DODONOV, Ya.Ya.; BORZOVA, L.D.; KOLOSOVA, V.S.; POKAYEVSKAYA, V.S.

Pyrolysis of oil shale tar under pressure in the gasification of the Volga Region oil shales. Ispol', tverd. topl., ser. maz. 1 gaza no. 51238-246 '64 (MIRA 19:2)
DODONOV, Yo.

Battery powered phonograph. Radio no. 5123-25 My '61. (MIRA 14:7)
DODONOV, Ye.

Voltage converter, i.e., no. 10154, 0 '63. (MIRA 16:11)
DODONOV, Ye.

Multichannel electronic switch. Radio no. 3150-51. № 614
(MINA 27/7/1)

(Maleks Depression—Geology, Stratigraphic)
TITLE: Memory with magnetostriction delay lines for series computers

SOURCE: Operativnye i postoyannye zapominyushchiye ustroystva (Rapid and nonvolatile storage); sbornik stately. Leningrad, Izd-vo Energija, 1965, 166-163

ABSTRACT: Dynamic delay-line memories seem to be the most suitable for small consecutive-action computers. The present paper describes one type of such memories based on magnetostriction delay lines. The block diagram of the memory is shown in Fig. 1 of the Enclosure. After outlining the necessary theory and describing the construction and operation of the device, the authors conclude that the advantages of the magnetostriction delay line memory are: 1) low cost; 2) possibility of memory alterations without disturbing the basic circuitry; 3) input and output of information through several branches; 4) high speed; 5) easy matching with transistorised circuits; 6) economical operation; and 7) long-life. Orig. art. has: 6 formulas, 5 figures, and 1 table.
TITLE: Digital-analog computer system using magnetostrictive delay lines


ABSTRACT: The authors describe the design and performance of a digital differential analyzer using magnetostrictive delay lines as memory elements. The authors claim that such a memory has the advantages of a high-speed ferrite core memory and the economy of a magnetic drum. The digital differential analyzer has the following parameters: 32 integrators, binary operational code, 20-bit words, 250 KHz cycle rate, 400 operations per second, and error not exceeding 0.01%. The operational program and the initial conditions are entered manually through switches on a control console. The data entry can be manual, using decimal or binary codes, or automatic. The digital
The differential analyzer consists of a memory, computational unit, control unit, input and output equipment, control console and code converters. Of particular interest is the design and performance of the memory. The memory uses eight magnetostrictive delay lines, shown diagrammatically in fig. 1. The lines circulate the initial conditions data, the program, the increments, the intermediate results, and other information. The electrical pulses are converted into acoustical signals utilizing the magnetostrictive phenomenon. The acoustic material should be a nickel-iron-titanium alloy, which reduces the temperature effects on the delay time; in the absence of such material, nickel wire of medium hardness can be used. The diameter of the wire is very important. It determines the resolution of the delay line and the magnitude of the output signal. The thinner the wire, the better the resolution and the lower the output signal. An optimum diameter for a 250-1000 KHz signal rate is 0.5-0.8 mm. To reduce the reflection coefficient and physical dimensions, the delay line is formed into a flat Archimedes spiral housed in a flat cylindrical enclosure. The performance specifications for the ultrasonic delay line are as follows: operating frequency 50-1000 KHz, delay time 300-3000 microseconds, resolution 0.5-2 microseconds, signal-to-noise ratio greater than 4, and power consumption 1.5 w. The other functional units of the digital differential analyzer are described in detail. Block diagrams and performance data are given. Orig. art. has: 1 table, 6 formulas, 4 figures.
Fig. 1. A block diagram of the memory unit
1 - ultrasonic-delay line; 2 - the electro-acoustic transducer;
3 - receiving coil; 4 - the input driver; 5 - output amplifier;
6 - dampers; 7 - permanent magnets; 8 - pulse stretcher;
B₁ and B₂ - signal gates.

SUB CODE: 09/ SUBM DATE: 12Feb66/ ORIG REF: 005/ OTH REF: 000
AUTHOR: Gorban', A.M.; Gridin, G.K.; Dodonova, G.M.; Onishchenko, E.L.; Sirotyan, V.G.; Fomenko, N.K.; Khalmakaya, Ye. V.; Shikolov, V.S.; Shakhomlinov, M.M.  
(Candidate of Technical Sciences)  
TITLE: Magnetostriction delay lines  
SOURCE: Avtomatika i priborostroeniy, no. 3, 1965, 35–37  
TOPIC TAGS: magnetostriction, circuit delay line, ferromagnetic material, delay circuit  
ABSTRACT: Magnetostriction delay lines are based on the fact that ferromagnetic materials transmit ultrasound with a speed which is lower than the speed of electrical signals through conventional circuits. The Institut avtomatiki Gosudaretsvennogo komiteta po priborostroeniyu, sredstvam avtomatizatsii i sistemam upravleniya pri Gosplan SSSR (Institute of Automation, State Committee for the Design of Instruments, Means of Automation, and Control Systems attached to Gosplan SSSR) developed three such delay lines with delay times of 80, 640, and 2560 μsec, respectively. The block diagram of the devices is shown in Fig. 1 of the Enclosure. The sound conductor is made of an "N-1, hard" nickel alloy wire 0.7 mm in diameter. Its Young's modulus is about 21,000 – 23,000 kg/mm², specific density is 8.9 g/cm³, ultrasound velocity is 4,750 – 5,050 μsec, and the temperature coefficient of delay is 1.4·10⁻⁴ per °C. The article presents the pertinent circuit diagrams and a detailed description of the delay line operation. Orig. art. has: 1 formula and 4 figures.
Figure 1. Block diagram of the magnetostriction delay line = 1 - Input signal shaper; 2 - muffler; 3 - transmitter magnetostriction converter; 4 - permanent magnets; 5 - sound duct; 6 - receiver magnetostriction converter; 7 - output signal amplifier; 8 - pulse spreader.

