651-668 '61.

1. Katedra i Zaklad Warszywnictwa Szkoły Glownej Gospodarstwa Wiejskiego, Skierniewice.

GACZYNSKI, ROBERT

Distr: 4E2c(j)

✓ Chromatographic method of identification of some vulcanization accelerators. Robert Gaczyński and Maria Stepińska (Inst. Rubber Ind., Warsaw). *Przemysł Chem.* 38, 871-8 (1960). The method deals with identification of 2-mercaptobenzothiazole (I), 2,2'-dithiodibenzothiazole (II), *N,N*-diethyl-2-benzothiazolesulfenamide (III), bis(dimethylthiocarbamoyl) disulfide (IV), Zn ethylphenyldithiocarbamate (V), 1,3-diphenylguanidine (VI), and of the antioxidant phenyl-2-naphthylamine (VII) in rubber mixes and vulcanizates. The sample was extd. with acetone (4 hrs.). For acidic accelerators I, II, IV, and V, the solvent was a mixt.: iso-PrOH:25% NH₄OH:PhCl = 45:10:45; for basic accelerators III and VI, and for the antioxidant VII, BuOH:AcOH:H₂O = 4:1:5. I-VII were identified by color reactions: I and II with Bi(NO₃)₃ 1% soln.; III, ninhydrin 1% acetone soln.; IV, CuSO₄ 5% soln. for rubber mixes, and ninhydrin 1% acetone soln. for vulcanizates; VI, bromophenol blue; VIII, *p*-nitroaniline hydrochloride + NaNO₂. Circular paper chromatography was applied. Methods of sepn., and a discussion of whether the detected product was originally present or is a decompn. product, are given. The time of extn. and analysis for I-VII present together in one sample is 7 hrs. I. Dobruška

3
 1-JAJ (NA)
 1-JAJ (MAY)
 1

STEPIEN, Maria; GACZYNSKI, Robert

Determination of mercaptobenzithiazole (Accelerator M) and 2-benzothiazyl disulphide (Accelerator DM) by paper chromatography. Chem anal 6 no.6:1045-1049 '61.

1. Institute of Rubber Industry, Warsaw.

ORSZAGH, Andrzej; GACZYNSKI, Robert; ANTCZAK, Barbara

Grafting native rubber with methyl methacrylate. Polimery 7 no.4:
129-131 Ap '62

1. Uniwersytet, Warszawa (for Orszagh). 2. Instytut Przemyslu Gumowego,
Warszawa (for Gaczynski and Antczak).

ORSZAGH, Andrzej; GACZYNSKI, Robert

Effect of gamma irradiation of natural caoutchouc modified by grafting. Polimery tworzyw wielk 8 no.4:140-142 Ap '63,

1. Uniwersytet Warszawa (for Orszagh). 2. Instytut Przemyslu Gumowego, Warszawa (for Gaczynski).

GAD, D.Z.

Abundance of putrefactive and phosphate dissolving bacteria in various bottoms of bodies of freshwater. Vop. ekol. 5:31-32 '62. (MIRA 16:6)

1. Institut gidrobiologii AN UkrSSR, Kiyev.
(Bacteria, Phosphorus) (Soil micro-organisms)

L 27293-66 EWI(1)/FCC GW

ACC NR: AR6014568

SOURCE CODE: UR/0169/65/000/011/B050/B050

AUTHOR: Belyayev, V. P.; Beltadze, T. G.; Gadakchan, V. O.; Lominadze, V. P. 34
B

TITLE: Some results of comparison of radiosonde and aircraft turbulence measurements in the free atmosphere

SOURCE: Ref. zh. Geofizika, Abs. 11B342

REF SOURCE: Tr. Tsentr. aerol. observ., vyp. 63, 1965, 109-113

TOPIC TAGS: free atmosphere, atmospheric turbulence, radiosonde

ABSTRACT: A method is presented for comparison of observations of atmospheric turbulence made from an aircraft and by radiosonde with an overload attachment. Results of the comparison showed the feasibility of using radiosonde with an overload attachment to indicate atmospheric turbulence zones. [Translation of author's abstract.]

[NT]

SUB CODE: 04/ SUBM DATE: none

Card 1/1 CC

UDC: 551.511.6 2

GND 64-10015 V. I.
A USSR / Farm Animals. Silkworm.

Q-6

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54894.

Author : Gadakhbadze V. I., Iozashvili, O. V.

Inst : Not given.

Title : The Coefficient of the Weight of the Dry Cocoon
in Relation to the Raw One.

Orig Pub: Byul. nauchno-tekhn. inform. Gruz. n.-i. in-ta
shelkovodstva, 1956, 1, 52-56.

Abstract: No abstract.

Card 1/1

71

GADAKHABADZE, V.I.; TKHELIDZE, L.M.

The introduction of white cocoon and hybrid cocoons. Tekst.
prom. 16 no.8:8 Ag '56. (MLRA 9:10)

(Georgia--Silk manufacture)

L 1807-66 EMT(1)/FCC GW
ACCESSION NR: AT5022886

UR/2789/65/000/063/0109/0113
551.551.5

AUTHOR: Belyayev, V. P.; Beltadze, T. G.; Gadakchan, V. O.; Lominadze, V. P.

