

USSR

VINOGRADOVA, M. B., GUSEV, V. D.

UDC: 621.396.677.001.5

"Concerning the Question of Reduction of the Directive Gain of an Antenna
During Reception of a Fluctuating Signal"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 9, Sep 72, pp 1816-1822

Abstract: The problem of variation in the directive gain of a large linear antenna during reception of a fluctuating signal is considered. It is shown that directive gain depends on the ratio between the powers of the "mirror reflection" and scattered components of the signal, and may differ considerably from the theoretical value. If there is no mirror image component of the signal, then the directive gain of the antenna is determined by the ratio of the correlation radius of the field to the wavelength, and does not change with an increase in the length of the antenna.

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USSR

UDC 577.391

MAKHLINA, A. M., VINOGRADOVA, M. F., and VODOP'YANOVA, L. G.

"The Relative Radiation Sensitivity of Some Animal Organs"

Leningrad, Vestnik Leningradskogo Universiteta, Biologiya, No 2, 1973,
pp 88-94

Abstract: At the peak of radiation sickness (72 hrs after irradiation of rats and rabbits with a lethal dose of X-rays amounting to 1,000-1,200 and 3,000 R, respectively), changes in the proteins, nucleic acids, and lipids of the animals' small intestine, liver, spleen, brain, and skeletal muscles were studied. On the basis of changes established by the investigation of organ and tissue homogenates, the small intestine, spleen, and liver must be regarded as radiation-sensitive, while the brain and skeletal muscles are radiation-resistant. The results obtained for mitochondria isolated from the organs of the animals agreed with those obtained in the study of homogenates derived from the organs in question. The conclusions reached in regard to the relative radiation sensitivity of the organs and tissues studied are in agreement with those arrived at by other investigators, except in the case of the liver, which is regarded as radiation-resistant in some published work. According to the data obtained in the present work, the biosynthesis of total lipids in the liver of rats decreased by 32%, while that of cholesterol increased by a factor 1/2

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MAKHLINA, A. M., et al., Vestnik Leningradskogo Universiteta, Biologiya, No 2, 1973, pp 88-94

of three. The content of lipids + cholesterol increased by 11-12%. The biosynthesis of total lipids and proteins in the mitochondria of the rat liver increased significantly, while a change in the content of these two components did not take place. The biosynthesis of lipids and proteins was studied by means of a tracer introduced by the addition of radioactive Na acetate ($2^{14}C$). The results of the work described indicated that the radiation sensitivity increased with increasing intensity of the metabolic activity of the organs and tissues.

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Biochemistry

USSR

VINOGRADOVA, M. F., MIHAYLO, D. D.

"Intensity of Lipid Metabolism and Complexes of Lipoids With Proteins in the Mitochondria of the Small Intestines of Irradiated Animals"

Nauch. dokl. vyssh. shkoly. Biol. n. (Scientific Reports of Schools of Higher Education. Biological Sciences), 1971, No 7, pp 59-62 (from RZh-Biologicheskaya Khimiya, No 23, Dec 71, Abstract No 23F1682)

Abstract: The intensity of restoration of lipids and their complexes with proteins changes significantly in the mitochondria of the small intestines of rats 48 hours after 800 roentgens of x-irradiation. The radioactivity of the entire suspension of mitochondria and protein complexes in the irradiated animals drops. Separate determination of the radioactivity of the proteins and lipids of these complexes demonstrated that 2-C¹⁴-acetate is included both in the lipid and the protein part of the lipoprotein molecule. Normally, more than half of all the activity of the lipoproteins goes to radioactivity of the lipids; under the

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USSR

VINOGRADOVA, M. F., et al, Nauch. dokl. vyssh. shkoly. Biol. n.,
1971, No 7, pp 59-62

conditions of radiation injury of the animals, a large part of
the radioactivity goes to the protein. This is connected with
significant inhibition of the biosynthesis of lipids in the
mitochondria of irradiated rats.

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USSR

UDC: 621.315.592

VINOGRADOVA, M. N., DRABKIN, I. A., YELISEYEVA, Yu. Ya., and
NELSON, I. V.

"Optical Characteristics of p-Type $Pb_{1-x}Mn_xTe$ Solid Solutions"

Leningrad, Fizika i tekhnika poluprovodnikov, No 8, 1972, pp 1478-1482

Abstract: The work described by this paper is the investigation of infrared reflection and absorption spectra in solid solutions of $Pb_{1-x}Mn_xTe$, with the purpose of explaining the energy structure of these alloys. The reflection spectra were measured with specimens having various carrier concentrations and with an Mn concentration of up to 9% at 300° K, and such spectra are plotted for alloys in which $x = 0.03, 0.06, 0.09$ with identical Hall concentrations. The absorption spectra were obtained for polycrystalline specimens of $Pb_{0.95}Mn_{0.05}Te$ and $Pb_{0.9}Mn_{0.1}Te$ and are reproduced as well. It is found that the introduction of Mn into $Pb_{1-x}Mn_xTe$ alloys leads to a change in the respective positions of light and heavy hole zones, and that the structure of the alloys' valent zones differs substantially from those of PbTe.

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1/2 052

UNCLASSIFIED

PROCESSING DATE--02OCT70

TITLE--THE ACTION OF PULSED SHOCK WAVES ON POLYMERS -U-

AUTHOR--(04)--VINOGRADOVA, N.G., PAVLOV, A.I., PASHKOV, P.G., KHARDIN, A.P.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1): 76-80

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, CHEMISTRY, PHYSICS

TOPIC TAGS--SHOCK WAVE, POLYMETHYLMETHACRYLATE, NYLON, TEFLON, VIBRATION EFFECT, COMPRESSIVE STRESS, ANISOTROPY, POLYMER PHYSICAL PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/0329

STEP NO--UR/0374/70/006/001/0076/0080

CIRC ACCESSION NO--AP0111523

UNCLASSIFIED

2/2 052

UNCLASSIFIED

PROCESSING DATE--02JCT70

CIRC ACCESSION NO--AP0111523
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. POLY(METHACRYLATE), NYLON 6, OR
TEFLON WERE COVERED WITH A STEEL PLATE AND SUBJECTED TO A SINGLE SHOCK
WAVE IMPACT OR MULTIPLE, VIBRATIONAL IMPACTS. IN THE LATTER CASE A
CHARGE WAS EXPLODED ON THE STEEL PLATE COVERING THE POLYMER, WHICH WAS
SUPPORTED BY ANOTHER STEEL PLATE. DUE TO THE DIFFERENCES IN THE
ACOUSTICAL D. OF STEEL AND PLASTICS THE SHOCK WAVE WAS REFLECTED AND
THE PLASTIC SUBJECTED TO REPEATED COMPRESSIONS. THE METHOD PERMITTED
TO APPLY SMALLER THAN OR EQUAL TO 350 KILOBARS PRESSURE TO THE POLYMERS
WITHOUT DESTRUCTION. SUCH SHOCK WAVES DECREASED THE ANISOTROPY OF
POLYMERS AND THEIR D.

UNCLASSIFIED

USSR

UDC: 669.24'26:620.183

VINOGRADOVA, N. J., DAVYDOVA, V. V., MAKHANEK, G. V., PETROVA, S. N.,
SADOVSKIY, V. D., Leningrad Polytechnic Institute imeni Kalinin

"Application of a Metallographic Method for Determination of the Depth of
Surface Hardening in Nickel-Chromium Based Alloys"

Moscow, Zavodskaya Laboratoriya, No 11, 1972, pp 1359-1360.

Abstract: The influence of the chemical composition of alloys on the possibility of metallographic determination of strain hardening by decoration of dislocations with the carbide phase liberated upon aging is studied. The method can be used for nickel-chromium alloys of any composition with carbon contents of at least 0.05%. Hardening 20-30 μ up to several millimeters in depth is revealed.

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USSR

UDC: 621.319.4

NEYMAN, M. I., SOKOLOVA, M. A., SVERDLOVA, A. N., ~~VINOGRADOVA, N. V.~~, RYN-
DINA, L. P., STARENCHENKO, V. G., KOTEL'NIKOVA, L. P.

"Thin-Film Ceramic Capacitors With High Specific Capacitance"

Elektron. tekhnika. Nauch.-tekhn. sb. Radiodetali (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 4(21), pp 3-9 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V322)

Translation: The authors discuss a new method of making thin-film ceramic capacitors with high specific capacitance. Their basic electrical characteristics are given.

1/1

USSR

UDC 612.741+154.2

VINOGRADOVA, O. I., KOTS, Ya. M., RODIONOV, I. M., and TKHOREVSKIY, V. I.,
Chair of Human and Animal Physiology, Soil Biology Faculty, Moscow State
University; Chair of Physiology, State Central Institute of Physical Culture;
and Department of Labor Physiology, Institute of Labor Hygiene and Occupational
Diseases, Academy of Medical Sciences SSSR, Moscow

"Independence of an Emotionally Induced Increase in Muscle Work Capacity From
the Blood Flow Through Working Muscles"

Leningrad, Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 5,
1973, pp 781-788

Abstract: Measurements were made on young human subjects instructed to compress
the handle of a fist dynamometer for as long as possible while performing mental
calculations of mathematical problems presented at 3-sec intervals, with the
time allowed for each problem indicated by light flashes and the beat of a metro-
nome. The results revealed that emotional excitation increases the endurance
of working muscles by about 50% on the average and accelerates blood flow
through resting muscles (plethysmographic measurement). However, there is
no increase in blood flow through the working muscles when the force of con-
traction is 60% of the maximum force that can be generated voluntarily.
Similarly, the endurance of working muscles is increased by 40% and 30%
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VINOGRADOVA, O. I., et al., Fiziologicheskiy Zhurnal SSSR imeni I. M. Sechenov, Vol 59, No 5, 1973, pp 781-788

respectively when the effort is only 30% of the maximum but an increase in blood flow is prevented by partial occlusion of the brachial artery or the flow is arrested by complete occlusion of that vessel. The emotionally induced cholinergic discharge by the sympathetic system not only causes vasodilation in resting muscles but also stimulates glycolysis, production of lactic acid, and activation of phosphorylase. It is therefore concluded that the emotionally induced increase in muscle capacity to do static work is due to an augmented anaerobic metabolism in muscle tissue and is independent of the blood flow prevailing in the working muscles.

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1/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70
 TITLE--REPRODUCTION OF BLACK AND WHITE ORIGINALS IN THE BOOK JOURNAL
 INDUSTRY--U-
 AUTHOR--(02)-GRACHEV, A.V., VINOGRADOVA, O.M.
 COUNTRY OF INFO--USSR
 SOURCE--PCLIGRAFIYA 1970, 1 23-6
 DATE PUBLISHED-----70
 SUBJECT AREAS--METHODS AND EQUIPMENT
 TOPIC TAGS--PHOTOGRAPHIC IMAGE, PHOTOGRAPHIC MATERIAL
 CONTRL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
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 CIRC ACCESSION NO--AP0134418
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2/2 021

CIRC ACCESSION NO--AP0134416
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--20NOV70

ABSTRACT. THE REQUIREMENTS OF BLACK AND WHITE ORIGINALS AND THEIR CLASSIFICATION (PHOTODUPLICATION ORIGINALS, DRAWINGS, ETC.) ARE DISCUSSED. THE DEPENDENCE OF THE REPRODUCTION QUALITY ON THE TYPE OF SURFACE OF THE PHOTOGRAPHIC PAPER WAS STUDIED AND THE RESULTS ARE TABULATED. THE MAX. DS. ACHIEVED FOR 15 GRAPHIC AND COLOR MATERIALS ARE TABULATED. ANILINE DYES GAVE THE HIGHEST DS. (2.1-2.3) AND GLOSSY PAPER ENABLED OPTICAL DS. OF 1.8-2.0 FOR SHADOWED PORTIONS OF THE IMAGE TO BE OBTAINED.