Hemorrhages into the spinal canal in fetuses and newborn infants. Akush. i gin. no.1:26-29 Ja-P '54. (MLRA 7:6)

1. Iz kafedry akusherstva i ginekologii pediatricheskogo fakul'teta (sveduyushchiy - professor A.A. Lebedev) II Moskovskogo meditsinskogo instituta im. I.V. Stalina. (Fetus--Diseases) (Infants (Newborn)) (Hemorrhage)

Survey of Scientific and technical Dissertations defended at USSR Higher Educational institutions(10).
Pathomorphological changes in the nerve cells of the spinal cord in the stillborn and in dead newborn infants. Akush. i ginec. 35 no.4: 58-64 Jl-Ag '59. (MIRA 12:11)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. A.G. Butylin)
Kurskogo meditsinskogo instituta.
(SPINAL CORD pathol.)
(STILLBIRTH pathol.)
(INFANT MORTALITY pathol.)
Morphological changes in the spinal cord in stillborn and deceased newborn infants in toxemias. Akush. i gin. no.4;29-33 '61.

1. Iz kafedry akusherstva i ginekologii (zav. - prof. A.G. Bitylin) Kurskogo meditsinskogo instituta. (SPINAL CORD--DISEASES) (STILLBIRTH) (INFANT (NEWBORN)--MORTALITY) (PREGNANCY, COMPLICATIONS OF)
ACCESSION NR: AR4035553
SOURCE: Ref. zh. Avtomat., telemekh. i vy-uchisl. tekhn. Sv. t., Abs. 3A164
AUTHOR: Dodonova, L. G.
TITLE: Equipment for measuring quick-changing flows
CITED SOURCE: Sb. tr. Leningr. mekhan. in-ta, no. 33, 1963, 116-120

TOPIC TAGS: flow meter, electroconductive liquid flow meter, induction flow meter, quick changing flow meter

TRANSLATION: An induction flow meter has been developed which permits measuring flow of an electroconductive liquid in a wide frequency range (from 0 to 5-6 kc). This frequency range is obtained by using a d-c amplifier with electromagnetic recording and permanent-magnet sensors. An insulating material conduit is placed between the poles of a permanent magnet. The electroconductive liquid crosses the magnetic field lines. As a result, an emf is set up which is proportional to the liquid rate-of-flow; the emf is picked up by electrodes and is applied to the amplifier. With a d-c current in the sensor as low as 10^-9 amp and with longer electrodes, the polarization error has been reduced to 2-3%. To ensure the
amplifier stability and low noise, these steps have been taken: (1) the amplifier
is designed with a symmetrical balanced circuit; (2) grid and heater circuits are
supplied with a stabilized voltage; (3) the first-tube heater uses d-c; and
(4) negative feedbacks are employed. The amplifier comprises three stages with
6N2P and 6N1P tubes and a potentiometer-type interstage coupling. The output power
stage is designed with a 6N13S tube and is proportioned to accommodate the
electromagnetic vibrators of the first and second types. A simplified diagram is

DATE ACQ: 17Apr64

SUB CODE: IE

ENCL: 00

(Prospecting—Geophysical methods)
DODONOVA, N. N.

DODONOVA, N. N. - "Hyperspecificity of Immunity in Flexner Dysentery." Sub
26 May 52, First Moscow Order of Lenin Medical Inst. (Dissertation for
the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952
2333  Dodonova, N.N.

EKZ. Bespl.-
(54-56505)p  616.935-084
Detection of minimal quantities of B virus in fibroblast cultures of chick embryo. Vop. virus 6 no. 4:444-453 Jl-Ag '61.

(MIRA 14:11)


(VIRUSES) (TISSUE CULTURE)
GAVRILOV, V.I.; DODONOVA, N.N.

Variability of the Asian Fowl plague virus cultured in transplanted mouse embryo cells (the KEM-L line). Vop. virus 7 no.1:92-100 Ja-P '62. (MIRA 15:3)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni L.A. Tarasevicha, Moskva. (NEWCASTLE DISEASE)
GAVRILOV, V.I.; DODONOVA, N.N.; KUBORINA, L.N.

Epizootology of adenovirus infections in M. rhesus monkeys.
Vop.virus 7 no.4:99-105 J1-Ag '62. (MIRA 15:8)

1. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh
preparatov imeni L.A.Tarasevicha, Moskva.
(ADENOVIRUS INFECTIONS) (MONKEYS--DISEASES AND PESTS)
GAVRILOV, V.I.; VASIL'YEVA, N.N.; DODKOV, N.B.; ZHIYEVA, R.G.

Line of transplantable cells from a Syrian hamster tumor caused by the SV40 virus. Vop. virus 8 no. 5: 583-590 S-0163
(MIRA-1711)

1. Institut virusologii imeni D.I.Ivanovskogo AVM SSSR i Kontrol'nyy institut meditsinskikh biologicheskikh preparatov
imeni L.A. Tarasevicha.
VASIL'YEVA, N.N.; KRAVCHENKO, A.T.; GAVRILOV, V.I.; DODONOVA, N.N.; LEVENBUK, I.S.; KARNAJEVA, F.M.

Study of the infective and oncogenic activity of the SV40 virus. Preliminary report. Vop. virus. 9 no.2 222-227 Mr-Ap '64. (MIRA 17:12)

1. Kontrol'nyy institut imeni Tarasevicha, Moskva.
ALTSTEIN, A.D.; DODONOVA, N.N.; VASILYeva, N.N.


1. The Tarasevich State Control Institute of Medical Biological Preparations, Moscow, U.S.S.R.
KOSTYUKOV, M.A.; GAVRILOV, V.I.; DODONOVA, N.N.; DREYZIN, R.S.

