

USSR/Chemistry - Organophosphorus Compounds, Nov 52

"The Alkylation of Amines With Chlorides of Dialkylphosphoric Acid," B. P. Lugovkin and B. A. Arbutov, Chem Inst Imeni A. M. Butlerov, Kazan State U Imeni V. I. Lenin

"Zhur Obshch Khim" Vol 22, No 11, pp 2041-2047

The action of chlorides of diethylphosphoric acid and dibutylphosphoric acid on carbazole was studied. The heating of these components above 200° resulted in a reaction which produced N-ethyl- and N-butylcarbazoles, resp. The alkylating action of the chlorides of dialkylphosphoric acid was also detected on the examples of aniline, *p*-naphthylamine,

238r38

diphenylamine and α -aminopyridine. The reaction resulted in N-diethylaniline (87%), N-diethyl-*p*-naphthylamine (88%), N-ethyldiphenylamine (83%), N-methyldiphenylamine (69%) and N-methylpyridonimine (29%), resp. Alkylation with acid chlorides of dialkylphosphoric acid was shown to take place also in the case of amides of acids. To explain the mechanism of the alkylating action of the acid chlorides, a study was made of the effect of heat on the anilide of diethylphosphoric acid. It was demonstrated that when the latter was heated up to 230°, diethylaniline (85%) was formed. A preliminary scheme for the fission of the anilide of diethylphosphoric acid is given.

238r38

LUGOVKIN B. P.

LUGOV KIV, B. P.

Taririnic acid. B. A. Arbuzov and B. P. Lugovkin (V. I. Ulyanov-Lenin State Univ., Kazan). *Dokl. Akad. Nauk S.S.S.R.* 1, 416-21 (1953); cf. Arnaud, *Compt. rend.* 114, 79(1892); 134, 478(1902).—To 60.7 g. petroselinic acid in dry CHCl_3 was slowly added 80 g. Br in 40 ml. CHCl_3 with good cooling; after evapn. of the solvent there was obtained 77 g. 6,7-dibromotearic acid, m. 87-8° (from Et_2O). This (66 g.) in 180 ml. abs. EtOH and 26 g. powd. KOH was heated 8 hrs. on a steam bath, then treated with 24 g. powd. KOH and heated 5 hrs. longer; after diln. with 500 ml. H_2O and neutralization with dil. H_2SO_4 there was formed 65% taririnic acid (6-octadecyne-1-carboxylic acid) (I), m. 50.8° (from EtOH), b. 200-7°, b₂ 198°; with 3 g. Br in CHCl_3 , 5 g.

of the acid gave 7.0 g. di-Br deriv., m. 33°. I (12 g.) with 3 g. PCl_5 heated 15 min. to 65-85° gave 72.7% taririnyd chloride, b₁ 192°, d₄ 0.8344 (heated with H_2O 1 hr. it gave I). Heating 5 g. I with 8 g. Ac_2O in sealed tube 1 hr. at 180-90° gave, after a lengthy evapn., 90% of the anhydride of I, m. 47.5-8° (from dry Et_2O) (this heated 1 hr. with dil. NaOH readily gave I); 1 g. anhydride with 0.7 g. Br in CHCl_3 gave the tetrabromide, m. 33.5°. I chloride (6.3 g.) added to concd. NH_4OH with cooling gave 98.7% amide (II), m. 88° (from abs. EtOH), which (6 g.) in CHCl_3 treated with 4 g. Br gave the di-Br amide of I, m. 80-80.5° (from EtOH). II (10.7 g.) and 8.5 g. P_2O_5 heated at about 3 min. to 180° gave 16.6% nitrile, b₁ 158-9°, n_D 1.4758, d₄ 0.8799. Refluxing 10 g. I in 20 g. abs. MeOH with 4 g. H_2SO_4 6 hrs. gave 92.3% I Me ester, b₁ 157-8°, b₂ 164-6°, n_D 1.4560, d₄ 0.8975, which with Br in CHCl_3 gave the di-Br deriv., m. 27-7.5° (from EtOH-Et₂O). Similarly was prepd. 91.6% I Et ester (III), b₁ 163-4°, b₂ 202-4°, n_D 1.4540, d₄ 0.8835, d₁₅ 0.8821 (hydrolysis with 5% NaOH in 1.5 hrs. gave I), gave the dibromide, a yellow liquid, n_D 1.4773, d₄ 1.1320; heating 1.5 g. III in 5 ml. AcOH with 0.65 g. iodine 3 hrs. at 70-80° gave the di-iodide, m. 20-6.5° (from abs. EtOH). To 20.1 g. III in 100 ml. dry BuOH was added 7 g. Na; after heating 15-20 min. to complete the reaction, the mixt. was dild. with H_2O (15 ml.), heated at 100-20° 1 hr., washed with H_2O , salted out with NaCl, and the org. layer evapd. yielding 8.7 g. material, m. 204-6°. Crystn. from AcOH changed this material completely, yielding some I and a substance, m. 52-4°. The EtOH mother liquor after isolation of the product, m. 204°, gave 48.6% Me $(\text{CH}_2)_8\text{C}(\text{CH}_2)_7\text{CH}_2\text{OH}$, b₁ 183-4°, m. 29-30°; the latter (1 g.) with 0.7 g. Br in CHCl_3 gave a dibromide, an oily liquid, and a tetrabromide, m. 51-3°. G. M. K.

LUGOVKIN, B. P.

LUGOVKIN, B.P.; ARBUZOV, B.A.

Alkylating amines with acid chloride of dialkylphosphoric acid.
Soob.o nauch.rab.chl.VKHO no.2:22-23 '53. (MIRA 10:10)
(Alkylation) (Amines) (Phosphoric acid)

LUBOVKIN, B.P.

Reactions of 6-aminolincarboxaldehyde. B. P. Lubovkin (All-Union Central Council Trade-Unions, Sci. Research Div. Inst. Hyg., Kazan). *Zhur. Obshchei Khim.* 23, 1696-1703 (1953).—6-Quinolincarboxaldehyde (I) heated with MeI 0.5 hr. at 85-90° gave 65.0% yellow methiodide, m. 222°; I and EtBr in sealed tube 3 hrs. at 100-10° gave 64% ethobromide, m. 191-2°; I and EtI after 0.5 hr. at 100° gave 80% ethiodide, m. 195-0°. I (5 g.) heated with 2.5 g. SeO_2 to 240° reacted vigorously, yielding 63.5% 6-quinolinecarboxylic acid, m. 290°; picrate, m. 240-1° (from dil. AcOH). The acid with EtBr or EtI after 10 hrs. in sealed tube at 100° gave no indication of reaction. I (20 g.) with 10 g. KOH in 12 ml. H_2O gave a mild exothermic reaction, and stirring 6 hrs., filtering, and extg. with Et_2O yielded 74.1% 6-quinolinemethanol (II), m. 81-2° (from EtOH); picrate, yellow, m. 201-2° (from EtOH). The residue gave 63.6% 6-quinolinecarboxylic acid. II and MeI after 2 hrs. on a steam bath gave 66% methiodide, m. 170° (from EtOH); EtBr and II in sealed tube 3 hrs. at 90° gave 95.2% ethobromide, m. 177-8° (from EtOH); EtI and II refluxed 2 hrs. gave 91% ethiodide, m. 132° (from EtOH). To 12 g. I

