

Approved C. N.

PLATE I BOOK REVIEWS
CIAJ, Dnepropetrovsk, Dnepropetrovsk
697 p. Series also translated. No. of copies printed not given. No
circulation mentioned.

PROBING: This book is intended for metallurgists, physicists, chemists, and
civil and mechanical engineers.

CONTENTS: The book consists of 39 papers by Russian specialists on problems in
science and technology, particularly metallurgy, physics, chemistry,
biology, civil and mechanical engineering, and electronics. The
papers are given at the end of the book. Some of the articles
are accompanied by references. No pronunciation or notation. At the back
of the book there are 29 indexes, all Russian.

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AVRAM, C.N.; FILIMON, I.

Simple beton elements under the influence of eccentric compression.
Studii tehn Timisoara. 9 no.3/4:325-337 JI-D '62.

PANIN, N.; AVRAM, E.

New traces of vertebrates in the Miocene of the Rumanian sub-Carpathians. Studii cerc geol 7 no.3/4:455-484 '62.

AVRAM, E. MATEI, V.

New paleontologic data on the Cretaceous Flysch in the northeastern part of the Boflana Valley Basin. Studii cerc geol geof geogr 9 no.2:321-327 '64.

1. Geologic Committee attached to the Rumanian Council of Ministers. Submitted April 28, 1964.

MIRCEANU, G., et al.; STEFANESCU, M.; AVRAM, E.; MATZI, V.; ALEXANDRU, M.;
BULNAREANU, C.

Nature of the appearances of crystalline schists in the Zanava-
Prislop region. Studii cerc geol geof geogr 9 no.2:511-518 '64.

1. Geological Committee and the Enterprises of Geology and
Laboratories. Submitted April 28, 1964.

WAL, G.; JOURNAL, T.

"Forest Planting in Rumania", p. 344, (RUMENIA AMERICANA, Vol. 12, No. 8, August 1964, Bucharest, Rumania)

SO: Monthly List of East European Accessions (MEL), 10, Vol. 4, No. 1, March 1965, Uncl.

L 20/5-66 EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) JD/EM
ACCESSION NR: AP5027064 RU/0017/65/000/004/0199/0203

AUTHOR: Guida, O. (Engineer); Avram, Gh. (Engineer)

230

TITLE: Experiments concerning the manufacture of non-corrosive ferritic steel tubes in a mill for 3" seamless tubes of the stossbank type

SOURCE: Metalurgia, no. 4, 1965, 199-203

TOPIC TAGS: ferritic steel, metal tube, metal test

ABSTRACT: On the basis of the tests reported in this paper, the authors conclude that non-corrosive ferritic steel H 17 could be used to advantage at the Republica Pipe Works, without major changes in manufacturing technology and with significant technical-economic advantages. Orig. art. has 6 figures and 7 graphs.

ASSOCIATION: Guida Institutul de cercetari metalurgice (Metallurgical Research Institute); Avram Uzinele de tevi "Republica" ("Republica" Pipe Works)

SUBMITTED: 00

ENCL: 00

SUB CODE: NN

NO REF SOV: 004

OTHER: 004

JPBS

Card 1/1

DD

AVRAM, I.

The AD-20 and the AD-12 ceramic fluxes for automatic welding; flux submitted and tested in the Lao Tac-dun Plants of Bucharest.

p. 52 (Metalurgia Si Constructia De Masini. Vol. 9, no. 4, Apr. 1957. Bucuresti, Rumania)

Monthly Index of East European Accessions (MEAT) IC. Vol. 7, no. 2, February 1958

ZOSIN, C., prof.; MANESCU, N., dr.; AVRAM, J., dr.; MIHZA, N., dr.;
GHELERT, I. Lazar, ing.

A model of the artificial kidney made in the Medical Clinic III of
the Medical Institute of Timisoara. Med. intern., Bucur 13 no.2:
297-302 F '61.

(KIDNEY, ARTIFICIAL)

MANESCU, N., dr.; AVRAM, J, dr.; METZ, A., dr.; HENNING, R., dr.;
POP, S., dr.

Nephrogenic anemia. Clinical and etiopathogenic considerations. Med.
intern. 14 no.9:1109-1116 S '62.

1. Lucrare efectuata in Clinica a III-a medicala (prof. C. Zosin),
I.M., Timisoara.

(KIDNEY DISEASES) (ANEMIA)

STEFANESCU, D., Prof.; TUCHEL, N.; AVRAM, L.

Superficial tension of electrolyte solutions and their specific conductivity. Rumanian M. Rev. 2 no.2:93 Apr-June 58.

(ELECTROLYTES:

superficial tension of electrolyte solutions & their specific conductivity)

Country : Panama
Institution : Organic Chemistry. Synthetic Organic Chemistry

Ref. No. : Ref. Zhur-Khiz'ya, No. 12, 1959, No. 4237A

Author :
Instit. :
Title :

Ref. No. :

Abstract : Substance (III) is hydrogenated (PTC₂, 40° in ethyl acetate). This results in the formation of KCN(CH₂)₂ having a melting point of 83°. The addition of Br₂ to III produces RBr·(CH₂Br)₂ (IV) which upon being heated is converted into RC(CH₂Br)=CHBr (V). In the presence of CH₃OH or of alcohol, IV is transformed into RC(CH₂Br)₂OR' where R'=CH₃ (VI) or C₂H₅ (VII). The synthesis of I is described according to the following arrangement: KCN+NH₄Cl+

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Country: Romania
Category: Organic Chemistry, Synthetic Organic Chemistry G

Ref. Jour.: Ref Zhur-Khimiya, No.12, 1959, No.48374

Author :
Instit. :
Title :

Chem. No. :

... of : ether). Unpurified IV (from 0.02 moles of III) is heated in vacuum for 1 hour at 105-110°; the salt is dissolved in hot CH₃OH and a 65% yield of V is separated; the melting point is 171°. CH₃OH is added to unpurified IV (from 0.04 moles of III); the mixture is boiled until the precipitation of HBr stops; a 59% yield of VI is separated; its melting point is 120-121° (from CH₃CH). VII is obtained in a similar manner by the action of alcohol; the melting

Prod: 4/7

Country : Romania G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abstr. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42374

Author :
Instit. :
Title :

Orig. Pub. :

Abstract : is separated. 1 mole of VIII is added to a solution of 1 mole of phthalic anhydride (or 166 g of $\text{C}_6\text{H}_4(\text{COOH})_2$) and 2 moles of KOH in 400 ml of water; the mixture is heated, while evaporating the water, to 180-190°. This temperature is maintained for 30 minutes; upon cooling the mass is pulverized into powder which is extracted with 10% Na_2CO_3 ; the filtrate is acidified with concentrated HCl, and a 50% yield of IX is separated off; the melting point is

Ref: 6/7

Country : Romania G
Category : Organic Chemistry. Synthetic Organic Chemistry

Abstr. Jour. : Ref Zhur-Khimiya, No.12, 1959, No.42374

Author :
Instit. :
Title :

Orig. Pub. :

Abstract : 154° (from benzoyl). 0.36 moles of IX and 0.66 moles of SOCl_2 are heated at 50° for 2 hours; the excess SOCl_2 is distilled off in vacuum, and the unpurified X is separated; its melting point is 82°. The CO and HCl are separated by heating the unpurified X to 180-190°; the residue is distilled at 170-180°/10 mm; I is then obtained, its yield is 47%, melting point 105° (from CCl_4).
-- V. Skerodunov

Ankon, Marguerite

Chem

The catalytic isomerization of saturated hydrocarbons. The mechanism of activation of aluminum chloride by water. Costin D. Nenitescu, Marguerite Avram, and Elvire Sliam (Acad. Rep. populare romuna, Imerfest). *Rev. Roum. Chim.* 1978, 23, 1225-22. In the isomerization of satd. hydrocarbons by means of AlCl₃, the catalyst must be activated either by an alkyl halide, which may be formed *in situ* from a hydrogen halide and traces of olefins present in the hydrocarbon feedstock, or by water. A mechanism for the isomerization is proposed and supported. The hydrocarbons (2 mols), purified by treatment with H₂SO₄ followed by hydrogenation over Ni and distn. over Na, were brought into contact with 0.4 mole of AlCl₃ sublimed *in vacuo* and activated with 0.4 mole H₂O in a stream of CO₂. The gas produced was analyzed for H₂ by combustion after removal of the CO₂ in 60% KOH and of org. gases with active C. Blanks were run on the CO₂ and on the system without the activator. A trial with cyclohexyl chloride as activator for the AlCl₃ in the isomerization of cyclohexane produced no H₂. 30 references.