Results of the indentification of adenoviruses of the monkey type M. Vop. virus. 10 no.4:483-486 Jl-Ag '65. (MIRA 18:8)

I. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR i Gosudarstvenny kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni L.A. Tarasevicha, Moskva.
Dodonova, N. Ya.--"Infrared Radiation of an Electrical Discharge in Molecular Gases."
(Deferativnyi Zhurnal--Fizika, January 54)

So: SUA 168, 22 July 1954
USSR/Physics - Spectral analysis

Card 1/1 Pub. 22 - 15/47

Authors : Dodonova, N. Ya.

Title : Infrared radiation of a high-frequency discharge in CO and CO$_2$

Periodical : Dok. AN SSSR 98/5, 753-756, Oct 11, 1954

Abstract : The infrared radiation of a high-frequency discharge in CO and CO$_2$ and their mixtures with hydrogen and nitrogen was investigated and the yields of infrared radiation of discharges, having different frequency but identical intensity, were compared. The effect of increased gas pressure in the discharge tube on the radiation intensity, in the case of high- and low-frequency discharges, is discussed. Data regarding the radiation spectra of CO and CO$_2$ and the measurement results are presented in graphs. Two USSR references (1937 and 1942). Graphs.

Institution : The A. A. Zhdanov State University, Leningrad

Dodonova, N. Ya.

USSR/Physics - Infrared radiation

Card 1/1 : Pub. 22 - 15/44

Authors : Dodonova, N. Ya.

Title : "About the mechanism of the excitation of oscillating levels of molecules in electric discharge"

Periodical : Dok. AN SSSR 98/6, 923-935, October 21, 1954

Abstract : Experiments with infrared radiation of electric discharges in CO and CO2 gases are described. The purpose of the experiments was to determine if the radiation was due to thermal excitation of molecules or to collisions of the latter with electrons, or both; also, to determine whether there is any possibility for transforming the oscillating energy of excited molecules into forward and rotating movements. Six references; 3 U.S.S.R. (1893-1954). Graphs.

Institution : Leningrad State University im. A. A. Zhdanov

"Infrared Emission of Nitric Oxide in Electric Discharge," Vest. Len. Univ.,
Phys. and Chem. Series, 10, No.2, pp. 3-5, 1956

Translation 9002985
DODONOVA, N.Ya.; SOBOLEV, V.V.

(NITRA 9:9)
(Nitrogen oxides--Spectra)
AUTHORS: Dodonova, N. Ya., Sidorova, A. I., Terenin, A. N.

TITLE: Photosynthesis Under the Action of Schumann Radiation


ABSTRACT: Already 20 years ago the photochemical decomposition of simple gases such as NH₂, H₂O, CH₄, CO, which were also present in the primary atmosphere of the Earth could be observed due to the short-wave ultraviolet radiation by Terenin (Ref 4) and others (Ref 5). The absorption spectra of these gases are in the Schumann range of the wavelengths. The limiting wavelengths of the photochemical decomposition of the afore-mentioned gases, the decomposition products and the final products are given in the table. Some of the forming radicals are luminescent. Besides the reactions mentioned, more complicated reactions take place such as the formation of formaldehyde and, finally, formamide (Ref 12). The formation of amino acids from somewhat more complicated compounds could be observed by various authors (Ref 13), Pavlovskaya and Pasynskiy (Ref 14), Groth (Ref 16)
recently reported on the photosynthesis of amino acids from natural gases. The authors of the present paper had made experiments for the photosynthesis of amino acids from natural gases already before the publication of the mentioned paper. For this purpose they used a hydrogen tube (Fig 1) with an energy distribution in the spectrum similar to that of sunlight. The apparatus is briefly described. A high-quality quartz window was used at the point of emergence of the beams. The transparency of this window was measured by F. I. Vilenov (Fig 2). The production of the gases is briefly described. Two experimental series were made: (1) with steam, methane, and ammonia, (2) the same with subsequent addition of carbon. Gas pressure was 100 torr, methane pressure, 500 torr. The mixture was irradiated for 24-26 hours. At the bottom of the reaction cell some liquid drops accumulated which were investigated by paper chromatography. Figure 3 shows schematically the typical chromatograms. The following amino acids could be definitely determined herefrom: \( \alpha \)-alanine, \( \alpha \)-aminobutyric acid, valine, and nor-leucine. In experiments only with steam and ammonia no amino acids could be found. Furthermore, some problems of photochemical synthesis were discussed, and
Photosynthesis Under the Action of Schumann Radiation

Terenin, K. Ya. Kasparov (Ref 17), Terenin and Yu. F. Solonitsyn (Ref 19) are mentioned in this connection. There are 3 figures, 1 table, and 20 references, 5 of which are Soviet.

SUBMITTED: April 15, 1959
AUTHORS: Dodonova, N. Ya., Sidorova, A. I.

TITLE: Photosynthesis of amino acids from mixtures of simple gases under the action of ultraviolet radiation in vacuo


TEXT: The authors studied the syntheses of complex organic compounds under the action of light from an H₂-lamp with a multi-line and a continuous spectrum in the vacuum UV region on the following gas mixtures: (1) NH₃, CH₄, H₂O, (2) CH₄, NH₃, H₂O, CO, (3) NH₃, H₂O, CO. The overall gas pressure was up to 600 mm Hg. All the experiments were made above liquid water. The photolysis products were analyzed by paper chromatography. It was found that the photolysis of mixture (1) yields amino acids (leucine, valine, α-aminobutyric acid, glycine), hydrazine, and formaldehyde. In the photolysis of mixtures (2) and (3), less active Card 1/2
Photosynthesis of amino acids ...

acids with lesser Rf values (glycine, glutamic acid, alanines) are more intensely appearing among the amino acids; besides acids, also formaldehyde and urea are forming. It is shown that Hg vapor has no sensitizing effect on the reaction. The reaction mechanism is discussed; it is supposed that formaldehyde and urea are intermediates in the synthesis of amino acids. [Abstractor's note: Complete translation.]
AUTHOR: Dodanova, N. Ya.

