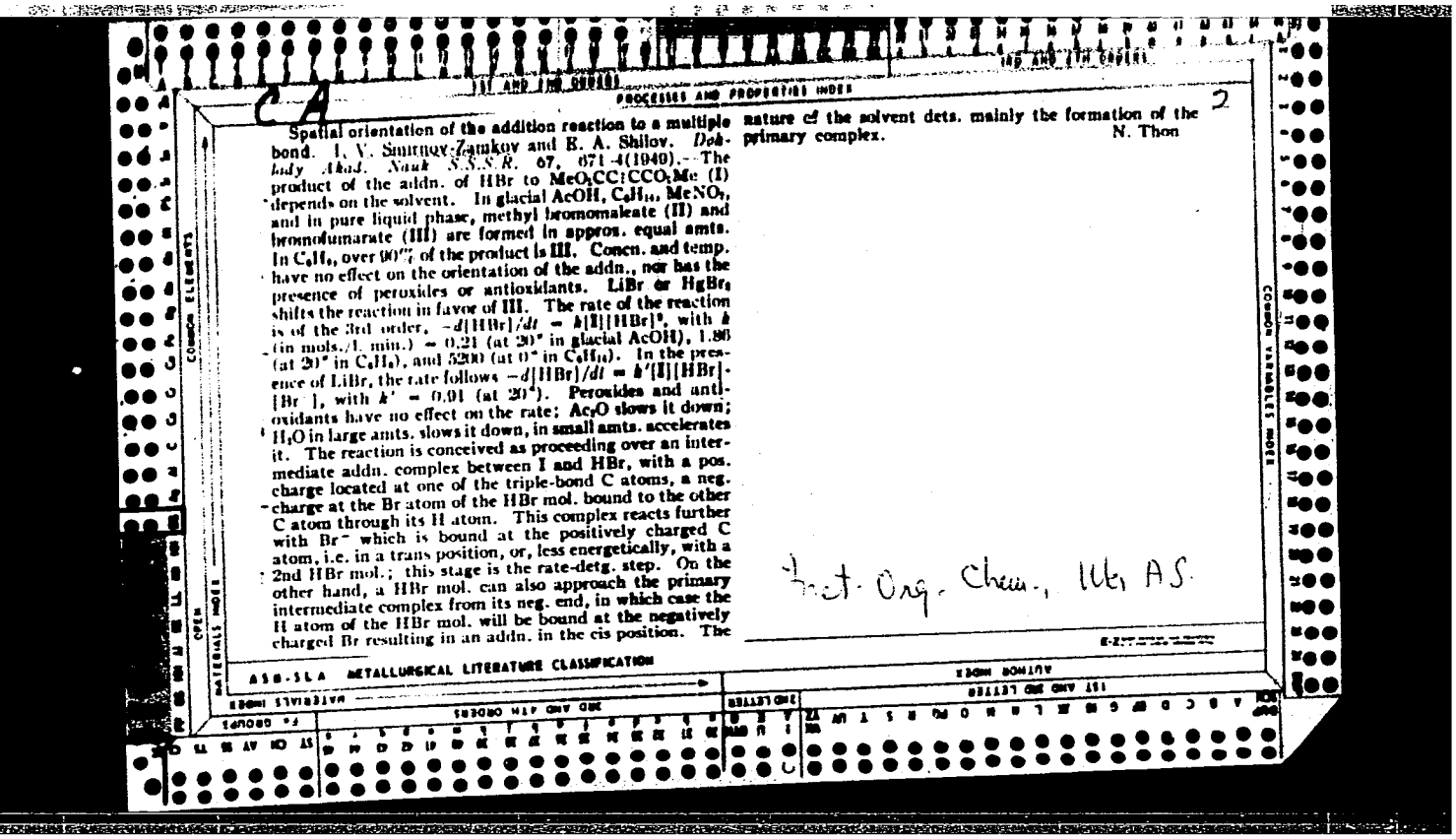


CA

PROCESSES AND PROPERTIES INDEX

2

Spatial orientation of the addition reaction to a multiple bond. I. V. Smirnov-Zamkov and E. A. Shilov. *Doklady Akad. Nauk S.S.S.R.* 67, 671-4(1949).—The product of the addn. of HBr to $MeO_2CC{:}CCO_2Me$ (I) depends on the solvent. In glacial AcOH, C_6H_{14}, $MeNO_2$, and in pure liquid phase, methyl bromomaleate (II) and bromofumarate (III) are formed in appros. equal amts. In C_6H_6, over 90% of the product is III. Concn. and temp. have no effect on the orientation of the addn., nor has the presence of peroxides or antioxidants. LiBr or $HgBr_2$ shifts the reaction in favor of III. The rate of the reaction is of the 3rd order, $-d[HBr]/dt = k[I][HBr]^2$, with k (in mols./l. min.) = 0.21 (at 20° in glacial AcOH), 1.86 (at 20° in C_6H_6), and 5200 (at 0° in C_6H_{14}). In the presence of LiBr, the rate follows $-d[HBr]/dt = k'[I][HBr][Br^-]$, with k' = 0.01 (at 20°). Peroxides and antioxidants have no effect on the rate; Ac_2O slows it down; H_2O in large amts. slows it down, in small amts. accelerates it. The reaction is conceived as proceeding over an intermediate addn. complex between I and HBr, with a pos. charge located at one of the triple-bond C atoms, a neg. charge at the Br atom of the HBr mol. bound to the other C atom through its H atom. This complex reacts further with Br^- which is bound at the positively charged C atom, i.e. in a trans position, or, less energetically, with a 2nd HBr mol.; this stage is the rate-detg. step. On the other hand, a HBr mol. can also approach the primary intermediate complex from its neg. end, in which case the H atom of the HBr mol. will be bound at the negatively charged Br resulting in an addn. in the cis position. The nature of the solvent dets. mainly the formation of the primary complex.

N. Thon

Inst. Org. Chem., Ukr. A.S.

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SMIRNOV-ZAMKOV, I.B. i SHILOV, E.A.

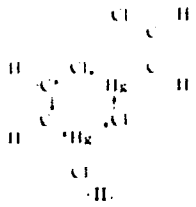
24807. SMIRNOV-ZAMKOV, I.B. i SHILOV, E.A. Oprostpanst bennom Napravlenii Reaktsiy Prisoedineniye Po Kratnym Sbyazyam Doklahd Akadnauk SSSR Novaya Seriya T. LXVII 4, 1949, S. 671-74.—Bibliogr: S. 674.

SO: Letopis' No. 33, 1949

CA

10

Theory of the formation of cis-chlorovinylmercury chloride from acetylene and mercuric chloride. I. V. Smirnov-Zamkov and P. A. Shilov (Inst. Org. Chem., Acad. Sci. Ukr. S.S.R., Kiev). *Doklady Akad. Nauk S.S.S.R.* **73**, 723-5(1950). At 100°, formation of cis-CHCl:CH-HgCl (I) from C_2H_2 and solid $HgCl_2$ involves an induction period of approx. 1 hr. That induction period is shortened very markedly by advance addn. of some I. Addn. of the trans isomer has no accelerating effect, on the contrary, it inhibits somewhat the formation of I. That the difference of the effects of the cis and the trans isomers is not due to the lower melting temp. of I is demonstrated by the fact that at 124°, too, only an addn. of I suppresses the induction period and accelerates the reaction, whereas the same amt. (5%) of the trans isomer has a marked inhibiting action. I is the only product in the absence of Cl ions, in their presence, the reaction is trimol. and its product is the trans isomer. Formation of I is interpreted by a mechanism involving a 6-membered cyclic intermediate formed from C_2H_2, $HgCl_2$, and I, of the structure II, which decomp. into 2 I.



The trans isomer, being less polarizable in its HgCl group, is evidently not sufficiently active at 100-24° to form the cyclic intermediate. Thus

SMIRNOV-ZAMKOV, I. V.

PA 174T7

USSR/Chemistry - Bromine Addition Jan/Feb 51

"Stereochemistry and Mechanism of Addition of Bromine by the Tertiary Bond," Ye. A. Shilov, I. V. Smirnov-Zamkov, Inst Org Chem, Acad Sci Ukrainian SSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk, No 1 pp 32-41

Shows addn of Br to dimethyl ester of acetylenedicarboxylic acid proceeds by either radical or donor-acceptor mechanism. Radical reaction in various soln always yields cis- and trans-dibromides in approx equal proportions. Donor-acceptor reaction, observed in expt with admixt, yields only trans-isomer (dibromfumaric ester).

174T7

LC

SMIRNOV-ZAMKOV, I. V.

USSR

Stereochemistry and mechanism of the formation and decomposition of *cis*- and *trans*-chlorovinylmercuric chloride. E. A. Shilov and I. V. Smirnov-Zamkov. *Dopovidi Akad. Nauk Ukr. R.S.R.* 1951, 87–92 (Russian summary); cf. *C.A.* 43, 8824*f*; 45, 1951*b*, 7052*e*.—Addn. of $HgCl_2$ in satd. aq. soln. to C_2H_2 was studied kinetically in presence of HCl, LiCl, and KCl. Rate of formation of *trans*-ClCH:CHMgCl (*trans*-I) is proportional to Cl^- concn. and independent of cation concn. Both *cis*- and *trans*-I have good thermal stability up to 200°; however Cl^- catalyzes dissocn. at lower temps. The rate and the extent of the dissocn. for *trans*-I are appreciably higher than for *cis*-I in alc. at 50° in presence of LiCl. The heat of formation of *trans*-I is 9.3 kcal./mole and of the *cis*-I 13.0 kcal./mole. An electronic mechanism, consistent with the kinetics, is offered for the formation of *trans*-I. Murray Senkus

5

WS

1. SHYLOV, IYE. O., SMYRNOV-ZAMOV, I.V.

2. USSR (600)

4. Isomerism

7. Sterochemistry and the mechanism of the formation and disintegration of cis- and trans-chlorvinylmercurchlorides. Dop.AN URSR No. 2 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SMIRNOV-ZAMKOV, I.V.

A.M.Butlerov as initiator of the teaching on the mechanism of organic reactions. Ukr.khim.zhur. 18 no.2:141-147 '52. (MLRA 6:9)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.
(Chemical reaction--Mechanism) (Chemistry, Organic)
(Butlerov, Aleksandr Mikhailovich, 1828-1886)

S.[illegible] V. I. V.

USSR/Chemistry - Hydrocarbons 21 Apr 52

"The Formation of a Cyclobutene Ring in Chlorination of Dimethylacetylene," I. V. Smirnov-Zamkov, Inst of Org Chem, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXIII, No 6, pp 869-871

The chlorination of dimethylacetylene by sulfuryl chloride shows that a cyclic dimer of dimethylacetylene with 2 chlorine atoms added to it is formed. The expts which were carried out prove definitely that treating of dimethylacetylene with sulfuryl chloride or chlorine will produce cyclobutene derivs.

223T7

Smirnov-Zamkov, I. V.

USSR/Chemistry - Organic chemistry

Card 1/1 Pub. 116 - 15/24

Authors : Smirnov-Zamkov, I. V. and Kostromina, N. A.