TITLE: Some results of comparing radiosonde and aircraft measurements of turbulence in the free atmosphere

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 63, 1965. Voprosy dinamiki atmosfery (Problems of atmospheric dynamics), 109-113

TOPIC TAGS: atmospheric turbulence, free atmosphere, aircraft bump, aircraft measurement, radiosonde measurement

ABSTRACT: Measurements made from aircraft of atmospheric turbulence are compared with radiosonde measurements (with an overload attachment) to determine the value of radiosonde data for predicting turbulent zones over air routes. To test the method it was necessary to make experimental plane flights to measure bumpiness intensity over the same area with the radiosonde measurements. Analyses showed that there were zones in which there was good agreement between data from the two sources, including agreement concerning the thickness of the disturbing zone. However, in other cases it was found that although radiosonde and airplane data simultaneously detected dis-

Card 1/2

L 1807-66

ACCESSION NR: AT5022886

turbed zones, the two methods yielded different values for the thickness of the zone (either method could yield the higher value). Good agreement was obtained in about 74% of the comparisons. Data from three series of tests in the Tbilisi region indicate that there is a 75-85% probability that turbulence will occur or not occur over a period of 1 1/2 hr. Orig. art. has: 1 figure and 1 table. [ER]

ASSOCIATION: Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory) 44.55

SUBMITTED: 00

ENCL: 00

SUB CODE: ES

NO REF SOV: 002

OTHER: 000

ATD PRESS: 4111

Card 2/2 *00*

SARAKHANOV, Konstantin Konstantinovich; SHUL'MAN, Georgiy Yakovlevich;
GADALEV, Yu.A., red.; BARANOV, I.A., tekhn.red.

[Murmansk Economic Administrative Region] Murmanskii ekonomicheskii administrativnyi raion. Murmanskoe knizhnoe izd-vo, 1959. 162 p. (MIRA 12:8)
(Murmansk Province--Economic conditions)

DREBENTSOV, Viktor Semenovich; GADALEV, Yu.A., red.; BELYAYEV, N.F.,
tekhn.red.

[Animal world of Murmask Province] Zhivotnyi mir Murmanskoi
oblasti. Petrosavodsk, Murmanskoe knizhnoe izd-vo, 1959. 99 p.
(MIRA 14:3)

(Murmansk Province--Zoology)

PELIPEYCHENKO, Mikhail Vasil'yevich; GDALEV, Yu.A., red.; BARANOV,
I.A., tekhn. red.

[Along the rivers and lakes of the Kola Peninsula] Po rekam i
ozeram Kol'skogo poluostrova. Murmansk, Murmanskoe knizhnoe izd-
vo, 1960. 100 p. (MIRA 15:7)
(Kola Peninsula--Description and travel)
(Kola Peninsula--Zoology)

GADALIN, I.

High achievements in production. Avt.transp.34 no.5:35 My '56.
(MIRA 9'9)

1.Glavnyy inzhener avtokelenny no.32.
(Stavropol--Transportation; Automotive)

YEGURTSOV, N.N.; KOLGANOV, V.I.; GADALIN, I.Ye.

Practice in the study of wells using the hydroacoustic method
in the Krasnoyarsk and Belozërka fields. Trudy Giprovoŝtoknefti
no.5:129-133 '62. (MIRA 16:8)

(Kuybyshev Province—Oil field flooding)

GADALIN, V.N.; ZIMIN, A.S.; PILUGANOVA, E.A.

Investigating kinematic parameters of the SKhS-1,2 cotton
harvesting machine. Trakt. i sel'khoz mash. 31. no.6:27-30
Je '61. (MIRA 14:6)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro po
kholokouborke.
(Cotton-picking machinery)

GADALIN, Yu I.

USSR/Medicine-Insect Control

Card 1/1 Pub. 148 - 21/25

Author : Yu. I. Gadalin; N. L. Gershovich; N. N. Gorchakovskaya; A. B. Levit; and V. A. Nabokov

Title : The results of the use of insecticidal smokes to control Ixodes persulcatus ticks

Periodical : Zhur. mikro. epid. i immun. 4, 92-97, Apr 55

Abstract : The results of the work of the multipurpose expedition of the Institute of Malaria, Parasitology and Helminthology, Ministry of Health USSR; the Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR; and the Kuybyshev Oblast Antimalaria Station During 1954 are reported. Experiments with hexachlorane smoke aerosols produced by burning a special cartridge NBK (G-17) indicated that 95-98.5 percent of Ixodes persulcatus ticks in the treated area were killed. The results of the experiments are presented on two charts. No references are cited.

Institution :

Submitted : December 31, 1954

GADULIN, Yu. I.

Subject : USSR/Medicine AID P - 2894
Card 1/2 Pub. 37 - 11/20
Authors : Rakhmanova, P. I., Gadulin, Yu. I., Geminov, N. V.,
Kubatkin, V. I., Levit, A. B., Martensen, V. N.,
Popova, N. A.
Title : Use of zooprophylaxis against malaria in building new
populated localities
Periodical : Gig. 1 san., 9, 48-49, S 1955
Abstract : Discusses preventive measures against mosquitoes in
Pecherskiye Vyselki, a new development in the Kuybyshev
Oblast'. The editorial office considers the material
of this article insufficient for sanitary evaluation,
and recommends further studies. Chart.
Institutions: Institute of Malaria, Medical Parasitology and
Helminthology, Ministry of Health, USSR; State
Sanitary Inspection for the Kuybyshev Hydroelectric

AID P - 2894

Gig. 1 san., 9, 48-49, S 1955

Card 2/2 Pub. 37 - 11/20

Power Plant, Kuybyshev Regional Antimalaria Station,
and "Kuybyshevsel'proyekt" Planning Office.

Submitted : J1 22, 1954

GADALIN, Yu.I.; GERSHKOVICH, N.L.; GORCHAKOVSKAYA, N.N.; LEVIT, A.B.

An experiment in destroying *Ixodes persulcatus*, the carrier of tick-borne encephalitis in its natural environment [with summary in English]
Biol.MOIP. Otd. biol. 61 no.3:35-41 My-Je '56. (MLRA 9:10)
(TICKS) (DDT (INSECTICIDE))