TITLE: Synthesis of urea under ultraviolet irradiation in vacuo


TEXT: The investigations on the effect of ultraviolet irradiation from gas mixtures made under the direction of Academician A. N. Terenin have been continued and a report is given on the formation of urea observed earlier (Biolizika, 4, 149, 1961) by illuminating a mixture of CO ($p_{CO} \sim 100-200$ mm Hg) and NH$_3$ ($p_{NH_3} \sim 200-300$ mm Hg). After 1-2 hrs irradiation by a hydrogen lamp of minimum wavelength 1430 Å, a thin white coating formed on the chamber window, in which urea was found by paper chromatography. The reaction is stated as: NH$_3$ + hv $\rightarrow$ NH$_2$ + H; CO + NH$_2$ $\rightarrow$ CONH$_2$; CONH$_2$ + NH$_2$ $\rightarrow$ CONH$_2$(NH$_2$)$_2$. Using chromotropic acid, hexamethylene tetramine formed by reaction of formaldehyde with ammonia was also found. Formaldehyde Card 1/2
Synthesis of urea under... 

Hyde is formed according to: $H + CO \rightarrow CHO; \; CHO + CHO \rightarrow CH_2O + CO$. When the shortwave limit of the lamp was increased to 1800 $\AA$, the synthesis took some dozens of hours owing to low permeability of ultraviolet glass to 1900-1800 $\AA$, and no reaction occurred in irradiation with $\lambda > 2800 \; \text{Å}$. This confirms the assumption that the reaction is caused by NH$_2$ radicals formed by decomposition of NH$_3$. The shortwave limit of this process lies at 1900 $\AA$. The presence of HCN in the gas mixture was discovered using picrate paper protected from ultraviolet irradiation.

SUBMITTED: February 2, 1962
DODONova, N.Y.; SIDORova, A.I.

Role of ethyl radicals in the synthesis of amino acids under the influence of ultraviolet irradiations in vacuo. Biofizika 7 no.1: 31-33 '62.

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.
   (AMINO ACIDS) (ULTRAVIOLET RAYS) (ETHYL)

1. Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta imeni A.A. Zhdanova.
(SULFUR COMPOUNDS) (ULTRAVIOLET RAYS) (PHOTOCHEMISTRY)
DODONAVA, N.Ya.

Synthesis of urea under the action of vacuum ultraviolet radiation.
Vest. LGU 17 no.16:144-145 '62. (MIRA 15:9)
(Urea) (Ultraviolet rays)
Title: Excitation of free radicals incident to dissociation of polyatomic molecules by UV photons. Report presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held in Uzhgorod 2-9 Oct 1962.

Source: AN SSSR, Szhostiya, ser.fiz., v.27, no.8, 1963, 1094-1096

Topic tags: radical detachment, free radicals, photolysis, NH₂, CH, OH, amine, hydrazine

Abstract: The present work was a continuation of studies initiated in 1934 by A. N. Torenin and G. G. Neuymin (Izv. AN SSSR, Ser. Fiz. Mat., No. 4, 1939), who discovered luminescence of OH, NH₂, CN and CHO radicals incident to photolysis of ammonium, hydrazine, acetonitrile and formic acid vapors by λ > 1250 Å radiation from a hydrogen discharge tube. Since then other investigators, Soviet and foreign, have contributed to the field. In the present study there were investigated the emission spectra of radicals formed as a result of photodissociation of a number of amines, hydrazine: derivatives and other compounds under the influence of the radiation from a 1 kW high-voltage hydrogen discharge tube with a thin fluorite window (λ > 1250 Å).
which corresponds to about 10 eV). The luminescence spectra of the radicals were photographed with the aid of quartz and glass optics spectrographs at right angles to the direction of the incident radiation. The vapor pressure was about 1 mm Hg or was determined by the vapor pressure of the substances at room temperature. The results are summarized in a table which lists the investigated compounds and the radicals (N₂, CN and CH), the characteristic spectra of which were detected. The radical detachment energies are noted for some compounds. Measurements indicated a linear dependence of the CN band intensities on the intensity of the incident radiation for some compounds, which may be taken as an indication of the absence of step photolysis. The formation of nitrogen containing compounds under the experimental conditions can be explained on the assumption that nitrogen molecules are present in a metastable state with sufficient excess energy to provide for significant chemical activity. "Laboratory technician N.V. Rudenko participated in the experimental part of the work." Orig.art.has: 2 formulas, 1 figure and 1 table.

ASSOCIATION: Laboratoriya fotokataliza, Leningradskiy gos. universitet im.A.A. Zhdanova (Photocatalysis Laboratory, Leningrad State University)
Fluorescence of NO during photodissociation of N₂O under the influence of vacuum ultraviolet radiation

ABSTRACT: The authors obtained the fluorescence spectrum of NO during photodissociation of N₂O in accordance with the scheme

\[ \text{N}_2\text{O} \rightarrow \text{NO}^* + \text{N}, \]  
\[ \text{NO}^* \rightarrow \text{NO} + h\nu. \]  