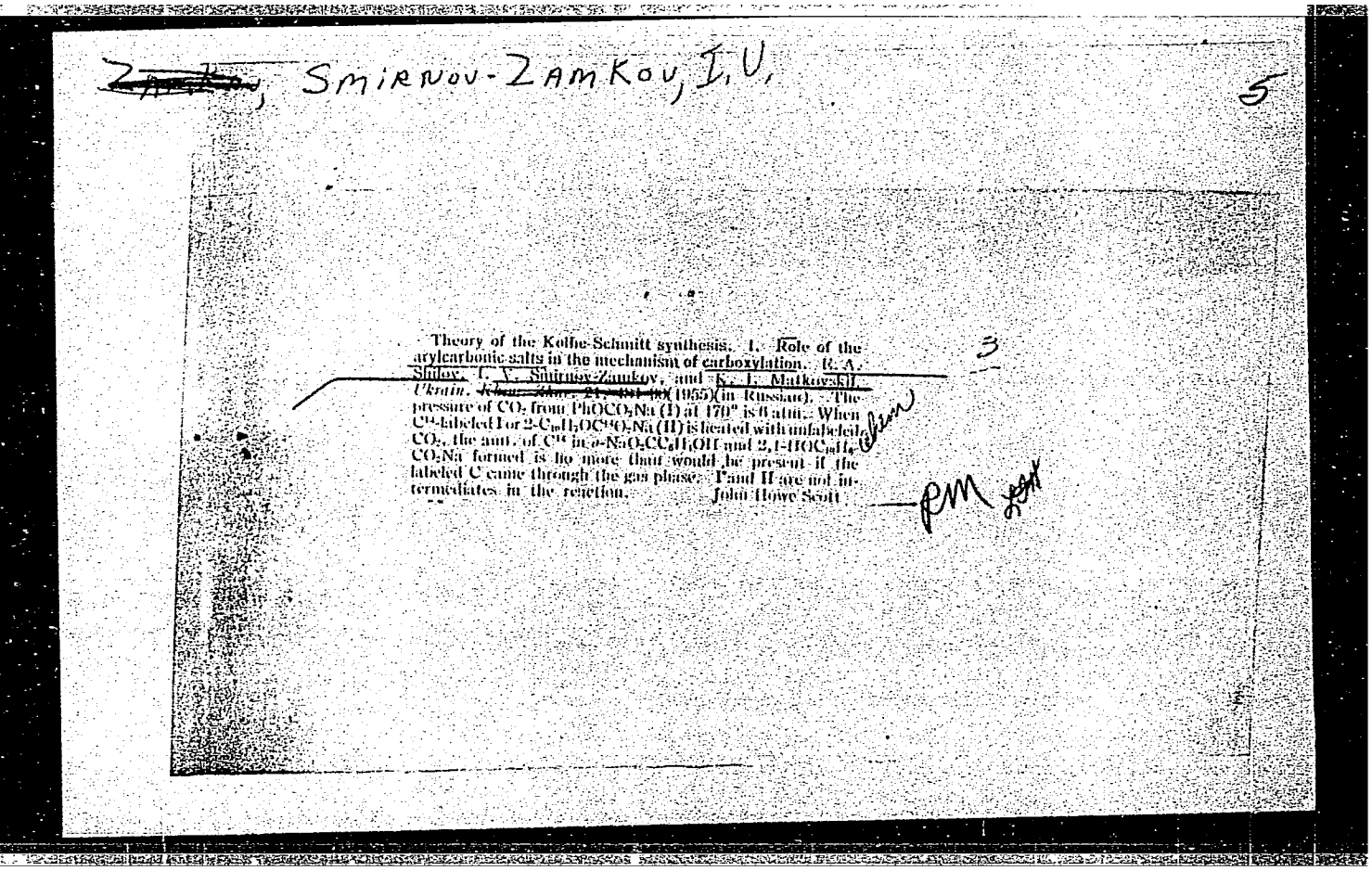
Title : The reaction of sulfuryl chloride with dimethyl acetylene

Periodical : Ukr. khim. zhur. 21/2, 233-239, 1955

Abstract : The normal, addition and by-products formed during the reaction of dimethyl acetylene (2 moles) with sulfuryl chloride (1 mole) are described. The effect of the physico-chemical conditions and various additions on the reaction process and yield of dichlorotetramethylcyclo butene is analyzed. Experimental data are presented on the induction period of the reaction, effect of radical inhibitors and lighting, as well as on the radical chain mechanism of the reaction. Six references: 4 USSR, 1 USA and 1 German (1912-1952). Table.

Institution : Acad. of Sc., Ukr. SSR, Inst. of Organ. Chem.

Submitted : December 14, 1954



Smirnov-Zamkov, I.V.

5

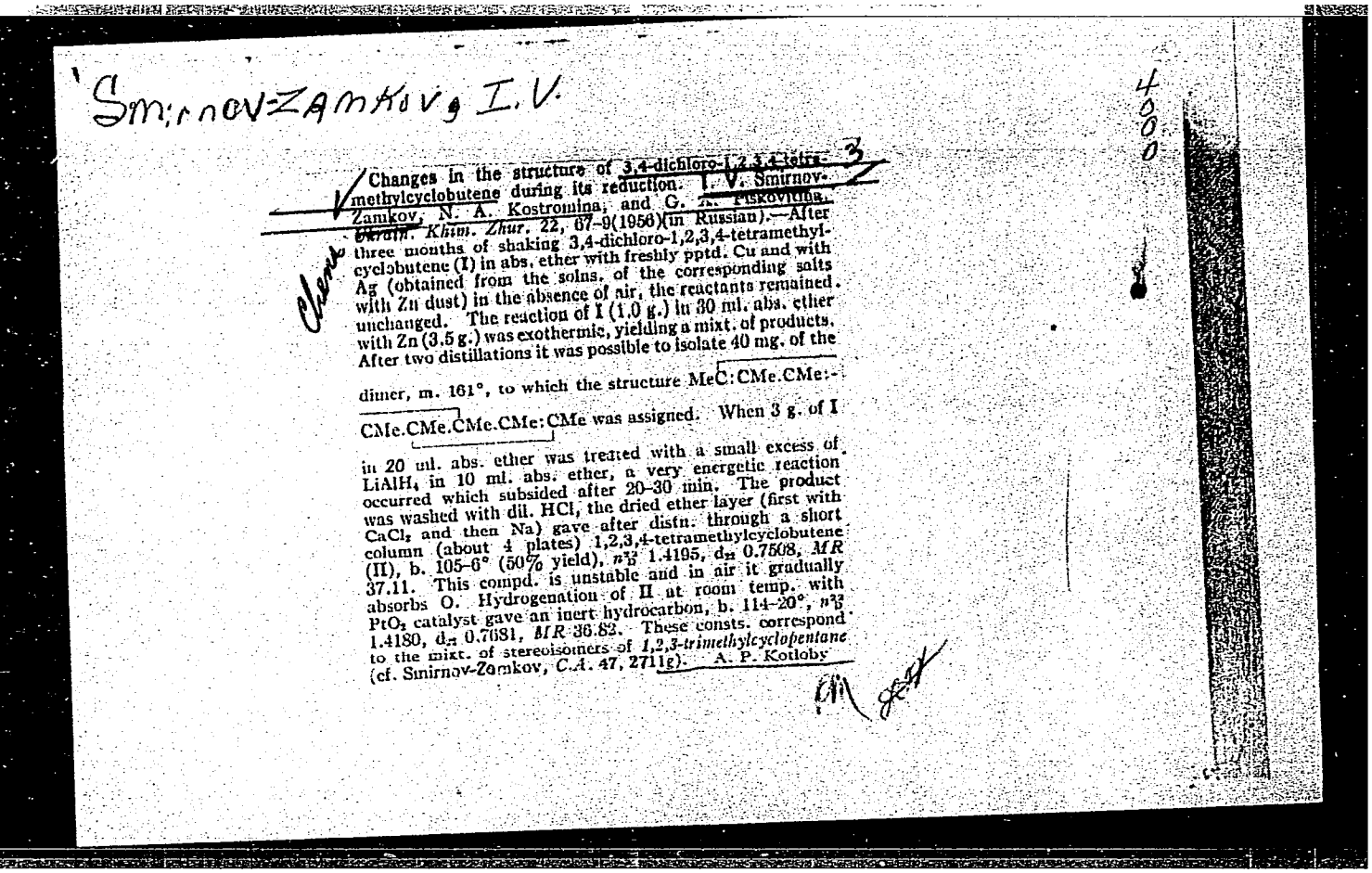
Theory of the Kolbe-Schmitt synthesis. I. Role of the arylcarbonic salts in the mechanism of carboxylation. K. A. Shilov, I. V. Smirnov-Zamkov, and K. I. Matkovskii. *Ukrain. Khim. Zhur.* 21, 481-90 (1955)(in Russian). The pressure of CO_2 from $PhOCO_2Na$ (I) at 170° is 6 atm. When C^{14}-labeled I or 2-$C_6H_5OC^{14}O_2Na$ (II) is heated with unlabeled CO_2, the amt. of C^{14} in *o*-$NaO_2CC_6H_4OH$ and 2,1-$HOC_6H_4CO_2Na$ formed is no more than would be present if the labeled C came through the gas phase. I and II are not intermediates in the reaction. John Howe Scott

3

SHILOV, Ye.A.; SMIRNOV-ZAMKOV, I.V.; MATKOVSKIY, K.I.

Theory of the Kolbe-schmitt synthesis. Part 2. Role of disubstituted salts in carboxylation. Ukr.khim.zhur. 21 no.5:600-613 '55. (MLRA 9:3)

1Institut organicheskoy khimii AN USSR.
(Carboxylation)



Smirnov-Zamkov, I. V.

Changes in the structure of 3,4-dichloro-1,2,3,4-tetramethylcyclobutene during its reduction. I. V. Smirnov-Zamkov, N. A. Kostromina, and G. A. Peskova. *Ukrain. Khim. Zhur.* 22, 67–9(1956)(in Russian).—After three months of shaking 3,4-dichloro-1,2,3,4-tetramethylcyclobutene (I) in abs. ether with freshly pptd. Cu and with Ag (obtained from the solns. of the corresponding salts with Zn dust) in the absence of air, the reactants remained unchanged. The reaction of I (1.0 g.) in 30 ml. abs. ether with Zn (3.5 g.) was exothermic, yielding a mixt. of products. After two distillations it was possible to isolate 40 mg. of the dimer, m. 161°, to which the structure MeC:CMe.CMe:CMe.CMe.CMe.CMe:CMe was assigned. When 3 g. of I in 20 ml. abs. ether was treated with a small excess of $LiAlH_4$ in 10 ml. abs. ether, a very energetic reaction occurred which subsided after 20–30 min. The product was washed with dil. HCl, the dried ether layer (first with $CaCl_2$ and then Na) gave after distn. through a short column (about 4 plates) 1,2,3,4-tetramethylcyclobutene (II), b. 105–6° (50% yield), n_D^{23} 1.4195, d_4 0.7508, *MR* 37.11. This compd. is unstable and in air it gradually absorbs O. Hydrogenation of II at room temp. with PtO_2 catalyst gave an inert hydrocarbon, b. 114–20°, n_D^{23} 1.4180, d_4 0.7681, *MR* 36.82. These consts. correspond to the mixt. of stereoisomers of *1,2,3-trimethylcyclopentane* (cf. Smirnov-Zamkov, *C.A.* 47, 2711g).—A. P. Kotloby

73-1-25/26

AUTHOR: Smirnov-Zamkov, I. V.

TITLE: Conference on problems of stereochemistry of chemical reactions. (Soveshchaniye po voprosam stereokhimii khimicheskikh reaktsiy).

PERIODICAL: Ukrainskiy Khimicheskiy Zhurnal, 1957, Vol.23, No.1, pp.129-130 (USSR)

ABSTRACT: The conference was held in Kiev, October 29-31, 1956. It was convened by the Scientific Council on the Theory of Chemical Structure, Kinetics and Reaction Ability of the Chemical Sciences Division, Ukrainian Ac.Sc. (Ucheniy sovetom po teorii khimicheskogo stroyeniya, kinetiki i reaktsionnoy soposobnosti pri Otdelenii Khimicheskikh Nauk AN SSSR) together with the Division of Chemical and Geological Sciences of the Ac.Sc. Ukraine (Otdelenii Khimicheskikh i Geologicheskikh Nauk AN USSR) and the Kiev Division of the All Union Chemical Society imeni D. I. Mendeleyev (Kievskiy otdelenii Bsesoyuznogo Khimicheskogo Obshchestva im. D. I. Mendeleyeva). In addition to Kiev chemists, over 30 scientists from other parts participated, mainly from Moscow, e.g. Academicians A. N. Nesmeyanov, V. N. Kondrat'yev, B. A. Kazanskiy, I. N. Nazarov and others. The meeting

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to the original compound, whereby the same configuration is conserved in all cases. O. A. Reutov reported on the mechanism of the electrophilic substitution in saturated [illegible] optically active mercury-organic compounds; these reactions can take place with [illegible] transforming the configuration depending on the mechanism which the author considered as the cases S_E2 and S_E1 of the British classification. In the discussion of these two papers much importance was attached to the discoveries from the point of view of the theory of organic transformations; in addition, it was mentioned

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. Conference on problems of stereochemistry of chemical reactions.

that the reported work should be supplemented by data on the kinetics of the reactions under consideration. The paper of Ye. A. Shilov was devoted to the mechanism of cis-compounds with short links. On the examples of the compounds of haloid-hydrogen acids and mercury salts with acetylenes, hydrating and oxidation of acetylenes and oleofins, the author showed that in heterolytic and catalytic reactions the formation of cis-derivatives takes place predominantly through complexes with ring structures. In free-radical compounds cis-isomers form in non-stereo way as well as with trans-forms. In the discussion some of the views expressed by the author were disputed but not his fundamental assumptions. M. I. Kabachnika, S.T. Ioffe and K. V. Vatsuro have shown in their papers that the state of equilibrium between the ketone and the stereo cis- and trans-enols depends on the constants of acidity of the components of the system. Personnel of the N.D. Kursanov laboratory presented two papers, one on the mechanism of alkylation of quaternary salts of ammonium (N.D.Kursanov and S.V. Vitt) and on the mechanism of re-ethering of methylether of benzoic acid applying simultaneously labelled atoms and optically active radicals (R.V.Kudryavtsev

Card 3/5

Conference on problems of stereochemistry of chemical reactions.

and S.V. Vitt). Exchange with the medium and presence or absence of rotation of the optically active radicals was dealt with within the framework of the "synchronous" and "asynchronous" mechanism proposed by these authors. The discussion revealed contradictions relating to the views on the nature and the importance of carbon in the mechanism of organic reactions. The wish was expressed to study this problem at a special conference of the Scientific Council on the Theory of Chemical Structure, Kinetics and Reaction Ability. G. A. Rudakov dealt with the mechanism of racemization of camphene. A.P.Terent'yev considered the problem of the factors bringing about the existence of optically active organic substances in nature. The author attributes particular importance to selective adsorption of right or left antipodes on asymmetric crystals of a certain configuration. It was mentioned in the discussion by Ye. A. Shilov that isolating of optically active substances could take place also without active "intermediaries" as a result of statistical conditions. Since optically active systems are biologically more favourable than racemine mixtures, active forms should suppress inactive ones in the biological evaluation.