in EtOH was added 2.5 g. KCN in 3 ml. H_2O and the mixt. heated on a steam bath 0.5 hr.; quenching in H_2O gave a tarry ppt. which was extd. with hot H_2O to remove unreacted I; the residue extd. with EtOH gave 5% 6,6'-quinoloin, m. 166-7° (from EtOH); picrate, yellow, m. 237-8° (from EtOH). Refluxing 3.0 g. I and 2.4 g. 2-aminopyridine in EtOH 2 hrs. gave 86.4% 6-(2-pyridyliminomethyl)quinoline (III), m. 139-40° (from EtOH). III and MeI refluxed 3 hrs. gave 81% dimethiodide, m. 126-8° (from AcOH); III and EtI similarly gave 63.6% diethiodide, m. 119-20°. I (3 g.) and 2.7 g. 2- $\text{C}_6\text{H}_5\text{NH}_2$ refluxed 2 hrs. in EtOH gave 4.85 g. 6-(2-naphthyliminomethyl)quinoline, m. 140-1° (from EtOH); methiodide, m. 210-14°; ethiodide, m. 183-5°. I and 1- $\text{C}_6\text{H}_5\text{NH}_2$ gave 84% oily 6-(1-naphthyliminomethyl)quinoline, whose picrate, m. 195-0° (from AcOH). Heating o- $\text{C}_6\text{H}_4(\text{NH}_2)_2$ with 2 moles I in EtOH 1 hr. gave 37.9% bis-6,6'-(o-phenylene-diiminomethyl)quinoline, green, m. 221-2° (from EtOH). p- $\text{C}_6\text{H}_4(\text{NH}_2)_2$ resulted in 92.1% 6,6'-(p-phenylene-diiminomethyl)diquinoline, yellow, m. 252-3° (from AcOH). I and benzidine similarly gave 83.9% 6,6'-(4,4'-biphenyldiiminomethyl)diquinoline, yellow, m. 262-4° (from AcOH).

G. M. K.

LUGOVKIN, B.P.

Synthesis of secondary 6-quinolylcarbinols. Zhur.ob.khim. 25 no.2:
392-397 F '55. (MIRA 8:6)

Labor Protection
1. Kazanskiy nauchno-issledovatel'skiy institut okhrany truda Vse-
soyuznogo Tsentral'nogo Soveta professional'nykh soyuzov.
(Quinolinemethanol)

Lugovkin, B. P.

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Chem

Preparation of 6-monohalomethylquinolines. B. P. Lugovkin (All-Union Labor Protection Sci. Research Inst., Kazan). *Zhur. Obshchei Khim.* 26, 1733-6 (1958).—6-Quinolylcarbinol (I), m. 70-81°, forms the HCl salt, m. 204-5° (from EtOH), HBr salt, m. 201° (from EtOH), and picrate, m. 201°. I heated with concd. HCl in a sealed tube 7 hrs. at 135-40° gave 20.6% 6-chloroethylquinoline (II), m. 70°, shows skin irritating properties; picrate, m. 206° (from AcOH); HCl salt, m. 181-2° (from dry EtOH). II with MeONa-MeOH gave 6-quinolylcarbonyl methyl ether, a viscous oil; picrate, m. 175-6° (from EtOH); chlorosulfate, m. 133° (from AcOH); methiodide, m. 189-9°. Similarly II with EtONa gave 6-quinolylcarbonyl Et ether, an oil; picrate, m. 176-8° (from EtOH); chlorosulfate, m. 176° (from AcOH); methiodide, m. 118-19° (from dioxane-EtOH). II heated with KCN in aq. EtOH 1 hr. at 80° gave 23.3% 6-quinolylacetonitrile, m. 81.5° (from H₂O); picrate, m. 217.5° (from AcOH); methiodide, m. 167-8° (from EtOH). I with dry HBr in a sealed tube 7 hrs. at 120° gave 54.5% 6-bromomethylquinoline (III), m. 74-5° (from ligroine), which is an irritant; on standing, it changes to an infusible substance containing 29.6% Br. III picrate, m. 198° (from AcOH); HBr salt, m. 201° (from EtOH). Shaking II with NaI in Me₂CO 1.5 hrs. gave 21.5% 6-iodomethylquinoline, m. 204-5° (from EtOH); picrate, m. 193°.

G. M. Kosolapoff

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LUGOVKIN, B. P.

AUTHOR: Lugovkin, B. P.

79-2-54/58

TITLE: About the Reaction of 6-Monohalogenomethylquinolines with Sodium Salts of Dialkylphosphorous Acids (O vzaimodeystvii 6-monogaloidmetilkhinolinov s natriyevymi solyami dialkilfosforistykh kislot)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 529-531 (U.S.S.R.)

ABSTRACT: The author investigated the reaction of 6-chloromethylquinoline with dimethyl diethyl-, dipropyl-, diisopropyl sodium phosphide and 6-bromomethylquinoline with dibutyl-, diisobutyl sodium phosphide in an absolute ether medium. The reaction led to the formation of 6-methylquinoline-phosphinic acid esters. The latter are described as consistent liquids, soluble in water, alcohol, and ether and changing intensively when heated at 130-200°. The esters were identified in the form of picrates and iodomethylates.

~~cont. 2/2~~ 1 table. There are two Slavic references.

Assoc: All-Union Sci Res Inst - Labor Protection, Kazan

Distr: $4E1j/4E3d/4E2c(j)$

✓ Synthesis of esters of 8-caffeoylmethylphosphonic acid.

B. P. Lugovkin (All-Union Sci. Research Labor. Protection

1931, Kazan). *Zhur. Obshchei Khim.* 27, 1624-8 (1957). —

8-chloromethylcaffeine (m. 215° (AcOH) (cf. Golovchinskaya and Chaman, C.A. 47, 6209f)) (1.5 g.) heated with

1.4 g. (EtO)₂P 10 min. to 155° and finally to 180° gave

after treatment with C in hot EtOH 2.05 g. di-Et 8-caffeoyl-

methylphosphonate, m. 133°. Similarly was prepd. 65.2% di-Pr ester, m. 70-1°, and 85.6% di-iso-Pr ester, m. 121-2°.