The N₂O was illuminated with a high-voltage hydrogen lamp with lithium-fluoride window, at an intensity of \(10^{15} - 10^{18}\) quanta/sec in the 1050–1700 Å region. The transmission of the window for H₂ of hydrogen was 70%. The pressure of N₂O was 1 mm Hg. The spectrum was photographed with RP-3 film with a Hilger quartz spectrograph (Model E 517) and with a glass spectrograph with transmission 1:5 perpendicular to the direction of the exciting light. The exposure time was two hours. The fluorescence spectrum of N₂O contained intense \(\gamma\) bands of the NO system \(0--\nu''\), weaker bands of the \(1--\nu''\) system, bands of the OH system \(3064\) Å, and the violet system of bands CN with...
edges 4216, 3883, and 3590 Å, in the visible region, as well as intense bands coinciding with CO Angstrom bands (4510, 5918 Å) and the yellow fluorescence in the 6000 Å region. To check whether the fluorescence of NO is a primary or secondary process during the illumination of N2O, the fluorescence spectrum of NO was obtained under analogous conditions as N2O. The spectrum of the NO consisted of a large number of bands in the 2200–3000 Å region, belonging to the various transitions between the electronic states of the γ system and of the β system, as well as intense OH bands (2065 Å) and CN bands with edges at 4216, 3883, and 3590 Å. The yellow fluorescence near 6000 Å was particularly intense. The results are compared with those obtained by others and causes of the differences are discussed. The undisputed difference established between the fluorescence spectra of the two oxides leads to the conclusion that the γ bands of NO are affected by different excitation processes in the two gases. Furthermore, the fluorescence of NO is connected with primary and not with secondary processes. The author thanks A. N. Terenin for interest in the work and N. V. Rudenko for participation. Orig. art. hast; 2 figures and 6 formulas.
AUTHOR: Dodonova, N. Ya.

ORG: Physics Institute, Leningrad State University (Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta)

TITLE: Nitrogen activation by ultraviolet radiation in vacuum

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 5, 1966, 969-971

TOPIC TAGS: photochemistry, photolysis, photoactivation, nitrogen, activated nitrogen, hydrogen cyanide

ABSTRACT: Photosactivation of molecular nitrogen by ultraviolet light in vacuum has been studied to verify the earlier reported synthesis of nitrogen-containing compounds, e.g., hydrogen cyanide, by photochemical reaction of active nitrogen with saturated hydrocarbons. Formation of HCN in nitrogen-methane mixtures, which were exposed to radiation from a high-voltage hydrogen lamp with a fluorite window, was the criterion of nitrogen photoactivation. HCN was detected by paper chromatography (sensitivity of the method $10^{-6}$ g) and mass-spectrometry in the gaseous mixture in a special reaction vessel evacuated to 5-8 mm Hg. Presumably, HCN may be the product of photochemical reaction of OH radicals from methane with active nitrogen. Photoactivation of nitrogen may proceed by two mechanisms: decomposition...
(predissociation) of the $N_2$ molecule into atoms, which is induced by 1273 Å radiation, or by excitation of the molecule into the $A^3\Sigma_u^+$ metastable state which may be chemically active. Orig. art. has: 1 figure.

"To Epidemiology of the Pandemic in Wartime,"

[Diphtheria and its prevention] Difterii i ee pradeduprezen-

(DIPHTHERIA--PREVENTION)
Peculiarities of the epidemiology and prevention of measles in the children's hospital. Vop. okh. mat. i det. 4 no. 5:66-70 8-0 '99.

Effectiveness of the seroprevention of measles by gamma globulin taken from a placenta in a pediatric hospital. 
Trudy IEM no18:201-204 '61. (MIRA 17:2)

MAUERMAN, O.Ye.; DMITRIYEVA-RAVIKOVICH, Ye.M. [deceased]; PUDONova, O.N.

Clinical epidemiological characteristics of scarlet fever; a revisi of the literature. Zhur. mikrobiol., epid. i immun. 41 no.9:42-45 S '64.

1. Moskovskiy institut epidemiologii i mikrobiologii Ministerstva zdravookhraneniya RSFSR.
DODONova, T.A.

Stratigraphy of lower Paleozoic and pre-Cambrian sediments in the
Talas Ala-Tau. Trudy Inst. geol. AN Kir. SSR no.9:207-213 '57.

(Talas Ala-Tau--Geology, Stratigraphic)
DODONOVA, T.A.

Age of complex metal ores in the Kurgan deposit in the Talas Ala-Tau. Zap. Kir. otd. Vses. min. ob-va no.1;71-75 159. (MIRA 14:3)

(Talas Ala-Tau—Ore deposits)
Age and mode of occurrence of quartz-porphyries in the Kökemeren Valley. Mat. po geol. Ťian-Shania no.3:135-146 '62.

(MIRA 16:7)

(Kökemeren Valley—Quartz)
(Kökemeren Valley—Porphyry)
DODONOVA, T.A.

Early Hercynian syenite-diorites of the Terek Massif (Talas Ala-Too), Zap. Kir. otd. Vses. min. ob-vu no.5:51-57 '65.

(MIRA 18:7)
Method of combined spinning, slubbing, and twisting in woolen manufacture. Nauch.-issled. trudy TSNIIshersti no.17:29-38 '62. (MIRA 17:12)
DODONA, V.N., kand. med. nauk (Kuntaev, Moskovskoy oblasti)

Epidemiology and clinical aspects of scarlet fever. "Feld. i akh." 22 no. 919-22 S'57 (MIRA 1110) (SCARLET FEVER)
1032. METASTATIC SEPTIC PNEUMONIAS AND ABSCESSES OF THE LUNG
IN OTOGENIC SEPSIS (Russian text) - Dodonova Z. G. and Triantafillidi I. G.,
Moscow - VESTN. OTO-HINNO-LARING, 1956, 20/5 (54-57)
Illus. 1

Pulmonary abscesses are frequently one of the manifestations of otogenic sepsis.
Of 70 patients with otogenic sepsis (1948-1957), 20 had pulmonary complications.
X-ray examination is of great importance for timely detection of metastatic lesions of
the lungs; a rapid alternation of the roentgenological picture is characteristic for
the above disturbance. Infiltrative foci appear early, with a predisposition to ac-
celerated disintegration and formation of abscesses. Surgical treatment should be
coupled with antibiotic therapy.

(Kliniki bol'nykh u Khm, garla, i nosa
Moskovskogo oblastnogo naukovo-issledovatel'skogo
Klinicheskogo instituta)
DODOROV, T.