Vera I. Vivian...

3
8000

AM

AVRAM, H.

NENITESCU, C.; AVRAM, M.; SLIAM, E. Reduction of 5-nitouracil by sodium dithionite.

Studia chimice chimie
Vol. 4, No. 1/2, Jan/June 1956

Bucuresti, Rumania

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 5, No. 10,
Oct. 1956

AVRAM, Margaret				

Cyclobutane series. I. 1,3-Disubstituted cyclobutane derivatives. Margarete Avram, Costin D. Năntău, and Maria Maxim (Acad. R.V.R., Bucharest, Romania). Chem. Ber. 90, 1424-32(1957); cf. C.A. 54, 4512a. The synthesis of 1,3-diaminocyclobutane (I) as well as several intermediate products and derivs. was described. Epibromohydrin (246 g.) and 290 g. PhCH₂Br heated 8 hrs. at 155-60° (internal temp.) with 0.2 g. HgCl₂ and the product distd. gave 343 g. crude PhCH₂OCH(CH₂Br) (II), b_p 148-55°; the fore-run (b_p to 150°) heated again with HgCl₂ and the product distd. gave 64 g. II, b_p 148-55°; on repeated distn. II b_p 148°. Epichlorohydrin (340 g.) and 615 g. PhCH₂Br treated with 0.5 g. HgCl₂, heated slowly (during 8 hrs.) to 155°, kept 6 hrs. at 155-60°, and distd. gave 608 g. PhCH₂OCH(CH₂Br)CH₂Cl (III), b_p 146-57°; from the fore-run an addnl. 103 g. III was obtained; redistd. III b_p 146°. Na (23 g.) was dissolved in 400 cc. EtOH, half the soln. and 88 g. CH₂(CO₂Et), 400 cc. dry C₂H₅, and 1.54 g. crude II (or 132 g. crude III) heated 1.5 hrs. at 170° (bath temp.) in a 1.5 l. autoclave (pressure 6 atm.), cooled (neutral soln.), 400 cc. dry C₂H₅ and the remaining NaOEt soln. added, heated 6 hrs. (with III 9 hrs.) at 170°. The cooled neutral soln. filtered from KBr (or KCl), and the filtrate concd. on a H₂O bath; the KBr was dissolved in H₂O, the soln. extd. with Et₂O, the ext. concd., the residue combined with the main fraction, and repeatedly distd.

*to give 65 g. crude CH₂CH(OCH₂Ph)CH₂CO₂Et (IV), b_p 178-83°, on redistn. b_p 178°, d₄ 1.0083, n_D²⁰ 1.4810. Crude IV (160 g.) and 170 g. KOH in 420 cc. EtOH and 300 cc. H₂O refluxed 2 hrs. on a H₂O bath, evapd. *in vacuo* almost to dryness, the residue dissolved in 400 cc. H₂O, the soln. extd. with Et₂O, acidified with concd. HCl (soln. V), and the ppt. filtered off gave CH₂CH(OCH₂Ph)CH₂CO₂H₂ (CO₂H), m. 158° (H₂O). Soln. V prepd. as above extd.*

with 5 100-cc. portions Et₂O, the ext. dried, evapd., the residue heated at 10 mm. until CO₂ evolution ceased, and

distd. gave 98 g. CH₂CH(OCH₂Ph)CH₂CHCO₂H (VI), b_p 194°, d₄ 1.13907. VI (2 g.) and 1 g. urea heated 3 hrs. at 130-5° gave the amide, m. 120° (H₂O). VI (98 g.), 50 cc. abs. EtOH, 80 cc. C₂H₅, and 2 drops H₂SO₄ refluxed 8 hrs. (H₂O separator used) gave 100 g. VI Et ester (VII), b_p 139°, b_n 175°, d₄ 1.0632, n_D²⁰ 1.5019, MR 65.00. VII (117 g.) in 500 cc. EtOH mixed with 0.5 g. Pd black, shaken with H at atm. pressure, after absorption of the calcd. amt. H (5-8 hrs.) the catalyst filtered off, the filtrate

concd., and the residue distd. gave 65 g. CH₂CH(OH)-

CH₂CHCO₂Et (VIII), b_p 150°, d₄ 1.0727, n_D²⁰ 1.4504, MR 36.13. VIII (30.4 g.) and 35.2 g. PhSO₂Cl cooled in ice H₂O, treated portionwise with 20 cc. dry C₂H₅N, the mixt. kept 20 hrs. in an ice box, treated with 30 cc. H₂O, extd. with Et₂O, the Et₂O ext. washed successively with H₂O, dil. HCl, aq. Na₂CO₃, and H₂O, dried, and evapd. *in vacuo* (50° bath temp.) gave 65 g. PhSO₂ ester (IX) of VIII, purity 60.7%. IX (65 g.) dissd. with 55 cc. EtOH, treated with 24 g. NaN₃ in 25 cc. H₂O, the mixt. boiled 10 hrs., cooled, the sepd. PhSO₂Na dissolved by adding H₂O, the soln. extd. with Et₂O, the ext. washed with H₂O, and dried gave 27 g.

CH₂CHN₃CH₂CHCO₂Et (X), b_p 94°, d₄ 1.0902, n_D²⁰ 1.4007, MR 42.51. X (25.5 g.) and 15 cc. N₂H₄·H₂O (XI) heated 30 min. on a boiling H₂O bath, the excess XI evapd. *in vacuo* on the H₂O bath, and the residue cooled gave 23 g. hydrazide (XII), m. 70° (C₂H₅-ligroine). XII (23 g.) dissolved in 270 cc. cold (0°) N HCl, mixed with 150 cc. Et₂O, the mixt. treated dropwise at 0-5° with aq. NaN₃

Allem, M. J. S. R. T. E. (191-125-01, (191-125-01); 4
and M. J. S. R. T. E.

hydraide subjected to a Curtius degradation gave $\text{CH}_3\text{CH}(\text{NH}_2)\text{CH}_2\text{CH}_2\text{NHCO}_2\text{Et}$, m. 185° (aq. EtOH). IV re-

duced like VII gave 85% $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CH}_2\text{CO}_2\text{Et}$ (XXI), b. 120-2°, d₄ 1.118, n_D 1.448, M_r 52.17. XXI oxidized like VIII gave 75% oxo diester, b. 112-13°; semi-carbazone m. 170°; 78% oxime (XXII), b. 127°, d₄ 1.1583, n_D 1.4085, M_r 55.03. XXII (12 g.) catalytically reduced like XVIII gave 4 g. amino diester, b. 98°, and 6 g. compd., b. 195°, apparently the secondary amine. IX (10 g.) in 10 cc. EtOH treated with 10 g. KI in 5 cc. H₂O, boiled 10

hrs. on a H₂O bath, and worked up gave 5 g. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NHCO}_2\text{Et}$ (XXIII).

b. 113° (decompn.). XXIII (5 g.) in 100 cc. 80% EtOH treated portionwise during 12 hrs. with 150 g. 3% Na-Hg with stirring, the supernatant liquid sepd. from Hg, boiled 6 hrs., acidified, and extd. with Et₂O

gave 1.0 g. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NHCO}_2\text{H}$, b. 110°, b. 194°; S-benzylthiuronium salt m. 176° (EtOH). A more convenient method of prep. I from XII was as follows. XII (31 g.) was converted, like in the prepn. of XIII but replacing the PhCH₂OH by 100 cc. abs. EtOH, into 32 g. crude

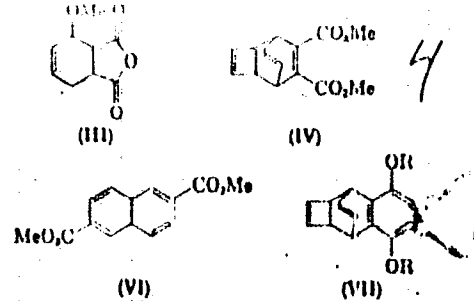
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NHCO}_2\text{Et}$ (XXIV). Crude XXIV (32 g.) subjected to a Curtius degradation gave 13 g. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NHCO}_2\text{Et}$.