The di-Bu ester, 88.8%, was a viscous liquid, while the di-

iso-Bu ester, 88.7%, m. 75-8°. The di-Bu ester heated with

1:1 HCl in a sealed tube 5 hrs. at 110-20° gave 8-caffeoyl-

methylphosphonic acid, m. 285-6° (AcOH), the same being

obtained from hydrolysis of the other esters above.

G. M. Kosolapov

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79-28-4-35/60

AUTHOR: Lugovkin, B. P.

TITLE: On the Condensation of 6-Quinoline-Aldehyde by Ketones and Combined Ester (O kondensatsii 6-khinolinal'degida s ketonami i slozhnymi efirami)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 4, pp.1007-1010(USSR)

ABSTRACT: In the reaction of aldehyde with acetone in diluted aqueous alkali solution the author has obtained the quinolidene-(6)-acetone (I) in a yield of 33 %. In alcohol solution under presence of sodium ethylate he obtained a highly polymeric product. The reaction of the aldehyde with acetophenone under presence of sodium ethylate proceeds easily and develops quinolidene-(6)-acetophenone (II) in a yield of 71 %. The reaction of the aldehyde with acetoacetic ester in the presence of piperidine was carried out during cooling of the reaction mixture (Ref 2). From the reaction products only diethylester of the quinolidene-(6)-bis-acetoacetic acid (III) in a yield of 33 % could be separated. In the condensation of the aldehyde with acetic ethyl ester the ethylester of the quinolyl-(6)-acrylic acid (IV) was separated in

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On the Condensation of 6-Quinoline-Aldehyde by Ketones and Combined Ester 79-28-4-35/60

s yield of 22 %. The condensation product of the aldehyde with diethylmalonic ester was identified as methyl iodide of diethylester of the quinoline-(6)-malonic acid. The yield was 49 %. There are 1 table and 2 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda
VTsSPS, Kazan'
(Kazan' All-Union Scientific Research Institute for Labor
Protection VTsSPS)

SUBMITTED: April 5, 1957

Card 2/2

5 (3)

SOV/79-29-4-66/77

AUTHOR:

Lugovkin, B. P.

TITLE:

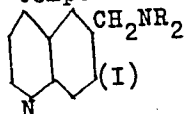
On the Reaction of the 6-Chloromethylquinoline With Amines
(O vzaimodeystvii 6-khlormetilkhinolina s aminami)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol. 29, Nr 4, pp 1350 - 1353
(USSR)

ABSTRACT:

The results of the reaction of the 6-chloromethylquinoline with ammonia, the secondary aliphatic amines, aniline, and the secondary heterocyclic amines are described in the present paper. The reaction of chloride with a concentrated aqueous ammonia solution yielded at usual temperature the compound (I) in the form of an oily liquid (46%)

(I) (II)R=CH₃(III)R=C₂H₅

In the case of heating of chloromethylquinoline with aqueous solutions of dimethyl- and diethyl amine the compounds (II) and (III) were obtained which were as well colorless, oily liquids (42 and 62% correspondingly). 6-(aminomethyl)-quinoline yields

Card 1/2

On the Reaction of the 6-Chloromethylquinoline With Amines SOV/79-29-4-66/77

in ether solution with HCl a monochlorohydrate, whereas the 6-(dialkylaminomethyl)-quinolines form dichlorohydrates. The nitrogen atom in the cycle of the amine (I) has a higher basicity than the NH_2 -group. The amines (II) and (III) affiliate 2 molecules methyl iodide under formation of the crystalline diiodo methylates. In the case of the reaction of the chloride (2 moles) with aniline and in the case of the heating of the components in alcohol the compound (IV) was obtained in crystals (38%). In the case of heating of 6-chloromethylquinoline with piperidine in aqueous solution (V) was obtained as colorless viscous oil (69%). (IV) is obtained in crystalline form with morpholine under the same conditions. Both amines form dichloro- and diiodo methylates. Resinlike products occur as by-products in the above mentioned reactions. The synthesized amines are not resistant to air and stain even in the dark. There are 2 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda VTsSPS.Kazan' (All-Union Scientific Research Institute of Worker Protection of VTsSPS, Kazan')

SUBMITTED: February 24, 1958
Card 2/2

LUGOVKIN, B.P.

Interaction between 8-caffeincarboxaldehyde and dialkyl-
phosphorous acids. Zhur.ob.khim. 30 no.7:2427-2429 J1 '60.
(MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany
truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov, Kazan'.
(Caffeincarboxaldehyde)
(Phosphorous acid)

LUGOVKIN, B.P.

Condensation of 6-quinolyl aldehyde with some heterocyclic compounds.
Zhur.ob.khim. 31 no.5:1685-1688 My '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda.
Vsesoyuznogo tseutral'nogo Soveta professional'nykh soyuzov.
(Quinolyl aldehyde) (Heterocyclic compounds)

LUGOVKIN, B.P.

Interaction of 6-quinolyl aldehyde with heterocyclic bases
containing active methyl groups. Zhur.ob.khim. 32 no.8:2544-
2548 Ag '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrány
truda Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov,
g. Kazan'.

(Quinolyl aldehyde) (Heterocyclic compounds)

LUGOVKIN, B. P.

Condensation of 6-quinolyl aldehyde with pyridine and quinoline bases. Zhur. ob. khim. 33 no.1:71-74 '63.
(MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov.

(Pyridine bases) (Quinoline) (Aldehydes)

LUGOVKIN, B.P.

Condensation of 8-theobromine aldehyde with iodoalkylates of heterocyclic bases. Zhur.ob.khim. 33 no.10:3205-3207 0 '63.
(MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda.

LUGOVKIN, B.P.

Some derivatives of barbituric acid. Zhur. ob. khim. 24 no.9:
3107-3109 S '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda
Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov, g.
Kazan'.

ACC NR: AP6033302

SOURCE CODE: UR/0409/66/000/004/0571/0574

AUTHOR: Lugovkin, B. P.