SMIRNOV-ZAMKOV, I.V.

AUTHORS: Smirnov-Zamkov, I.V. and Piskovitina, G.A. 73-2-10/22

TITLE: The mechanism of bromine addition to the dimethylester of acetylenedicarboxylic acid. (O mekhanizme prisoyedineniya broma k dimetilovomu efiru atsetilendikarbonovoy kisloty).

PERIODICAL: "Ukrainskiy Khimicheskiy Zhurnal" (Ukrainian Journal of Chemistry), Vol.23, No.2, March-April, 1957, pp.208-214 (USSR).

ABSTRACT: E.A.Shilov and I.V.Smirnov-Zamkov (Ref.1: E.A.Shilov and I.V.Smirnov-Zamkov, Izv.AN SSSR,OKhN,1951,32) proved that the bromination of the ester of acetylene dicarboxylic acid in some organic solvents, under the absence of light, can proceed in 2 ways. In the absence of admixtures of bromide salts complete addition of bromine occurs and approximately equal quantities of dibromofumarate and dibromomaleate are formed. In the presence of bromide salts bromine is added according to the transmechanism of the acceptor-donor mechanism in accordance with the kinetic equation:

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$$-\frac{d[Br_2]}{dt} = kM[Br_2][LiBr] ,$$

where M = the concentration of the ester of acetylene

73-2-10/22

The mechanism of bromine addition to the dimethylester of acetylenedicarboxylic acid. (Cont.)

There is 1 drawing, 7 diagrams and 2 Slavic references.

ASSOCIATION: Institute of Organic Chemistry, Academy of Sciences, Ukraine. (Institut Organicheskoy Khimii, AN USSR).

SUBMITTED: November 14, 1956.

AVAILABLE: Library of Congress

Card 3/3

Stereochemistry and Mechanism of Hydrogen Bromide Addition to the Dimethyl Ester of Acetylene-dicarboxylic Acid in Organic Acids

S/020/60/130/06/023/059
B011/B015

increases with the temperature decrease. 2) Outside this range the stereodirection of the reaction at higher temperature is practically independent of the latter. In propionic acid, the second case holds between 0 and 60°. In acetic acid, both cases hold; the first case between 10 and 40°, the second one between 40 and 80°. In the mixture of monochloro- and trichloroacetic acid, only the first case is valid between 25 and 40°. Equation (1) holds for each individual reaction type since the common third reaction order holds for all temperatures and all solvents. Value k_3 is therefore the sum of the reaction constants of the cis- and trans-addition. The values of the individual constants may be determined from the relation to the stereoisomer yields. Thus, the authors obtained the constants for each individual process, and calculated the activation energies (Table 2). The activation energies of the trans-addition proved to remain constant along the entire temperature range investigated. The energies of the cis-additions are, however, either very high or very low. The authors conclude therefrom that the trans-addition follows in all cases the same mechanism.

67894

Stereochemistry and Mechanism of Hydrogen Bromide Addition to the Dimethyl Ester of Acetylene-dicarboxylic Acid in Organic Acids

S/020/60/130/06/023/059
B011/B015

There are two mechanisms for the cis-addition: one of them requires a high activation energy which is by 2 kcal higher than that of the trans-addition. This mechanism occurs, therefore, at higher temperatures; the other mechanism requires a very low activation energy and is, therefore, prevailing at low temperatures. The authors assume that both trans- and cis-addition with a high activation energy are due to open tri-molecular complexes (see Scheme). Cis-addition with a small activation energy apparently proceeds over a ring complex (see Scheme). The energy resulting from the process (taking place in two stages) (Ref 1) is obviously determined by the detachment energy of the proton in the final stage. The solvent may serve as a proton acceptor. The more basic the solvent, the lower is the activation energy due to the energy gain for the proton addition, e.g. to the carbonyl of the solvent. The activation energy of the processes taking place over open complexes therefore decreases in the following order: mixture of monochloro- and trichloroacetic acid - acetic acid - propionic acid. In a ring complex, the detachment of the proton

Card 3/4

SMIRNOV-ZAMKOV, I.V.; PISKOVITINA, G.A.

Stereochemistry and mechanism of addition of hydrobromic acid to cyclohexene. Ukr.khim.zhur. 28 no.4:531 '62. (MIRA 15:8)

1. Institut organicheskoy khimii AN USSR.
(Hydrobromic acid) (Cyclohexene)

SMIRNOV-ZAMKOV, I.V.

Remarks on G.F. Dvorko's article "On the mechanism of addition of hydrogen bromide to acetylene derivatives in acetic acid." Ukr. khim. zhur. 30 no.3:313 '64. (MIRA 17:10)

[redacted], [redacted]

Stereochemistry and mechanism of the reactions of addition to unsaturated compounds. Part 3: Addition of hydrogen bromide to dimethyl ester of acetylenedicarboxylic acid in aprotic solvents. Ukr. khim. zhur. 30 no.10:1076-1078 '64.

(MIRA 18:1)

1. Institut organicheskoy khimii AN Ukr.SSR.

L 55038-65 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) Pc-4/Pr-4 RPL JW/RM
ACCESSION NR: AP5013783 UR/0073/65/031/005/0517/0518
541.127+541.64+678.675

30
29
B

AUTHOR: Smirnov-Zamkov, I. V.; Piskovitina, G. A.

TITLE: Interphase polycondensation of *n*-phenylene diamine with dichloroanhydride of isophthalic acid at the water-benzene interface

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 5, 1965, 517-518

TOPIC TAGS: kinetics, polycondensation, polymer, polymer chain, polyamine

ABSTRACT: The rate of growth of a polymer chain was determined as a function of the time of contact of the reagents. The initial compounds used were *n*-phenylene diamine and the dichloroanhydride of isophthalic acid. The dichloroanhydride was purified by distillation in a vacuum and recrystallization. The jet method of polycondensation was used so that the time of contact of the two solutions could be varied from several hundredths to several tenths of a second. The reaction was carried out at the water-benzene interface with equal initial concentrations of the reagents. A predetermined amount of potassium hydroxide was added to the aqueous

Card 1/3

SMIRNOV-ZAMKOV, I.V.; PISKOVITINA, G.A.

Kinetics of the interfacial polycondensation of p-phenylenediamine with isophthaloyl dichloride at the water-benzene interface. Ukr. khim.zhur. 31 no.5:517-518 '65. (MIRA 18:12)

1. Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR.
Submitted Dec. 16, 1964.

SMIRNOVA, A., kand. sel'skokhoz. nauk; SHABANOVA, M., kand. sel'skokhoz. nauk; IONOVA, Z.; FED'KO, I., kand. biolog. nauk; SHEVCHENKO, A., aspirantka; CHMYR', P., mladshiy nauchnyy sotrudnik

From work practices in the use of poisonous chemicals. Zashch. rast. ot vred. i bol. 10 no.3:22-24 '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy (for Smirnova, Shabanova). 2. Nauchno-issledovatel'skiy institut sadovodstva im. I.V. Michurina, Michurinsk (for Ionova). 3. Vsesoyuznyy institut kukuruzy, Dnepropetrovsk (for Fed'ko). 4. Ukrainskiy institut rasteniyevodstva, selektsii i genetiki im. Yur'yeva (for Shevchenko).

L 50512-65 EWT(1)/EWA(j)/EWA(b)-2 RO

ACCESSION NR: AP5011983 UR/0348/65/000/003/0022/0023

AUTHORS: Smirnova, A. (Candidate of agricultural sciences); Shabanova, M. (Candidate of ~~agricultural~~ sciences)

18
17
B

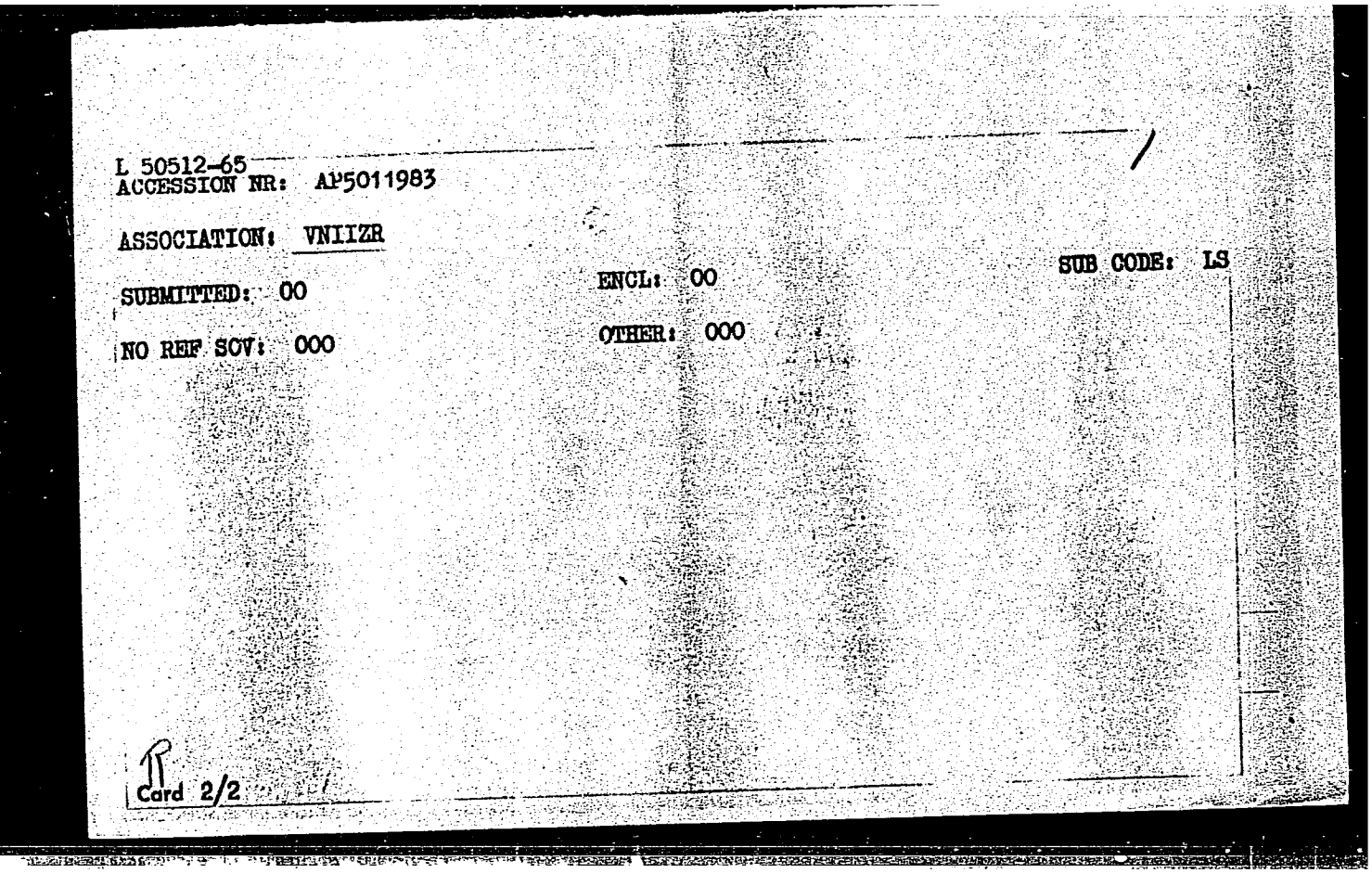
TITLE: Results of testing trichlorometaphos

SOURCE: Zashchita rasteniy ot vrediteley i bolezney, no. 3, 1965, 22-23

TOPIC TAGS: agriculture, pesticide, biological research, trichlorometaphos

ABSTRACT: Trichlorometaphos 3 (O-methyl-O-ethyl-O-2,4,5 trichlorophenylthiophosphate), developed by VNIIKhSZR and described by N. N. Mel'nikov et al ("Zashchita rasteniy," 1963, No. 10), represents an analogue of the foreign preparation trolene, also called Ronnel Dau ET-57. It is, however, less dangerous to warm-blooded animals. Tested in 0.1-0.2% emulsion against 42 species of arthropoda, it proved effective against mites, aphids, moths and caterpillars, producing 80-99% mortality. It was found to be active for 8-14 days, and was equally beneficial in fruit and vegetable cultures. The preparation is a contact-active insect- and acaricide. It loses its toxicity and decomposes rapidly at high temperatures and on intensive insulation. The article presents a list of several insects against which this preparation is only weakly effective.