$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$, b. 115°, hydrogenated with Pd black to 60% I, b. 155° [1,3-di-ac deriv. m. 218° (EtOH)].

12
3/13
sk

AVRAM, M

Investigations in the cyclobutane series. II. Cyclobutadiene. *Matetele Avram, Costin, D., Neutzesco, and Elie, AJICA (Acad. R. V. R. Bucarest, Romania). Chem. Ber. 90, 183 (1957); cf. C.A. 53, 10093.* -- Hofmann degradation of 1,3-bis(dimethylamino)cyclobutane as well as thermal fission of Reppe adducts from cyclooctatetraene and several dienophiles result only in formation of butadiene (I) instead of the expected cyclobutadiene. A soln. of 1.8 g. 1,3-bis(dimethylamino)cyclobutane-2MeI (II) in 20 ml. MeOH is shaken 1 hr. with Ag₂O (from 6 g. AgNO₃ and 10% aq. NaOH). After filtration and washing of the ppt. with MeOH, the filtrate is evapd. at 20-35° in vacuo. From a bath temp. of 120° up to 200°, decompn. with formation of 20 ml. gas, which is caught over 60% KOH, takes place; the gas has a C-H ratio of 1:1.5. II (4.26 g.) is heated with 6 g. KOH in 6 ml. water for 1.5 hrs.; the resulting gas is led into a soln. of Et in CH₂Cl₂. After evapn. a small quantity 1,2,3,4-tetrabromobutane, m. 117°, is left. II (4.26 g.) after treatment according to the first procedure, on distn. of the filtrate, gives 2 ml. MeOH, which on diln. with water yields an oil. After extrn. with ether, drying, and evapn., the yellow oil (50 mg.) is mixed with 50 mg. maleic anhydride to give III, m. 97° (dioxane-ether) (Fialg, C.A. 44, 6898J) (MeO-



463 b
463 d
1-30 (w)
462 c(j)

CCl₄) (28 g.) and 23 g. cyclooctatetraene is heated 8 hrs. at a bath temp. of 150-5°. At slightly higher temp. decompn. takes place to give 25 g. IV, b_p 140-150°. On heating 0.1 mole (24 g.) IV 15 min. to about 300°, 300-420 ml. gas is vigorously evolved and proves to be I (15-17% yield). From the residue there is obtained 4-6 g. di-1,2,6-naphthalenedicarboxylate (V), m. 187°, 6-6.5 g. (30-33) di-Me phthalate, b_p 140-60°, and 6.5 g. VI, m. 120°. At 300° with 30% Pd-C VI gives V. When VII (R = Me), m. 105° (Repp, *et al.*, C.A. 43, 6194g), is heated to the b.p., I is obtained in 26% yield, and from the residue 60-64% 1,4-dimethoxynaphthalene, m. 85°, and 1,4-dimethoxyphenanthrene, m. 124.5-125°, are isolated and identified. VII (R = Ar), m. 136-7° (*loc. cit.*), gives on thermal degradation 1,4-diacetoxynaphthalene, m. 123-4°, and 1,4-diacetoxypheanthrene, m. 137°. Fission of the adduct of cyclooctatetraene and α -naphthoquinone, m. 190-2°, gives 1, anthraquinone, and a mixt. of homocis benzanthraquinones, m. 160° (MeOH) (the mixed m.p. with authentic 1,2-benzanthraquinone, m. 168°, is 155°).

C. B. Fritag

Distr: 4E20(j)/4E3d

5
27 May
12

Cyclobutanes. III. Benzocyclobutadiene. Costin D.
Ștefănescu, Mașata Axram, and Dolia Dinu (Tech.
Institute, Bucharest, Romania). *Chem. Ber.* 90, 2541-4
 (1957); cf. *ibid.* 1857. — Formation of dihydrobenzodiphen-
 ylene (I) from 1,2-dibromobenzocyclobutene (II) and Zn
 (cf. Cava and Napier, *C.A.* 81, 11310) suggests that
 benzocyclobutadiene (III) is a distinct but short-lived inter-
 mediate. The cyclopentadiene (IV) adduct of III is now
 obtained by reaction of II with Li-Hg, then IV. Similar
 reaction with furan under these conditions gives an amor-
 phous polymer. A soln. of 80 g. α -C₆H₄(CHBr)₂ in 600
 cc. Me₂CO (very dry) is refluxed 52 hrs. with 105 g. NaI in
 100 cc. Me₂CO, filtered; the soln. evapd. to 750 cc., decolor-
 ized with Na₂S₂O₈, and dild. to 1 l. with H₂O, the ppt. sepd.,
 and the soln. extrd. with Et₂O gives 50% II, m. 62-3°. A
 soln. of 3 g. II in 50 cc. abs. Et₂O is shaken 10-12 hrs. with
 100 g. 0.5% Li-Hg (cooling at first), sepl., washed with
 H₂O, and evapd. to give 80% I, m. 74°. A soln. of 15 g. II
 in 25 cc. abs. Et₂O shaken with 600 g. 0.5% Li-Hg and 10 g.
 IV gives 62% 1,4-endomethylene-1,4,11,12-tetrahydrodiphen-
 ylene (V), b. 83-4°, n_D²⁰ 1.67317, d₄²⁰ 1.0639. V absorbs 1.2
 moles H over Pd. V forms adducts with PhN₃ (m. 132°)
 and CH₃N₃ (m. 70°). The latter heated to the b.p. in a
 CO₂ stream forms pyrazole. M. A. Simkins

b
4

gfg

AVRAM, M.

Distr: 4E20(1)/4E3d

d
3 May

Brominated derivatives of 2-phthalimidopropene, Costia
 D. NENIĆ, M. STOKIĆ, AVRAM, and Maria Maxim
~~Acc. rep. populara Romina, SEW 1972, chim. 6, 239-45~~
 (1958). — α -Phthalimidobutyric acid (I) was prepd. from
 K H phthalate and HO,CCM₂NH₂.HCl. From the acid
 chloride of 1,2-phthalimidopropene (II), m. 105° was ob-
 tained; on bromination with N-bromosuccinimide II yields
 1-bromo-2-phthalimidopropene (III), m. 98°. Brominating
 III gives 1,1,3-tribromo-2-phthalimidopropene (IV), m.
 101°. The 2-Br of IV is easily substituted by methoxy or
 ethoxy groups to yield, resp., 1,3-dibromo-2-methoxy-2-
 phthalimidopropene, m. 117-18° and 1,3-dibromo-2-
 ethoxy-2-phthalimidopropene, m. 135°. J. Serall

9-9

AVRAM, MARGARETA

Dist: 4E3d/4E3b/4E2c(j)

Cyclobutane series. V. Some bromo derivatives of cyclobutane. Margareta Avram, Blaise Marin, and C. D. Nenitzescu (Acad. R.P.R., Bucharest, Romania). *Acta. rep. poizitors Romins, Studii cercetari chim.* 7, 165-97 (1959) (German summary); cf. C.A. 53, 16993f; preceding abstr. —Both *cis*- (I) and *trans*-1,2-cyclobutanedicarboxylic acid (II) were converted into a mixt. of *cis*- (III) and *trans*-1,2-dibromocyclobutane (IV) by the Hunsdiecker reaction (which was therefore not stereospecific). I (38 g.), m. 139.5-40.5°, or its anhydride (V) in 150-200 cc. H₂O was added to 85 g. AgNO₃ in 1700 cc. H₂O. The Ag salt of I (80-85 g.) pptd. The salt was dissolved in 1100 cc. dry CCl₄, stirred, and cooled to 0°. Br (87.9 g.) was added (the temp. rose to 68°), the soln. filtered, 3% aq. NaHSO₃ added till discoloration occurred, the soln. washed (H₂O), dried (MgSO₄), the solvent evapd. in a column, and the residue fractionated twice *in vacuo* to give a mixt. (10.2-21.6 g.) of 14% III and 78% IV. II, m. 131-1.5°, was prepd. from the di-Et ester of I, b_m 138°, by converting it with NaOEt to the di-Et ester of II, b_m 120°, and then boiling with 6N HCl 12 hrs. The Ag salt of II was converted into a mixt. of 26% III and 65% IV as above. 1-Bromocyclobutane was dissolved in 130 cc. isopentane and dry HBr was introduced at 0° under ultraviolet illumination 8-4 hrs. Fractionation gave 10 g. III, 97% purity, b_m 102°, m. -14.5 to -14.2°, d₄ 2.0103, n_D 1.54981. IV, 97% purity, b_m 93-4°, m. -3.5 to -4.0°, d₄ 1.03651, n_D 1.53484, was prepd. in CHCl₃ by bromination of cyclobutane. A mixt. (21.4 g.) of III and IV, 21.4 g. AlBr₃, and 0.038 cc. H₂O was stirred in 180 cc. CS₂ at 0-15° 10 hrs. The CS₂ soln. was decanted from the red resin which sep'd., washed, evapd., and the residue fractionated *in vacuo*. Thus, 15-16 g. mixt. was obtained contg. 11% III, 47.6% IV, and 37.5% 1,3-dibromocyclobutane (VI) (detd. by gas chromatography). This mixt. (10.7 g.) and 20 g. powd.