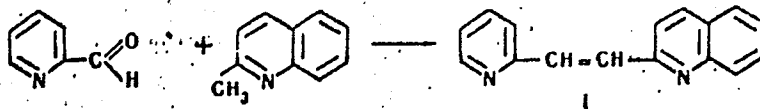
ORG: All-Union Scientific Research Institute of Labor Protection, Kazan' (Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda)

TITLE: Condensation of 2-pyridinealdehyde with heterocyclic bases. Synthesis of 1- α -pyridyl-2-quinolyl-, benzothiazolyl- and benzoselenazolylethylenes and their iodo-methylates

SOURCE: Khimiya geterotsiklicheskih soyedineniy, no. 4, 1966, 571-574

TOPIC TAGS: heterocyclic base compound, condensation reaction, *chemical synthesis*

ABSTRACT: Continuing their study of the reactions of 2-pyridinealdehyde with thiocyanates, the authors investigated its condensation with quinolino, benzthiazole and selenazo heterocycles containing active methyl groups. Condensation of the aldehyde with quinaldine with heating to 155-160° produced 1-(2-pyridyl)-2-(2-quinolyl)ethylene (I):



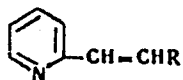
Card 1/3

UDC: 547.824+542.953.3

ACC NR: AP6033302

On heating with methyl iodide in an acetic anhydride solution, (I) gave the diiodomethylate (II). Heating of the aldehyde with lepidine produced a syrupy liquid; the expected 1-(2-pyridyl)-2-(4-quinolyl)ethylene was identified in the form of the crystalline diiodomethylate (IX). Condensation of the aldehyde with 2-methylbenzthiazole, 2-methyl-5-methoxybenzthiazole and 2-methyl-5-methoxybenzselenzazole produced 1-(2-pyridyl)-2-(2-benzthiazolyl)ethylene (III), 1-(2-pyridyl)-2-(5-methoxy-2-benzthiazolyl)ethylene (V) and 1-(2-pyridyl)-2-(5-methoxy-2-benzthiazolyl)ethylene (VII). With methyl iodide, these compounds form only moniodomethylates IV, VI and VIII. The synthesized compounds and their melting points are listed in Tables 1 and 2. Orig. art. has: 2 tables.

Table 1

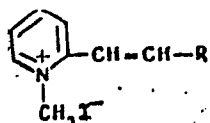


Compound No.	R	MP, °C
I	2-Quinoly	98
III	2-Benzthiazolyl	126
V	5-Methoxy-2-benzthiazolyl	92
VII	5-Methoxy-2-benzselenzazolyl	121

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ACC NR: AF6033302

Table 2.



Empirical Formula	Compound No.	R	M P, °C
C ₁₁ H ₁₀ N ₂	II		234-235
C ₁₈ H ₁₉ N ₂ S	IV		223
C ₁₈ H ₁₉ N ₂ OS	VI		233-234
C ₁₈ H ₁₉ N ₂ OSe	VIII		243-244
C ₁₁ H ₁₀ N ₂	IX		237

SUB CODE: 07/ SUBM DATE: 11Feb65/ ORIG REF: 004/ OTH REF: 001

Card 3/3

LUGOVKIN, B.P.

Interaction between the derivatives of purine and phosphorous esters.
Zhur.ob.khim. 31 no.10:3406-3407 0 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda
Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov,
Kazan'.

(Purine) (Phosphorous acid)

LUGOVKIN, B.P.

Synthesis of α -hydroxyphosphonobarbituric acid esters. Zhur.ob.
khim. 31 no.10:3408-3409 0 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda
Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov,
Kazan'.

(Barbituric acid)

LUGOVKIN, B.P.

Condensation of 8-caffeine aldehyde with iodoalkylates of
pyridine and quinoline bases. Zhur.ob.khim. 32 no.2:452-454
F '62. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany
truda, Kazan'.
(Caffeine) (Pyridine) (Quinoline)

IUGOVKIN, Vsevolod Dmitriyevich

[Vegetable growing] Oroshevodstvo. Moskva, Gos. izd-vo selkhoz
lit-ry, 1957. 366 p. (MIRA 11:4)
(Vegetable gardening)

LUGOVKIN, V.D.

Producing more tomatoes. Kons. i ov. prom. 12 no.1:32-34 Ja '57.
(MIRA 10:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Tomatoes)

LUGOVKIN, V.D.

Improve the growing of tomatoes. Kons. i ov. prom. 12 no.2:27-30 Y '57.
(MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i ovoshchsushil'noy promyshlennosti.

(Tomatoes)

LUGOVKIN, V.D.

Conference at the Stalingrad Experimental Breeding Station. Kons. i ov.
prom. 12 no.2:47 F '57. (MIRA 10:6)
(Tomato breeding)

IUGOVKIN, V.D.

Quality of tomatoes. Kons.i ov.prom. 12 no.6:28-30
Je '57. (MIRA 10:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Tomatoes)

LUGOVKIN, Y.D.

Forgotten crops. Kons.i ov.prom. 12 no.9:40-41 S '57. (MIRA 10:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Asparagus) (Rhubarb)

LUGOVKIN, V.D.
LUGOVKIN, V.D.

Development of the supply of raw products for the canning industry.
Kons. i ov. prom. 12 no.10:16-19 0 '57. (MIRA 11:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Canning industry--History)

Country : USSR
Category: Cultivated Plants. Potatoes. Vegetables.
Cucurbits.

M

Abs Jour: RZhBiol., No 22, 1958, No 100316

Author : Lugovkin, V.D.
Inst : -
Title : Growing Scallop Squash for Canning.

Orig Pub: Konservn. i ovoshchesush pron-st', 1958, No 1,
19-20

Abstract: Agricultural technique for growing scallop squash according to the data of Scientific Research Institute of Canning and Vegetable Drying Industry. In Krasnodarskiy Kray, the vegetative period of scallop squash is 55-60 days (until the beginning of fruit bearing);

Card : 1/2

M-71

Country : USSR

M

Category: Cultivated Plants. Potatoes. Vegetables.
Cucurbits.

Abs Jour: RZhBiol., No 22, 1958, No 100316

the average yield is 15-20 tons/ha. It is not recommended to pick young fruit on seed plots, since this lowers the quality and the yield of the seeds. -- M.P. Ovsyannikova

Card : 2/2

LUGOVKIN, V.D.

Growing spice plants for the canning industry. Kons. i ov. prom. 13
no.2:28-32 F '58. (MIRA 11:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Spices)

LUGOVKIN, V.D.

Useful manual for agricultural workers. Kons. i ov. prom. 13
no.6:42 Je '58. (MIRA 11:5)
(Krasnodar Territory--Tomatoes)

LUGOVKIN, V.D.

Review of the book "Tomato cultivation in the people's democracies."
Kons. 1 sv. prom. 14 no.1:42-43 Ja '59. (HIRA 12:1)
(Tomatoes)

LUGOVKIN, V.D.,

Organizing the growing of green peas in areas near canning
factories. Kans. i ov. prom. 14 no.4:20-23 Ap '59.

(MIRA 12:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i
dvoshcheshil'noy promyshlennosti.

(Peas)

LUGOVKIN, V.D.

Conference on the expansion of fruit growing in the
Crimea. Kons.1 ov.prom. 14 no.12:43-44 D '59.
(MIRA 13:3)
(Crimea--Fruit culture)

LUGOVKIN, V.D.

Conference on a comparative study of the scientific methods used
for investigating the storage of potatoes, vegetables, fruits, and
berries. Kons.i ov.prom. 15 no.3:45-46 Mr '60. (MIRA 13:6)
(Food--Storage--Congresses)

LUGOVKIN, V.D.; MAKSIMOV, F.N.