Method for calculating static condensers for groupe compensation of \( \cos \phi \) in industrial enterprises. p. 17.

Vol. 6, no. 9, Sept. 1955
ELEKTRCENERGIIA
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956
KAPLYANSKIY, A.Ye., doktor tekhn. nauk, prof. (Leningrad); DODOTCHENKO, V.V., inzh. (Leningrad); KONONOV, S.P., inzh. (Leningrad)

Magnetic plasma and ion flow motors and d.c. generators. Elektriches'tvo no. 5:88-91 My '64. (MIRA 1716)}

This report embodies the results attained so far by the authors in their study of a very serious disease of rice in Bulgaria, which appears to be identical with the condition known as 'blast' in America and 'inomai' or 'imoehiyo' in Japan [cf. K.A.M., vii, p. 394], and to have some features in common with the 'brunnese' of rice in Italy. After noting the divergences of opinion regarding the causes of blast in other countries, it is stated that, in Bulgaria, the disease is probably caused by Piricularia oryzae [ibid., viii, p. 124; ix, p. 550] and Scirrularia oryzae [ibid., ix, p. 484]. The former of which is more widely distributed than the latter. Isolations from rotten rice straw also yielded a strain of Scirrularia which proved to be identical with Sakurai's S. No. 2 [ibid., viii, p. 289]. Brief descriptions are given of the morphology of the fungi and of the symptoms caused by them on rice plants.
In Bulgaria the disease usually appears during the latter part of the summer, its destructiveness increasing with the earliness of its appearance. Under favourable conditions, e.g., abundant dew or rains, fog, cloudy weather, and the like, at the time of heading or immediately after, it may rapidly spread over whole fields from a few infection foci, usually near to the source of water, and practically destroy the whole of the crop. In general, all conditions tending to increase the relative humidity inside the rice stands favour the development of the disease.

*P. oryzae* was shown to overwinter as conidia on rice seeds, the straw, and infected stubble, and also as mycelium on straw and stubble [ibid., viii, p. 197]. The conidia retained their viability for over 17 months when kept at room temperature under dry conditions, and under the same conditions the mycelium survived for over 29 months in diseased rice nodes. *S. oryzae* overwinters as sclerotia and mycelium on the stubble. The chief control measures recommended are the cultivation of uniform, well-aerated fields, and the use of resistant varieties of rice, and in the case of *S. oryzae* burning of the stubble, suitable crop rotation, and the isolation of the infected parts of the rice fields.

Besides this disease, rice in Bulgaria also suffers from straighthead [ibid., vii, p. 493], and in 1929 *Scleropycnis nasutus* was observed on it in a few localities.
Duineye (D. N.)—Physiological races of leaf rust of Wheat (Puccinia triticina Eriks.) in Bulgaria.

(Physiological forms of leaf rust of Wheat (Puccinia triticina Eriks.) in Bulgaria.—Reprinted from Zemlingar
zioni Eriks. in Bulgaria.)—Agricultural Thought, Sofia, ii, 2, 34 pp., 0 figs.,
1 map, 1931. [English summary.] This is a detailed account of the author's investigation in 1930
of wheat brown rust (Puccinia triticina) material collected from
six widely separated localities in Bulgaria, for the purpose of
determining the physiological forms of the fungus that occur in
that country (R.A.M. x, p. 648). The experiments were made by
means of single spore inoculations on eleven differential hosts (a
list of which is given) in the greenhouse. The results (which are
presented in tabular form) indicate the existence in Bulgaria of
the already known forms XIII, XV, XVII, XIX, XX, XXI (1931),
and of a new form XXIV, which differs from
in, pp. 660, 768), and of a new form XXIV, which differs from
forms XIII and XXI only in the reaction caused by it on the
differential varieties Democrat C.I. 3384 and Mediterranean C.I. 3332. On the former, which is resistant to form X11, form XXIV causes a reaction of an indeterminate character (infection type x) in which symptoms proper to different types of [ibid., ii, p. 159], in which symptoms proper to different types of infection frequently appear on the same leaf and cannot be mechanically separated. Mediterranean C.I. 3332 is resistant to form XXIV and susceptible to form XXI.

The most prevalent forms in Bulgaria appear to be X11 in the north and XX in the south. Form XXIV was found in three localities, and the remaining forms were only sporadic.
In this further annotated list of plant-parasitic micro-organisms stated to be new records for Bulgaria [R.A.M. x, p. 436] the following organisms of economic interest may be mentioned.

1. **R. javanicum** (A. Var.) sensu K. Christoff n. sp. was found attacking *R. javanicum* (A. Var.) in the country of *R. javanicum* var. sp., which it caused brown to blackish-brown spots, and of *R. javanicum* var. sp. on which the lesions had a purplish tinge. The bacillus is a short and moderately long (1 to 3 by 0.5 to 0.6 μm), motile, strictly aerobic, gram-negative, non-acid-fast, non-sporulating, encapsulated rod with rounded ends and with 1 to 10 peritrichal flagella, occurring usually singly but frequently in pairs.

2. **R. javanicum** (A. Var.) var. sp. on which the lesions had a purplish tinge. The bacillus is a short and moderately long (1 to 3 by 0.5 to 0.6 μm), motile, strictly aerobic, gram-negative, non-acid-fast, non-sporulating, encapsulated rod with rounded ends and with 1 to 10 peritrichal flagella, occurring usually singly but frequently in pairs.

3. **R. javanicum** (A. Var.) var. sp. on which the lesions had a purplish tinge. The bacillus is a short and moderately long (1 to 3 by 0.5 to 0.6 μm), motile, strictly aerobic, gram-negative, non-acid-fast, non-sporulating, encapsulated rod with rounded ends and with 1 to 10 peritrichal flagella, occurring usually singly but frequently in pairs.