KOH was heated at 100-10° 1 hr. From the gas evolved, 1.4 cc. HC≡CCH=CH₂ (VII) condensed in a trap, and HCl-C≡CH was adsorbed in a Cu(I) soln. VII was identified by converting it into tetrabromovinylacetylene. A mixt. (10.7 g.) of III and IV dissolved in 10 cc. CS₂ was mixed with 3 g. AlBr₃ dissolved in 80 cc. CS₂ at 0°, stnd. with dry HBr, agitated 2 hrs. at 0° and 6 hrs. at 15°. The solvent was decanted, evapd., and the residue distd. *in vacuo*. Tribromobutane (VIII) (10 g.), b_m 104-5°, d₄ 2.2028, n_D 1.55338, was obtained. VIII (2 g.) heated at 110° with 6 g. KOH gave VII. 1,2-Dibromocyclobutane-1,2-dicarboxylic acid (IX) (30.3 g.) was dissolved in 20 cc. H₂O, neutralized with NH₃ to pH 7, and dropped into a soln. of AgNO₃ (34.5 g. in 300 cc. H₂O). The Ag salt of IX (47-50 g.) pptd. The Hunsdiecker reaction of this (18.8 g.) gave 3 g. 1,1,2,2-tetrabromocyclobutane (X), m. 126° (MeOH). AlBr₃ (1.50 g.) dissolved in 100 cc. CS₂ was added to 18.6 g. X at 0° and agitated at 10-20° 10 hrs. A mixt. of isomers (C₄H₆Br₂) was obtained, b_m 114-15°. I (7.2 g.) dissolved in 60 cc. C₆H₆ was mixed with 7.9 g. dry pyridine and 22.2 g. Pb(OAc)₂, and stirred at 50-60° 1 hr. Cyclobutene (XI) evolved was introduced into a soln. of Br in CH₂Cl₂, from which 1.6 g. 1,2-dibromocyclobutane was obtained, b_m 95-100°. A flask contg. 150 cc. dry CCl₄, 17 g. bromosuccinimide, and 0.5 g. benzoyl peroxide was filled with carefully dried XI and agitated at 70-4° 6 hrs. The CCl₄ soln. was decanted from the polymer (oil) sep'd., and the solvent evapd. By fractionating the residue, 1,2-dibromocyclobutane (2.8-3.5 g.), b_m 80-5°, was obtained. VI. The decomposition of quaternary salts of 1,3-diaminocyclobutane. Margareta Avram and C. D. Nenitzescu. *Ibid.* 100-74.—The attempted Hoffmann degradation of 1,3-bis(dimethylamino)cyclobutane dimethobromide (I) in the presence of PhLi (II) was found to be anomalous, giving phenylcyclobutene (III). I (15 g.), m. above 265°.

AURAM, N,N'-BIS(DIMETHYLAMINO)CYCLOBUTANE
AND DERIVATIVES, ETC.

3/29

2/16
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was prepd. from 9.6 g. 1,3-bis(dimethylamino)cyclobutane (IV) dissolved in 10 cc. dr. MeOH at 0° by satg. it with dry MeBr and allowing the mixt. to stand 12 hrs. To 100 cc. Et₂O soln. of II, obtained from 9.6 g. PhBr, 4.9 g. I was added. The soln. was agitated 80-100 hrs. Me₂N was isolated as its picrate (3 g.). Also obtained were a white cryst. product, m. 157° (EtOH), and 0.46 g. III, b_p 80-8°. III was converted into 2,4-dinitrophenyl phenylcyclobutenyl sulfide, m. 98°. IV (11.6 g.) was added to 15 cc. 30% H₂O₂ and stirred at 0-10° 10 hrs. to give 1,3-bis(dimethylamino)cyclobutane N,N'-dioxide, m. 85-90° (hygroscopic); picrate m. 183° (MeOH). T. Scott

Distr: 4E2c(j)/4E3b/4E3d

1
 Preparation of cyclobutadiene. C. D. Nenitzescu, Margareta Avram, Eiza Marcia, Maria Maxim, and Doina Duiu (Chem. Research Center, Acad. R.P.R., Bucharest, Romania). *Acad. Rep. Populare Romine, Studii cercetari chim.* 7, 481-504(1959).—A literature review (and results of exptl. work based on it) was presented in connection with the synthesis of cyclobutadiene or alkyl- and aryl-cyclobutadiene derivs. Hofmann degradation of the diquaternary base of 1,3-diaminocyclobutane, thermal decomn. of cyclooctatetraene adducts, and attempts to prepare cyclobutadiene from brominated derivs. of cyclobutane were performed. Cyclobutadiene was detected in AgNO₃ and Hg complexes, as well as (for a short period) in the gaseous state. Transformation of the Hg-cyclobutadiene complex into cyclooctatetraene was accomplished. Alkylated and arylated derivs. of cyclobutadiene were prepd. (32 references) (Summaries in Russian and English).
 M. Lapidot

7
 1-BW(BW)
 2-909(LNB)(copy)
 3

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 A

Centrul de cercetari Chimice al Academiei R.P.R.,
 Sectia de chimie organica, Bucuresti.

AVRAM, Margareta; MARICA, Eliza; NENITZESCU, Costin D.[Nenitescu, C.D.],
acad.

Research in the series of cyclobutane. V. On the bromoderivatives
of cyclobutane. VI. Research in the obtainment of quaternary salts
derived from cyclobutanediamine. Rev chimie 4 no.2:253-270 '59.
(EEAI 9:7)

1. Aus dem Chemischen Forschungslaboratorium der Akademie der RVR,
Bukarest. 2. Redacteur en chef, Comite de redaction, Revue de
Chimie; Mitglied der Akademie der Rumanischen Volksrepublik (for
Nenitescu)

(Ring compounds) (Cyclobutane) (Bromine)
(Quaternary compounds) (Salts) (Cyclobutanediamine)

AVRAM, M.

A review of Vols. 1-2 of C. D. Nenitescu's Tratat elementar de Chimie organica (Elementary Treatise on Organic Chemistry). p. 125.

REVISTA DE CHIMIE. Bucuresti, Rumania. Vol. 10, no. 2, Feb. 1959.

Monthly List of East European Accessions. (EEAI), LC. Vol. 8, no. 9, ^{Sept.} 1959.
Uncl.

AVRAM, M.

Shidlov in the cyclobutane series. IV. A silver nitrate complex $C_4H_4AgNO_3$. Margareta Avram, Ella Marica, and Cosmin N. Nenciu (Acad. R.V.R., Bucharest, Romania), *J. Res. Ber.* 92, 1089-91 (1980); cf. C.A. 52, 18335g. — The elimination of Br from 1,2,3,4-tetrabromocyclobutane (I) with Li-Hg yielded an unstable Hg deriv. which with $AgNO_3$ gave a cryst. complex having the structure Ia or Ib. Cyclooctatetraene dibromide oxidized in Me_2CO with $KMnO_4$ at -8° by the method of Cope and Burg (C.A. 47, 3925f) gave 43% 3,4-dibromocyclohexene-1,2-dicarboxylic acid (II), m. $191-2^\circ$ (Et_2O -petr. ether). II



(Ia)



(Ib)