Work experience of communist labor brigades of the Chkalov state farm. Kons.i ov. prom. 15 no.6:27-29 Je '60. (MIRA 13:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (for Lugovkin). 2. Krymskiy konservnyy trest (for Maksimov).
(Bakhchisaray--Canning and preserving)

LUGOVKIN, V.D.

Executive meeting of canning industry specialists of the member
countries in the Council of Mutual Economic Assistance. Kons.1
ov.prom. 15 no.7:45 J1 '60. (MIRA 13:6)
(Canning industry--Congresses)

LUGOVKIN, V.D.

Fourth Plenum of the Central Board of Administration of the
Scientific and Technological Society of the Food Industry.
Kons. i ov. prom. 15 no. 12:40-41 D '60. (MIRA 14:1)
(Food industry--Congresses)

LUGOVKIN, V.D.

Prolong the vegetable processing season at the enterprises of
canning industry. Kons.i ov.prom. 16 no.1:25-28 Ja '61.

(MIRA 13:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Canning industry)

LUKOZHEV, Kh.N.; LUGOVKIN, V.D.

Increase the productive capacity of canneries in the Kabardino-Balkar A.S.S.R. Kons.i ov. prom. 16 no.2:30-31 F '61.

(MIRA 14:4)

1. Kabardino-Balkarskiy sovnarkhoz (for Lukozhev). 2. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (for Lugovkin).

(Kabardino-Balkar A.S.S.R.—Canning industry)

LUGOVKIN, V.D.

All-Union Seminar on the methods used in plant breeding and in the
growing of vegetable seeds. Kons.i. ov.prom. 16 no.4:44-46 Ap '61.
(MIRA 14:3)

(Plant breeding) (Vegetable gardening)

LUGOVKIN, V.D.

Fifth Plenum of the Central Board of the Scientific and
Technical Society of the Food Industry. Kons. i ov. prom.
16 no.7:38-40 JI '61. (MIRA 14:8)
(Food industry)

LUGOVKIN, V.D.

Mechanization of tomato harvesting. Kons. i ov. prom. 16 no.9:40-41
S '61. (MIRA 14:8)

(United States--Tomatoes--Harvesting)

LUGOVKIN, V.D.

Conference of the group of specialists of the Permanent Committee
of Economic and Technical Research Cooperation in the Field of
Light and Food Industry of the Member-Countries of the Council of
Mutual Economic Aid. Kons. i ov.prom. 17 no.4:38-39 Ap '62.
(MIRA 15:3)

(Canning industry) (Communist countries--International cooperation)

LUGOVKIN, V.D.; SAMSONOVA, A.N.

News review. Kons. i ov. prom. 17 no.8:45-47 Ag '62.
(MIRA 17:1)

LUGOVKIN, V.D.

Third Plenum of the Central Administration of the Scientific and
Technical Society of the Food Industry. Kons.i ov. prom. 18
no.2:45-46 F '63. (MIRA 16:2)
(Food industry)

LUGOVKIN, V.D.

Seminar on the seed growing of vegetable cultures for canning.
Kons. i ov.prom. 18 no.9:45 S '63. (MIRA 16:9)
(Seed industry) (Vegetables, Canned)

~~YUGOVKINA, M. I.~~ MISHARIN, D.M., redaktor; YEGURNOV, G.P., redaktor;
ANDREYEV, G.G., tekhnicheskij redaktor

[Labor productivity and labor-consumption of processes in coal pit
mines] Proizvoditel'nost' truda i trudoemkost' protsessov na ugol'-
nykh kar'erakh. Moskva, Ugletekhizdat, 1954. 169 p. (MLRA 8:4)
(Labor productivity) (Coal mines and mining)

LUGOVKINA, M.I., inzh.

Determination of the maximum dimensions of excavator-worked open-pit mines with top loading. Shakht. stroi. 5 no.6:15-19 Je '61.
(MIRA 14:6)

1. Giproruda.

(Excavating machinery)
(Strip mining)

GARKAVI, E.A., LUGOVKINA, V.P.

Clinical features of poliomyelitis based on material from the
Yaroslavl Pediatric Hospital for 1956. *Pediatrics* 36 no.4:48-53
Ap'58 (MIRA 11:5)

1. Iz kafedry detskikh bolezney (zav. - prof. A.I. Titova)
Yaroslavskogo meditsinskogo instituta.
(YAROSLAVL--POLIOMYELITIS)

LUGOVKINA, V.P.

Serous meningitis conditioned by the intestinal group of filterable viruses. *Pediatrics* no.2:11-16 '62. (MIRA 15:3)

1. Iz detskoy bol'nitsy No.1 Yaroslavlya (glavnyy vrach E.A. Garkavi, nauchnyy rukovoditel' - prof. A.I. Titova).
(VIRUS DISEASES) (MENINGITIS)

GLOBUS, L.L.; SOKOLOV, I.G.; SOKOLOV, B.I.; LUGOVKINA, Ye.I.; GURVICH,
E.A., red.; KASIMOV, D.Ya., tekhn. red.

[Manufacture of nonmetallic building materials] Proizvodstvo
nerudnykh stroitel'nykh materialov. Moskva, Gosstroizdat,
1963. 175 p. (MIRA 17:2)

1. Gosudarstvennyy soyuznyy institut po proyektirovaniyu ne-
metallorudnoy promyshlennosti.

LUGOVOY, A.F.

Result of the treatment of sodium chloride poisoning in rabbits.
Farm.i toks. 19 supplement:59-61 '56. (MLBA 10:7)

1. Kurs farmakologii s retsepturoy (rukovoditel' - dotsent A.F.
Lugovoy) Odesskogo sel'skokhozyaystvennogo instituta.
(SODIUM CHLORIDE, poisoning,
exper., ther. (Rus))

LUGOVOY, A. F., Docent.

"Etaminal narcosis for hogs."

Veterinariya Vol. 37, No. 3, 1960, p. 61

Odessa Agriculture Inst.

LUGOVOY, A.F., dotsent.

Etaminal anesthesia for swine. Veterinariia 37 no.3:61 M '60.
(MIRA 16:6)

1. Odesk'iy sel'skokhozyaystvennyy institut.
(Barbiturates) (Anesthesia in veterinary surgery)

IUGOVOY, A.M., agronom

Obtaining high yields of alfalfa seed. Zemledelie 7 no.3:81-82
Mr '59. (MIRA 12:4)

1. Kolkhoz "Progress," Voznesenskogo rayona, Nikolayevskoy oblasti.
(Alfalfa)

LUGOVOY, A.S.