UNCLASSIFIED

USSR

UDC 612.821.2

VINOGRADOVA, O. S., Department of Memory Problems, Institute of Biophysics,
Academy of Sciences-USSR, Pushchino-na-Oke

"Some Problems of Memory and the Role of the Limbic System in the Registration
of Information"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov, Vol 23, No 2,
Mar/Apr 73, pp 305-314

Abstract: According to current evidence, memory is stored and analyzed at corresponding levels of increasing complexity. However, while storage of memory traces is dispersed, processes involving selection of information for storage are controlled by the well-delineated limbic system. Within it, the most important role is played by hippocampal field CA₃ which functions as a comparing mechanism matching current with trace excitations. In this field the strongest reaction occurs to the first stimulus, and in field CA₁, to the second stimulus. In the mammillary bodies reactions are generated after 3-4, in the anteroventral nucleus after 4-7, and in the cingulate cortex (the highest level) after 8-15 stimulations. It is apparent that each successive link in the information portation of the limbic system functions as an integrator of recurrent stimuli, which processes the impulses and dispatches a signal to the next higher structure only after a critical level of excitation is reached. Reactions in field

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VINOGRADOVA, O. S., Zhurnal Vysshey Nervnoy Deyatel'nosti imeni I. P. Pavlov,
Vol 23, No 2, Mar/Apr 73, pp 305-314

CA₃ become extinct when responses are generated in the limbic cortex. The limbic system may be regarded as an integrated functional system of information registration in which each structure performs a definite but relatively simple operation.

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USSR

SOKOLOV, YE. N., and VINOGRADOVA, O. S. (Editors)

Neyronnyye Mekhanizmy Oriyentirovochnogo Refleksa (Neuronal Mechanisms of the Orientation Reflex), Moscow, Moscow University Publishing House, 1970, 432 pp

Translation; Introduction: Polygraphic recording of somatic, vegetative, and electroencephalographic reactions of animals and man made it possible by means of repeated stimuli of different modes and intensities to differentiate between adaptation, defense, and orientation reflexes. The adaptation reflex, which in part is a protective reflex, is characterized by a relatively high threshold, specific type of reaction local reflexogenic zone, different direction of changes when engaging and disengaging the stimulus, and high stability when stimulation is repeated. The defense reflex as the protective reflex of the entire organism differs from the adaptation reflex by its wide generalized reaction, a higher threshold, and a capacity to be induced by stimuli of different modality.. The orientation reflex is characterized by a low threshold of formation, wide generalization of stimulation, an absence of a specific reflexogenic zone, monotype reactions in engaging and disengaging the stimulus, and also the development of extinction which is selective with relation to the parameters of the repeatedly applied stimulus.

In order to explain the extinction signal specific with relation to the parameters of the orientation reflex the concept of a "nervous model of the stimulus" -- the path of fixation of the properties of the applied stimulus

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SO KOLOV, YE. B., and VINOGRADOVA, O. S., Neyronnyye Mekhanizmy Oriyentirovochnogo Refleksa, Moscow, Moscow University Publishing House, 1970, 432 pp

was introduced. The orientation reaction is regarded as being the result of the formation of a signal of disagreement induced by the disagreement between the external signal and the nervous model of the stimulus. Within certain bounds, the greater the difference between the afore mentioned nervous model of the stimulus and the parameters of the tangible active stimulus, the stronger the orientation reaction (Ye. N. Sokolov, 1960).

If the repeating signal is characterized by a number of stable properties such as color, intensity, and spatial localization, then the nervous model of the stimulus fixes all of the parameters simultaneously. The intensity of the orientation reaction increases in proportion to the simultaneously modified parameters of the signal.

Not only elementary but also complex criteria of the signal, such as coincidence or the succession of several stimuli in time, are imprinted in the nervous model of the stimulus. This is proven by the development to differentiate between the extinction signal selective with relation to the parameters of the reactions not directly linked with changes in the functional state, and that in an overall change of the functional state which can disturb selective extinction attained in an active state.

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SOKOLOV, YE. S., and VINOGRADOVA, Neyronnyye Mekhanizmy Oriyentirovochnogo Refleksa, Moscow, Moscow University Publishing House, 1970, 432 pp

However, the study of macroreactions does not make it possible to expose the internal mechanisms of the orientation reflex. In this connection an investigation of reactions of separate neurons by methods used in analogous studies of manifestations of the orientation reflex at the level of macroreactions was undertaken.

The investigation was conducted on nonanesthetized rabbits by means of extracellular microelectrode recording. Specific (retina, anterior corpus bigeminus, corpus geniculatum laterale, and the visual cortex of the cerebral hemispheres) and nonspecific (hippocampus, reticular formation of the mesencephalon, and nonspecific nuclei of the thalamus) systems were investigated.

The electrical potentials after their reinforcement were separated by a system of two filters. The first filter separating signals in the 0.5-100 Hz range made it possible to record the slow component of the bio-currents. The second filter by separating signals within the 300-500 Hz range made it possible to record commissure activity. The main method used in the investigation of the neuronal organization of the orientation reflex was the multiple application of the stimulus at constant intervals, thereby making possible the determination of the reaction stability of the neuron being studied. If the course of the experiment an extinction reaction developed, then the selectivity extent of the attained extinction was studied by the assembly of test-stimuli.

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USSR

SOKOLOV, YE. S., and VINOGRADOVA, Neyronnyye Mekhanizmy Oriyentirov-
chonogo Refeksa, Moscow, Moscow University Publishing House, 1970, 432 pp

Particular attention was given to processes linked with the changes
in the functional condition of the cerebral cortex and nonspecific thalamus.

Data obtained by a group of researchers working under the guidance
of the author at the Chair of Neuropsychology of the Psychology Faculty,
Moscow State University, are collated in this work.

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USSR

SOKOLOV, YE. S., and VINOGRADOVA, Neyronnyye Mekhanizmy Oriyentirovochnogo Refleksa, Moscow, Moscow University Publishing House, 1970, 432 pp

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USSR

UDC 541.64:547.257.1

VINOGRADOVA, S. V., KORSHAK, V. V., VINOGRADOVA, O. V., POLYAKOVA, A. M.,
ANISIMOV, K. N., and KOLOBOVA, N. YE., Institute of Metal Organic Compounds,
Acad. Sc. USSR

"Synthesis of Manganese Polydibutylphosphinate"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 15, No 3, Mar 73, pp 516-520

Abstract: Manganese polydibutylphosphinate has been synthesized by oxidative decarbonylation of manganese carbonyl with dibutylphosphinic acid under UV irradiation, and by polycondensation of dibutylphosphinic acid with manganese and manganic acetates. The effect of the type of solvent used, the temperature and duration of the reaction, as well as the effect of concentration and relationship of starting materials on the polycoordination process of dibutylphosphinic acid and manganese acetate has been investigated. The process of the polycondensation of manganese acetate with dibutylphosphinic acid is an equilibrium process.

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USSR

UDC 547.831.3

1

LUGOVIK, B. A., YULIN, L. G., BORODIN, P. V., VINOGRADOVA, S. M., and
KOST, A. N., Moscow State University Imeri M. V. Lomonosov

"Reactions of 1,2-Dihydroquinolines. III. Addition of Benzene and Phenyl
Halides to the Double Bond of 2,2,4-Trimethyl-1,2-dihydroquinolines"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 6, Jun 71, pp 795-797

Abstract: 2,2,4-Trimethyl-1,2-dihydroquinoline (I) does not react with benzene at room temperature, even with excess $AlCl_3$. When heated it yields products of di- and polymerization. On the other hand the hydrochloride or N-acetyl derivative of (I) adds benzene at room temperature. When $AlCl_3$ is replaced by iron or zinc chloride or by strong mineral acids, the reaction does not take place at all. Solvents which are capable of forming stable complexes with $AlCl_3$ -- such as diethyl ether, nitromethane, dibutyl ether, or nitrobenzene -- hinder the reaction. Substituting a benzyl group in position 1 or a methyl group into the aryl ring has practically no effect on the reaction, while the presence of a methoxy group in position 6 hinders the process considerably. Hence, addition of benzene to (I) requires a preliminary protonation or acylation of the amino group. Phenyl halides react under drastic conditions yielding only para-substituted 4-aryl-2,2,4-trimethyl-1,2,3,4-tetrahydroquinolines.

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USSR

UDC 541.64:547.257.1

VINOGRADOVA, S. V., KORSHAK, V. V., VINOGRADOVA, O. V., POLYAKOVA, A. M.,
ANISIMOV, K. N., and KOLOBOVA, N. YE., Institute of Metal Organic Compounds,
Acad. Sc. USSR

"Synthesis of Manganese Polydibutylphosphinate"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 15, No 3, Mar 73, pp 516-520

Abstract: Manganese polydibutylphosphinate has been synthesized by oxidative decarbonylation of manganese carbonyl with dibutylphosphinic acid under UV irradiation, and by polycondensation of dibutylphosphinic acid with manganese and manganic acetates. The effect of the type of solvent used, the temperature and duration of the reaction, as well as the effect of concentration and relationship of starting materials on the polycoordination process of dibutylphosphinic acid and manganese acetate has been investigated. The process of the polycondensation of manganese acetate with dibutylphosphinic acid is an equilibrium process.

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USSR

UDC 541.61

VINOGRADOVA, S. V., and KORSHAK, V. V., Institute of Organoelemental Compounds, Academy of Sciences USSR, Moscow

"What Is New in Polycondensation Methods for the Synthesis of Thermostable Polymers"

Moscow, Uspekhi Khimii, Vol 39, No 4, 1970, pp 679-701

Abstract: The article considers techniques for the synthesis of "heat-stable" and "thermostable" polymers by the method of nonequilibrium polycondensation. Heat stability is defined as "the maximum temperature at which a polymer is capable of retaining a specific mechanical strength," thermostability as "the maximum temperature which a polymer can withstand without chemical change, primarily without decomposition." There is a discussion of the synthesis of heat-stable polyarylates by the interaction of dicarboxylic acid chlorides with bisphenols and of the work done in this area by the Institute of Organoelemental Compounds, Academy of Sciences USSR, in conjunction with the Laboratory for the Kinetics of Polymerization Processes of the Institute of Chem-

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USSR

VINOGRADOVA, S. V., and KORSHAK, V. V., Uspekhi Khimii, Vol 39, No 4, 1970, pp 679-701

ical Physics, Academy of Sciences USSR, as well as in conjunction with the Institute of Physical Chemistry, Academy of Sciences USSR. The work done at the Institute of Organoelemental Compounds and by L. B. SOKOLOV, et al., in the field of low-temperature polyamidation, particularly in the synthesis of heat-stable aromatic polyamides, is described. There is also a description of work done in the field of the synthesis of polymers of cyclochain structure (polyimides and polyoxadiazoles), as well as aromatic polyethers and polysulfones.

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1/2 018 UNCLASSIFIED PROCESSING DATE--18SEPT0
TITLE--PARAMETERS OF THE DEPENDENCE OF INTRINSIC VISCOSITY ON MOLECULAR
WEIGHT FOR POLYARYLATES WITH ALIPHATIC SIDE GROUPS -U-
AUTHOR--(05)-PAVLOVA, S.A., DUBROVINA, L.V., VINOGRADOVA, S.V., SALAZKIN,
S.S., KORSHAK, V.V.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(1), 69-71 ✓
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--INTRINSIC VISCOSITY, MOLECULAR WEIGHT, POLYARYL RESIN,
POLYCONDENSATION, LIGHT DIFFRACTION, POLYMER STRUCTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1986/0254 STEP NO--UR/0460/70/012/001/0069/0071
CIRC ACCESSION NO--AP0102304
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102304

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLYARYLATE F-12-ST (I) AND POLYARYLATE F-12-ATS (II) (WHERE THE N SUBSTITUENT IS AC INSTEAD OF COC SUB17 H SUB35) WERE PREPD. BY INTERFACIAL POLYCONDENSATION BY A METHOD DESCRIBED EARLIER BY S. V. VINOGRADOVA, ET AL. (1965). THE INTRINSIC VISCOSITIES OF I AND II WERE MEASURED IN TETRAHYDROFURAN (III) AND CHCL SUB3 AT 20 PLUS OR MINUS 0.1DEGREES, WHEREAS THE MOL. WTS. WERE MEASURED BY LIGHT DIFFRACTION IN A VISUAL NEPHELOMETER AT LAMBDA EQUALS 5461 A. CALCN. OF MARK HOUWINK PARAMETERS (ALPHA AND K FOR I AND II IN III WERE 1.14 AND 3.24 TIMES 10 PRIME NEGATIVE6, AND 0.80 AND 1.55 TIMES 10 PRIME NEGATIVE5, RESP.) SHOWED THAT ALPHA WAS PROPORTIONAL TO THE LENGTH OF THE ALIPHATIC CHAIN, WHICH WAS INCONSISTENT WITH DATA OBTAINED FROM POLYARYLATES HAVING AROMATIC SIDE GROUPS. THE CHANGE IN THE HYDRODYNAMIC BEHAVIOR WAS ATTRIBUTED TO HIGHER CHAIN RIGIDITY.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SYNTHESIS OF POLYMERS BY LOW TEMPERATURE POLYCONDENSATION -U-
AUTHOR--(04)-KORSHAK, V.V., VINOGRADOVA, S.V., VASNEV, V.A., MITAISHVILI,
T.I.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(5), 1113-17
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL SYNTHESIS, CONDENSATION REACTION, POLYESTER RESIN,
AMIDE, CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1373 STEP NO--UR/0459/70/012/005/1113/1117
CIRC ACCESSION NO--AP0135047
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0135047