(41.2 g.) in 100 cc. H_2O adjusted with 3% aq. KOH to pH 7, treated dropwise with stirring with 46.6 $AgNO_3$ in 90 cc. H_2O , and the ppt. filtered off rapidly, washed with H_2O , $EtOH$, and Et_2O , and dried 24 hrs. in the dark over P_2O_5 gave 64 g. Ag salt (III) of II. III (40 g.) and 80 cc. CCl_4 refluxed with the slow removal of 30-40 cc. CCl_4 through the condenser, the residue cooled, treated with 8.1 cc. Br, heated briefly on the water bath, refluxed 15 min., cooled, filtered, washed, dried, and evapd., and the residue (9.16 g.) dissolved in dry Et_2O , kept 24 hrs. over K_2CO_3 , and evapd. gave I, b.p. $115-20^\circ$, m. 104° ($MeOH$ or petr. ether). I (1.37 g.) and 42 g. 0.5% Li-Hg shaken 15-20 hrs. at room temp. with 35 cc. abs. Et_2O , the Et_2O layer decanted, the Hg sludge washed with Et_2O , the combined exts. washed, dried, and evapd. under N gave a pale yellow oil with an acid, characteristic odor, decomp. about 60° . The Et_2O soln.

from a similar run shaken 1-3 min. with satd. aq. $AgNO_3$ and filtered, and the residue (0.82 g.) washed with Et_2O and recrystd. from $EtOH$ gave Ia-Ib, m. 110° . Ia-Ib (0.22 g.) treated under CO_2 with dil. NH_4OH gave 0.3 cc. gas. Ia-Ib (0.52 g.) powdered and added gradually to Br in CH_2Cl_2 , and the mixt. filtered, washed, dried, and evapd. gave 0.1 g. oil, contg. 42.3% Br and 7.15% N, which decompd. on attempted distn. in vacuo. The formation of cyclobutadiene which existed for short periods of time in the gaseous state was demonstrated by treating Ia-Ib with a small amt. of steam and sweeping with air through Ascarite and $Mg(ClO_4)_2$ to give a gas which formed Ia-Ib with $AgNO_3$ soln.

F. W. Hoffmann

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4E2c (J)

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Distr: 4ERC(1)/4E3d

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BWL(177)
TAS(110) (111)

Deamination of 3-benzoyloxycyclobutylamine by nitrous acid. Maria Maxim, Margareta Avram, and C. D. Niculescu. *Rad. rep. populara Romina, studii cercetari chim.* 8, 187-194 (1970).—3-Benzoyloxycyclobutylamine (31.5 g.) was treated with 230 cc. 10% AcOH and a soln. of 21 g. NaNO₂ in 4.5 cc. H₂O (at -5° and with stirring). The mixt. was stirred 2 hrs. at 0°, kept overnight at room temp., and extd. with ether, the ext. neutralized with Na₂CO₃, the undesired resins decanted, the ext. dried (MgSO₄), and the H₂O evapd. to give 32% benzyl alc. (I), b. 95°, and 42.8% 3-benzoyloxy-1-cyclobutanol (II), b. 146°, dn 1.073, n_D²⁰ 1.5249. I was identified as the phenylurethan, m. 78° and II by its phenylurethan, m. 115° (EtOH). The overall yield of the diazotation was 74.3%. In this reaction, no formation of cyclopropane compds. was observed and the Demjanov rearrangement did not occur. To confirm the cyclobutane structure of II, the following reactions were carried out. II (8 g.) in 60 cc. anhyd. C₂H₅N was added (room temp. with stirring) to a complex of 10.5 g. C₂O and 105 cc. anhyd. C₂H₅N, the mixt. stirred 0.5 hr., kept overnight, heated 2 hrs. at 60°, poured over ice H₂O, and filtered. The filtrate was extd. thrice with 1:1 ether-H₂O, the exts. washed with H₂O, dil. HCl, and H₂O again, dried (MgSO₄), filtered, and the solvent evapd. The residue gave 82% 3-benzoyloxy-1-cyclobutanone (III), b. 113°, dn 1.0506, n_D²⁰ 1.5225; semicarbazone m. 161° (EtOH). To 1 g. III in 1.5 cc. C₂H₅N was added portionwise 0.6 g. KMnO₄ in 8 cc. C₂H₅N and 3.5 cc. H₂O, the mixt. left overnight, filtered, and concd. *in vacuo*. Adn. of a little H₂O and acidification with HCl gave BaOII, m. 121°. To an ice-cooled mixt. of 5 g. II and 4.8 g. PhSO₂Cl was added dropwise 2.6 cc. anhyd. C₂H₅N, the mixt. kept overnight, H₂O added, and the oil layer sep'd. The aq. layer was extd. with ether, the oil and ether layers washed with H₂O, dil. HCl and Na₂CO₃ soln., dried (MgSO₄), filtered, and evapd.

gave 83% 3-benzoyloxy-1-cyclobutanol benzenesulfonate (V). Finely powdered IAAH₂ (1 g.) was added with stirring to 7.8 g. crude V in 80 cc. abs. ether, the mixt. stirred 0.5 hr., refluxed 1.5 hrs., and 2 cc. H₂O, 1.5 cc. 20% NaOH, and 7 cc. H₂O added with cooling and stirring. Filtering, washing with ether, drying the ether soln. (MgSO₄), filtering, evap. the ether, and dist. gave (as a residue) 63% benzoyloxycyclobutane (VI), b. 98°, b. 80°, dn 0.9769, n_D²⁰ 1.5114, and 16% 3-benzoyloxy-1-cyclobutanol, identified by its phenylurethan, m. 115°. Through a soln. of 0.6 g. VI in 7 cc. MeNO₂ dry HBr was passed for 5 min. After the soln. was cooled and kept 1 hr. at room temp., a part of the HBr was removed *in vacuo*, the soln. neutralized with Na₂CO₃ soln., and the org. layer dried (MgSO₄), filtered, and distd. The fraction, b. 100° (contg. MeNO₂ and cyclobutanol phenylurethan (VII)), was treated with Ph isocyanate to give cyclobutanol phenylurethan, m. 127° (petr. ether). Dry HBr gas was passed through 1.5 g. II in 30 cc. MeNO₂ for 5-10 min. and excess gas eliminated *in vacuo*. The soln. was neutralized with anhyd. K₂CO₃ and filtered, and the filtrate (contg. 1,3-dihydroxycyclobutane (VIII)) treated with Ph isocyanate to give (after 3-4 hrs.) 35.5% urethan, m. 207°. Another proof of the cyclobutane ring preservation, after deamination, was the prepn. of di-Et 3-hydroxycyclobutane-1,1-dicarboxylate (IX) by the diazotation of the di-Et 3-aminocyclobutane-1,1-dicarboxylate. The yield was 78.5% and its phenylurethan m. 115° (EtOH). Oxidn. of IX gave 85% di-Et 3-cyclobutanone-1,1-dicarboxylate (X), b. 128°, semicarbazone m. 177° (EtOH). The reason for the stability of the cyclobutane ring in II and IX and of the absence of any cyclopropane ring may have been the presence of substituents with -I effect, and the fact that in these cases the cyclopropane ring could not be stabilized by resonance.