Tracer. Mashinostroitel' no.4:25 Ap '63.
(Milling machines--Numerical control)

(MIRA 16:5)

LAVROVSKIY, Aleksandr Aleksandrovich; KUROCHKIN, Yu.V., *otv.red.*; LEBEDEVA,
L.S., *kand.biolog.nauk*, *red.*; BELEVICH, Ye.P., *red.*; ZABLOTSKIY,
V.I., *red.*; KOBLITSKAYA, A.F., *red.*; LUGOVOY, A.Ye., *red.*; KLIMOVA,
Z.I., *tekh.red.*

[Wild boar in the Volga Delta.] Kaban v del'te Volgi. Astrakhan',
Izd-vo "Volga," 1962. 66 p. (Astrakhanskiy zapovednik. Trudy, no.
7).
(MIRA 17:2)

LUGOVOY, A.Ye.; KUROCHKIN, Yu.V.

Gray crow in the Volga Delta. Trudy Astr. zap. no.6:135-143
'62. (MIRA 16:7)

(Volga Delta--Parasites--Crows)
(Volga Delta--Worms, Intestinal and parasitic)

LUGOVOY, A.Ye.

Dynamics of the distribution of nesting places of colonial birds in
the lower Volga Delta. Trudy Astr. zap. no.5:211-219 '61.

(MIRA 16:8)

(Volga Delta--Birds--Eggs and nests)

LUGOVY, A.Ye.

Birds of the Volga Delta. Trudy Astr.zap. no.8:9-185 '63.

(MIRA 18:1)

LUGOVY, A.M.

Formation of winter bird populations in the northern Caspian Sea.
Trudy Astr.zap. no.8:373-376 '63.

(MIRA 18:10)

GANYUSHKIN, M.A. [deceased]; LUGOVYI, A.Ye.

Ringling molted ducks in the Astrakhan Preserve. Trudy Astr.zap.
no.8:393-399 '63. (MIRA 18:16)

LUGOVOY, A.Ye.

Feeding habits of ichthyophagous gulls in the lower Volga Delta.
Trudy Astr. zap. no.5:220-231 '61. (MIRA 16:8)
(Volga Delta--Gulls) (Birds--Food)

MITROFANOV, M.G.; MIRSKIY, Ya.V.; DOROGOCHINSKIY, A.Z.; DRONIN, A.P.
MAKAR'YEV, S.V.; LUGOVOY, B.I.

Selecting the best arrangement for separating gasoline fractions
in molecular sieves. Trudy GrozNII no. 15:84-92 '63.
(MIRA 17:5)

BRUSKIN, D.E., dotsent. Primalni uchastiye: SENILOV, G.N., dotsent;
BASOVA, B.K., dotsent; BOKSHITSKIY, L.V., prepodavatel'; LUGOVOY,
G.F., prepodavatel'; CHUMAKOV, N.M., prepodavatel'. SENKEVICH,
A.M., dotsent, red.; CHAROV, A.D., tekhn.red.

[Electric equipment of airplanes] Elektrooborudovanie samoletov.
Moskva, Gos.energ.izd-vo, 1948. 464 p. (MIRA 12:6)

1. Kafedra inzhenerno-aviatsionnoy sluzhby Moskovskogo ordena
Lenina energeticheskogo instituta im. V.M.Molotova (for all
except Senkevich, Charov).

(Airplanes--Electric equipment)

AMMOV, I.I., red.; BURTSEV, D.N., red.; GORYUNOV, S.V., red.;
GUSEV, A.I., red.; KOROTKOV, G.V., red.; KOTLUKOV, V.A.,
red.; KUZNETSOV, I.A., red.; MIRONOV, K.V., red.;
MOLCHANOV, I.I., red.; NEKIPELOV, V.Ye., red.; PONOMAREV,
T.N., red.; POPOV, V.P., red.; PROKHOROV, S.P., red.;
SKROBOV, S.A., red.; TYZHNOV, A.V., red.; SHABAROV, N.V.,
red.; YAVORSKIY, V.I., red.; BOBKYSHEV, A.T., red. toma;
VINOGRADOV, B.G., red. toma; VOLKOV, K.Yu., zam. red. toma;
LUGOVOY, G.I., zam. red. toma; OGARKOV, V.S., red. toma;
SIMONOV, A.V., red. toma; IZRAILEVA, G.A., red.izd-va;
IVANOVA, A.G., tekhn. red.

[Geology of coal and combustible shale deposits in the
U.S.S.R.]Geologiya mestorozhdenii uglia i goriuchikh slant-
tsev SSSR. Glav.red.I.I.Ammosov i dr. Moskva, Gosgeoltekh-
izdat. Vol.2. [Moscow Basin and other coal deposits in
central and eastern provinces of the European part of the
U.S.S.R.]Podmoskovnyi bassein i drugie mestorozhdenia uglia
tsentral'nykh i vostochnykh oblastei Evropeiskoi chasti
RSFSR. 1962. 569 p. maps. (MIRA 15:9)

1. Russia (1923- U.S.S.R.)Ministerstvo geologii i okhrany
nedr.

(Coal geology)

LUGOVOY, A.S.

Grinding the teeth of kmurling rolls. Mashinostroitel' no.8:
27 Ag '62. (MIRA 15:8)

(Grinding and polishing)

LUGOVY, G. M.

USSR/ Engineering - Machine repair

Card 1/1 : Pub. 70 - 1/11

Authors : Lugovoy, G. M. Engineer., and Khaykis, L. B. Cand. of Techn. Sc.

Title : The problem of regulating repair works

Periodical : Mekh. stroi. 4, 3-6, Apr 1954

Abstract : Criticism of the present way of handling machine repairs, is presented. An 18 point program for organizational and work-shop improvements offering great economical savings, better and much faster methods of machine repair works, was suggested. Tables.

Institution :

Submitted :

USSR/Medicine - Nutrition LUGOVY, G. V.

FD-3297

Card 1/1 Pub. 141 - 12/19

Author : Nogaller, A. M.; Lugovoy, G. V., Petrova, Z. A.

Title : Application of bran meals in therapeutic nutrition

Periodical : Vop. pit., 39-41, Jul/Aug 1955

Abstract : Suggests use of bran for therapeutic nutrition since it has more protein and less carbohydrate in comparison to flour. Lists 15 recipes for preparation of dishes using bran. No references.

Institution : Sanitoria No 1 and No 2, Yessentuksk Resort

Submitted :

L 31331-65

ACCESSION NR: AP4047235

S/0219/64/058/010/0011/0015

AUTHOR: Lugovoy, L. A.; Parin, V. V.