4. **R. javanicum** (A. Var.) var. sp. on which the lesions had a purplish tinge. The bacillus is a short and moderately long (1 to 3 by 0.5 to 0.6 μm), motile, strictly aerobic, gram-negative, non-acid-fast, non-sporulating, encapsulated rod with rounded ends and with 1 to 10 peritrichal flagella, occurring usually singly but frequently in pairs.
progress to determine the real identity of the causal organism.

The other reports include *B. meliosyninis var. phaseoli* on French beans (*Phaseolus vulgaris*) grown from seed imported from Germany; *Ureaphila cuneata* on onion (*Allium cepa*) [ibid, p. 410]; *F. graminearum* on wheat [ibid, p. 282]; *P. cerearia* [ibid, p. 410]; *P. triticis* on wheat (ibid, p. 782); *P. phaseoli* [ibid, p. 530]; *P. oryzae* in the vegetative stages on *Dactyloctenium aegyptium* and in the acre and毫不留情 stages on different species of *Pennisetum,* including plum; *Macrophomina phaseoli* [ibid, p. 410]; *P. phaseoli* on oak (*Quercus robur*); *P. phaseoli* on *Aster spp.* [ibid, p. 782]; *P. carotovorum* on hemp (*Cannabis sativa*); *Macrophomina phaseoli* on rhubarb; *Cytoplasta capitata* [ibid, p. 417] on dead apple buds and twigs; *C. fuscata* var. *cinerea* [ibid, p. 433]; *C. fuscata* var. *cinerea* on dead apple buds and twigs; *C. fuscata* var. *cinerea* [ibid, p. 342] causing the death of peach twigs; *B. cucurbitae* [ibid, p. 282] on vegetable marrow; *S. pustulosa* [ibid, p. 410]; *F. graminearum* on barley and some wild species of *Holcus*; *S. pustulosa* on barley and some wild species of *Holcus*; *S. pustulosa* on barley and some wild species of *Holcus*; *F. graminearum* [ibid, p. 282] on wheat, rye, and *Poa pratensis.* Very widespread on wheat, rye, and *Poa pratensis.* *Verticillium dahliae* on *Ager tenuissima,* eggplant, *Solanum tuberosum,* tomato, plum, peach, apple, and cotton; *Bacillus subtilis* [ibid, p. 556] on globe artichokes (*Cynara scolymus*); *F. graminearum* on cereal *Ager tenuissima* on *A. tenuissima,* eggplant, *Solanum tuberosum,* tomato, plum, peach, apple, and cotton; *Bacillus subtilis* [ibid, p. 556] on globe artichokes (*Cynara scolymus*); *F. graminearum* on cereal *Ager tenuissima* on *A. tenuissima,* eggplant, *Solanum tuberosum,* tomato, plum, peach, apple, and cotton; *Bacillus subtilis* [ibid, p. 202] on wheat, tobacco, rice, and French beans; and *B. ambrosiae* [ibid, p. 202] on rice. The paper terminates with a list of new host plants of parasitic fungi that were recently found in Bulgaria.
As a result of his study [details of which are given] of the behaviour on Blakman's and Levine's differential wheat varieties [R.A.M., ii, p. 158] of 69 collections of wheat stem [black] rust (Puccinia graminis tritici), gathered in 1931 and 1932 from various parts of Bulgaria, the author established the occurrence in that country of physiologic forms 17, 24, 34, 40, 116, and 119 of the rust. He also found two new forms, 129 and 130, the reaction of which on the differential varieties is indicated, and each of which was obtained only once. It is pointed out that this is the first record in nature of physiologic forms 116 [but see ibid., xiii, p. 861] and 119, which had been artificially produced by crossing in Canada [ibid., x, p. 16; xii, p. 14]. Of these, form 116 was prevalent, together with form 40, both in 1931 and in 1932, while form 119, as well as forms 17 and 24, were only found once each. Form 34 was isolated once in 1931 and six times in 1932. Notes are given on the distribution of these forms in other continents.

In describing the experiments, it is stated that most of the work was done in the months from September to November, inclusive, and from February to the beginning of May, in order to obviate the unfavourable effect of ecological factors, especially that of temperature and light, on the normal development of the artificially induced rust epidemics.
DODOV, D.N.

Production of ergot in Bulgaria. Farmatsija, Sofia 4 no. 4:21-22 July-Aug 54.

1. Stashii nauchen sutrudnik pri Instituta za zashchita na rasteniata.

(ERGOT ALKALOIDS,
prod. in Bulgaria)
DODOV, D.-I; DIMITROVA, E.; ZOLOTOVICH, G.


Vol. 9, no. 2, Apr./June 1956
DOKLADY
SCIENCE
Sofia, Bulgaria

SO: East European Accession, Vol. 6, No. 3, March 1957
SO: Monthly Index of East European Accessions (EEAI) LC Vol 7, no 1 Jan 1958
Possibilities of developing wheat varieties resistant to a complex of rust and smut strains. Zashch. rast. ot vred. i bol. 6 no. 7: 54-55 Jl '61. (MIRA 16:5)
DODOV, D.N.

Immunologic studies of barley scald; Rhynchosporium secalis (Oud.) Davis. Izv Inst zasht rast 5:71-85 '63.

1. Vorgelegt von Akademiemitglied D. Ivanoff [Ivanov, D.], Mitglied des Redaktionskomitees, "Doklady Bolgarskoy Akademii nauk".
SAGORCHEV, B. [Gayorchev, B.]; DUNAVA, I.

Chromatographic separation of ferric and ferrous ions. Use of complexon III as complex-forming agent. Zakhlad BAN 17
no. 5 1979-198 1964

BULGARIA/Organic Chemistry Synthetic Organic Chemistry

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81637.

Author: Ivanov, Ch., Jelinaslov L., Dodova M., Agova M.

Inst: AN Bulgaria.