M. J. J. J.

AVRAM, MARGARETA

Distr: 453d

Investigations in the cyclobutane series. VII. Dibenzotricyclobutadiene and dibenzocyclobutadiene. Margareta Avram, Dolina Dinu, Georg Mateescu, and Costin D. Nenitzescu (Acad. R.V.R., Bucharest, Romania). *J. Org. Chem.* 33, 1789-1812 (1968); CA 54, 8661f. -- Dibenzocyclobutadiene (I) in stannous chloride dimerizes in the presence of Ni(CO)₄ (II) to 3,4,7,8-dibenzotricyclo[4.2.0]octa-3,7-diene (III). III on warming was converted, with cleavage of the middle cyclobutane ring, to 1,2,5,6-dibenzocyclooctatetraene (IV), which, with Br₂, underwent ring contraction to 2,5-dibromo-3,4,7,8-dibenzotricyclo[4.2.0]octa-3,7-diene (V). 1,2-Di-Br deriv. (30 g.) of I and 8.5 g. II in 30 cc. dry Et₂O shaken 0.5 hr. manually and 3 hrs. mechanically with 600 g. 0.4% Li-Hg (or 1800 g. 0.5% Na-Hg), the Et₂O layer decanted, the Hg sludge washed with Et₂O, the combined Et₂O solns. washed with H₂O and filtered from 7.6% yellow solid contg. 16% N, and the filtrate worked up yielded 7.8 g. III, m. 133° (ligroine or Et₂O). III (1 g.) in 20 cc. *o*-C₆H₅Cl, refluxed 4-5 hrs. under N and evapd. *in vacuo* gave 0.73 g. IV, m. 109° (sublimed *in vacuo*). IV in EtOAc oxidized and treated with H₂O, gave phthalic acid and phthalic anhydride. IV (0.1 g.) in 2 cc. MeOH treated with aq. AgNO₃ gave IV·AgNO₃, m. 222° (EtOH). IV (0.1 g.) in a little C₆H₆, treated with PhCN·Pd(2, 2) C₆H₅, gave IV·PdCl₂, m. 224°. IV (1 g.) in 5 cc. C₆H₆, treated slowly with stirring at -5 to 0° with 1.5 g. Br in CH₂Cl₂, kept 0.5 hr. in the cold, and evapd. *in vacuo* yielded 1.72 g. V, m. 157° (ligroine, b. 60-80°). V (300 mg.) in 150 cc. dry Et₂O shaken 0.5 hr. with 10 g. 0.5% Li-Hg, filtered under N from the Hg sludge, washed with H₂O, and worked up yielded 90-120 mg. 4,5-benzotricyclo[6.4.0.0^{1,9}]dodeca-1,4,7,9,11-pentaene (VI), m. 78-80°; upon recrystn. the m.p. rose and the O-content of the material increased. VI kept 12 hrs. in air or treated several hrs. with an air jet in Et₂O soln. gave the peroxide (VII), m. 135° (decompn.). VII hydrogenated over Pd-C gave a hydrocarbon, m. 105°, contg. 91.07% C and 8.06% H. VI (90 mg.) and 50 mg. maleic anhydride heated 5 min. at 80-90° and extd. with Et₂O gave 30 mg. hygroscopic adduct, m. 250-5°. VI and *N*-phenylmaleimide gave (similarly) an adduct, m. above 250° (decompn.). V (2 g.) in 5 cc. glacial AcOH and 1.09 g. KOAc refluxed 12 hrs., filtered, and dil'd. with H₂O, and the product isolated with Et₂O yielded 1.3 g. 2,5-di-AcO analog (VIII) of V, m. 192° (MeOH). VIII (0.13 g.), 0.112 g. KOH, and 5 cc. EtOH refluxed 2 hrs. gave 0.0778 g. 3,4,7,8-dibenzotricyclo[4.2.0]octa-3,7-diene, m. 133°; the mother liquor (concd.) gave orange-yellow crystals, C₁₈H₁₄, m. 133° (MeOH and EtOH). The infrared absorption spectra of these compds. were discussed. J. W. Hoffmann

5
in Br (B.W)
1-2-2-2-2-2
1-2-2-2-2-2

MATEESCU, Gheorghe; AVRAM, Margareta; DINU, Doina; NENITESCU, Costin D., acad.

Infrared spectrum of dibenzotricyclohexadiene. Studii cerc chim 9
no.3:427-434 '61.

1. Institutul de chimie al Academiei R.P.R., Sectia de chimie organica,
Bucuresti. 2. Redactor responsabil "Studii si cercetari de chimie"
(for Nenitescu).

AVRAM, Margareta; MATIESCU, Gheorghe D.; DINU, Doina; DINULESCU, Ilie G.;
NENITESCU, Costin D., acad.

Studies in cyclobutane series (VIII). Adducts of benzocyclobutadiene
with some cyclic dienes. Studii cerc chim 9 no.3:435-445 '61.

1. Institutul de chimie al Academiei R.P.R., Sectia de chimie organica,
Bucuresti.

MATEESCU, Gh.D.; AVRAM, Margareta; NENITESCU, C.D., acad

Infrared spectra of some additional products of cyclooctatetraene with different phyliedienos. Studii cer chim 10 no.1:65-72 '62.

1. Laboratorul de chimie organica al Institutului Politehnic si Centrul de cercetari speciale al Ministerului Sanatatii, Bucuresti.
2. Membru al Comitetului de redactie si redactor responsabil, "Studii si cercetari de chimie" (for Nenitescu).

AVRAM, Margareta; STERNBERG, Renée; DINULESCU, I.G.; NENITESCU, C.D., acad.

Condensation of 1,1-diodo-2-phenylpropane with ethyl malonate. *Studii cer chim* 10 no.1:73-80 '62.

1. Centrul de cercetari chimice al Academiei R.P.R., Sectia de chimie organica, Bucuresti. 2. Membru al Comitetului de redactie si redactor responsabil, "Studii si cercetari de chimie" (for Nenitescu).

MATEESCU, G.D.; AVRAM, Margareta; DINU, Doina; NENITZESCU, C.D.
[Nenitescu, C.D.]

Infrared spectrum of dibenzotricyclooctadiene. Rev chimie 8
no.1:13-20 '63.

1. Institute of Chemistry of the Academy of the R.P.R. Bucharest.
2. Member of the Academy of the R.P.R. (for Nenitescu).

AVRAM, Margareta; MATEESCU, G.D.; DINU, Doina; DINULESCU, I.G.;
NENITZESCU, C.D. [Nenitescu, C.D.] Member of the Academy of the R.P.R.

Investigations in the cyclobutane series (VIII). Rev chimie 8
no.1:77-86 '63.

1. Institute of Chemistry of the Academy of the R.P.R., Bucharest.

KENITESCU, C.D., academician; AVRAM, Margarota; POGANY, I.I.; MATEESCU, Gh.D.
FARCASIU, Malvina.

Synthesis and thermal decomposition of tricyclo -

[4.2.2.0^{2.5}]-deca-3,7,9-triene. Studii cerc chim 11 no.1:
7-18 '63.

1. Sectia de chimie organica a Centrului de cercetari chimice
al Academiei R.P.R., Bucuresti.

DINULESCU, Iliu G.; AVIGAN, Mircea; MARINESCU, George I.; HANITANESCU,
Costin D.

Research in the cyclobutane series. Pt.14. Studii Cercchim 12
no.5:357-364 '64

1. Center of Organic Chemistry Research, Romanian Academy, Polizu
St., no.1, Bucharest.

TURCU, T., prof.; PAINA, N., dr.; IONESCU, Gabriela, dr.; DUTU, Doina, dr.;
AVRAM, Maria, dr.; FLORESCU, O., dr.

The pronounced increase in rats infected with the causal agents
of anthroozoonoses demands intensification of rat eradication.
J. hyg. epidem. (Praha) 9 no.1:75-76 Ja-F'64

AVRAM, N. Constantin; FILIPON, I.; FRIEDRICH, R.

Calculation of reinforced concrete frames in the plastic stage. Bul St si Tehn Tim 8 no.1:161-167 Ja-Je '63.

AVFAM, N. Constantin; VOLNA, N.I.; PAUNESCU, M.; MIHAESCU, A.; GRUIA, A.

New results of re-vibrating concrete. Bul St si Tehn Tim 8
no.1:169-185 Jan-fe '63.

RUMANIA / Soil Science. Mineral Fertilizers.

J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34389.

Abstract: under fall plowing and as side-dressing in the presence of 6 leaves, N 20 and after the closing of rows N 20 and K 60. The doses indicated showed good results at many experimental stations in various territories of the land. -- V. V. Prokoshov.

Card 2/2

M

Country : ROMANIA
Category: Cultivated Plants. Grains.

Pub Jour: RZhBiol., No 11, 1958, No 48880

Author : Davidescu, D.; Birca, N.; Avram, P.; Enescu, D.;
Popescu, I.; Vancea, I.; Davidescu, E.

Inst : Sci. Res. Inst. of Agriculture.
Title : Results of the Experiments on the Introduction of
Fertilizers Under Corn, and Spring and Winter Wheat.

Orig Pub: An Inst. cercetari agron , 1957, 24, No 5, 47-69

Abstract: Experiments on the application of fertilizers were
conducted during 1953-1955 at the following stations:
at the Experimental Station of Merhuleshti in Kon-
stantza region, on applying basic fertilizers under
corn; at the experimental stations of Kyapic Turziy

Card : 1/2

RZhBiol., No 11, 1958, No 48880

M

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000102620004-6"

in Kluga region and of Bucharest at the Suchava region,
wheat; at the experimental stations of Merhuleshti
and Studin in Krylovskaya region and Moara Domniasca
in the Bucharest region, on applying side-dressing
to winter wheat according to the vegetation phases.
The article indicates the most suitable doses of
the basic fertilizers under the corn (application
of 30 kg/ha of manure and 20 kg/ha of manure plus
N 40 P 30 K 20), under the spring wheat (P₂O₅ 40 kg/
/ha) and winter wheat (N 30 kg/ha). -- A.F. Khlystova

Card : 2/2

Avram, P.