Card 1/2



L 50512-65
ACCESSION NR: AP5011983

ASSOCIATION: VNIIZR

SUBMITTED: 00 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 2/2

SMIRNOVA, A.A., meditsinskaya sestra.

Nursing care in cancer of the rectum. Med.sestra no.1:26-28 Ja '54.
(MLRA 7:1)

1. Bol'nitsa im. S.P.Botkina (Moscow).
(Rectum--Cancer) (Nurses and nursing)

SMIRNOVA, A.A., med.sestra

Postoperative care of patients with mental disturbances in the neurosurgical clinic. Med.sestra 17 no.10:45-47 O '58 (MIRA 11:11)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni instituta neyrokhirurgii imeni akademika N.N. Burdenko AMN SSSR, Moskva.
(POSTOPERATIVE CARE)
(NERVOUS SYSTEM--SURGERY)

SMIRNOVA, A. A. Cand Med Sci -- (diss) "Peculiarities of the Distribution of the Branches of the Uterine Artery in Women in Relation to Cross-Section by Age." Rostov-on-the-Don, 1957. 19 pp 20 cm. (Rostov-on-the-Don State Medical Inst), 200 copies (KL, 18-57, 98)

S

USSR / Human and Animal Morphology (Normal and Pathological).
Circulatory System. Blood Vessels.

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 2960

Author : Smirnova, A. A.
Inst : Rostov-on-Don Medical Institute
Title : Variations of Uterine Artery Approaches to the Uterus and Its Division into Terminal Branches

Orig Pub : Tr. Otchetn. nauchn. konferentsii (Rostovsk.-n/D med. in-t) za 1956 g. Rostov-na-Donu, 1957, 181-183

Abstract : Using the method of roentgenography and corrosion on 198 specimens of the uterus (U) of humans, of 0-80 years of age, it was established that there are 4 basic variants in approaches of uterine arteries (UA) to U: the right and left UA approach the lateral edges of U on different levels (26.1% of cases), both UA approach the U on the level of mid-cervix (29.4%), closer to the

Card 1/2

USSR / Human and Animal Morphology (Normal and Pathological).
Circulatory System. Blood Vessels.

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 2960

lower end of the cervix of U (23.5%), closer to the upper end of the cervix of U (20.9%). In 40% of cases each UA divides into the ovarian and fundic branches; in 27.4% it divides into ovarian branch and a common branch for the fundus U and ovarian tube; in 17% it divides into a fundic branch and a common branch for the ovary and the tube; in 5.8% it divides into 3 branches, namely, fundic, ovarian and tubal; in 1.3% it branches into fundic and tubal and a branch to the round ligament; and in 8.5% of cases an asymmetrical division of right and left UA was observed.

Card 2/2

SMIRNOVA, A.A.

Distomiasis of the brain. Zhur. nerv. psikh. 60 no. 4:447-542 '60.
(MIRA 14:4)

1. Sovetskiy gospital' Krasnogo Kresta v Pkhen'yane (dir. N.N. Baranova).
(BRAIN--DISEASES) (DISTOMATOSIS)

BAYADIN, L.N.; LOBUSEV, A.F.; PROSHINA, K.A.; SMIRNOVA, A.A.; SHELEPINA, L.A.

Experimental data on plastic arterial surgery in case of an infected wound; preliminary report. Trudy 1-go MMI 16:139-146'62. (MIRA 16:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V.Kovanov) Pervogo Moskovskogo ordena Lenina meditsinskogo instituta.
(ARTERIES—SURGERY) (SURGERY, PLASTIC)

SMIRNOVA, A. A.

The effects of different methods of sauerkraut-making on its vitamin C content. O. P. Maikova, B. I. Khanina, and A. A. Smirnova. *Trudy Leningrad. Sanit. Gigien. Med. Inst.* 14, 167–61(1953); *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 3387.—The use of *Lactobacillus acidophilus* starters is beneficial to the preservation of vitamin C.

B. S. Levine

(2)

SMIRNOV, Aleksey Aleksandrovich; YUN'YEV, V.S., otv.red.; GOLUBYATNIKOVA, G.S., red.izd-va; KOROVENKOVA, Z.A., tekhn.red.

[Economics, production organization and planning in the coal mining industry] Ekonomika, organizatsiia proizvodstva i planirovanie v ugol'noi promyshlennosti. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 334 p. (MIRA 13:1)
(Coal mines and mining)

SMIRNOVA, A.A.; MAL'KOVA, I.S.

Lengthening the rolls of cord fabrics. Khim.volok no.4:73-74 '62. (MIRA 15:8)

1. Krasnoyarskiy zavod.
(Krasnoyarsk--Tire fabrics)

NUDEL'MAN, B.I., inzh.; SMIRNOVA, A.A., inzh.

Changes in some properties of artificial porous aggregates in the process of hardening lightweight concrete. Stroi. mat. 9 no.5:34-36 My '63. (MIRA 16:7)

(Aggregates(Building materials))
(Lightweight concrete)

BRYKINA, M.M.; MAKSIMOV. M.M.; POLIKARPOVA, R.V.; RYBIN, F.S.; SMIRNOVA, A.A.

Comparison of the properties of reservoir rocks in level D_1 of the central section of the Minnibayevo region based on field data and data obtained with the EI-S electric integrator. Nauch-tekh. sbor. po dob. nefti. no.21:3-13 '63. (MIRA 17:5)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

SMIRNOVA, A.A., kand. med. nauk; KHAZOV, F.D.

Neurodystrophic calcifications and ossifications. Vestn. rent. i rad. 38 no.3:71-72 My-Je '63. (MIRA 17:7)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (ispolnyayushchiy obyazannosti zav. - dotsent V.I. Skoumkov) Ryazanskogo meditsinskogo instituta imeni akad. I.P. Pavlova na baze Oblastnoy klinicheskoy bol'nitsy imeni N.A. Semashko (glavnyy vrach - zasluzhennyy vrach RSFSR B.N. Shirokov).

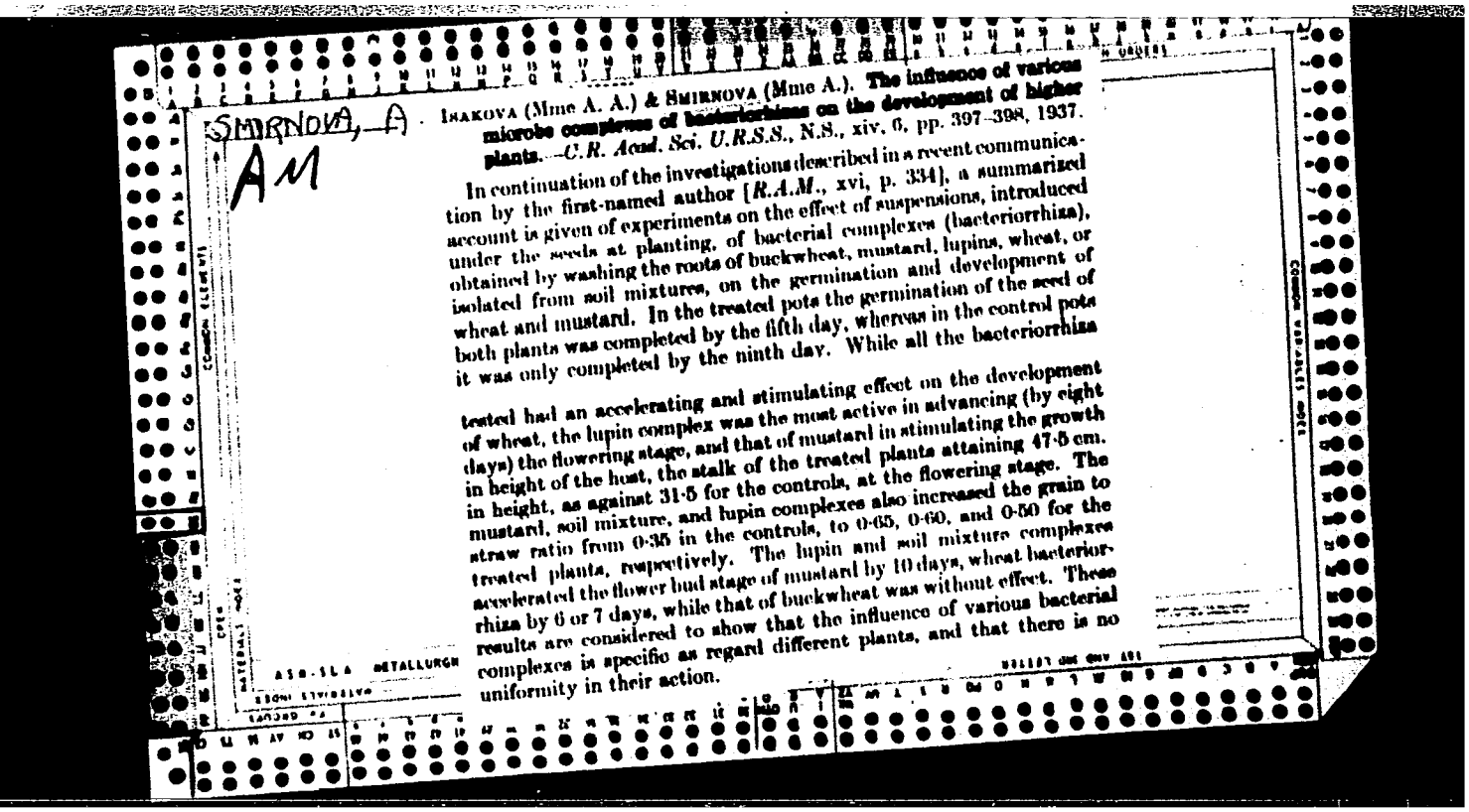
[illegible]

[illegible] fluids in the intensified development of a circular [illegible] of the [illegible] area of the Romashkino oil field. [illegible] neft i [illegible] 77-82 [illegible] (MIRA [illegible])

[illegible]

[redacted], A.A.; [redacted]

[redacted] mutually efficient stimulation of oil wells in a circular section of the Minibayevo region of the [redacted] field.
Trudy VNII no.39:76-94 '63. (MIRA 17:10)



SMIRNOVA, A
AM

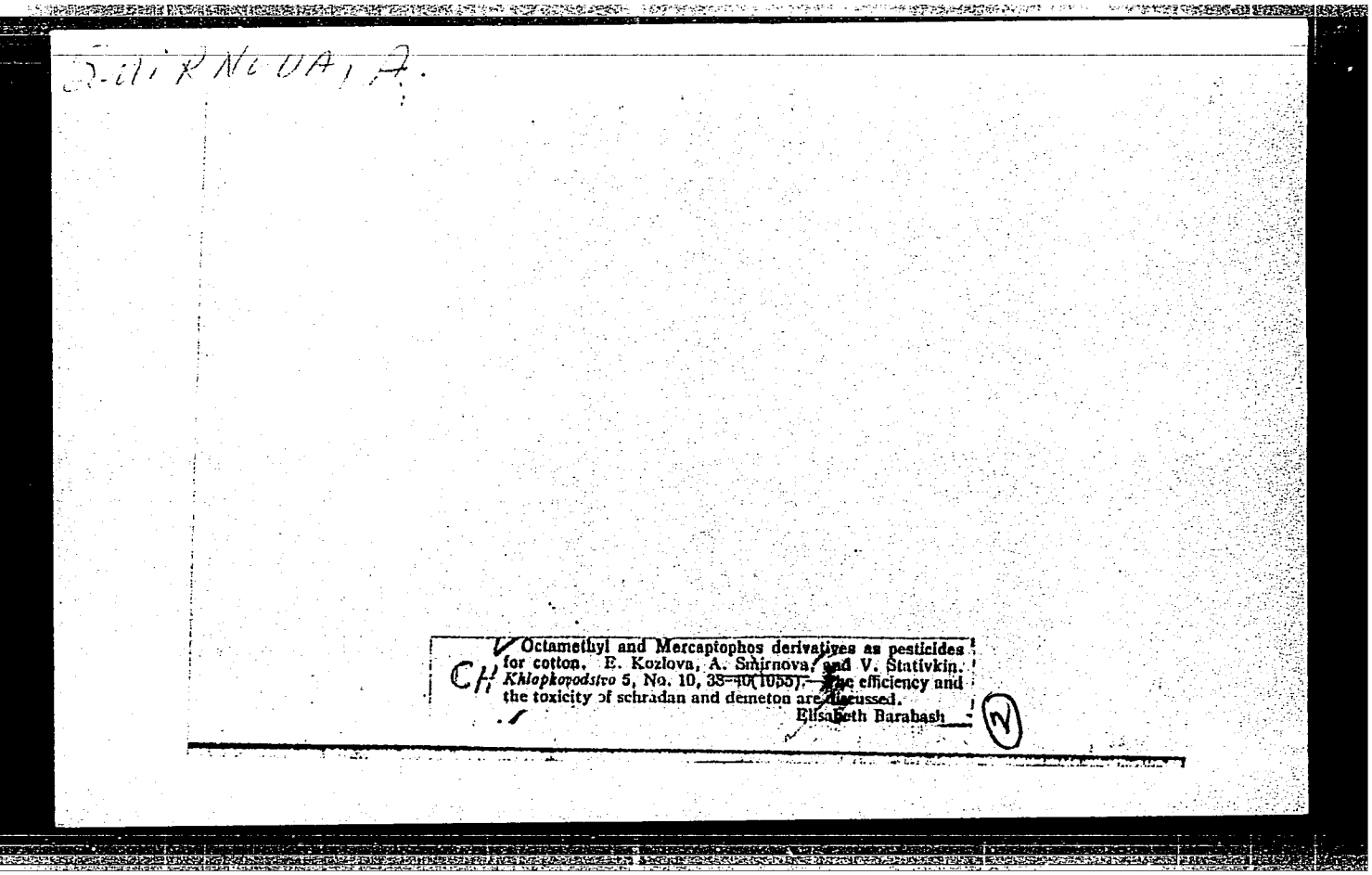
ISAKOVA (Mme A. A.) & SMIRNOVA (Mme A.). **The influence of various microbe complexes of bacteriorhizas on the development of higher plants.**—*C.R. Acad. Sci. U.R.S.S.*, N.S., xiv, 6, pp. 397–398, 1937.