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF ET SUB3 N TO MIXTS. OF CLCORCOCL (R IS P-C SUB6 H SUB4 OR (CH SUB2) SUB10) WITH ACCH SUB2 CO(CH SUB2) SUB8 COCH SUB2 AC, (P-ACCH SUB2 CDC SUB6 H SUB4) SUB2 O, ACCH SUB2 CO SUB2 (CH SUB2) SUB6 O SUB2 CCH SUB2 AC, P-HOC SUB6 H SUB4 O SUB2 CCH SUB2 AC, OR P-HOC SUB6 H SUB4 NHCOCH SUB2 AC DISSOLVED IN DICHLOROETHANE, PHNO SUB2, OR ACETONE GAVE 44-90PERCENT YIELDS OF POLYESTERS OF GENERAL STRUCTURE (CORCO SUB2 CME DOUBLE BOND CHCOR PRIME1 COCH DOUBLE BOND CME0) SUBN OR POLYESTER AMIDES OF STRUCTURE (CORCO SUB2 CME DOUBLE BOND CHCOXC SUB6 H SUB4 O) SUBN (X EQUALS O OR NH). POLYCONDENSATION OF BIS(4, (CHLOROCARBONYL)PHENYL)PHTHALIDE WITH BIS(4, CARBOXYPHENYL)PHTHALIDE (I), H SUB2 O, OR P-C SUB6 H SUB4 (CO SUB2 H) SUB2, OR OF P-C SUB6 H SUB4 (COCL) SUB2 WITH I OR H SUB2 O, ALL IN THE PRESENCE OF ET SUB3 N, GAVE POLYANHYRIDES OF GENERAL STRUCTURE (COR PRIME2 CO SUB2 COR PRIME3 CO SUB2) SUBN OR (COR PRIME2 CO SUB2) SUBN. THE REACTIONS WERE PERFORMED AT TEMPS. BELOW 40DEGREES. REDUCED VISCOSITIES OF THE POLYESTERS AND POLYESTER AMIDES WERE 0.06-0.33 DL-G AND OF THE POLYANHYRIDES 0.08-0.42 DL-G. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 013

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--POLYARYLATES -U-

AUTHOR--(04)-KORSHAK, V.V., VINOGRADOVA, S.V., SALAZKIN, S.N., BERIDZE,
L.A.

COUNTRY OF INFO--USSR

SOURCE--USSR 263,140

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--04FEB70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYARYL-RESIN, CHEMICAL PATENT, POLYCONDENSATION, PHENOL,
LACTONE, TEREPHTHALIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1473

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128872

UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0128872

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLYARYLATES ARE PREPD. BY
POLYCONDENSATION OF DICARBOXYLIC ACID CHLORIDES WITH BISPHENOLS. SUCH AS
GAMMA DILACTONES OF 2,5,BIS(PHENYL),4 PRIME,
HYDROXYPHENYL)HYDROXYMETHYL)TEREPHTHALIC ACID AND 2,4 BIS(PHENYL,4
PRIME, HYDROXYPHENYL)HYDROXYMETHYL)ISOPHTHALIC ACID. FACILITY:
INSTITUTE OF HETEROORGANIC COMPOUNDS, ACADEMY OF SCIENCES, USSR.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

012 017

TITLE--TWO MECHANISMS OF ACYLATION -U-

AUTHOR--(03)-KORSHAK, V.V., VINOGRADOVA, S.V., VASNEV, V.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(3), 614-16, CHEM

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION MECHANISM, ALKYLATION, ACETYLENE, PHENOL,
METHYL ALCOHOL, TERTIARY AMINE, PYRIDINE, BENZENE, CHLORINATED ORGANIC
COMPOUND, KETONE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3001/0537

STEP NO--UR/0020/70/191/003/0614/0616

CIRC ACCESSION NO--AT0126284

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0126284

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COMPETITIVE ACETYLATIONS WERE RUN OF MIXED PHOH AND MEOH WITH BZCL IN THE PRESENCE OF TERTIARY AMINES IN C SUB2 H SUB4 CL SUB2 AT 25DEGREES USING PYRIDINE, ET SUB3 N, OR BU SIB3 N. ALSO TESTED WERE QUINOLINE, ISOQUINOLINE, 2,METHYLPYRIDINE, GAMMA,COLLIDINE, 3, METHYLPYRIDIE, QUINALDIEN, ME SUB2 ETN, TRIALLYLAMINE, AND ME SUB2 NC SUB6 H SUB11. STRONGLY BASIC TERTIARY AMINES GAVE MUCH GREATER CONVERSION OF PHOH THAN OF MEOH (PKA LARGER THAN 10), WHILE FOR PYRIDINE (PKA 5.23) THE MEOH CONVERSION PREDOMINATES, I.E. NUCLEOPHILIC CATALYSIS WAS OPERATIVE. THE RESULTS WERE GIVEN GRAPHICALLY FOR OTHER AMINES AND TABULARLY FOR ET SUB3 N AND PYRIDINE, IN SOLVENT SYSTEMS OF DIOXANE, C SUB6 H SUB6, C SUB2 H SUB4 CL SUB2, ME SUB2 CO-C SUB6 H SUB6, ME SUB2 CO, PHND SUB2, AND MECN. WITH ET SUB3 N THE CONVERSION OF PHOH AMOUNTED TO 80-96PERCENT; WITH PYRIDINE IT WAS SMALLER THAN 30PERCENT IN ALL THESE SOLVENTS; IN DIOXANE ONLY 10PERCENT PHOH WAS CONVERTED, AND THE REACTION WITH MEOH WAS MOST PREDOMINANT. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--USE OF CHLORINE-35 NUCLEAR QUADRUPOLE RESONANCE TO STUDY THE
TRANSFER OF INFLUENCE THROUGH AN ESTER BOND.--U--
AUTHOR--(05)--KORSHAK, V.V., VINOGRADOVA, S.V., VASNEV, V.A., BRYUKHOVA,
YE.V., SEMIN, G.K.
COUNTRY OF INFO--USSR
SOURCE--IAV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 681-2
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--CHLORINE ISOTOPE, NUCLEAR RESONANCE, SPECTUM, ESTER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1904 STEP NO--UR/0062/70/000/003/0681/0682
CIRC ACCESSION NO--APC123688
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--3000770

CIRC ACCESSION NO--AP0123688

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE N.Q.R. SPECTRAL DATA WERE
TABULATED FOR P-RC SUB6 H SUB4 D SUB2 CC SUB6 H SUB2 CL-P AND P-CLC SUB6
H SUB4 O SUB2 CC SUB6 H SUB4 R-P (R EQUALS NO SUB2, F, CL, MEO, H, ME,
AC). TRANSMISSION OF THE ELECTRONIC EFFECTS THROUGH THE ESTER LINK IS
MUCH MORE FACILE IN THE DIRECTION YIELDS G-C(O) THAN IN YIELDS C(O)-O
DIRECTION. FACILITY: INST. ELEMENTOORG. SOEDIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 011

TITLE--THERMAL STABILITY OF AROMATIC POLYESTERS -U- UNCLASSIFIED PROCESSING DATE--11SEP70

AUTHOR--KORSHAK, V.V., VINOGRADOVA, S.V., DANILOV, V.G., BERIDZE, L.A.,
SALAZKIN, S.N.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER B 1970, 12(2), 129-32

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--THERMAL STABILITY, POLYESTER RESIN, CONDENSATION REACTION,
CHLORIDE, POLYNUCLEAR HYDROCARBON, PHENOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0227

STEP NO--UR/0460/70/012/002/0129/0132

GIRC ACCESSION NO--AP0106883

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106883

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DTA CURVES OF POLYESTERS PREPD. BY CONDENSING PHENOLPHTHALEIN WITH 1 EQUIV. OF SEBACOYL CHLORIDE, ISOPHTHALOYL CHLORIDE, 4,4PRIME,BIPHENYLDICARBONYL CHLORIDE, OR TEREPHTHALOYL CHLORIDE (I), AND BY CONDENSING I WITH 9,9,BIS(4-HYDROXYPHENYL)FLUORENE, 10,10,BIS(4, HYDROXYPHENYL), ANTHRONE, 2,2,BIS(4, HYDROXYPHENYL)ACENAPHTHELENONE, OR BISPHENOL A (II), SHOWED THAT THE COMPS. WERE STABLE SMALLER THAN OR EQUAL TO 460DEGREES IN HE. AT 350-60DEGREES THE WT. LOSS IN HE WAS 2-3PERCENT. THE WT. LOSSES IN HE AT 900DEGREES WERE SMALLER THAN OR EQUAL TO 50PERCENT FOR THE POLYESTERS WITH THE EXCEPTION OF THOSE CONTG. II.

UNCLASSIFIED

Acc. Nr.

AP0048857

Abstracting Service:
CHEMICAL ABST.

5-78

Ref. Code
21 R 0459

50918u Viscometric and electron-microscopic studies of the polypyromellitimide of anilinephthalein. Korshak, V. V.; Pavlova, S. A.; Boiko, L. V.; Babchinitser, T. M.; Vinogradova, S. V.; Vygodskii, Ya. S.; Golubeva, N. A. (Inst. Elementorg. Soedin., Moscow, USSR). *Vysokomol. Soedin., Ser. A* 1970, 12(1), 56-62 (Russ). The hydrodynamic properties of the title polymer (I) (prepd. from pyromellitic dianhydride and anilinephthalein by a high temp. polycyclization in PhNO₂ or by a 2-stage procedure) were studied. Viscosity and mol. wt. measurements indicated that the reaction conditions had no effect on the structure of I. The intrinsic viscosity of I was proportional to the mol. wt. (2000-160,000). The rigid I macromols. had a linear structure and were present in soln. as assocd. globules. The dimensions of the globules (as measured by electron microscopy) were similar to those calcd. from viscometric data using the P. Debye-A. M. Bueche equation (1948). CKJR

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REEL/FRAME
19800624

Acc. Nr:

AP0041737

Abstracting Service:
CHEMICAL ABST.

✓70

Ref. Code:

ULR0459

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79596s Degradation of aromatic polyimides at high temperatures. Gribkova, P. N.; Rode, V. V.; Vygodskii, Ya. S.; Vinogradova, S. V.; Korshak, V. V. (Inst. Elementoorg. Soedin. Moscow, USSR). *Vysokomol. Soedin., Ser. A* 1970, 12(1), 220-8 (Russ). The thermal degradation in vacuo, O₂ and air of aromatic polyimides (I) at 375-600° was investigated. I were prepd. by polycondensation of pyromellitic anhydride with 3,3-bis(p-aminophenyl)phthalide or 9,9-bis(p-aminophenyl)fluorene (II) and from 3,3',4,4'-tetracarboxydiphenyl ether and II. I were stable in vacuo at ≤ 425-75° but began to decomp. at higher temps. to yield solid and liq. low-mol.-wt. substances, as well as CO, CO₂, and H₂. Decompn. began via homolytic cleavage of the imide rings and isomerization. O₂ did not initiate the degradation but oxidized the cleavage product to accelerate the degradation of I. The presence on the central C atom of the starting diamine of a closed, cyclic group capable of conjugation increased the thermal stability of I.

DBJR

REEL/FRAME
19751614

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Acc. Nr.