TITLE: Blood circulation in separate cerebral cortex areas during light and olfactory stimuli

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny*, v. 58, no. 10, 1964, 11-15

TOPIC TAGS: animal, rabbit, blood flow, cerebral cortex, parietal area, occipital area, olfactory area, thermoelectric method, light stimulus, olfactory stimulus

ABSTRACT: Blood circulation changes in the parietal, occipital, and olfactory areas of the cerebral cortex during light and olfactory stimuli were investigated in 15 nonanesthetized rabbits. Thermoelectrodes were implanted in the cortex areas at a depth of 1 mm to record blood circulation rate changes by a thermoelectric method. Arterial pressure and respiration were recorded at the same time. An intermittent light signal served as a light stimulus and a weak ammonia solution served as an olfactory stimulus. Findings show that light

Card 1/2

L 31331-65

ACCESSION NR: APL047235

stimuli selectively increase blood circulation in the occipital area, and olfactory stimuli selectively increase blood circulation in the olfactory area. However, in both cases arterial pressure changes very little or not at all. Apparently increased functional activity of a given cerebral cortex area is accompanied by an increased blood supply to that area, and at the same time blood circulation of the other cortex areas does not change or changes very little depending on the strength and duration of the stimulus. Blood supply changes in the different cerebral cortex areas are found to correspond to the type of cortex excitation and the blood supply increases possibly are related to the more intense metabolism in the active cortex areas. Orig. art. has: 3 figures.

ASSOCIATION: Laboratoriya fiziologii i patologii dykhaniya i krovoobrashcheniya Instituta normal'noy i patologicheskoy fiziologii AMN SSSR, Moscow. (Physiology and Pathology of Respiration and Blood Circulation Laboratory of the Institute of Normal and Pathological Physiology AMN SSSR)

SUBMITTED: 10Aug63

ENCL: 00

SUB CODE: LS

NR REF SOV: 002

OTHER: 007

Card 2/2

LUGOVOY, L.A.

Changes in the velocity of the blood stream in the cortical and medullar layers of the kidney in introduction of adrenaline and compression of the trachea. Biul. eksp. biol. i med. 59 no.6:20-23 Je '65. (MIRA 18:6)

1. Laboratoriya fiziologii i patologii dykhaniya i provoobra-shcheniya (zav. - chlen-korrespondent AMN SSSR prof. M.Ye. Marshak) Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR prof. V.V. Parin) AMN SSSR, Moskva.

LUGOVOY, M.V.

LEVINSON, Nikolay Grigor'yevich [deceased]; GEYDYSH, S.S., inzh., retsenzent;
GINTSBURG, M.V., inzh., retsenzent; LUGOVOY, M.V., inzh., retsenzent;
REZNIK, I.S., inzh., retsenzent; TROYANOVSKIY, V.V., inzh., retsenzent;
TIMOFYEVSKIY, T.P., inzh., red.; BARYKOVA, G.I., red.izd-va; MODEL',
B.I., tekhn.red.

[Mechanization of management control (management technology)]
Mekhanizatsia upravlencheskogo truda (orgatekhnika). Moskva.
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.1. 1958.
386 p. (MIRA 12:2)
(Automatic control) (Industrial management)

LUGOVOY, P.A., inzhener; GALKIN, N.V., inzhener; TSYPIN, L.G., inzhener.

Determining the length of locomotive runs in using electric
and diesel traction. Zhel. dor. transp 38 no.8:8-15 Ag 1956.
(MLRA 9:10)

(Railroads--Management)

INGOVOY, P.A., inzh.

Determining the efficiency of capital investments. Zhel. dor.
transp. 47 no.6:72-75 Je '65. (MIRA 18:6)

LUGOVOY, P.A., inzhener.

On some unsolved problems. Elek. i tepl. tiaga no.4:13-15 Ap '57.
(Railroads--Management) (Locomotives) (MLRA 10:6)

LUGOVOY, P.A., inzh.; TSYPIN, L.G., inzh.; GIBSHMAN, A.Ye., prof.,
doktor tekhn. nauk, retsenzent; USHAKOV, S.S., doktor
tekhn. nauk, retsenzent; KRISHTAL', L.I., red.;
VOROTNIKOVA, L.F., tekhn. red.

[Technical and economic calculations in the reorganiza-
tion of railroads] Tekhniko-ekonomicheskie raschety pri
rekonstruktsii zheleznykh dorog. Moskva, Transzheldoriziat,
1963. 246 p. (MIRA 16:4)
(Railroad engineering)

VERTSMAN, G.Z., kand. tekhn. nauk; PANTELEYEV, P.I., kand. tekhn. nauk; GOMOLYAYO, I.M.; TAL', K.K.; GUSEVA, K.G.; LUGOVOY, P.A.; MASSAN, A.M.; GALKIN, N.V.; SAPRYGINA, G.M.; CHESNOKOV, D.S.; DROZDKOV, V.I.; IZYUMOV, P.S.; ZAK, B.O.; KOROGID, P.Ye.; MAKSIMOVICH, L.N.; ZBOROVSKAYA, M.I.; PAVLOVSKAYA, S.A.; BORISOV, A.V.; SELIVANETS, N.Ye.; ITKES, V.M.; YATSKEVICH, Ya.D.; KOZYRSKIY, N.P.; NIKITIN, V.D.; NEKLEPAYEVA, Z.A., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Design and planning of railroad stations and junctions]
Proektirovanie zheleznodorozhnykh stantsii i uzlov; spravochnoe i metodicheskoe proizvodstvo. Moskva, Transzheldorizdat, 1963. 443 p. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut transportnogo stroitel'stva (for Guseva). 2. Gosudarstvennyy institut tekhniko-ekonomicheskikh izyskaniy i proyektirovaniya zheleznodorozhnogo transporta (for Zak). 3. Kiyevskiy gosudarstvennyy proyektno-izyskatel'skiy institut (for Kozyrskiy). 4. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta Im. I.V. Stalina (for Nikitin).

(Railroad engineering)

LUGOVOY, P.I.; POZDNYSHV, A.V., redakter; KARYAKINA, M.S., tekhnicheskiy redakter.

[Pneumatic weapons] Pnevmaticheskoe oruzhie. Moskva, Izd-vo DOSAAF,
1955. 86 p. (Firearms) (MLRA 9:5)

FOTIYEV, S.M.; LUGOVOY, P.N.

Increased water content of the crystalline rocks in the western
part of the Aldan Shield. Mat. Kom. po izuch. podzem. vcd. Sib.
i Dal' Vost. no.2:164-175 '62. (MIRA 17:8)

LUGOVOY, P.N.

Hydrogeological characteristics of the Olekma-Chara interfluve.
Mat. Kom. po izuch. podzem. vod. Sib. i Dal' Vost. no.2:176-185
'62.
(MIRA 17:8)

LUGOVOY, F.N.

Characteristics of the formation of karst in frozen formations.
Geol. i geofiz. no.8:25-33 '64 (MIRA 18:2)

1. Institut mineralovedeniya imeni Ubracheva, Moskva.

LUGOVOY, S.P.

UBD-3 machine for cutting off potato tops before digging. Trakt. 1
sel'khozmas. 30 no.7:31-32 J1'60. (MIRA 13:10)
(Potatoes--Harvesting)

LUGOVOY, T.