In continuation of the investigations described in a recent communication by the first-named author [*R.A.M.*, xvi, p. 334], a summarized account is given of experiments on the effect of suspensions, introduced under the seeds at planting, of bacterial complexes (bacteriorrhiza), obtained by washing the roots of buckwheat, mustard, lupins, wheat, or isolated from soil mixtures, on the germination and development of wheat and mustard. In the treated pots the germination of the seed of both plants was completed by the fifth day, whereas in the control pots it was only completed by the ninth day. While all the bacteriorrhiza tested had an accelerating and stimulating effect on the development of wheat, the lupin complex was the most active in advancing (by eight days) the flowering stage, and that of mustard in stimulating the growth in height of the host, the stalk of the treated plants attaining 47·5 cm. in height, as against 31·5 for the controls, at the flowering stage. The mustard, soil mixture, and lupin complexes also increased the grain to straw ratio from 0·35 in the controls, to 0·65, 0·60, and 0·50 for the treated plants, respectively. The lupin and soil mixture complexes accelerated the flower bud stage of mustard by 10 days, wheat bacteriorrhiza by 6 or 7 days, while that of buckwheat was without effect. These results are considered to show that the influence of various bacterial complexes is specific as regard different plants, and that there is no uniformity in their action.

[redacted], A. A.

New moistening agents for spraying with contact insecticides and acaricides.
Dokl. Ak.sel'khoz 17 No. 2, 1952.

[redacted], August 1952



Octamethyl and Mercaptophos derivatives as pesticides for cotton. E. Kozlova, A. Smirnova, and V. Stativkin. *Khlopkopodstvo* 5, No. 10, 38–40(1955).—The efficiency and the toxicity of schradan and demeton are discussed.
Elisabeth Barabash

SMIRNOVA, A.A.

USSR / General and Specialized Zoology. Insects. P
Insect and Mite Pests.

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 44803

Authors : Kozlova, Ye. N.; Smirnova, A. A.; Stativkin, V. G.; Dvortsova, Ye. I.

Inst : All-Union Institute for Plant Protection

Title : The Basis and Development of Methods for the Protection of Cotton from Sucking Pests Using Systemic Insecticides.

Orig Pub : Tr. Vses. in-ta zashchity rast., 1956, vyp. 7, 9-32.

Abstract : According to experiments made by the All-Union Institute for Plant Protection the length of action by mercaptophos (M) and octamethyl (O) on sucking pests of cotton depended on the concentration of the insecticide in the plant fibres, which was determined by the spraying rate of

Card 1/3

USSR / General and Specialized Zoology. Insects. P
Insect and Mite Pests.

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 44803

length of effect on the pests to M, but are less toxic to warm-blooded animals; they are more suitable for use in agriculture. The treatment of cotton with O and especially with M did not decrease the quality of the fibers, the oil content or the germination of the seeds. --
A. P. Adrianov.

Card 3/3

ASKAR'YAN, G.A.; RABINOVICH, M.S.; SAVCHENKO, M.M.; SMIRNOVA, A.D.

Detection of a quick photoionization halo and a cloud of concentrated long-lived ionization from a shock wave produced by a spark in a laser beam. Pis'ma v red. Zhur. eksper. i teoret. fiz. 1 no.6:18-22 Je '65. (MIRA 18:10)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

L 10958-66 EWT(1)/T/EWA(m)-2 IJP(c)

ACC NR: AP6002464 SOURCE CODE: 0386/65/002/011/0503/0506

AUTHOR: Askar'yan, G. A.; Rabinovich, M. S.; Smirnova, A. D.; Studenov, V. B.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Polarization of the ionization halo during air breakdown in a constant electric field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 11, 1965, 503-506.

TOPIC TAGS: laser, nonlinear optics, laser pulsation, gas ionization, electric field, laser beam

ABSTRACT: The ionization halo formed during gas breakdown at the focus of a beam from a Q-spoiled laser was investigated by studying its polarization due to an applied electric field, E_0 = 10 v/cm — 1 kv/cm, at the focus. In the first series of experiments, the quickly varying field perturbations generated during formation of the halo were registered by a thin probe with a dielectric sheath placed perpendicularly to the electric field at a distance of approximately 1 cm above the breakdown. The duration of a signal from the probe (30—50 μsec) was close to that of the laser pulse. Its amplitude E_m increased linearly with the increasing electric field ($E_m/E_0 \simeq 0.5 \times 10^{-3}$ cm). By comparing the signal from the probe with the characteristics of the halo, it was established that the region from which the field was forced out (α_{eff}) was $\simeq$ 1 cm. In the other series of experiments the

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L 10958-66

ACC NR: AP6002464

breakdown occurred between two flat electrodes with a potential difference Δv placed relatively far away from each other. One of the electrodes was grounded through a 75-ohm resistor, and the current flowing toward the electrode was measured. It was confirmed that $\alpha_{eff} \simeq 1$ cm. In the experiments it was established that the photoeffect of the spark formed during the breakdown and the photoelectric effect associated with the surfaces of the electrodes could be neglected. The ionization of the gas was attributed to the multiphoton absorption in the ultraviolet region of the spectrum or to absorption of kv x-ray photons emitted by the hot plasma in the breakdown region. The authors also discovered a rapidly generated intrinsic dipole moment of the spark, the direction of which is opposite to the light beam. This dipole moment is probably associated with light pressure or thermoelectric effects. Orig. art. has: 2 figures.

[CS]

SUB CODE: 20 / SUBM DATE: 18Oct65/ ORIG REF: 001/ ATD PRESS: 4170

Card 2/2

Morphological features of crystals of GaP. G. V. Averkiyeva, A. S. Borshchevskiy, G. K. Kalyuzhnaya, A. D. Smirnova, D. N. Tret'yakov, N. N. Tekhtareva (10 minutes).

Features of the growth of crystals of silicon carbide of the cubic modification from the gaseous phase. A. A. Pletyushkin, S. N. Gorin, L. M. Ivanova (10 minutes).

Investigation of the physical properties of semiconducting compounds with the lattice of ZnS and NaCl in the melting region and liquid state. V. M. Glazov, S. N. Chizhevskaya, N. N. Glagoleva (10 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

ACCESSION NR: AP4041359 S/0048/64/028/006/0985/0988

AUTHOR: Borshchevskiy, A.S.; Kalyuzhnaya,G.A.; Smirnova,A.D.; Takhtareva,N.K.; Tret'yakov, D.N.

TITLE: Morphological characteristics of laminar gallium phosphide crystals /Report, Third Conference on Semiconductor Compounds held in Kishinev 16-21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 985-988, and insert facing p. 988

TOPIC TAGS: crystal structure, crystal growth, gallium compound

ABSTRACT: Gallium phosphide crystals were obtained by slowly cooling dilute solutions of phosphorus in gallium and subsequently separating the precipitated crystals from the excess gallium, as proposed by G.Wolff,P.H.Keck and J.D.Broder (Bull. Amer.Phys.Soc.29,116,1954). The crystals thus obtained had the zincblende structure, were laminar in form with the (111) faces developed, and ranged in size from 15 x 10 x 1 mm^3 to a few hundred microns. The pure crystals were light orange in color and uniformly transparent. The crystal plates had the form of equilateral triangles, 60° rhombi, regular hexagons, or were of mixed shape. A drawing showing the faceting of the simplest rhombic crystals is given in Fig.1 of the Enclosure. The two

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ACCESSION NR: AP4041359

well developed (111) faces reacted differently to etching with HCl: one face retained its initial specular luster, and the other acquired a mat surface. This polarity is attributed to the regular alternation of planes consisting of gallium or phosphorus atoms respectively. Triangular etch pits marking dislocations were observed on the (111) faces. The dislocation density varied greatly even from place to place on the same crystal, and the total variation among the crystals was from 10^3 to 10^6 cm^{-2}. Twinning planes parallel to the developed (111) faces were found; the twinning appeared to involve rotation of the two portions of the crystal about the $\langle 111 \rangle$ axis. Dark lines were also observed marking the long diagonal of the rhombic plates; these are believed to mark the central portion of the dendritic structure. The growth of the crystals is discussed at some length in rather general terms. It is concluded that the laminar form is a consequence of the non-equilibrium conditions and the excess of one component, that more than one growth mechanism is involved, and that growth probably proceeds differently in the $\langle 111 \rangle$ and the $\langle \overline{111} \rangle$ directions. Orig.art.has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01

SUB CODE: SS,IC NR REF SOV: 001 OTHER: 002

Card 2/3

ENCLOSURE:01

ACCESSION NR: AP4041359

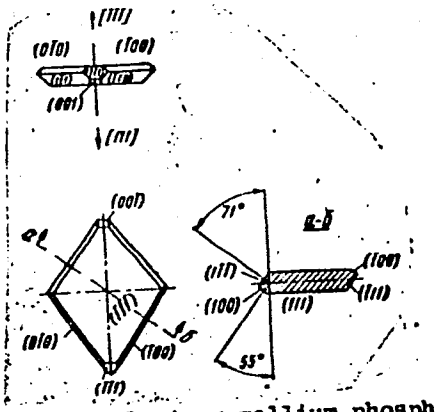

Fig.1. Faceting of rhombic laminar gallium phosphide crystals.

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ACCESSION NR: AP4011441 S/0076/64/038/001/0089/0095

AUTHORS: Komandin, A. V. (Moscow); Smirnova, A. D. (Moscow)

TITLE: The thermodynamic aspect of dielectric relaxation processes in glycerin esters.

SOURCE: Zhurnal fiz. khim, v. 38, no. 1, 1964, 89-95

TOPIC TAGS: dielectric constant, dielectric losses, glyceryl acetate, hydroxybenzoate, enthalpy, entropy, dielectric relaxation, acetic acid, glycerin derivatives, thermodynamic functions

ABSTRACT: This article deals with the measurements of the dielectric constants and tangent of dielectric losses of α,γ-glyceryl acetate and α-glycerin ester of o-hydrobenzoate in a liquid and supercooled liquid state at different frequencies of the electric field and in a wide range of temperatures. The free energy, enthalpy and entropy characterizing the dielectric relaxation processes were calculated from the resulting measurements. The relaxation time of the glycerin derivates is closely associated with the nature of the substituting groups. The substitution of the hydrogen in the glycerin by simpler

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ACCESSION NR: AP4011441

radicals reduces the relaxation time, whereas the substitution by more complex radicals prolongs the dielectric relaxation time to a considerable extent. The dispersion of the dielectric constant of d,l -glyceryl acetate has been determined for five temperatures ranging from -20 to -50C, and the dispersion of a-glyceryl o-hydroxybenzoate has been determined at 40, 30 and 20C. The temperature dependence of the dielectric constant and the loss tangent have been determined by d,l-glyceryl o-hydroxybenzoate over a given temperature range. The connection between the thermodynamic functions and the chemical structure of the investigated compounds is under discussion. Orig. art. has: 3 Figures, 6 Formulas and 6 Tables.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni V. M. Lomonosov (The V. M. Lomonosov Moscow state university)

SUBMITTED: 24Jan63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH NR REF SOV: 006 OTHER: 003

Card 2/2

ACCESSION NR: AP4033413 S/0076/64/038/003/0783/0785

AUTHOR: Komandin, A. V.; Smirnova, A. D.