~~NIXON, Oh.
SUKAVA (in case); Given Name~~

Country: Rumania

Academic Degree: --

Affiliation: --

Source: Bucharest, Comunicariile Academiei Romane Revista
No 4, 1961, pp 473-478.

Note: "The Efficiency as Fertilizer of the Manganese Residue of
Iacobeni, Suceava."

Co-author:

AVRAM, P.

AVRAM, S.

- 12
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14
1. Report on the Completion of Collectivization and the Reorganization of Agriculture Submitted to the Extraordinary Session of the State National Assembly at the Session of 27 April 1952. Doc. OMB 91213-251 pp 3-20.
 2. "The Old Socialist Transformation Network in the western part of the Country Carried out in Various Planning Systems and the Possibility of its Integration in the State Economic Network." Eng. A. ZHUKOV, Eng. I. ZAVARZA and Eng. S. ZIPAY of the Center for the Organization of Territory (Central de Organizarea Teritoriilor); Revista de Statistica; pp 33-44.
 3. "The New M.P.S. 21/1958 Photogrammetric Concern in Production." G. VARTOL, Candidate in Science (Candidate in Science) and Eng. N. ZAMBROU; pp 12-20.
 4. "The Necessity of Adapting the Plans for the Organization of Territory." Eng. M. VASILESCU and Eng. I. CRYSIAC; pp 33-39.
 5. "Programs for the Impediments Organization of the Territory in Support of the Socialist Agricultural Policy." Eng. A. ZHUKOV; pp 40-44.
 6. "The 'Avram' Institute." Eng. S. AVRAM, Center for the Organization of Territory; Revista de Statistica; pp 45-50.

1004
Doc: 2000-11

NEGREA, A.; BOTOSANEANU, I.; NEGREA, St. (Banat); TABACARU, I.; SERBAN, E.;
DANCAU, D.; AVRAM, S. (Cernisoara); DECU, A. (Oltenia); DECU, V.
(Oltenia); DUMITRESCU, M.; ORGHIDAN, T. (Cheile Virghisului);
TANASACHE, J.; GEORGESCU, M. (Dobrogea)

Contribution to the study of mollusks in Rumanian caves. Pt. 3.
Studii cerc biol anim 15 no.3:333-342 '63.

1. Comunicare prezentata de M.A. Ionescu, membra corespondent al
Academiei R.P.R.

AVRAM, Constantin

Observations on the variability of the species *Ischyropsalis dacica*
Roewer (Romanian) (Ord. Opiliones, Subord. Palpatores,
Fam. Ischyropsallidae). *Studia cerc. biol. s. zool.* 16 no. 4:295-306
1964.

1. "Emil Racovita" Institute of Speleology.

AME Stofania

A new opillione, *Platybunus cirdeii* n. sp. Studii cerc biol s. zool
16 no.6:431-487 '64.

1. "Emil Racovita" Institute of Speleology.

HERZ, A.; SABO, E., chim.; ISTVAN, Fr.; BELLISCHI, P.; DEPA, St.; URSESCU, I.
ing.; SABO, Gh.; AVRAM, V., ing.

Drying some materials in fluidized bed. Rev chimie Min petr 15
no.7:409-411 J1 '64

AVRAMCHIK, M.H.

Growth of reindeer moss in the central part of the Anadyr River
Basin. Bot.smr. 39 no.3:437-441 My-Ja '54. (MLRA 7:7)

1. Anadyrskaya opytaya olenevodcheskaya stantsiya.
(Anadyr Valley--Lichens) (Lichens--Anadyr Valley)

TSAGOLOV, N.A., prof., doktor ekon.nauk; BLYUMIN, I.G., prof., doktor ekon.nauk [deceased]; RUMYANTSEV, A.M., prof.; KORNIYENKO, A.A., dotsent, kand.ekon.nauk; SHNETYERSON, A.I., prof., doktor ekon.nauk; LIF, Sh.B., prof., doktor ekon.nauk; SHVEDKOVA, G.M., kand.ekon.nauk; FISHEVSKIY, Yu.K.; DVORKIN, I.N., doktor ekon.nauk; SIDOROV, I.P.; KHAFIZOV, R.Kh., kand.ekon.nauk; NIKOLAYEV, A.B., kand.ekon.nauk; AVRANCHUK, F.P., kand.ekon.nauk; AL'TER, L.B., doktor ekon.nauk; BOYARSKIY, A.Ya., prof., doktor ekon.nauk; BREGEL', B.Ya., prof., doktor ekon.nauk; ARZUMANYAN, A.A.; VOLODIN, V.S., dotsent, kand.ekon.nauk; MIKSHA, L.S., kand.ekon.nauk; BUNKINA, M.K., dotsent, kni.ekon.nauk; YEVREYSKOV, A.V., kand.ekon.nauk; FADEYEVA, T.A., kand.ekon.nauk; KOLGANOV, M.V., prof., doktor ekon.nauk; KHRUMUSHIN, G.B., kand.ekon.nauk; MOSHENSKIY, M.G., kand.ekon.nauk; IVANOV, N.N., kand.ekon.nauk; GUTTSAYT, M.G., dotsent, kand.ekon.nauk; ABOLTIN, V.Ya., prof., doktor ekon.nauk; KOLLONTAY, W.M., kand.ekon.nauk; GLUKHAROV, L.I., kand.ekon.nauk; POKROVSKIY, A.I., kand.ekon.nauk; DADASHEV, G.A., dotsent, kand.ekon.nauk; ALESHINA, I.V., kand.ekon.nauk; ZHAMIN, V.A., dotsent, kand.ekon.nauk;

(Continued on next card)

TS400LOV, N.A.--(continued) Card 2.

KOZLOV, A.P.; TIMOFEYEV, T.T., kand.istor.nauk; ALEKSEYEV, A.M., dotsent, kand.ekon.nauk; FILATOVA, Ye.M., dotsent, kand.ekon.nauk. Prinsipali uchastiye: VOLKOV, F.M., kand.ekon.nauk; KHRMUSHIN, G.B.; VOZNESENSKIY, L.A., nauchnyy sotrudnik. SPERANSKAYA, L., red.; CHKPELEVA, C., tekhn.red.

[Criticism of present-day bourgeois, reformist, and revisionist economic theories] Kritika sovremennykh burzhuaznykh, reformistskikh i revizionistskikh ekonomicheskikh teorii. Pod red. N.A.TSagalova. Moskva, Izd-vo Sotsial'no-ekon.lit-ry, 1960. 588 p. (MIRA 13:5)

1. Moscow. Universitet. 2. Chlen-korrespondent AN SSSR (for Arsumanyan).

(Economics)

AVRAMCHUK, Fedor Petrovich, kand. ekonom. nauk; VLAS'YEVICH, Yuriy
Yevlampiyevich, kand. ekon. nauk; BEZDENIEZHNYKH, P.T., red.;
CHAPAYEVA, N.I., tekhn. red.

[Militarization of the national economy and intensification
of the contradictions of imperialism] Militarizatsiia ekono-
miki i obostrenie protivorechii imperializma. Moskva,
Voenizdat, 196?. 141 p. (MIRA 15:10)
(Munitions) (World politics)

NEKRYACH, Ye. F.; SAMCHENKO, Z. A.; Prinizhala uchast'ye AVRAMCHUK, L. P.

Sorption of water vapor by hydrophilic high polymers. Part 8:
Isotherms of sorption and of heat of wetting of polycaprolactam.
Ukr. khim. zhur. 28 no.5:514-621 '62. (MIRA 15:10)

(Nylon) (Sorption) (Heat of wetting)

NEKRYACH, Ye. F.; SAMCHENKO, Z. A.; Prinsipala uchastivye AVRAMCHUK, L. P.

Sorption of water vapors by hydrophilic high polymers. Part 9:
Investigation of the structural changes of polycaprolactam based
on sorption and thermochemical data. Ukr. Khim. zhur. 28 no. 6:
703-706 '62. (IIRA 15:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(Nylon) (Sorption) (Thermochemistry)

ACCESSION NR: AP4040772

S/0021/64/000/006/0774/0776

AUTHOR: Nekryach, Ye. F., Avramchuk, L. P.