Title: The Preparation of Nitrofuran Substitutes Having Possible Antitubercular Activity.

Orig Pub: Dokl. Bolg AN, 1957, 10, No 4. 313-316

Abstract: In search of new preparations which possess antitubercular activity, there were obtained: 5-nitrofurfuryldene salicylhydrazine, yield 80.3%, m.p. 246-250°C. (with decomposition; from alcohol); 5-nitrofurfuryldene benzylcyanoacetyl hydrazine, yield 64%, m.p. 181-185°C. (with decomposition; from alcohol), and 5-nitrofurfuryldene isonicotynocetyl hydrazine (I). It was demonstrated that cyanoacetyl...
hydrazide and 5-nitrofurfurylidene hydrazone are not active as antitubercular agents in vitro and in vivo. It possesses high antitubercular activity, which is combined with low toxicity. To 0.56 moles of acetic anhydride at 25°C were added dropwise 0.2 moles of 70% HNO₃ and 0.1 moles of furfurylidene isonicotinoyl hydrazine in 50 mL acetic anhydride agitated for 30 minutes at 25°C. and the nitrate of I was separated, yield 40%, m.p. 155°C. (with decomposition). The aqueous solution of the nitrate of I is neutralized with soda ash and I is obtained, yield ~ 100%, m.p. 245-250°C. (with decomposition; from alcohol).

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77628.

Author : Ivanov, C. and Dodova, M.
Inst : Bulgarian Academy of Sciences.
Title : On the Preparation of Derivatives of 5-Bromofuran Possessing Probable Tuberculostatic and Bacteriostatic Activity.

Orig Pub: Doklady Bolg Akad Nauk, 10, No 6, 477-480 (1957) (in English with a Russian summary).

Abstract: For the purpose of investigating the effect of the substitution of the \( \text{NO}_2 \) group by a \( \text{Br} \) atom in derivatives of 5-nitrofurfural on the pharmacological activity, the authors have synthesized a number of acylhydrazones of 5-bromofurfural (mp 80-82\(^\circ\)); thiosemicarbazone yield 73.2\%, mp 166-168\(^\circ\) (from water);

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contains 3H₂O), having a general formula 5-BrC₄H₂OCH = NNCOR (I) and a number of (5-bromofur- 
yl-2)-hydrazones of the general structure 5-BrC₄H₂CONHN = R (II), starting from the hy- 
drazone of 5-bromofuran-2-carboxylic acid (mp 134- 
135°C) and various carbonyl compounds. The deriva- 
tive obtained (R in parentheses), the yield in %, 
and the mp in °C (decomp; from alc) are given be- 
low: I (4-pyridyl), 68, 210-214; I(CH₂CN), 78.1, 
170-173; I(C₆H₄OH-2), 64.9, 228-232; I(5-BrC₄ 
H₂O), 55, 175-179; I(C₁₅H₃₁), 66.2, 68-91; 
II(CHC₆H₅), 40.9, 162-165; II (CHC₆H₄CH₃ -4), 
65.1, 159-162; II (CHC₆H₄OH-2), 71.5, 194-197;

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77628.

Abstract: II (CHC₆H₄ NHCOCH₃-4), 97.9, 276-280; II(CCH₂C₆H₄ N(CH₃)₂ -4), 59.5, 153-155; II (CHCH = CHC₆H₅), 78.4, 258-260; II (CHC₄H₃ O), 73.6, 197-200; II (CHC₄H₂O·NO₂-5), 61, 225-228; II (C(CH₃)₃C₆H₅), 42.3, 158-160; II (CHC₅H₁₁O₅), 65, 178-183. -- V. Zaretskiy.
DONU, A
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PERIODICAL: INDUSTRIA TEXTILE, Vol. 9, no. 12, Dec. 1956

DONU, A. Processing synthetic polyamide yarns in the knitting industry
p. 467

Monthly List of East European Accessions (EFAI) LC Vol. 8, no. 4
April 1959, Unclass
DODU, A.; STEFĂNESCU, E.

Some considerations on increasing the durability of men's socks. p.400

INDUSTRIA TEXTILĂ. (Asociatia Stintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Industriei Usoare) Bucuresti, Romania Vol. 10, no. 10, Oct. 1959

MUNTEANU, Virgilia, ing.; DOBU, Ar., ing.


1. Institutul de cercetari textile.
Considerations on checking the thread quality and super-elastic thread socks, Pt.2. Ind text Rum 12 no.74279-281 J1'61.

Institutul de cercetari textile.
DODU, A., ing.; MUNTEANU, Virgilia, ing.

Torsion equilibrium of synthetic fibers, an important qualitative parameter. Ind. text Rum 12 no. 9:364-365 8761

1. Institutul de cercetari textile.
DODU, Ar., ing.

New technique in knitting industry. Ind text Rum 12 no.10:403-411 0 '61.

1. Institutul de cercetari textile.
GROSS, A.; DOU, A.; Ing.

DODU, A., ing.


1. Institutul de cercetari textile.
HALALAU, I., ing.; STEFANESCU, Ruprosina, ing.; DODU, A. ing.

Main technical parameters of polyamide fibers and threads and their influence on the processing technology and quality of finished products. Ind text Run 19 no.6:221-224 Ju '62.
GROSS, A.; DODU, A., ing.

Design effects in knitted materials. Ind têxt Rum 14, no.2: 70-72 F '63.

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"Bases of knitting machine designing" by S. Milcenco. Reviewed by A. Dodu. Ind text Rum 14 no.10:486 S '63.
DODU, A., prof. ing.

"Rotary machine for knitted materials" by S.M. Mirkin, H.S. Simin.
Reviewed by A. Dodu. Ind text Rm 14 no. 114543 N° 63.
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New equipment in worsted spinning mills and their influence on the yarn quality. Ind text Rum 15 no. 1: 16-23 Ja '64.
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