TITLE: Dielectric properties of liquid benzophenone

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 3, 1964, 783-785

TOPIC TAGS: benzophenone, dielectric loss, dielectric permeability, relaxation process, thermodynamic function

ABSTRACT: The article describes the measurements of dielectric permeability and the tangent of the angle of dielectric losses for liquid benzophenone in the 95 to -55 C interval at 50 kc, 800 kc and 20 Mc as the frequency of the external field. The measurement of dielectric properties was conducted by the resonance method. The accuracy of dielectric permeability measurement was ± 1 %, dielectric losses ±(5 - 10) %, and the accuracy of temperature measurements was ± 0.1 deg. It was found that with lowering of the temperature the dielectric permeability of liquid benzophenone increases, reaching a maximum, after which it rapidly falls to small values, which characterizes the deformation polarization. At the temperature of the maximum of dielectric permeability the tangent of the dielectric

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L 51299-65 EWT(1) IJP(c)

ACCESSION NR: AP5013664 UR/0386/65/001/001/0009/0015

AUTHOR: Askar'yan, G. A.; Rabinovich, M. S.; Savchenko, M. M.; Smirnova, A. D.

TITLE: Light spark in a magnetic field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 1, no. 1, 1965, 9-15

TOPIC TAGS: laser, laser induced spark, laser air breakdown, laser induced plasma, controlled fusion reaction

ABSTRACT: The first results of experiments with a laser-induced spark in an external magnetic field are presented. The magnetic field made it possible to study the development of spark plasma based on diamagnetic induction signals, and to study the spark-field interaction as applied to plasma containment, acceleration, and injection into mirror machines. A Q-switched laser was used in the experiments. The external d-c magnetic field was 10 koe. The most striking result of the experiments was the long duration of the diamagnetic plasma (of the order of several microseconds), which was bracketed by initiation and damping signal pulses on a baseline 5 μsec long. The mechanism of formation of the prolonged magnetic moment is not

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L 51299-65

ACCESSION NR: AP5013664

clear. However, the effect may be utilized in attempts to inject additional energy into the spark plasma by h-f external fields or by longer-pulse lasers with a higher energy input. Orig. art. has: 4 formulas and 1 figure. [SK]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute of the Academy of Sciences, SSSR)

SUBMITTED: 03Feb65 ENCL: 00 SUB CODE: EC, EM

NO REF SOV: 006 OTHER: 003 ATD PRESS: 4014

BJB

Card 2/2

L 64154-65 EWA(k)/FBD/EWG(p)/EWT(1)/EPF(c)/EEC(k)-2/EPA(w)-2/T/EEC(b)-2/EWP(k)/EWA(m)-2/EWA(c) WG UR/0386/65/001/006/0018/0023

ACCESSION NR: AP5019591 SCTB/IJP(c)

AUTHOR: Askar'yan, G. A.; Rabinovich, M. S.; Savchenko, M. M.; Smirnova, A. D.

TITLE: Discovery of a fast photoionization halo and a cloud of concentrated long-lived ionization from a shock wave of a breakdown in the laser beam

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 1, no. 6, 1965, 18-23

TOPIC TAGS: laser, breakdown, photoionization, ionization, plasma, laser beam, multiphoton absorption, gas breakdown

ABSTRACT: The results are presented of an experimental study of the ionization halo produced during breakdown of a gas by a laser beam in the region of the breakdown. The laser beam from a Q-switched laser with a rotating prism was focused between a horn equipped with a detector and an antenna of an 8-mm oscillator by means of a lens with a 5-cm focal length. This arrangement made it possible to make simultaneous measurements of the transmitted and reflected microwave radiation displayed on an oscilloscope. A comparison of the degree of attenuation of the microwaves determined from the change in the detector current and the current corresponding to the voltage at the time of the appearance of the breakdown shows that microwave radia-

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L 64154-65 2

ACCESSION NR: AP5019591

tion is strongly dissipated in the plasma of the halo. The lifetime of the plasma in the halo is relatively long, reaching hundreds of μsec. The maximum attenuation occurs within a period less than 5 μsec after the breakdown. The authors also observed an ionization halo caused by radiation from the region heated by the laser beam, where the radiation is propagated ahead of the shock wave. The attenuation and scattering by this halo should increase with the wavelength of the microwave radiation. The high degree of ionization and heating due to photoionization and the shock wave near the region of the breakdown result in a relatively long lifetime of the plasma. Orig. art. has: 2 figures. [CS]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 10May65 ENCL: 00 SUB CODE: OP

NO REF SOV: 002 OTHER: 002 ATD PRESS: 4065

Card 2/2

L 35355-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6017804 SOURCE CODE: UR/0058/66/000/001/A065/A065

AUTHOR: Borshchevskiy, A. S.; Kalyuzhnaya, G. A.; Smirnova, A. D.; Takhtareva, N. K.

TITLE: Influence of impurities on the crystallization of gallium arsenide and phosphide from metallic solutions

SOURCE: Ref. zh. Fizika, Abs. 1A552

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 65-66

TOPIC TAGS: gallium compound, gallium arsenide, crystallization, crystal impurity

ABSTRACT: The authors investigated the influence of Cu, Zn, Cd, Si, Ge, Sn, Se, Te, and rare-earth metals (Me) as contained in the gallium as impurities on the crystallization of GaAs and GaP from liquid solutions. The amounts of impurities and the crystallization conditions varied over a wide range. Estimates are given of the chemical activity of the obtained crystals, their electric conductivity, hardness, and thermal-emf coefficients. The coefficients of effective distribution in GaP crystallized from a dilute solution is $K_{eff}Zn = 0.02$, $K_{eff}Te = 0.4$, and $K_{eff}S = 1.3$. Plate-like GaP and GaAs crystals with prescribed impurity content were obtained. A. Rabin'kin. [Translation of abstract]

SUB CODE: 20, 07

Card 1/1

SMIRNOVA, A.D.

Spring-fed bogs in the vicinity of the village of Srednyaya Us'va (Central Urals). Bot. zhur. 50 no.4:571-576 Ap '65. (MIRA 18:5)

1. Gosudarstvennyy universitet imeni Lobachevskogo, Gor'kiy.

ACC NR: AR6021761 SOURCE CODE: UR/0275/66/000/003/B015/B015

AUTHOR: Borshchevskiy, A. S.; Kalyuzhnaya, G. A.; Smirnova, A. D.; Takhtareva, N. K.

TITLE: Effect of impurities on crystallization of gallium arsenide and phosphide from metal solutions

SOURCE: Ref. zh. Elektronika i yeye primeneniya, Abs. 3B117

REF SOURCE: Sb. Materialy dokl. 1-y Nauchno-tekhn. konferentsii Kishinevsk. politekhn. in-ta. Kishinev, 1965, 65-66

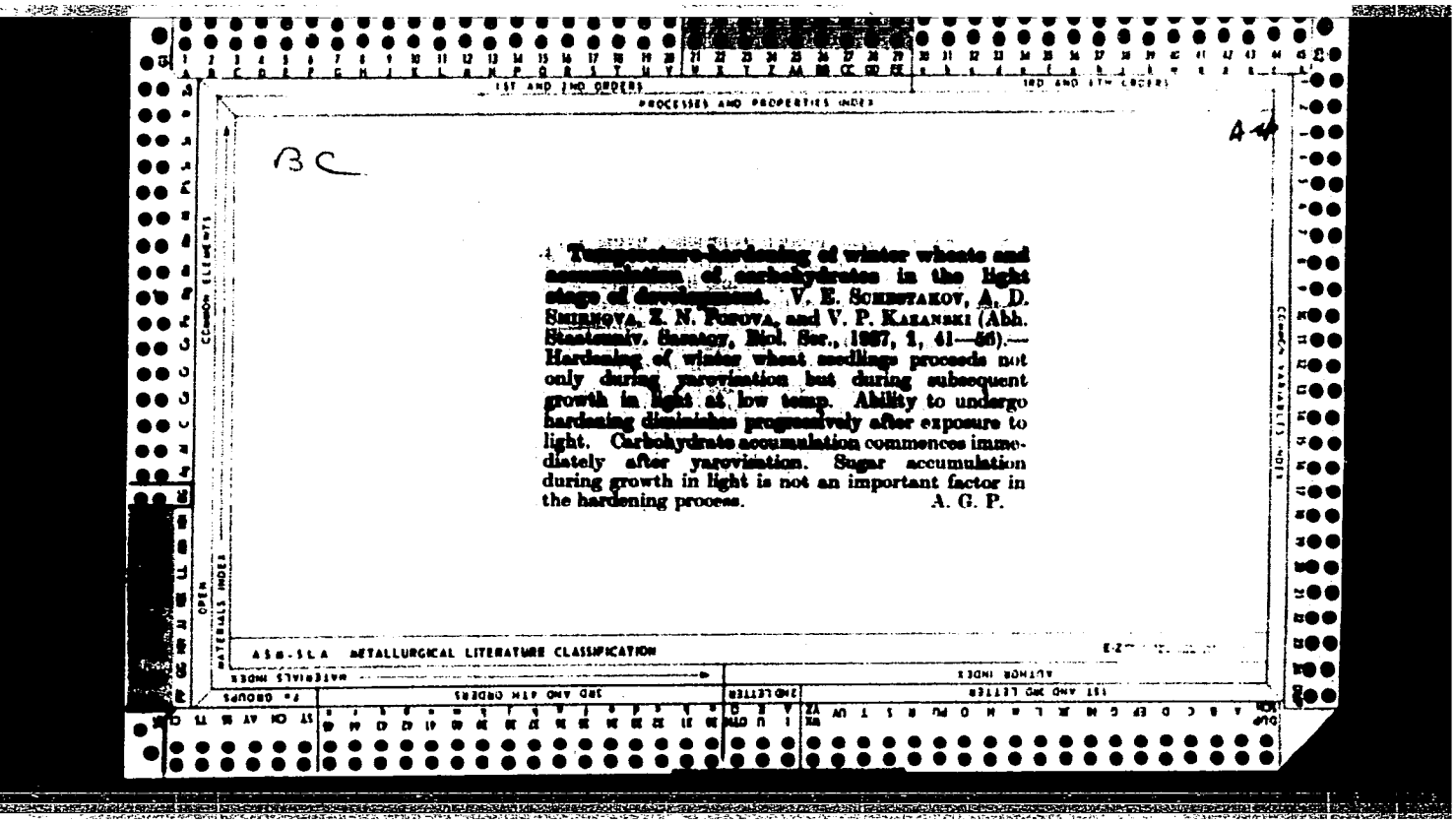
TOPIC TAGS: gallium arsenide, gallium phosphide, crystallization, semiconductor

ABSTRACT: The effect of Cu, Zn, Cd, Si, Ge, Sn, Se, Te, and rare-earth metals as impurities in Ga upon the crystallization of GaAs and GaP from liquid solutions of Ga with As and P was studied. The amount of impurities and the conditions of crystallization were widely varied. The chemical activity, electric conductivity, hardness, and thermo-emf of the resulting GaAs and GaP crystals were measured. In GaP crystallization from delute solutions, the effective distribution coefficients were: Zn -- 0.02, Te -- 0.4, S -- 1.3. Slaty crystals of GaP and GaAs with specified impurity contents were produced. A. R. [Translation of abstract]

SUB CODE: 09, 20

UDC: 621.315.592:548.552:546.681'18/19

Card 1/1



B C

A 4

4. **Temperature-hardening of winter wheats and accumulation of carbohydrates in the light stage of development.** V. E. SCHESTAKOV, A. D. SHIRKOVA, Z. N. POPOVA, and V. P. KAZANSKI (Abh. Staatsuniv. Saratow, Biol. Ser., 1937, 1, 41—56).—Hardening of winter wheat seedlings proceeds not only during yarovization but during subsequent growth in light at low temp. Ability to undergo hardening diminishes progressively after exposure to light. Carbohydrate accumulation commences immediately after yarovization. Sugar accumulation during growth in light is not an important factor in the hardening process. A. G. P.

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

B-III-1

BC

Changes in the nitrogen content, in connection with [illegible] of [illegible], and with resistance to frost of [illegible] wheat, in passing through the [illegible] stage. A. B. [illegible]IVA and V. E. [illegible] (Proc. Conf. [illegible] Sci., Saratov, 1937, 2, [illegible].—The protein- and non-protein-N contents of [illegible] winter-wheat plants are > of ordinary ones; in both cases they vary inversely with the mono- and poly-saccharide content. No correlation is established between protein content and resistivity to frost. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SVIRENKO, A.D.

Svirenko, A. D. "On certain rare forms of plants of the northern parts of Kostroma and Kirov Oblasts and the Udmurt ASSR", Uchen. zapiski Gor'k. gos. un-ta, Issue 14, 1949, P. 127-37, - Bibliog: p. 137.

SO: U-4631, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949).

SHIRAK[illegible], A. A.