AP0048839

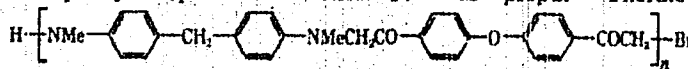
Abstracting Service:
CHEMICAL ABST

570

Ref. Code

UR0459

90908r: Poly(keto amines), a new type of [heterochain] polymer. Vinogradova, S. V.; Korshak, V. V.; Lebedeva, A. S.; Bulgakova, Y. A. (Inst. Elementorg. Soedin. Moscow, USSR). *Vysokomol. Soedin., Ser. A* 1970, 12(1), 165-70 (Rus). The condensation of H_2NRNH_2 (I) with $BrCH_2COR'COCH_2Br$ (II) gave $H-[NHRNHCH_2COR'COCH_2]_nBr$ (III), intended as intermediates in the synthesis of polyindoles. The reaction was 1st studied on model compds.: the condensation of $PhNH_2$ with I (R is $p-C_6H_4$ or $4,4'-C_6H_4OC_6H_4$) gave $p-(PhNHCH_2CO)_2C_6H_4$, m. 193-5°, and $(4-PhNHCH_2COC_6H_4)_2O$, m. 186-8°, resp. Similarly, $PhCOCH_2Br$ was condensed with I (R is $4,4'-C_6H_4C_6H_4$, $4,4'-C_6H_4OC_6H_4$, or $4,4'-C_6H_4CH_2C_6H_4$) or with $(4-MeNHC_6H_4)_2CH_2$ to give the corresponding model compds. The condensation of I with II gave the best yields (70-90%) in $PO(NMe_2)_3$ at 100°. The following III were obtained (R' is $4,4'-C_6H_4OC_6H_4$, R given): $4,4'-C_6H_4C_6H_4$, $4,4'-C_6H_4OC_6H_4$, $(4-C_6H_4)_2CH_2$, 3,3-bis(4-phenylene)phthalide. Also IV was prepd. Thermo-



(IV)

mech. anal. (change in elongation induced by a 100-g load on a 4-mm-diam. sample with temp.) and thermogravimetry showed that III are stable to ~500°. CPJR

REEL/FRA
ME 19800606

LD 7

Acc. Nr: AA 0051019 - Abstracting Service: CHEMICAL ABST. 5-7c

Ref. Code: UK 0000

101534u Plastic antifriction material. Korshak, V. V.; Vinogradova, S. V.; Slonimskii, G. L.; Gribova, I. A.; Chumaevskaia, A. N.; Krasov, A. P.; Fomina, Z. Ya.; Askadskii, A. A. (Institute of Heteroorganic Compounds, Academy of Sciences, U.S.S.R.) Brit. 1,179,400 (Cl. C 10m), 23 Jan 1970, Appl. 29 Jun 1967; 3 pp. Antifriction materials with little self-adhesion and low coeff. of friction were prepd. by compression molding polyesters contg. >3% P with 30-70% MoS₂ and powd. Cu fillers. Thus, a 0.5-0.5-1.0 isophthaloyl dichloride-MePOCl₂-phenolphthalein mixt. was polycondensed in a chlorinated diphenyl solvent at 220° and 4.0 g of the polyester obtained was blended with 6 g MoS₂ and 4 g powd. Cu for 3-5 min before compression molding at 220-50° and 1000-1500 kg/cm². Polyesters contg. P were also prepd. by condensing terephthaloyl chloride with phenolphthalein and p,p'-methylphosphinyldienebis(benzoyl chloride) and were used either alone or were blended with phenolphthalein-phenol-formaldehyde resins.

CQPN

REEL/FRA
19811028

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Acc. Nr.

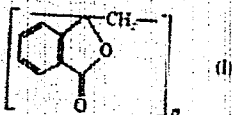
AP0048827

Abstracting Service:
CHEMICAL ABST.

5-78

Ref. Code
UR0459

90903k Synthesis and behavior of poly(methylenephthalide). Vinogradova, S. V.; Salazkin, S. N.; Korshak, V. V.; Chelidze, G. G.; Stenimskii, G. L.; Askadskii, A. A.; Mzhelskii, A. I. (Inst. Elementoorg. Soedin., Moscow, USSR). *Vysokemol. Soedin., Ser. A* 1970, 12(1), 205-13 (Russ). The title polymer (I) was prepd. by bulk, emulsion, and soln. polymn. of methylenephthalide (II) in the presence of peroxides or $BF_3 \cdot HCONMe_2$. II was also thermally polymd. in $HCONMe_2$ in air at 60° to give I of



higher mol. wt. than I obtained similarly under argon. Increasing the temp. to 80° had no effect on the I yield and viscosity. I with reduced viscosity 0.5-0.7 dl/g (0.5% $HCONMe_2$, 25°) was obtained by soln. polymn. of II in the presence of Bz_2O_2 or $(NH_4)_2S_2O_8$. Soln. polymn. of II was solvent-sensitive. I with

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REEL/FRA
19800591

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AP0048827

max. reduced viscosity (0.85 dl/g) was obtained by polymn. of II in HCONMe₂ at 70° in the presence of BF₃·HCONMe₂. Increasing the reaction time raised the I yield sharply. II was also bulk copolymd. with other monomers, esp. styrene, acrylonitrile, and Me methacrylate, in the presence of Bz₂O₂ to give high yields of copolymers with high reduced viscosity. All copolymers were solids, sol. in the same solvents (CF₃CO₂H, Me₂SO, etc.) as I. I had softening point 300° and good thermal stability. DBJR

LD

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19800592

Electrochemistry

USSR

UDC 541.67:537.311.33

KORSHAK, V. V., KHRENKOVA, T. M., SILING, S. A., CHEBAROVA, M. A.,
VINOGRADOVA, S. V., and KASATOCHKIN, V. I.

"Structure and Properties of Polymeric Semiconductors Based on Pyrromallitic
Acid Tetranitrile and p-Phenylenediamine"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 14, Series A, No 3, 1972,
pp 701-705

Abstract: The heating of a polymer based on pyrromallitic acid tetranitrile
and p-phenylenediamine (polyhexazocyclane PF) from 20 to 300, 400, 500, 600,
700, 800, and 900° at 5×10^{-3} torr, yielded polymers with specific resistance
 ρ_{spec} from 10^{13} to 5×10^{-1} ohm cm and activation energy of conductivity ΔE
from 1.7 to 0.1 ev, depending on the heat treatment. The structure of the
polymers was determined by X-ray diffraction analyses, nmr studies, and IR
spectroscopy. At heat-treatment temperatures above 500°C the polymer under-
goes degradation and cross-linking accompanied by the formation of bundles of
aromatic layers consisting mainly of condensed aromatic compounds.

1/1

1/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--THE INFLUENCE OF THE TYPE OF VULCANIZING SYSTEM ON THE EFFECTIVENESS OF THE PROTECTIVE ACTION OF STABILIZERS -U-

AUTHOR--(02)--VINOGRADOVA, T.N., FELDSHTEYN, M.S.

COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(2), 17-19

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--NATURAL RUBBER, BUTADIENE RUBBER, PHENOL, DIAMINE, PHENYLENE, CARBON BLACK, CHEMICAL STABILIZER, SULFUR COMPOUND, VULCANIZATE, THERMAL STABILITY, OZONE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/0827

STEP NO--UR/0138/70/029/002/0017/0019

CIRC ACCESSION NO--AP0124494

UNCLASSIFIED

2/2 016

CIRC ACCESSION NO--A0124494
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT, NATURAL RUBBER AND CIS 1,4 BUTADIENE RUBBER MIXTS. (30:70), STABILIZED WITH 2,6 DI TERT BUTYL 4 METHYLPHENOL (I), N PHENYL N PRIME ISOPROPYL P PHENYLENEDIAMINE (II), AND PHENYL BETA NAPHTHYLAMINE, WERE FILLED WITH CARBON BLACK AND VULCANIZED IN THE PRESENCE OF (ME SUB2 NCS) SUB2 S SUB2 (III), S PLUS (HNPH) SUB2 C: NH, S PLUS SULFENAMIDE M (IV), AND SP 1055 RESIN (V) PLUS S COMPN. VULCANIZATES OBTAINED IN THE PRESENCE OF S PLUS IV AND STABILIZED WITH II EXHIBITED SUPERIOR FATIGUE STRENGTH DURING WIDE RANGE FLEXING, WHEREAS VULCANIZATES OBTAINED IN THE PRESENCE OF S PLUS V HAD HIGH FATIGUE STRENGTH ONLY WHEN STABILIZED WITH I. III VULCANIZATES HAD EXCELLENT THERMAL STABILITY REGARDLESS OF THE STABILIZER USED, WHEREAS S VULCANIZATES EXHIBITED HIGHEST THERMAL STABILITY WHEN STABILIZED WITH II. THE O SUB3 RESISTANCE OF THE VULCANIZATES WAS INDEPENDENT OF THE VULCANIZING SYSTEM, BUT DEPENDED ON THE ANTIOZONANT'S EFFECTIVENESS. FACILITY: NAUCH. ISSLED. INST. SHINNOI PROM., MOSCOW, USSR.

UNCLASSIFIED

1/2 031

TITLE--CHANGE IN THE MIGRATION ACTIVITY OF LEUKOCYTES IN DOGS WITH ACUTE RADIATION SICKNESS -U-
 AUTHOR--VINOGRADOVA, V.G.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA 1970, 10(1), 65-9

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--GAMMA IRRADIATION, RADIATION SICKNESS, RADIATION DOSAGE, LEUKOCYTE, BLOOD PLASMA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/0236

CIRC ACCESSION NO--AP0119232

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

STEP NO--UR/0205/70/010/001/0065/0069

2/2 031

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119232

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF ACUTE GAMMA RAY IRRADN. ON THE MIGRATION ACTIVITY OF LEUKOCYTES WAS STUDIED IN DOGS. THE ANIMALS WERE IRRADIATED WITH GAMMA RAYS FROM PRIME60 CO IN THE DOSE OF 300 R (LD SUB99-45). THE MIGRATION ACTIVITY OF LEUKOCYTES WAS DETD. THREE TIMES PRIOR TO THE IRRADN. AND 1 HR, 24 HR, AND 3,5,7,10,12,15, 17, 20, 25, 30, 40, AND 50 DAYS AFTER IRRADN. THE BLOOD PLASMA OF IRRADIATED ANIMALS WAS ABLE TO MODERATE THE MIGRATION OF LEUKOCYTES OBTAINED FROM IRRADIATED ANIMALS, AS WELL AS OF THOSE OBTAINED FROM CONTROLS. THE DETN. OF THIS INFLUENCE OF THE IRRADIATED BLOOD PLASMA ON THE MIGRATION ACTIVITY OF LEUKOCYTES FROM INTACT ANIMALS IS SUGGESTED FRO ESTG. TOXEMIA DEVELOPED IN ANIMALS AFTER WHOLE BODY IRRADN.
FACILITY: VOENNO-MEO. AKAD. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 547.944/945

VINOGRADOVA, V. I., ISKANDAROV, S., and YUNUSOV, S. YU., Order of the Labor
Red Banner Institute of the Chemistry of Natural Products, Academy of Sciences
UzSSR

"Ditermamine; a new Bimolecular Alkaloid From *Thermopsis lanceolata*"
Tashkent, Khimiya Prirodnykh Soyedineniy, No 1, 1972, pp 87-92

Abstract: From the plant portion of *Thermopsis lanceolata*, a new bimolecular
alkaloid of the quinalizidine series was isolated, in addition to thermopsamine,
thermopsine, citizine, N-methylcitizine, pachycarpine and rhombifoline. On
the basis of NMR and mass-spectroscopic studies of this alkaloid and its
hydrogenated derivatives, plus the fact that on vacuum distillation it
yields thermopsine, this product was identified as Δ 5',6'-dehydro- \checkmark -
isolupanyl-5'-thermopsin-3.

1/1

USSR

UDC 547.944/945

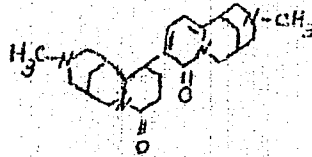
ISKANDROV, S., ~~VINOGRADOVA, V. I.~~, SHAYMARDANOV, R.A., Order of the Red Banner of Labor Institute of Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR

"Dimethamine -- a New Bimolecular Alkaloid Isolated from Thermopsis Alterniflora"

Tashkent, Khimiya Prirodnikh Soyedineniy, No 2, 1972, pp 218-222

Abstract: A new alkaloid, dimethamine, was isolated from the Thermopsis alterniflora by column chromatography on silica gel. The melting point of the new alkaloid is 216-217° C, accompanied by decomposition. The alkaloid is optically active and yields crystalline dihydrochloride, dipicrate and diiodomethylate. The composition and the nature of salts indicates that this substance has bimolecular structure. On the basis of IR, NMR and mass spectrometric data the following structure is proposed for the new compound.