The eyes and conscience of a construction project. Sov. profsoiuzy
19 no.11:14-15 Je '63. (MIRA 16:8)

1. Predsedatel' kontrol'no-operativnoy gruppy ob"yedinnenogo
komitet^a postroyek trest^a "Novomoskovskkhimstroy", Novomoskovsk,
Tul'skoy obl.
(Novomoskovsk--Industrial plants--Design and construction)
(Trade unions)

KUPERMAN, Z., inzh. (Moskva); MOROZOV, A.; ZHIRNOV, N.; POLYAKOV, V., inzh.;
LUGOVOY, V. (Tbilisi); KEL'BERT, D. (Tashkent)

Technical information. Okhr. truda i sots. strakh. 5 no.9:36-40
S '62. (MIRA 16:5)

1. Starshiy inzhener avtokolonny 2200 Kirovogradskogo oblastnogo
avtotransportnogo tresta (for Zhirnov).
(Technological innovations) (Safety appliances)

LUGOVOY, V.

Transistorized shortwave converter. Radio no. 3:47-50 Mr '65.
(MIRA 18:6)

LINGOVOY, V.N.

Stimulated Raman scattering in the anti-Stokes region. Zhur.
eksper. i teor. fiz. 48 no.4:1216-1219 Ap '65.

(MIRA 18:5)

L. V. LUGOVY V.

USSR/ Electronics - Radio receivers

Card 1/2 Pub. 89 - 19/27

Authors : Lugovoy, V., and Malochinskiy, O.

Title : Calculation of the input installation of a superheterodyne radio receiver

Periodical : Radio 8, 40-42, Aug 1955

Abstract : Mathematical formulas are presented (as an aid for the radio amateur constructor) for the calculation of the input installation for superheterodyne radio receivers. The calculation of the input installation should begin with first determining the required circuit quality. The circuit quality in the case of short-waves with consideration of all the

Institution :

Submitted :

Card 2/2 Pub. 89 - 19/27

Periodical : Radio 8, 40-42, Aug 1955

Abstract : losses incurred can be no higher than 75-100 and it becomes necessary to employ a HF-amplifier in the receiver. In the case of long and medium-waves the circuit quality of the input installation should be determined on the basis of a given nonuniformity of the frequency characteristic in the band pass. Diagram; graphs.

86853

S/141/60/003/005/006/026
E032/E314

9.2582

AUTHOR: Lugovoy, V.N.TITLE: On the Parametric Excitation of an Oscillator in a
ThermostatPERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiofizika, 1960, Vol. 3, No. 5, pp. 774 - 777

TEXT: Consider a region of space filled with a gas of oscillators and located in a thermostat. Suppose further that the modulus of elasticity K of each oscillator is a function of time t . The present author investigates the properties of such a system. If the modulus of elasticity is a constant then the absorption lines have the Lorentz form (Van Vleck and Weisskopf, Ref. 1). In the present paper particular attention is paid to the case $K(t) = K - \alpha \cos(pt)$. It is shown that for a certain value of α the absorption line goes over to an emission line, i.e. the gas under consideration has negative losses in this case. Assuming that "strong" collisions take place in the above gas so that the density matrix $\rho(t)$ is of the form:

Card 1/3

86853

S/141/60/003/005/006/026

E052/E314

On the Parametric Excitation of an Oscillator in a
Thermostat

$$\rho(t) = \rho_0(t) = \frac{\exp\{-\hat{H}(t)/kT\}}{Sp \exp\{-\hat{H}(t)/kT\}} \quad (1)$$

and the Hamiltonian in the presence of an external force is
of the form:

$$\hat{H}(t) = \hat{p}^2/2m + K(t)\hat{x}^2/2 - \hat{x}f(t) \quad (2)$$

it is shown that the mean value of the coordinate of an
oscillator is the solution of the following differential
equation:

$$m\ddot{\bar{x}} + \frac{2m}{\tau} \dot{\bar{x}} + k(t)\bar{x} = f(t) \frac{k(t)}{K(t)} + \frac{m}{\tau} \frac{d}{dt} \frac{f(t)}{K(t)} \quad (13)$$

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On the Parametric Excitation of an Oscillator in a Thermostat

In this equation τ is the mean time between collisions,

$k(t) = k(t) + m/\tau^2$ and m is the mass of an oscillator. This

equation is used to obtain the imaginary part of the

polarisability κ'' with $K(t) = K = \alpha \cos(\omega t)$ and

$f(t) = f_0 \cos(\omega t)$. Acknowledgments are expressed to

F.V. Bunkin for directing this work. There are 1 figure and 4 references: 2 Soviet and 2 English.

ASSOCIATION: Moskovskiy fiziko-tekhnicheskii institut
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9.2574 (1155, 1158)

AUTHOR: Lugovoy, V.N.

TITLE: On Maser operation when there are two resonant frequencies within the spectral line

PERIODICALS: Radiotekhnika i elektronika, v. 6, no. 10, 1961, 1700 - 1706

TEXT: Since the dimensions of resonators employed in the infra-red and optical region are much larger than the wavelength it is possible have a number of resonances within the spectral line. The purpose of this paper is to investigate the stability of Maser oscillations in the case of two separate resonances. The oscillation of a Maser device can be described by an ordinary differential equation system which was derived by A.N. Orayevskiy (Ref. 4: Radiotekhnika i Elektronika, 1959, 4, 4, 718) and V.M. Fain (Ref. 6: Zh. Exp. i tekh. Fiz. 1957, 33, 4, 945). The author starts the analysis by generalizing this differential equation system for the investigated case when the resonator can support two different modes. To facilitate the solution the following assumptions are made: 1)
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On Maser operation when there ...

The bandwidth of both resonant modes is considerably smaller than the spectral line width of radiation which again is very small in comparison with the center frequency. 2) The frequency of both resonances is nearer to the middle of the line than to the edges. The differential equation system is solved under these conditions with the aid of van der Pol's method (applicable when the coefficients are slowly varying) and evaluated for pure sinusoidal oscillations. It is concluded that if the two modes of the resonator are identical (i.e. the qualities and the coupling coefficients to the substance used are the same) and $\Delta \omega < \omega/Q$ (i.e. the difference of the resonant frequencies is less than a certain critical value, Q denotes the quality of the resonant circuit), there is one stable sinusoidal oscillation. If $\Delta \omega$ is larger than this critical value then two stable oscillations are possible at two separate frequencies. The frequency in this case is determined by the initial conditions. It is noted that if the difference of resonant frequencies is too large the conditions of stability have to be investigated separately for each mode of oscillation. There are 1 figure and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc. The refer-

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On Maser operation when there ...

ence to the English-language publication reads as follows: A.L.
Schawlow, C.H. Townes, Phys. Rev., 1958, 112, 6, 1940.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva, akademii nauk
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