Smirnova, A. D. "On certain forms which are rare and new for the flora of Gor'kiy Oblast and the Mariy Area", Uchen. zapiski Gork. gos. un-ta, Issue 14, 1949, p. 139-48, - Bibliog: 17 items.

SO: U-4731, 17 Sept. 53, (Letopis 'Zhurnal'nykh Statey, No. 24, 1949).

AMIRKOVA, A.D.

Amirkova, A. D. "Losses of the Pirestone Heteropsis in the environs of the Desert Biological Station of the Gor'kiy State University", Uchen. zapiski Gor'k. gos. un-ta, Issue 11, 1949, p. 149-60.

SO: U-4631, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949).

[redacted], A. D.

"Systematism of Polytrichum Swartzii Hartm", Botan. Zhur., 34, No. 4, 1949. State U, Gor'kiy. -c1949-.

SIRKOVA, A. D. and KULIKOVSKAYA, I. V.

"The Utilization of Mycorhiza in Planting Acorns in the Arid Environment of A Saratov Oblast'", Les i Step' (Forest and Steppe), No. 2, pp 29-37, 1958.

SMIRNOVA, A.D.

Types of spruce forests in the extreme north of the Kirov Province; part 1. Uch.zap.Gor'.un. no.19:195-223 '51. (MLRA 6:6)

(Kirov Province--Spruce)

USSR/Microbiology - General Microbiology.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9777

Author : Bekker, Z.E., Ostroukhov, A.A., Smirnova, A.D., Kosheleva, N.A., Fadeeva, N.P.

Inst : -

Title : Growth Manifestations in Submerged Cultures of Peninillium Chrysogenum Thom.

Orig Pub : Antibiotiki, 1956, 1, No 3, 40-47

Abstract : Mycelial cells of P. chrysogenum Q 176 in a submerged culture on a Stoun and Farrel medium in a 1000 liter apparatus with mixing at 200 rpm and aeration of 1 volume of air per volume of medium per minute, undergo very characteristic transformation during cultivation, which may be provisionally represented in the form of 6 growth phases. The I phase: germination of conidia (begins in 13-24 hours from the time conidia are inoculated in the nutrient medium). Conidia swell and form one or several growth tubes.

USSR/Microbiology - General Microbiology.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9777

II.phase: Expansion of hyphae (begins in 36-48 hours from the time of conidia inoculation in the nutrient medium). Still no activity is manifested in the culture liquid.
III phase: Accumulation of reserve substances (observed after 48-56 hours from the time of conidia inoculation or after 24-36 hours from the time of mycelium transplantation from the inoculating apparatus to the fermentation apparatus). Large numbers of fatty inclusions appear. Activity of the culture liquid is very low.
IV phase: Disappearance of fatty substances and the beginning of vacuolization (observed after 36-48 hours from the time of transplanting inoculated mycelium into the fermentation apparatus). Activity of the culture liquid is notably increased.
V Phase: Formation of large central vacuoles (observed in 48-72 hours from the time of transplanting the inoculated

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9777

The second stage-- from IV to VI growth phases-- is characteristic of reduction and a prevalence of dissimilation of reserve substances. The second stage of development is chiefly connected with the process of penicillin formation. Results of observations on development of penicillin production in a submerged culture are used for microscopic control of fermentation in production.

Simferopol, N.Y.

USSR / Microbiology. Antibiotics and
Antibodies.

Abs Jour : Ref Zhur - Biologiya, No

Author :

Inst :
Title : in

Orig Pub :

Abstract : Out of

Card 1/3

strain (Penicillium [illegible]
54) and [illegible]
by [illegible]
[illegible]
[illegible]
is [illegible]
under [illegible]
crystallization [illegible]
A crystalline preparation with
yellow color is prepared with
mass of 6000 phage units in 1 mg.
paration is active in [illegible]
media and loses its effectiveness in
alkaline medium. The preparation, adminis-
tered orally, is slightly toxic. A simple

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17

administration of fumagillin to mice at a
dose of 1 g/kg and multiple administration:
to rats and rabbits in the course of 10 days
at a 24-hour dose of 50 mg/kg showed no
effect on the animals' behavior, did not bring
about changes in the blood pressure and in the
internal organs of the animals. Fumagillin has
medicinal value in amoebic dysentery in rats,
and also in the nosema disease. --
T. P. Vertogradova

Card 3/3

MAKSIMOVA, R.A.; BEKKER, Z.E.; SMIRNOVA, A.D.

The fumagillin producer and problems in fermentation. Antibiotiki 4 no.5:14-19 S-O '59. (MIRA 13:2)

1. Laboratoriya antibiotikov biologo-pochvennogo fakul'teta Moskovskogo gosudarstvennogo universiteta i Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ASPERGILLUS)
(AMEBICIDES)

SMIRNOVA, A. D.

Physilogical role of mycorhiza. Uch. zap. Sar. un. 64:135-138 '59.
(MIRA 13:9)

(Mycorhiza)

L 27207-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6011568 SOURCE CODE: UR/0051/66/020/003/0499/0501

65

B

AUTHORS: Oksman, Ya. A.; Smirnov, V. N.; Smirnova, A. D.; Tret'yakov, D. N.

ORG: none

TITLE: High frequency electroluminescence of polycrystalline gallium phosphide

SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 499-501

TOPIC TAGS: gallium optic material, phosphide, electroluminescence, light excitation, luminescence center, crystal

ABSTRACT: The authors present new experimental data which make it possible to make some assumptions concerning the mechanism of high frequency electroluminescence of powdered GaP. The powder was prepared from platelike GaP obtained by a method described by A. S. Borshchevskiy et al. (Izv. AN SSSR ser. fiz. v. 28, 985, 1964). The powdered crystals (grain dimension not larger than 50 μ) were mixed with malamine formaldehyde resin and deposited (0.3 mm layer) on a metallic electrode. The second electrode of the capacitor was a fine-mesh grid insulated from the layer with a mica linear 10 μ thick. The capacitor was immersed either in liquid nitrogen or in carbon tetrachloride at room temperature.

Card 1/2 UDC: 535.376

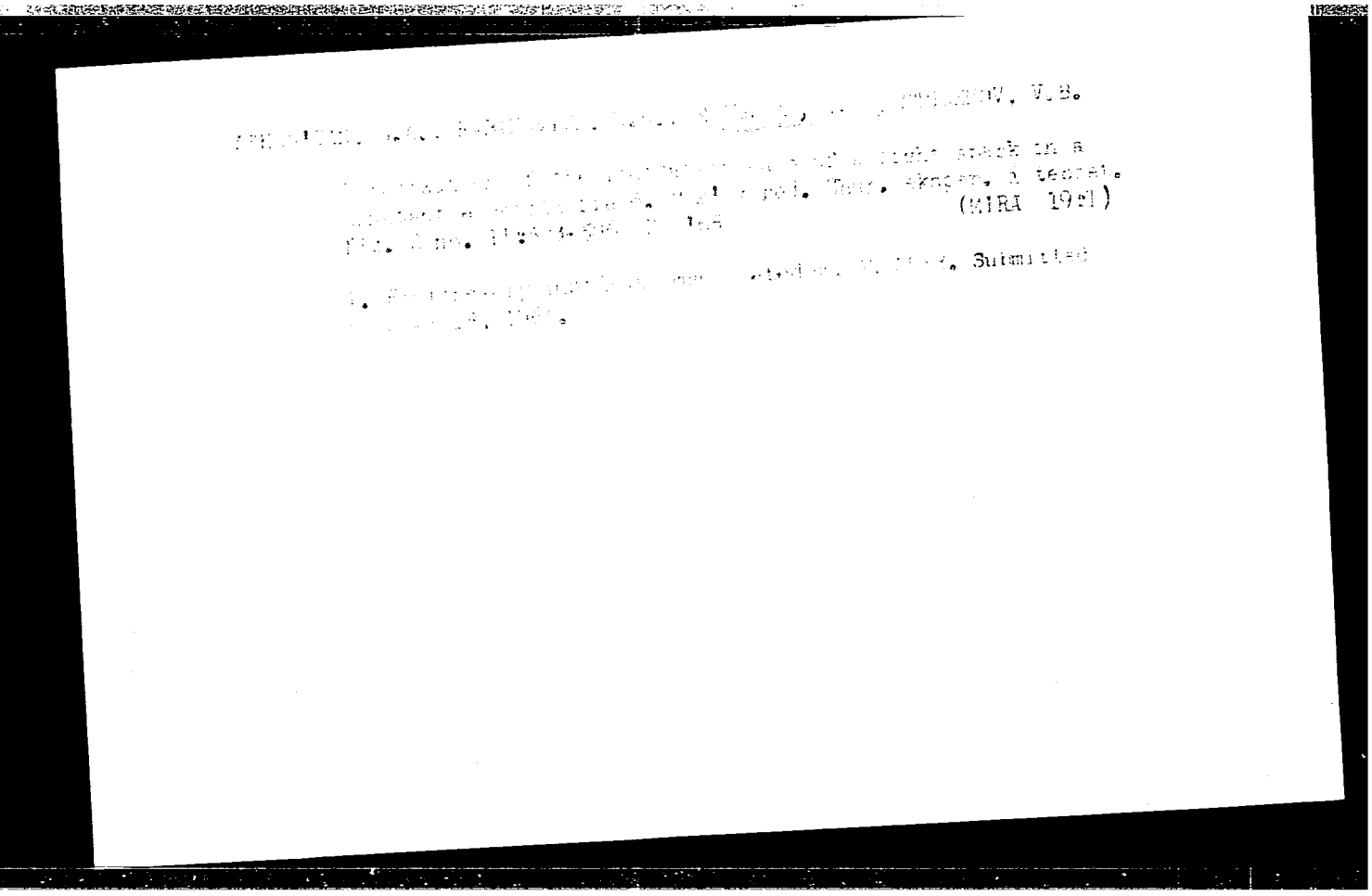
L 27207-66

ACC NR: AP6011568 O

The electroluminescence was excited by microwave pulses of 50 microseconds, with a repetition rate 50 -- 100 cps. The electroluminescence was registered through a window in the Dewar glass using a monochromator and photomultiplier. Alloying with zinc increased the electroluminescence intensity. The electroluminescence maximum was at 685 nm at 77K and 710 nm at 300K, in agreement with published data. The dependence of the electroluminescence brightness on the field intensity was proportional to a power-law function with exponents 2.5 -- 3.3, and the frequency dependence of the brightness was close to linear. It is concluded on the basis of the experimental data that the most probable mechanism of high-frequency electroluminescence of polycrystalline GaP is impact excitation of the lattice and of the centers, without participation on the part of the internal inhomogeneities of the crystal. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 29May65/ ORIG REF: 002/ OTH REF: 003

Card 2/2 CC



(MIRA 19:1)

45778-66 EEC(k)-2/EWP(k)/EWT(l)/EWT(m)/T/EWP(e) IJP(c) WH/WG

ACC NR: AP6031986 SOURCE CODE: UR/0386/66/004/005/0177/0180

AUTHOR: Askar'yan, G. A.; Rabinovich, M. S.; Smirnova, A. D.; Stepanov, V. K.; Studenov, V. B. 72 B

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Excitation of signals in a negatively charged post of an antenna under the influence of an unfocused laser beam 25

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 5, 1966, 177-180

TOPIC TAGS: laser application, shf antenna, electron emission

ABSTRACT: The authors describe the results of an investigation of current pulses produced when an unfocused laser beam strikes a metallic electrode or a post that serves as an antenna, on which a negative potential is applied. An ordinary Q-switched ruby laser was used, whose beam was aimed onto an antenna post located several meters away and under a negative voltage $U \approx 0 - 3$ kev. The antenna post was connected to ground through a capacitor and a resistor. The pulse picked off the resistor was fed through a capacitor and amplifiers (UR-3 and UR-4) to an oscilloscope (S1-10). The pulse induced in the antenna was commensurate in length with the duration of the laser flash. The pulse amplitude was at first approximately proportional to the voltage applied to the antenna but at a voltage $\gtrsim 1$ kv the magnitude of the signal increased sharply with

Card 1/2

TA 70T48

SMIRNOVA, A. E.