1/1



1/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--UN THE EMBRYOTOXIC EFFECT OF EPTHAME --U-

AUTHOR--(03)--MEDVED, I.L., VINOGRADOVA, V.KH. OLEFIR, A.I.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 5, PP 140-143

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EMBRYOLOGY, TOXICITY, WHITE RAT, BIRD, DRUG SENSITIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3002/1716

STEP NO--UR/Q475/T0/000/005/0140/0143

CIRC ACCESSION NO--AP0129084

UNCLASSIFIED

2/2 025

CIRC ACCESSIGN NO---AP0129084
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT. THE EMBRYOTOXIC EFFECT OF EPTHAME
(A DERIVATIVE OF THIOCARBAMINE ACID) WAS STUDIED IN 53 WHITE RATS AND
250 CHICK EMBRYONS. OBSERVATIONS ON THE DEVELOPMENT OF CHICK FETUSES
AND RAT PRGGENY OF THOSE RECEIVING THE DRUG DURING THE ENTIRE PERIOD OF
PREGNANCY INDICATE THAT SMALL DOSES OF EPTHAME DID NOT EXERT ANY
EMBRYOTOXIC EFFECT.

PROFZABOLEVANIY, KIYEV.
BOLEZNEY MZ USSR, KIYEV.

FACILITY: INSTITUT GIGIYENY TRUDA I
FACILITY: INSTITUT INFEKTSIONNYKH

UNCLASSIFIED

Organometallic Compounds

USSR

UDC 542.91:547.1'13:546:72

NESMEYANOV, A. N., MAKAROVA, L. G., and VINOGRADOVA, V. N., Institute of
Metalorganic Compounds, Acad. Sc. USSR

"Synthesis and Properties of η^5 -Cyclopentadienylirondicarbonyl- σ -ferrocenyl"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimi Cheskaya, No 7, Jul 72,
pp 1600-1604

Abstract: Reaction of diferrocenylmercury with cyclopentadienylirondicarbonyl
iodide yields η^5 -cyclopentadienylirondicarbonyl- σ -ferrocenyl (I) -- a
crystalline compound of orange color. In solid state it is stable in air,
dissolves easily in organic solvents, but the solutions are less stable. The
structure of (I) was proven by IR, PMR and NGR spectroscopy as well as by
reactions with HCl, bromine, and mercuric chloride. Reaction of (I) with
(C₆H₅)₃P takes place without rearrangement, evidently one CO group being
replaced by (C₆H₅)₃P.

1/1

Organometallic Compounds

USSR

UDC 542.91:547.257.2:547.514.72:546.725

NESMEYANOV, A. N., MAKAROVA, L. G., and VINOGRADOVA, V. N., Institute of Metal Organic Compounds, Academy of Sciences USSR

"Synthesis of σ -Ferrocenyl and σ -Ferrocenoyl Derivatives of Iron and Tungsten Cyclopentadienylcarbonyls"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 12, Dec 73, pp 2796-2798

Abstract: Reaction of ferrocenyl lithium with π -cyclopentadienyliron-dicarbonyl bromide yields π -cyclopentadienyliron-dicarbonyl- σ -ferrocenyl (I). Ferrocenoyl chloride reacted with π -cyclopentadienyliron-dicarbonyl sodium gives π -cyclopentadienyliron-dicarbonyl- σ -ferrocenoyl. Respective tungsten derivatives were obtained in an analogous manner. Decarbonylation of the ferrocenyl-tungsten complex by heating yields cyclopentadienyl-tungstentricarbonyl- σ -ferrocenyl. The iron complex requires more drastic conditions and some decomposition takes place in this reaction.

1/1

1/3 023 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--VARIATIONS IN THE FREQUENCY OF OCCURRENCE OF PCL IN THE MIDDLE
LATITUDES -U-
AUTHOR--VINOGRADOVA, V.N. ✓
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 3, 1970, PP 501-504
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--PULSATION, MICROPULSATION, DIURNAL VARIATION, TELLURIC
CURRENT, GEOMAGNETIC FIELD, GEOGRAPHIC LATITUDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3007/1641 STEP NO--UR/0203/70/G10/003/0501/0504
CIRC ACCESSION NO--AP0136906
UNCLASSIFIED

2/3 023

CIRC ACCESSION NO--AP0136906
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT. A STUDY WAS MADE OF THE APPEARANCE OF 3,748 CASES OF PCL PULSATIONS AT THE IRKUTSK EARTH CURRENTS STATION DURING THE PERIOD 1 AUGUST 1957 THROUGH 31 DECEMBER 1967. HISTOGRAMS OF THE DIURNAL VARIATION OF PCL SHOW THAT IN THE MIDDLE LATITUDES THE PERIOD FROM 2200 TO 1400 HOURS IS FAVORABLE FOR THE APPEARANCE OF PCL. THE GREATEST NUMBER OF PCL OBSERVED SIMULTANEOUSLY OVER A LARGE AREA SHOULD OCCUR AT 1400-0600 UT. ANALYSIS OF PCL OBSERVATIONS BY THE NETWORK OF SOVIET STATIONS CONFIRMS THIS CONCLUSION. THE ANNUAL WAVE IS CHARACTERIZED BY MINIMA DURING SOLSTICE PERIODS AND MAXIMA AT THE EQUINOX; THE AMPLITUDE OF THE ANNUAL WAVE IS TWICE AS GREAT AS THE AMPLITUDE OF THE SEMIANNUAL WAVE. THE MOST FAVORABLE CONDITIONS FOR THE APPEARANCE OF PCL ARE OBSERVED IN THE YEARS BEFORE AND AFTER THE SOLAR ACTIVITY MINIMUM; IN THE YEARS OF THE MINIMUM (1964-1965) THE FREQUENCY OF APPEARANCE OF PCL PEARLS IS DECREASED BY 40-50 PERCENT, ALTHOUGH THE FREQUENCY OF PCL DURING THIS PERIOD IS FIVE OR SIX TIMES GREATER THAN THE FREQUENCY OF THEIR APPEARANCE DURING THE PHASE OF MAXIMUM SOLAR ACTIVITY. THUS, IN THE CYCLIC VARIATION OF THE FREQUENCY OF OCCURRENCE OF PCL THERE IS A DEEP DEPRESSION DURING YEARS OF HIGH SOLAR ACTIVITY AND A FLAT (PROLONGED) MAXIMUM BETWEEN THE YEARS OF MAXIMUM AND MINIMUM SOLAR ACTIVITY. FOR PCL PULSATIONS IONOSPHERIC TRANSPARENCY SHOULD INCREASE FROM THE MAXIMUM TO THE MINIMUM OF SOLAR ACTIVITY. IN PARTICULAR, IN THE E LAYER THE NUMBER OF FREE ELECTRONS INCREASES BY A FACTOR OF ABOUT 1.5-2.0 DURING THE PERIOD BETWEEN THE SUNSPOT MINIMUM AND MAXIMUM.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

3/3 023

CIRC ACCESSION NO--AP0136906

ABSTRACT/EXTRACT--HOWEVER, THIS CYCLIC VARIATION IN THE APPEARANCE OF PCL
PROBABLY CANNOT BE ATTRIBUTED TO THIS EFFECT ALONE; THE EXPLANATION MUST
EVIDENTLY BE SOUGHT IN CYCLIC CHANGES IN THE POSITION OF THE PCL SOURCE
ON THE SUN. FACILITY: SIBERIAN INSTITUTE OF TERRESTRIAL
MAGNETISM, IONOSPHERE AND RADIO WAVE PROPAGATION.

UNCLASSIFIED

1/3 920
 TITLE--DIURNAL CHANGE IN DIRECTION OF THE POLARIZATION AXIS OF PCL
 PULSATIONS -U-
 AUTHOR-(03)-VINOGRADOV, P.A., VINOGRADOVA, V.N., GORIN, V.I.
 COUNTRY OF INFO--USSR
 SOURCE--MCSCCW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 3, 1970, PP 557-558
 DATE PUBLISHED--70
 SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
 TOPIC TAGS--DIURNAL VARIATION, MICROPULSATION, GEOMAGNETIC FIELD
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRA--3005/0524
 STEP NO--UR/0203/70/010/003/0557/0558
 CIRC ACCESSION NO--AP0132719
 UNCLASSIFIED

2/3 020

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--A0132719

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERE IS A DIURNAL CHANGE IN THE MAIN AXIS OF THE POLARIZATION ELLIPSE FOR PCL PULSATIONS: CONSTRUCTION OF POLARIZATION ELLIPSES OF THE H VECTOR OF THE PCL FIELD FOR SOGRA AND IRKUTSK STATIONS REVEALED THAT THE DIRECTION OF THE MAIN AXIS OF THE POLARIZATION ELLIPSE CHANGES AT 0500-0800 (LOCAL SOLAR TIME). IN THE EVENING AND NIGHTTIME HOURS THE AXIS OF PCL POLARIZATION IS DIRECTED TO THE NE, EARLY IN THE MORNING; PRIMARILY TO THE N, AND DURING THE DAYTIME NNW. HOWEVER, UNTIL NOW THERE HAS BEEN EXPERIMENTAL DOCUMENTATION ONLY FOR A MORNING INTERVAL OF ROTATION OF THE SIGN OF THE ANGLE OF DEVIATION OF THE MAIN AXIS OF THE POLARIZATION ELLIPSE FROM THE MAGNETIC MERIDIAN, ALTHOUGH IT HAS BEEN POSTULATED THAT THIS ALSO OCCURS IN THE INTERVAL 1700-2000 HOURS. PCL PULSATIONS ARE SPORADIC AND THEIR APPEARANCE CANNOT BE PREDICTED, ALTHOUGH TIMES FAVORABLE FOR OBSERVATION ARE KNOWN. MOREOVER, THE PERIOD 1700-2000 IS THE MINIMUM ON THE CURVE OF DIURNAL DISTRIBUTION OF PCL OCCURRENCE. CAREFUL STUDY OF RECORDS REVEALED THAT AT ABOUT 1800 THERE IS A GRADUAL STABILIZATION OF DELTA PHI AND E SUBX -E SUBY; DELTA PHI EQUALS 180DEGREES IS TYPICAL, ALTHOUGH 140DEGREES LESS THAN OR EQUAL TO DELTA EPSILON LESS THAN OR EQUALS TO 230DEGREES IS ALSO OBSERVED. THE MEAN DIRECTION OF THE POLARIZATION AXIS WITH THE EASTWARD DIRECTION FORMS AN ANGLE MINUS 9DEGREES (AXIS DEFLECTED TO THE SOUTH). THE DIRECTION OF THE POLARIZATION AXIS AT DIFFERENT TIMES WAS: 1600-1630, PLUS 30DEGREES; 1630-1700, PLUS 36DEGREES; 1700-1730, PLUS 39DEGREES; 1750-1800, MINUS 10DEGREES; 1800-1815, MINUS 7DEGREES.

UNCLASSIFIED

3/3 020

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132719

ABSTRACT/EXTRACT--THUS, THERE IS A REGULAR CHANGE IN THE DIRECTION OF THE PCL POLARIZATION AXIS DURING THE DAY WITH INTERVALS OF ROTATION OF THE SIGN OF THE ANGLE (BETWEEN THE AXIS OF POLARIZATION AND THE MAGNETIC MERIDIAN) AT 0500-0800 AND 1700-1800, COINCIDING IN TIME WITH THE MAXIMUM AND MINIMUM FREQUENCY OF APPEARANCE OF PCL IN THE MIDDLE LATITUDES. FACILITY: SIBERIAN INSTITUTE OF TERRESTRIAL MAGNETISM, IONOSPHERE AND RADIO WAVE PROPAGATION.