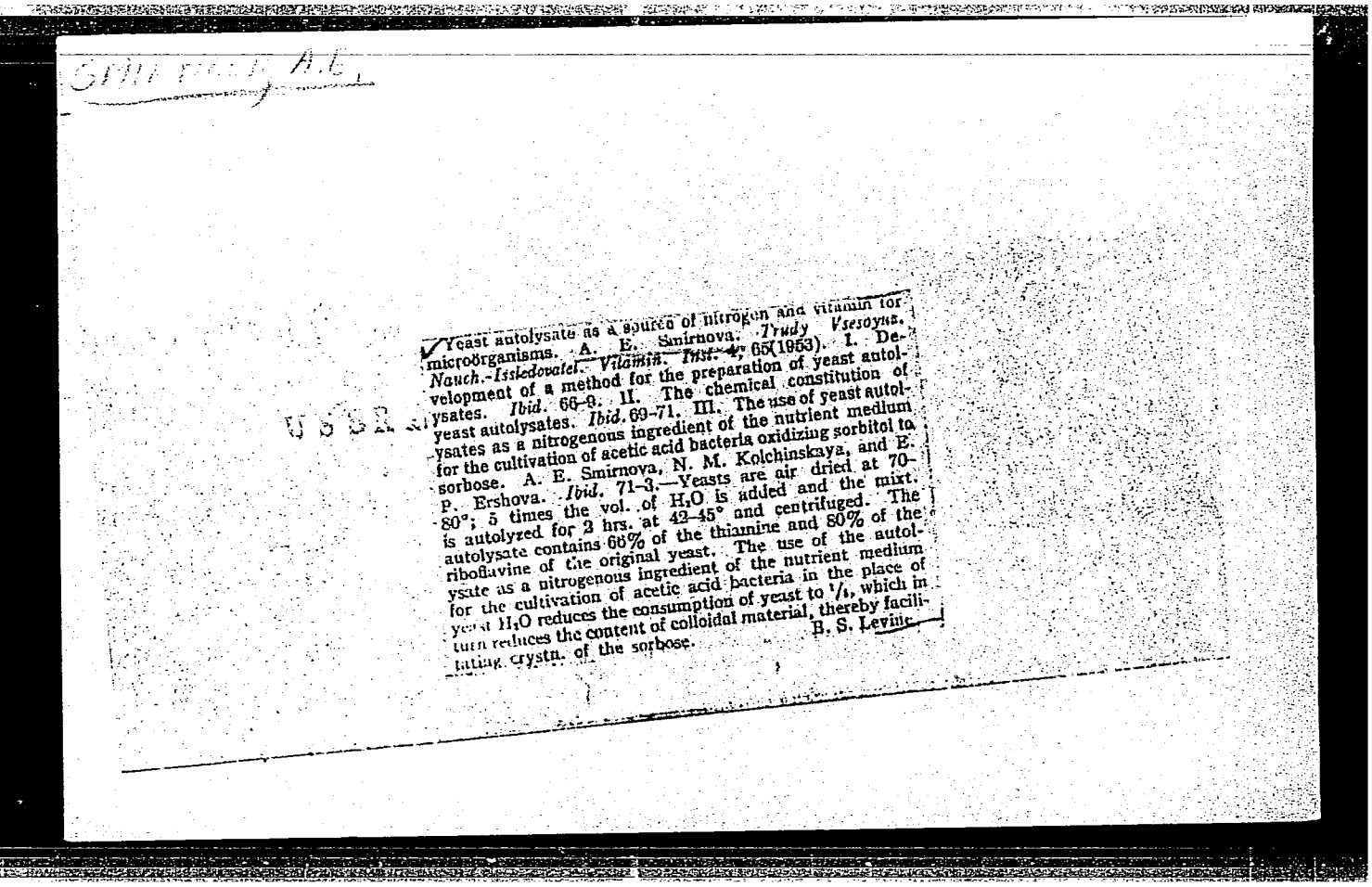
USSR/Medicine - Yeast, Growth Mar/Apr 1948
Medicine - Fermentation, Bacterial

"Rapid Method for the Control of Growth of Yeast During Fermentation Processes," A. E. Smirnova, Sci Res Inst of Fermentation Industry, Ministry of Spice Industries of RSFSR, Moscow, 5 pp

"Mikrobiol" Vol XVII, No 2

Turbidity of the ferment is positive indicator of the yeast concentrate. Describes method that determines the yeast concentrate with photoelectric nephelometer, permitting evaluation of the accumulation of yeast in the ferment during the growth process. Submitted 27 May 1947.

70T48



Yeast autolysate as a source of nitrogen and vitamin for microörganisms. A. E. Smirnova. *Trudy Vsesoyuz. Nauch.-Issledovatel. Vitamin. Inst.* 4, 65(1953). I. Development of a method for the preparation of yeast autolysates. *Ibid.* 66–8. II. The chemical constitution of yeast autolysates. *Ibid.* 69–71. III. The use of yeast autolysates as a nitrogenous ingredient of the nutrient medium for the cultivation of acetic acid bacteria oxidizing sorbitol to sorbose. A. E. Smirnova, N. M. Kolchinskaya, and E. P. Ershova. *Ibid.* 71–3.—Yeasts are air dried at 70–80°; 5 times the vol. of H_2O is added and the mixt. is autolyzed for 2 hrs. at 42–45° and centrifuged. The autolysate contains 66% of the thiamine and 80% of the riboflavine of the original yeast. The use of the autolysate as a nitrogenous ingredient of the nutrient medium for the cultivation of acetic acid bacteria in the place of yeast H_2O reduces the consumption of yeast to 1/5, which in turn reduces the content of colloidal material, thereby facilitating crystn. of the sorbose.

B. S. Levine

SMIRNOVA, A.F.

Active regulation of lineal growth of long bones. Ortop,travm. i protez. no.4:8-12 Jl-Ag '55. (MLRA 8:10)

1. Iz Gor'kovskogo instituta vosstanovitel'noy khirurgii, travmatologii i ortopedii (dir.-M.G.Grigor'yev)
(BONES, physiology,
growth, eff. of stimulation)
(GROWTH,
bones, eff. of stimulation)

SHIDKOVA, A.F., Cand Med Sci—(diss) "Effect of various stimulants on the longitudinal growth of tubular bones in young animals." Gor'kiy, 19 8. 9 pp (Gor'kiy State Med Inst im. S.M. Kirov), 100 copies (KL,26-58, 117)

BEKKER, G.M.; SMIRNOVA, A.F.

Fibromyoma of the lesser omentum. Khirurgiia 36 no.4:127-129 Ap '60. (MIRA 13:12)

(OMENTUM--TUMORS)

BODYAZHINA, V.I.; SMIRNOVA, A.F.

Causes of death in gynecological diseases. Vop.okh.mat.i det. 7 no.4:62-66 Ap '62. (MIRA 15:11)
(GYNECOLOGY--STATISTICS) (MORTALITY)

SMIRNOVA, A.F.

USSR/Scientists - Chemistry

Card 1/1 : Pub. 151 - 37/37

Authors : Rodionov, V. M.; Vorozhtsov, N. N.; Smirnova, A. F.; Shchetinina, L. A.; Shestov, A. P.; Korolev, A. I.; Lukashevich, V. O.; and Ufimtsev, V. N.

Title : In memory of Evgeniy Alekseevich Ivanov

Periodical : Zhur. ob. khim. 24/3, 579-580, Mar 1954

Abstract : Eulogy is presented honoring the passing of E. A. Ivanov, chief of the Central Laboratory of the Dorogomilov-Frunze Chemical Plant, scientist in the field of organic semi-products and dyes, recipient of Stalin premium. Illustration.

Institution: .....

Submitted : .....

L 8498-66 (A) EWT(m)/EWP(j)/EWP(t)/EWP(b) JD/RM

ACC NR: AP5028478 SOURCE CODE: UR/0286/65/000/020/0064/0064

AUTHORS: Ardov, D. I.; Kamenetskiy, I. Ya.; Smirnova, A. F.; Sergeyeva, A. A.; Ponomareva, V. M.; Golubeva, A. V.; Luk'yanov, N. P; Yeremina, Ye. N.; Sivograkova, K. A.; Kinter, I. P.; Shalina, V. P.

ORG: none

TITLE: Surfacing for metallic and reinforced concrete decks. Class 39, No. 175643 /announced by Organization of the State Committee on Ship Construction SSSR (Organizatsiya gosudarstvennogo komiteta po sudostroyeniyu SSSR)/

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 64

TOPIC TAGS: polymer, copolymer, rubber, mineral filler, pigment, metal surfacing, reinforced concrete, ship component, SYNTHETIC RUBBER

ABSTRACT: This Author Certificate presents a surfacing material for metallic and reinforced concrete decks. The surfacing material is based on a binding polymer and on mineral fillers and pigments. To increase its resistance to abrasion and corrosion and to reduce its slipperiness, a copolymer of styrole with nitrylacrylic acid and with butylacrylic rubber is used as the binding polymer.

SUB CODE: 11/ SUBM DATE: 12Mar64

UDC: 678.746.2--139.678.046.3 678.047

BVK

Card 1/1

GROSVAL'D, V.G.; SMIRNOVA, A.G.

New device for measuring stresses in metal drawing. Zav.lab. 22 no.3:357-359 '56. (MLRA 10:5)

1.TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Strains and stresses--Measurement)

PHASE I BOOK EXPLOITATION SOV/4961

Akademiya nauk SSSR. Institut mashinovedeniya

Tekhnologicheskiy smazki dlya obrabotki metallov davleniyem (Industrial Lubricants Used in Pressworking of Metals) Moscow, Mashgiz, 1960. 96 p. 5,000 copies printed.

Sponsoring Agency: Institut mashinovedeniya Akademii nauk SSSR.

Ed.: A. V. Korolev, Candidate of Technical Sciences; Ed. of Publishing House: G. N. Soboleva; Tech. Ed.: L. P. Gordeyeva; Managing Ed. for Literature on Heavy Machine Building: S. Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for scientific and technical personnel, production engineers, and students in schools of higher technical education and tekhnikums.

COVERAGE: The book contains articles analyzing the research on industrial lubricants used in pressworking of metals conducted by various institutes and plant laboratories. It is stated that these lubricants improve the metal-forming process and increase the wear resistance of tools (dies), thereby

Card 1/3

increasing the quantity and quality of production. Also included are papers discussed at an All-union convention on industrial lubricants held under the auspices of the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission for Machine-Building Processes of the Institute of Science of Machines, AS USSR). No personalities are mentioned. References accompany some articles and are all Soviet.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress (TS213.A36)

VK/dfk/os
4/20/61

YERSHOV, B.P.; SMIRNOVA, A.G.

Use of resorcinol as an indicator during the complexometric determination of cadmium. Plast.massy no.4:61-62 '63. (MIRA 16:4)
(Cadmium—Analysis) (Resorcinol)

ENTELIS, F.S., kand. tekhn. nauk; SMIRNOVA, A.I., inzh.

Investigating plastic molding processes. Stek. i ker. 20 no.10:14-20 O '63. (MIRA 16:10)

1. Gosudarstvennyy issledovatel'skiy keramicheskiy institut. (Ceramics)

YEVSTIGNEYEV, R.N.; STUPOV, A.D., kand.sel'skokhoz.nauk, red.; TOMASHPOL'SKIY, L.M., kand.ekon.nauk, red.; SMIRNOVA, A.I., vedushchiy red.; GONCHAROV, N.G., tekhn.red.

[Economic development of the Czechoslovak Republic] Razvitie ekonomiki Chekhoslovatskoi Respubliki. Moskva, Vses.in-t nauchn. i tekhn.informatsii. 1960. 99 p. (MIRA 13:6)
(Czechoslovakia--Economic conditions)

KOZIK, A.K.; ORESHKIN, Yu.V., red.; SMIRNOVA, A.I., red.; SOBOLEVA, N.M., tekhn.red.

[Industrial development of Poland] Razvitie promyshlennosti Pol'shi. Moskva, Proizvodstvenno-izd.kombinat VINITI, 1959. 382 p. (MIRA 12:12)

(Poland--Industries)

: USSR
: Forestry. Biology. Typology. K

: ZhBiol., No. 13 1958, No. 104499

: Smirnov, V. N.; Ponomarev, Yu. I.; Smirnova, A. I.

: --
: The Influence of Cytisus on the Forest Growth Properties of Sandy Podzolic Soils

: Lesn. Kh-vo, 1958, No. 3, 81

: It has been shown by investigations in Mari ASSR that the broom (Cytisus rabus bonensis) by its litter enriches the soil with organic substances, nitrogen and ash elements, affecting positively not only the upper horizon but also deeper layers. Self-sown and plantation pines growing up with broom look healthy and grow and develop better.
--L. V. Nesmelov

: 2/2

Smirnova, A.I.

Q-1

USSR/Farm Animals. General Problems

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35607

Author : Smirnova A.I., Solov'yeva V.F., Tsvetkova L.I., Romasheva I.B.
Inst : Not Given
Title : The Content of Carotene in the Feedstuffs of the Yaroslav Oblast'

Orig Pub : Sb. stud. rabot. Yaroslavsk. s.-kh. in-ta, 1956, vyp. 1, 102-105

Abstract : The results of the analysis of the most widely spread feedstuffs in the Oblast' are given. The highest content of carotene was found in the green leaves of oats and in pine needles; the carotene content of dried nettle was 1½ times higher than that of clover.

Card : 1/1

6

1. SMIRNOV, V. A., SMIRNOVA, A. I.

2. USSR (600)

4. Polariscope

7. A source of error in the polarimetric determination of starch in grain. Biokhimiia 17 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.