UNCLASSIFIED

1/2 019
TITLE--CLASSIFICATION OF THE SHORT PERIOD OSCILLATIONS OF THE GEOMAGNETIC FIELD -U- UNCLASSIFIED PROCESSING DATE--16OCT70
AUTHOR--VINDGRADOVA, V.N. V
COUNTRY OF INFO--USSR
SOURCE--GEOMAGNETIZM I AERONOMIJA, VOL. 10, NO. 2, 1970, P. 371-373
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--GEOMAGNETIC FIELD, OSCILLATION, GEOMAGNETIC ACTIVITY,
INTERNATIONAL QUIET SUN SURVEY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0155 STEP NO--UR/0203/70/010/002/0371/0373
CIRC ACCESSION NO--AP0119151
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0119151

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF CERTAIN REGULARITIES IN THE PERIODS OF PC AND PI GEOMAGNETIC OSCILLATIONS OBSERVED DURING THE IQSY PERIOD AT IRKUTSK. ATTENTION IS GIVEN TO THE FREQUENCY OF OCCURENCE OF OSCILLATION WITH DIFFERENT PERIODS, AND THE DEPENDENCE OF PC PERIODS ON MAGNETIC ACTIVITY AND TIME OF DAY IS EXAMINED. SEASONAL CURVES OF PI 1, PI 2, PC 1, PC 2, PC 3, PC 4, AND PC 5 ARE ANALYZED.

FACILITY: AKADEMIIA NAUK SSSR, INSTITUT ZEMNOGO MAGNETIZMA, IONOSFERY I RASPROSTRANENIIA RADIOVOLN, IRKUTSK, USSR.

UNCLASSIFIED

USSR

UDC 542.91:547.1.118

ARBUZOV, B. A., NOVOSEL'SKAYA, A. D., and VINOGRADOVA, V. S., Chemical Institute imeni A. M. Butlerov, Kazan' State University imeni V. I. Ul'yanov-Lenin

"Reaction of Some Vicinal Dihalide Compounds With One Electron Accepting Group Containing Sodium Triethyl Phosphite and Diethyl Phosphite"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 12, Dec 73, pp 2604-2608

Abstract: The reaction of methyl esters and nitrates of α,β -dichloro- and α,β -dibromopropionic acids with sodium triethyl phosphite and diethyl phosphite was studied at several temperatures $[-7^\circ, \text{ to } -10^\circ, +7^\circ, +20^\circ, +110^\circ \text{ and } +150^\circ]$ as well as the reaction of α,β -dibromodiethyl ester with triethyl phosphite at room temperature. The intermediate and final products were isolated and identified by means of IR spectral data and comparative analysis of physical properties.

1/1

USSR

UDC:539.4

KONOPLENKO, V. P., ARTYUKHINA, L. L., OVSEPYAN, Ye. S., VINOGRADOVA, V. S.,
Moscow

"The Level of Equicohesive Temperature of VM-1A Molybdenum Alloy Upon
Short-Term Testing in a Vacuum"

Kiev, Problemy Prochnosti, No 10, Oct 73, pp 51-55

Abstract: It is established that the equicohesive temperature of VM-1A alloy in a vacuum of $5 \cdot 10^{-4}$ or $5 \cdot 10^{-5}$ mm Hg is approximately 1250° C and increases both as a result of preliminary triple washing of the chamber with argon (to about 1450° C) and as a result of protection of the surface of specimens with a heat-resistant coating (to over 1500° C). The level of the equicohesive temperature of the alloy results from the rate of development of surface microscopic cracks which develop at points of separation of hard and brittle oxygen-containing phases on grain-boundary surfaces, which are enriched with residual oxygen during high-temperature testing.

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USSR

UDC 542.91:547.1'118

ARBUZOV, B. A., DIANOVA, E. N., and VINOGRADOVA, V. S., Chemical Institute
Imeni A. M. Butlerov, Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Reaction of 2,5-Diphenyl-3,4-diazacyclopentadien-1-one-3,4-dioxide With
Trialkyl Phosphites"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 73,
pp 1422-1424

Abstract: Trimethyl- and triethyl phosphite react with 2,5-diphenyl-
3,4-diazacyclopentadien-1-one-3,4-dioxide yielding 1-alkyl-3,5-diphenyl-
pyrazolyl-4 dialkyl phosphates.

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USSR

UDC 542.91:547.772.2:547.1'118

ARBUZOV, B. A., SOROKINA, T. D., FUZHENKOVA, A. V., VINOGRADOVA, V. S.

"Interaction of 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione with Trimethylphosphite and Tri(dimethylamino)phosphine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, 1973, pp 2577-2580

Abstract: A study was made of the effect of trimethylphosphite and tri(dimethylamino)phosphine on 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione (I). The study was made using thermography and infrared spectroscopy. Trimethylphosphite interacts with 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione via the bipolar ion stage with the formation of the methyl ether of the enol form of the dimethyl ester of 1,2-diphenylpyrazolidine-3-5-dione-4-benzylphosphonic acid. On interaction of tri(dimethylamino)phosphine with 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione, a stable adduct (1:1) was obtained having the structure of the bipolar ion with the P-C bond.

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USSR

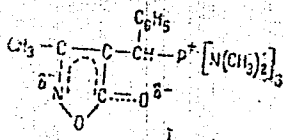
UDC 547.241

AREUZOV, B. A., DIANOVA, E. M., and VINOGRADOVA, V. S., Chemical Institute imeni A. M. Butlerov and Kazan State University imeni V. I. Ul'yanov-Lenin

"Reaction of 3-Methyl-4-benzylidenisoxazolinone-5 and 1,3-diphenyl-4-benzylidene-pyrazolone-5 With Tri(dimethylamino)phosphine"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 4, 1972, pp 750-753

Abstract: The title reactions result in the formation of 1:1 bipolar adducts. The adduct (I) of the 3-methyl compound is soluble only in polar



solvents; however, the adduct of the diphenyl compound is soluble in a wider range of solvents. Trace amounts of the product formed by the condensation of two pyrazalone rings were detected. Physical properties, NMR data, IR spectra, and experimental procedures are given.

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USSR

UDC 542.91:547.1'118

ARBUZOV, B. A., POLEZHAYEVA, N. A., and VINOGRADOVA, V. S., Chemical Institute
Imeni A. M. Butlerov, Kazan' State University Imeni V. I. Ul'yanov-Lenin

"Structure of the Products Obtained in the Reaction of Trimethyl Phosphite
With N-Acetyltrichloroacetaldimine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 5, May 73,
pp 1112-1116

Abstract: Several products are obtained from the reaction of N-acetyltrichloroacetaldimine [ATD] with trimethyl phosphite, depending on the reaction conditions. When the reaction is carried out at -13° , two crystalline products are obtained: dimethyl ester of α -(N-acetyl)-amino- β , β -trichloroethylphosphonic acid (I), m. p. $150.5-151^{\circ}$, and the dimethyl ester of α -(N-acetyl)amino- β , β -dichlorovinylphosphonic acid (II), m.p. $98-99^{\circ}$. The same reaction carried out without cooling is exothermic, the temperature of the reaction mixture rising to $40-45^{\circ}$, and it yields the phosphonate (I) plus an addition product of 1 mole of trimethyl phosphite to 2 moles ATD. The melting point of this addition product is $153.5-154^{\circ}$. With cooling to -40° the reaction products are (I), (II), and an inseparable mixture of several liquid products.

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USSR

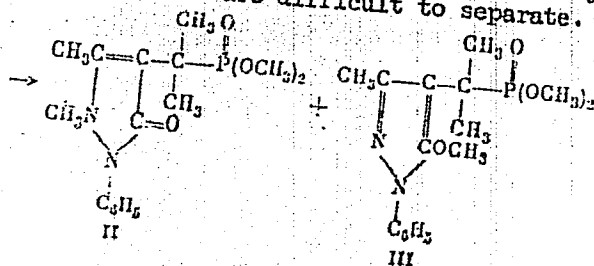
UDC 547.775.547.26'118

ARBUZOV, B. A., DIANOVA, E. N., VINOGRADOV, V. S., and PEIROVA, M. V., Chemical Institute imeni A. M. Butlerov and Kazan State University imeni V. I. Ul'yanov-Lenin

"Reaction of Trimethyl Phosphite With 1-Phenyl-3-methyl-4-isopropylidene-pyrazolone-5"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), Vyp 4, 1972, pp 746-749

Abstract: The title reaction does not occur at room temperature; however, if the reactants are allowed to react for 6 hours at 130°C in an atmosphere of dry nitrogen, two products are formed: compound (II), if the entering methyl group bonds to the 2-nitrogen and compound (III), if the methyl group bonds to the keto oxygen. The two products are difficult to separate.



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USSR

UDC 541.6:547.1.1118

ARBUZOV, B. A., SO OKINA, T. D., VINOGRADOVA, V. S. and SERGEYEVA, G. N.,
Chemical Institute Imeni A. M. Butlerov, Kazan State University Imeni V. I.
Ul'yanov-Lenin

"Structures of the Reaction Products of Some α, β -Unsaturated
Carbonyl Compounds With Trimethylphosphite and Tri(dimethylamino)-Phosphine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 4, Apr 72,
pp 865-871

Abstract: Trimethylphosphite reacts with 1,3-diphenyl-5-benzalbarbituric acid at -14° yielding a 1:1 addition product with bipolar structure which isomerizes easily to a methyl ester of the enol form of α -(1,3-diphenylbarbituryl-5)-benzylphosphonic acid dimethyl ester (I). The latter forms when the reaction is carried out at room temperature. Hydrolysis of (I) yields an enol form of a dimethylester of α -(1,3-diphenylbarbituryl-5)-benzylphosphonic acid. Reaction of tri(dimethylamino)phosphine with 1,3-diphenyl-5-benzalbarbituric acid yields a 1:1 crystalline addition product with a bipolar ionic structure. Dipole moment values and UV spectral parameters of a series of bipolar ions obtained from tri(dimethylamino)phosphine are reported.

1/1

- 47 -

USSR

UDC 542.91:661.718.1

ARBUZOV, B. A., POLEZHAYEVA, N. A., and VINOGRADOVA, V. S., Chemical
Institute imeni A. M. Butlerova, and Kazan State University imeni V. I.
Ul'yanov-Lenin

"Structure of the Reaction Products of Trimethyl Phosphite with Acetyl-
and Benzoyl-p-quinone"

Moscow, Doklady Akademii Nauk SSSR, Vol 201, No 1, Nov-Dec 1971, pp 91-94

Abstract: The reaction of some p-quinones with trialkyl phosphites and phosphines was studied. Benzoyl-p-quinone reacts with trimethyl phosphite in dry nitrogen to form dimethyl-p-methoxy-o-benzoyl phenylphosphate (I); p^{31} nmr showed the presence of an unstable bipolar ion (II), the latter rearranged to (I). The results indicate the formation of (II) as an intermediate in the presence of 1 mole of acetic acid; the only product is dimethyl p-hydroxy-o-benzoyl-phenyl phosphate (III). The reaction of acetyl p-quinone with trimethyl phosphite at low temperatures produces a phosphorane which in methylene chloride rapidly isomerizes into an enol ether. Physical data, structural formulas, compositions and infrared spectra for these and several other compounds are given.

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USSR

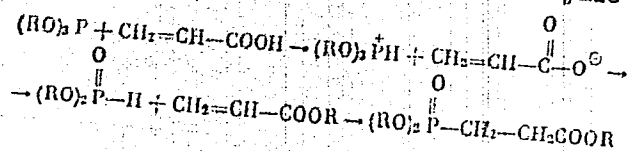
UDC 542.91:661.718.1

GAZIZOV, T. Kh., MAREYEV, Yu. M., VINOGRADOVA, V. S., FUDOVIK, A. N., and
 ARBUZOV, B. A., Chemistry Institute imeni A. M. Butlerov, Kazan' State
 University imeni V. I. Ul'yanov-Lenin, and Institute of Organic and Physical
 Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR

"Interaction of Trialkyl Phosphites with α, β -Unsaturated Acids"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 71,
 pp 1259-1266

Abstract: Experimental material indicates that the addition of trialkyl phosphites to α, β -unsaturated acids may proceed by preliminary protonation of the trialkyl phosphites by the unsaturated acids, with subsequent addition of the resultant dialkylphosphorous acids to esters of the unsaturated acids to give trialkyl esters of the corresponding β -phosphonocarboxylic acids, according to the scheme:

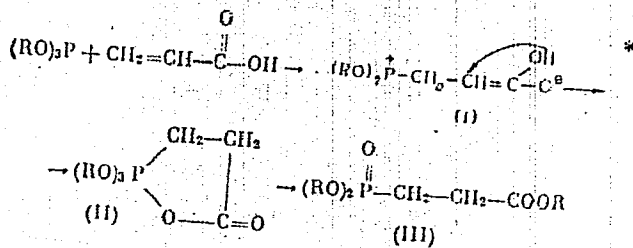


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USSR

GAZIZOV, T. Kh., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 71, pp 1259-1266

It is also possible that these reactions proceed according to the scheme suggested by V. A. KUKHTIN and G. Kh. KAMAY, viz.



but without the formation of an intermediate cyclic product of the phosphorane type. The reaction may proceed simultaneously according to both schemes.

The interaction of trimethyl phosphite with acrylic acid, along with trimethyl ester of β -phosphonopropionic acid, gives a small amount of the cyclic anhydride of methyl ester of β -phosphonopropionic acid. The latter is obtained in much greater quantities in the presence of acetic acid. The

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USSR

GAZIZOV, T. Kh., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya,
No 6, Jun 71, pp 1259-1266

formation of an analogous cyclic anhydride is observed in the interaction of
triethyl phosphite with methacrylic acid, as well as in the presence of acetic
acid.

The authors thank E. I. GOL'DFARB for taking the NMR spectra.

3/3

- 36 -

USSR

UDC 542.91 + 547.241 + 547.589.4

ARBUZOV, B. A., DIANOVA, E. N., and VINOGRADOVA, V. S., Chemical Institute imeni A. M. Butlerov, Kazan State University imeni V. I. U 'yanov-Lenin

"Reaction of Trimethyl Phosphite With Benzylidenebenzoyl-acetic Ester"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, Nov 70, pp 2543-2548

Abstract: Continuing their study of phosphorane-type compounds obtained in reactions of trialkyl phosphites with α, β -unsaturated carbonyl compounds, the authors found that the reaction of trimethyl phosphite with benzylidenebenzoylacetic ester gives crystalline 2,2,2-trimethoxy-3,5-diphenyl-4-carbethoxy-1-oxo-2-phosphnacyclo-4-pentene (I). The structure of I was proved by IR, NMR and UV spectral data, as well as a study of its chemical properties. I does not react with ethanol on heating to 70° for 7 hours even in the presence of phosphoric acid as catalyst, but is readily hydrolyzed on heating with an equimolar quantity of

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USSR

ARBUZOV, B. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, Nov 70, pp 2543-2548

water in ether, resulting in ring opening and the formation of the dimethyl ester of 1-phenyl-2-benzoyl-2-carboethoxyethylphosphonic acid, whose structure was confirmed by IR spectra. The action of acetic anhydride on I gives enol acetates.

The authors thank A. A. MUSINA for the NMR spectra.

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USSR

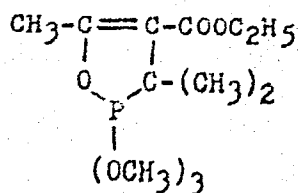
UDC: 661.718.1+547.241+541.6

ARBUZOV, B. A., DIANOVA, E. N., VINOGRADOVA, V. S., and PETROVA, M. V., Chemical Institute Imeni A. M. Butlerov at the Kazan State University Imeni V. I. Ul'yanov-Lenin

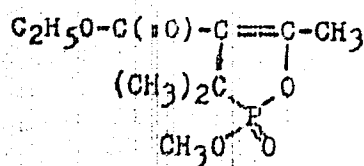
"Reaction of Trimethylphosphite With Isopropylideneacetoacetate"

Moscow, Doklady Akademii Nauk SSSR, Vol. 195, No 5, Dec 70, pp 1094-1096

Abstract: Trimethylphosphite reacts with isopropylidene acetoacetate at room temperature to yield the cyclic phosphorane A, b.p. 85-87° at 2·10⁻⁴ mm Hg, n_D²⁰ = 1.4721, d₄²⁰ = 1.1132.



"A"



"C"

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USSR

ARBUZOV, B. A., et al, Doklady Akademii Nauk SSSR, Vol. 195, No 5, Dec 70, pp 1094-1096

At room temperature with a water excess A hydrolyzes to yield a dimethyl-2-acetyl-2-carbethoxyethylphosphinic acid (B), $n_D^{20} = 1.4620$, $d_4^{20} = 1.1722$.

When acetic anhydride was reacted with A at $70-80^\circ$ for 7 hrs, the product was an enol acetate of B, b.p. $107-108^\circ/2 \cdot 10^{-4}$ mm, $n_D^{20} = 1.4630$, $d_4^{20} = 1.1578$.

When an attempt was made to distill B, the cyclic product C was obtained, b.p. $133^\circ/2 \cdot 10^{-4}$ mm, $n_D^{20} = 1.4738$.

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USSR

UDC: 547.26'118+547.775

ARBUZOV, B. A., DIANOVA, E. N., ~~VINOGRADOVA, V. S.~~, Chemical Institute imeni
A. M. Butlerov Affiliated With Kazan' State University imeni V. I.
Ul'yanov-Lenin

"The Structure of Products of the Reaction of 1-Phenyl-3-Methyl-4-Isopropylidenepyrazolone-5 With Dimethylphosphorous Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(104), No 6, Jun 72, pp 1212-1217

Abstract: The structure of dimethyl (1-phenyl-2,3-dimethylpyrazolone-5-yl-4) isopropyl phosphonate and dimethyl (1-phenyl-3-methyl-5-methoxypyrazolone-4) isopropyl phosphonate was identified by the addition of dimethylphosphorous acid to 1-phenyl-3-methyl-4-isopropylidenepyrazolone-5 followed by alkylation. Tautomerism of the adduct of dimethylphosphorous acid with 1-phenyl-3-methyl-4-isopropylidene-pyrazolone is proved. The authors thank Yu. Yu. Samitov and E. I. Gol'dfarb for taking the nmr spectra.

1/1

USSR

UDC 661.718.1:547.642

ARBUZOV, B. A., MAREYEV, YU. M., VINOGRADOVA, V. S., and SAMITOV, YU. YU.,
Chemical Institute imeni A. M. Butlerov, Kazan' State University Imeni
V. I. Ul'yanov-Lenin

"Spirophosphoranes Based on Acrolein and Methyl Esters of Ethylene-glycol-
and Butyleneglycol-1,3-phosphorous Acid"

Moscow, Doklady Akademii Nauk SSSR, Vol 205, No 4, Aug 72, pp 843-846

Abstract: The reaction of acrolein with cyclic phosphites was studied. Addition of acrolein to the methyl ester of ethyleneglycolphosphorous acid in absolute ether yielded 1,6,9-trioxa-[(5-methoxy)-5-phosphaspiro-(4,4)] 2-nonene, b.p. 55-56°/10⁻³mm, n_D²⁰ 1.4820, d₄²⁰ 1.3016. When butyleneglycol-phosphorous acid methyl ester was used, the product was 1,6,10-trioxa-9 methyl-[(5-methoxy)-5-phosphaspiro-(4,5)]-2-decene, b.p. 61-62°/10⁻³ mm, n_D²⁰ 1.4780, d₄²⁰ 1.2041. Addition of methyl vinyl ketone to the methyl ester of butyleneglycolphosphorous acid yielded, after a somewhat slower reaction, 1,6, 10-trioxa-2,9-dimethyl-[(5-methoxy)-5-phosphaspiro-(4,5)]2-decene, b.p. 73-74°/10⁻³ mm, n_D²⁰ 1.4745, d₄²⁰ 1.1707. The reactions were carried out with exclusion of moisture, under continuous stirring, keeping the temperature below +25°C. The products were found to hydrolyze easily in air but were stable enough to be distilled under high vacuum.

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Organophosphorous Compounds

USSR

UDC 542.91+661.718.1

ARBUZOV, B. A., SOROKINA, R. D., and VINOGRADOVA, N. S., Chemical Institute
imeni A. M. Butlerov, Kazan' State University imeni V. I. Ul'yanov-Lenin
Kazan'

"The Reactions of 5-Benzalbarbituric Acid with Trimethyl Phosphite and
Tris(dimethylamino)phosphine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 3, Mar 71,
pp 573-577

Abstract: At minus 14° trimethyl phosphite (I) added to 5-benzalbarbituric acid (II) with the formation of a 1:1 addition product (m.p. 80-5°) that had a bipolar structure. This product isomerized to the methyl ester of the enol form of the dimethyl ester of barbituryl-5-benzylphosphonic acid (III; m.p. 220-2°). The latter compound formed directly when the reaction was carried out at room temperature. On treatment of III with HCl, the dimethyl ester of barbituryl-5-benzylphosphonic acid (IV; m.p. 244°) was obtained. Dimethyl phosphite reacted with II to form a product which on recrystallization from dioxan yielded the dioxanate of the enol form of the dimethyl ester of barbituryl-5-benzylphosphonic acid (m.p. 154-5°). Treatment of the dioxanate with HCl resulted in the formation of a product that proved to be
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USSR

ARBUZOB, B. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 3, Mar 71, pp 573-577

identical with IV. In the presence of glacial acetic acid, I and II reacted with the formation of IV, which was isolated in the form of the enol dioxanate. The reaction of tri(dimethylamino)phosphine with II yielded a 1:1 addition product (m.p. 150-2°) which had the structure of a bipolar ion with a P-C bond. The product was stable in the form of a bipolar ion in the crystalline state.

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USSR

UDC: 621.391.19

KATYS, G. P., ZOTOV, V. D., POLIKARPOV, S. P., VINOGRADOVA, Ye. P. "Order of Lenin" Institute of Control Problems (Automation and Remote Control), Academy of Sciences of the USSR

"An Image Converter"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 36, Dec 71, Author's Certificate No 322781, Division G, filed 19 May 70, published 30 Nov 71, p 163

Translation: This Author's Certificate introduces an image converter made in the form of a semiconductor plate to which metal ring electrodes and a central point electrode are applied for a radial field. As a distinguishing feature of the patent, conversion errors which result from rotation and change of image scale are eliminated by using a sawtooth voltage source and by placing an additional electrode on the semiconductor plate inside the ring electrode. This auxiliary electrode is made from a material with conductivity opposite to that of the semiconductor plate and takes the form of one turn of an Archimedes spiral with one end connected to the ring electrode and the other end connected through a load to the source of sawtooth scanning voltage.

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USSR

UDC: 621.383.8

VINOGRADOVA, Ye. P., ZOTOV, V. D., Moscow

"Investigation of a One-Dimensional Solid-State Image Converter"

Moscow, Avtomatika i Telemekhanika, No 1, Jan 72, pp 189-191

Abstract: The article is a description of a solid-state one-dimensional image converter which utilizes the inverse Hall effect (the Suhl effect). The main scanning element is a rectangular semiconductor plate with one light-sensitive face and a point contact or PN-junction for signal takeoff on the opposite face. An attracting electric field is applied lengthwise of the scanning element. The plate is placed in a magnetic field whose strength is a linear function of time. When an image is projected on the light-sensitive surface, nonequilibrium carriers are generated in accordance with the intensity of the emission on the surface. These carriers are subjected to Lorentz force, Hall force, and the force of the

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USSR

VINOGRADOVA, Ye. P., ZOTOV, V. D., Avtomatika i Telemekhanika, No 1, Jan 72, pp 189-191

electric field. This results in redistribution of the carriers in the bulk of the semiconductor. Current takeoff affects the minority carriers corresponding to sequential sections of the surface as the magnetic field strength increases. If the laws of redistribution of the minority carriers are known, this process can be controlled and optimum parameters of the device can be selected depending on the job to be done. Preliminary calculations show that a resolution of the order of 30 lines/mm and a line conversion time of the order of a few microseconds can be achieved with a main scanning element about 30 microns in width with a light sensing surface approximately 10 mm long when the long dimension of the current takeoff is about 5 microns, and the illumination is approximately 100 lx. Two figures, bibliography of three titles.

2/2

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SUBSTITUTION ON THE BENZENE RING OF INDOLE. XI. SYNTHESIS OF
SUBSTITUTED 5,NITRO,6,AMINOINDOLINES -U-
AUTHOR--(04)-TERENTYEV, A.P., VINOGRADOVA, YE.V., CHETVERIKOV, V.P.,
DASHKEVICH, S.N.
COUNTRY OF INFO--USSR
SOURCE--KHM. GETEROTSIKL. SOEDIN, 1970, (2), 161-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--BENZENE DERIVATIVE, INDOLE, ORGANIC NITRO COMPOUND, SPECTRUM, CHEMICAL SYNTHESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1093 STEP NO--UR/0409/70/000/002/0161/0163
CIRC ACCESSION NO--AP0104491
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0104491

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CF. CA 71: 22110D. I (R PRIME1
 EQUALS H, R PRIME2 EQUALS NO SUB2) WAS HEATED WITH EXCESS AMINE TO GIVE
 I (R PRIME1 EQUALS H) (R PRIME2, PERCENT YIELD, AND M.P. GIVEN):
 CYCLOHEXYLAMINO, 91, 184.5-5.5DEGREES (ALC.); PIPERIDINO, 80,
 103-4DEGREES (HEPTANE); HO(CH SUB2)SUB2 NH, 76.5, 193-4DEGREES (MEOH OR
 MEND SUB2); BUNH (II) 69, 144-5DEGREES (AQ. MEOH); PHCH SUB2 NH (III),
 90, 172.5-3.5DEGREES (ETOH). I (R PRIME1 EQUALS AC, R PRIME2 EQUALS NO
 SUB2) (IV) (3 G) AND 10 ML BUNH SUB2 WAS HEATED 6 HR AT 78DEGREES TO
 GIVE 82PERCENT II. IV (3.1 G) AND 15 ML BUNH SUB2 WAS REFLUXED 2 HR TO
 GIVE 30PERCENT I (R PRIME1 EQUALS AC, R PRIME2 EQUALS BUNH), M.
 142-3DEGREES (MEOH). SIMILARLY PREPD. WAS 47.8PERCENT I (R PRIME1
 EQUALS AC, R PRIME2 EQUALS PHCH SUB2 NH) (V), M. 221.5-22DEGREES (HCONME
 SUB2). III (0.1 G) AND 5 ML AC SUB2 O WAS HEATED 2.5 HR TO GIVE
 86.5PERCENT V. N SUB2 H SUB4 .H SUB2 O (3 ML) WAS ADDED TO 3 G IV IN 25
 ML ETOH TO GIVE 48PERCENT (R PRIME1 EQUALS AC, R PRIME2 EQUALS NHHH
 SUB2), M. 208-9DEGREES (ISO-PROH). SIMILARLY, 77PERCENT I (R PRIME1
 EQUALS H, R PRIME2 EQUALS NHHH SUB2), M. 179-80DEGREES (ETOH), WAS
 OBTAINED FROM 10 ML N SUB2 H SUB4 .H SUB2 O AFTER 4 HR IN THE PRESENCE
 OF 0.4 G K SUB2 CO SUB3. UV SPECTRAL DATA WERE GIVEN.

UNCLASSIFIED

USSR

UDC 547.51 +541.15 + 661.718.1

BABKINA, E. I., VINOGRADSKAYA, L. S., DOBROVA, Ye. I., and GUR'YEVA, N. A.,
Branch of the Physical Chemical Scientific Research Institute imeni L. Ya.
Karpov

"Radiochemical Synthesis of Organophosphorus Compounds Based on Indene and
Phosphorus Trichloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 2084-2085

Abstract: Gamma irradiation of the mixtures of indene and PCl_3 under con-
ditions favoring either addition of PCl_3 to the double bond or polymerization
as well as under conditions practically excluding the possibility of polymeri-
zation yields, fails to induce the addition of PCl_3 to the indene along the
double bond. This may be due to an extremely unsaturated state of the indene
double bond leading principally to the polymerization products.

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1/2 014 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ADSORPTION BEHAVIOR OF A MIXTURE OF BUTYL AND NCROTYL ALCOHOLS ON
ZEOLITES -U-
AUTHOR--(03)-VINOGRADSKAYA, M.V., KELTSSEV, N.V., LVOV, S.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 238-40
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ADSORPTION, ZEOLITE, ISOTHERM, BUTANOL, GAS CHROMATOGRAPHY,
ALCOHOL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--1995/1262 STEP NO--UR/0076/70/044/001/0238/0240
CIRC ACCESSION NO--AP0116724
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116724

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADSORPTION ISOTHERMS OF MECH:CHCH
SUB2 OH (I) AND BUOH ON CAA ZEOLITE (II) AND NAX ZEOLITE (III) WERE
DETD. AT 80-300DEGREES AND 1-10MM HG. ON BOTH ZEOLITES, I WAS MORE
STRONGLY ADSORBED THAN BUOH, BUT III WAS MORE SELECTIVE THAN II. I
PRESENT AS AN 8PERCENT IMPURITY IN SAMPLES OF BUOH WAS COMPLETELY
REMOVED BY PASSING THE SAMPLES THROUGH III AT 130DEGREES, AND CHECKING
THE ELUATE BY GAS CHROMATOG. IN A 3000 TIMES 6-MM COLUMN FILLED WITH
CHROMOSORB W IMPREGNATED WITH POLYETHYLENE GLYCOL ADIPATE AND ELUTED
WITH HE. FACILITY: MOSK. INST. TONKDI KHEM. TEKHNOL. IM.
LONOMOSOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 911.3:616.9:576.895.771(47+57)

SHIPITSINA, N. K., ANUFRIYEVA, V. N., BANDIN, A. I., VINOGRADSKAYA, O. N.,
GORNOSTAYEVA, R. M., KUPRIYANOVA, Y. S., MARKOVICH, N. Ya., RASNITSYN, S. P.,
and TIMOFEYEVA, L. V.

"Study of the Biology of Blood-Sucking Diptera as Basis for Combating
Vectors of Infection and Blood-Sucking Insects in the Soviet Union"

V sb. Materialy Nauchn. konferentsii posvyashch. 50-letiyu In-ta Med.
parazitol. i tropich. Med. 1970 (Proceedings of the Scientific Conference
Devoted to the 50th Anniversary of the Institute of Medical Parasitology
and Tropical Medicine 1970 -- collection of works), Moscow, 1970, pp 48-49
(from RZh-Meditsinskaya Geografiya, No 2, Feb 71, Abstract No 2.36.48)

[No abstract]

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BIOLOGY

Agriculture

5

USSR

UDC 614.449.57:615.285.7]:576.895.77+595.771

KRIVTSOVA, Ye. N., MITRCFANOV, A. M., KOZIN, N. P., TIKOFEYeva, L. V.,
TULUPOVA, A. M., VINOGRADSKAYA, O. N., YERMISHEV, Yu. V., PLOTNIKOVA, A. S.
and RYAZANISEV, V. A., Institute of Medical Parasitology and Tropical Medicine
imeni Ye. I. Martainovskiy, Ministry of Health USSR, and Institute of Agri-
cultural and Specialized Application of Civil Aviation

"Testing of Some Organophosphorus Compounds and Carbamates against Larvae of
Aedes Mosquitoes (Culicidae) in Experiments with Aerial Spraying"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 5,
Sep/Oct 70, pp 599-603

Abstract: The use of organophosphorus compounds and carbamates against
mosquito larvae was tested in the Yakut ASSR, in the area of the villages of
Novy, Aikhal, and Mirny, and the Udachnaya deposits. Water reservoirs were
treated by aerial spraying from an AN-2 plane. The following pesticides were
tested: bytex, methylnitrophos, trolen, sevine, and dipterex; DDT was used as
the reference. Comparatively uniform marshy territories with occasional for-
ests and bushes were selected. Bytex was shown to be especially effective as
a larvicide, a dose of 40 g/hectare proving to be sufficient. Methylnitrophos

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USSR

KRIVTSOVA, Ye. N., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 39, No 5, Sep/Oct 70, pp 599-603

required a 100 g/hectare dose to be effective; trolen in doses 40 and 80 g/hectare reduced the density of mosquito larvae only insignificantly. Dipterex and sevin proved ineffective as larvicides, being significantly inferior to DDT. The effect of mosquito larvae eradication with organophosphorus compounds lasts for 7-14 days.

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USSR

UDC 911.3.616.9.576.895.771(571.56)

TIMOFEYEVA, L. V., MITROFANOV, A. M., VINOGRADSKAYA, O. N., RASNITSYN, S. P.,
PETRUCHUK, O. Ye., RYAZANTSEV, V. A., and YERMISHEV, Yu. V.

"Organizational Principles in the Struggle Against Blood-Sucking Midges and
Aedes Mosquitoes on the Basis of Their Biological Characteristics"

V sb. Materialy Nauchn. konferentsii, posvyashch. 50-letiyu In-ta med.
parazitol. i tropich. med., 1970 (Proceedings on the Conference Commemorating
the 50th Anniversary of the Institute of Medical Parasitology and
Tropical Medicine 1970 -- collection of works), Moscow, 1970, pp 50-51
(from RZh-36. Meditsinskaya Geografiya, No 1, Jan 71, Abstract No 1.36.75)

[No abstract]

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1/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--ON FAUNA AND BIOLOGY OF BLOOD SUCKING MOSQUITOES IN THE VICINITY OF
BELY YAR VILLAGE OF TYUMEN REGION BY OBSERVATION OF 1965 -U-

AUTHOR--(02)--VINOGRADSKAYA, O.N., ODINETS, A.A.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA PARAZITOLOGIYA I PARAZITARNYVE BOLEZNI, 1970, VOL
39, NR 3, PP 329-334

DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MOSQUITO, INSECTICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/0236

STEP NO--UR/0358/70/039/003/0329/0334

CIRC ACCESSION NO--AP0123998

UNCLASSIFIED

2/2 017

CIRC ACCESSION NO--AP0123998

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FAUNA AND BIOLOGY OF MOSQUITOES UNDER CONDITIONS OF A TAIGA ZONE OF THE RIGHT BANK OF THE OB RIVER IN THE LOCALITY SITUATED IN LATITUDE 61 DEGREES 15 MINUTES NORTH AND LONGITUDE 73 DEGREES 30 MINUTES EAST WERE STUDIED. THE FOLLOWING SPECIES OF MOSQUITOES OF THE GENUS Aedes WERE FOUND IN THE LARVAL STAGE: HEXODONTUS BYAR, EXCRUCIANS WALK, PUNCTOR KIRBY, IMPIGER WALK, NIGRINUS ECK, RIPARIUS, D. K. AS WELL AS ANOPHELES MACULIPENNIS. TRANSITIONAL AND HIGHLAND MARSHES ON TERRACES AND WATERSHEDS SERVED AS THE MAIN BREEDING PLACES FOR Aedes MOSQUITOES. FLOODLAND AND ASSOCIATED WATER RESERVOIRS DURING FLOODS PRODUCE INSIGNIFICANT EMERGENCE OF Aedes EXCRUCIANS W. BEFORE FLOODS AND AN. MACULIPENNIS NG AFTER FLOOD. THE PAPER PRESENTS PHENOLOGICAL DATA AND THE SEASONAL PREVALENCE OF LARVAE OF DIFFERENT SPECIES DEPENDING UPON THE TYPE OF WATER RESERVOIRS. TIME OF TREATMENT WITH NON RESIDUAL INSECTICIDES IS INDICATED.

FACILITY: TSENTRAL'NYY NAUCHNO-ISSLED. DEZINFEKTSIONNYY INSTITUT, MOSKVA.

UNCLASSIFIED

USSR

UDC 678.742.2:66.018.86.01:53

VINOGRADSKAYA, Ye. L., AGAMALYAN, S. G., and VDOVINA, A. L.

"Influence of γ -Radiation on the Physical Mechanical Properties of Polyethylene and Polycarbonate"

Moscow, *Plasticheskiye Massy*, 7, 1973, pp 10-12

Abstract: A study was made of the influence of γ -radiation on the molecular structure of high density polyethylene (HDPE) and polycarbonate (PC). Increasing the dose to 25 millirads resulted in an increase in the stability limit during stretching for HDPE; increasing the dose from 25 to 200 millirads resulted in a decrease in σ_v . Density, module of elasticity, hardness, and fatigue stability for HDPE in general increased with increasing dose. The molecular weight and fatigue resistance decreased for PC. Values for other parameters are given. The radiation of HDPE results in "linking" processes and leads to the breakdown of spherulite formation, and to the breakup and subsequent compaction of the structural elements. In PC, however, irradiation results in destructive processes leading to the fragmentation of the polymers.

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