TITLE: Kinetics of dissolution of synthetic polyamides [nylon, etc]

SOURCE: AN UkrRSR. Dopovid1, no. 6, 1964, 774-776

TOPIC TAGS: caprone, enant, yenant, anide, polyamide, polyamide dissolution, polyamide dissolution kinetics, methylene group, formic acid

ABSTRACT: The kinetics of the solution of polycaprolactam (caprone), polyhexamethylenadipamide (anide), and polyenanthamide (enant) were investigated in aqueous solutions of formic acid of various concentrations at 20 C. The study was motivated by the inadequacy of existing studies of the kinetics of solubility of polyamides. It was established that the solubility of polyamides depends to a great extent on their chemical structure, decreasing with an increase in the number of methylene groups in the elementary link of macromolecules of polymers. For 2--3 hours after the onset of dissolution, the percentage of dissolved polyamides i (%) is found to follow the empirical relation:

$$\lg i = \gamma \lg \tau + \lg B,$$

Where τ is the time in solution, and γ and B are constants. Typical values for γ

Card 1/3

ACCESSION NR: AP4040772

and B for various concentrations of formic acid are given in Table 1 of Encl. 01.
Orig. art. has 5 graphs and one table.

ASSOCIATION: Instytut zagall'nyy i neorganichnyy khimiy AN UkrSSR (Institute of
General and Inorganic Chemistry, AN UkrSSR)

SUBMITTED: 25Sep63

ENCL: 01

SUB CODE: 00

NO REF SOV: 001

OTHER: 000

Card 2/3

ACCESSION NR: AP4040772

ENCLOSURE: 01

(a)	Полимеры	Концентрация HCOOH, (e) моль %	γ	$\lg \theta$	θ
(b)	Капрол	65,4	0,91	2,25	168
		53,1	0,91	2,30	170
(c)	Анид	65,4	1,01	2,39	174
		53,1	1,01	2,60	178
(d)	Энант	65,4	0,91	2,46	178

Table 1: Values of the coefficients in the kinetic solubility equation

- (a) Polyamide
- (b) Caprone
- (c) Anide
- (d) Yenant (enant?)
- (e) Concentration of formic acid (HCOOH), MOLES

Card 3/3

DUMANSKIY, A.V.; AVRAMCHUK, L.P.; KURILENKO, O.D.; NEKRYACH, Ye.F.

Heat of reactions between a sulfonated styrene cationite and water. Dokl. AN SSSR 159 no.5:1120-1122 D '64 (MIRA 18:1)

1. Institut obshchey i neorganicheskoy khimii AN SSSR. 2. Chlen korrespondent AN SSSR (for Dumanskiy).

ACC NR: AP7010716

SOURCE CODE: UR/0020/66.171/006/1373/1375

AUTHOR: Nekryach, Ye. F.; Gorokhovatskaya, N. V.; Avramchuk, L. P.;
Kurilenko, O. D.; Dumanskiy, A. V. (Corresponding Member AN SSSR)

ORG: Institute of General and Inorganic Chemistry, Academy of Sciences
Ukrainian SSR (Institut obshchey i neorganicheskoy khimii AN UkrSSR)

TITLE: Nature of exchange ions and the hydration energy of ionites

SOURCE: AN SSSR. Doklady, v. 171, no. 6, 1966, 1373-1375

TOPIC TAGS: ion exchange, heat of hydration, ionite

SUB CODE: 07

ABSTRACT: The authors state that while studying the heats of hydration of some hydrophilic polymers, they used ionites as a convenient model object for investigation. When wetting with water dry and moistened samples of K^+ , Na^+ , Ca^{2+} and Fe^{3+} forms of the sulfostyrene cationite KU-2 with a nominal divinylbenzene content of 4 and 20%, the heats increased in all cases in the order $K^+ < Na^+ < Ca^{2+} < Fe^{3+}$. This gave rise to the thought that there is a certain relationship between the energy of hydration and the charge of the counter ions. To check this supposition, the authors undertook to investigate the heats of wetting with water at 20° sulfo-

Card 1/2

UDC: 536.664 + 541.183.12

0930

0928

ACC NR: AP7010716

styrene cationite samples with the following exchange ions: single-charged Cs⁺, Rb⁺, K⁺, Na⁺, Li⁺; doubly-charged Ba²⁺, Ca²⁺, Mg²⁺; and triply-charged Fe³⁺, Al³⁺. At the same time, water-vapor sorption isotherms were taken for the same samples at 20° on a vacuum sorption apparatus. The authors state that the results justify the assertion that a direct relationship exists between the size of the charge of exchange ions and the hydration energy of ionites as determined from the heats of wetting them with water. Orig. art. has: 1 figure. JPRS: 40,351

Card 2/2

L 2106-66 EWT(1)/EWP(m)/FS(v)-3/EWA(d) OW

ACCESSION NR: AP5024779

UR/0021/65/000/009/1139/1145

AUTHOR: Klich, Yu. O. (Klich, Yu. A.); Avramchuk, N. A.

39
37
B

TITLE: Certain cases of the perturbed motion of a mass point in a central gravitational field

SOURCE: AN UkrRSR. Dopovidi, no. 9, 1965, 1139-1145

TOPIC TAGS: spacecraft motion, spacecraft trajectory, asymptotic method, nonlinear mechanics

ABSTRACT: The Krylov-Bogolyubov method is applied to solving the problem of motion of a flight vehicle with a small constant thrust in a central gravitational field. The flight vehicle is considered as a point whose mass m varies linearly. The equations of motion are transformed to a form with a small parameter ϵ ($\epsilon = \dot{m}/m_0$, where m_0 is the initial mass of m and \dot{m} is the rate of expenditure of the mass) multiplying the nonlinear terms. This form of the equations makes it possible to apply asymptotic methods of nonlinear mechanics to the solution of the problem. By applying the averaging method, equations of the first approximation are derived which are valid for any direction of the thrust force. The equations of the first approximation are integrated and the trajectories of motion are determined for the

Card 1/2

L 2106-66

ACCESSION NR: AP5024779

following two particular cases: a) radial thrust, and b) constant direction thrust. Orig. art. has: 1 figure and 23 formulas. 21

[LK]

ASSOCIATION: Odes'kyi politehnikhnyi instytut (Odessa Polytechnic Institute) 44

SUBMITTED: 26Sep64

ENCL: 00

SUB CODE: SV, ME

NO REF SOV: 002

OTHER: 004

ATD PRESS: 4113

Card 2/2 P

LUGOVSKIY, Sergey Ivanovich; DYMCHUK, Gennadiy Konstantinovich;
DROBOT, Boris Yakovlevich; AVRAMCHUK, Rostislav Nikiforovich.
Prinimali uchastiye: MAR'YENKOV, V.V.; BAKIROV, U.Kh.;
NIKITIN, V.S., kandi. tekhn. nauk, retsenzent; STEBAKOV, B.A.,
gorn. inzh., otv. red.

[Ventilation of mines and strip mines] Ventilatsiia shakht i
kar'erov. [By] S.I.Lugovskii i dr. Moskva, Izd-vo "Nedra,"
1964. 306 p. (MIRA 17:5)

AVRAMCHUK, R.N., inzh.

Ventilating mines during multi-level work of unconnected
deposits. Sbor. nauch. trud. MGRI no.10480-8' 61
(MIRA 17:8)

Efficient method of ventilating developed horizons during
multi-level mining. Ibid. 88-92

L 24804-65 ENG(v)/EHT(1)/EEC(t)
ACCESSION NR: AT4049980

Po-4/Pe-5/Pae-2 GW/HLK
S/0000/64/000/000/0003/0015

29
27
1871

AUTHOR: Avramchuk, V. V.

TITLE: Polychromatic polarization of some lunar areas ✓

SOURCE: AN UkrSSR. Glavnaya astronomicheskaya observatoriya. Fizika Luny* i planet (Physics of the moon and planets). Kiev, Naukova dumka, 1984, 3-18

TOPIC TAGS: moon, lunar polarization, Umov effect, polychromatic polarization

ABSTRACT: The author gives a brief outline of the meaning of the Umov effect as interpreted by G. V. Rozenberg (UFN, 69, No. 1, 57, 1959). It is postulated that in the case of the moon the dependence of polarization on wavelength is due to some other factor than the Umov effect. The author gives the results of polarization measurements of the moon in 18 cross sections of the spectrum over a range of 355 - 600 nm. The observations were carried out in September 1962. An analysis of these data shows that at a phase of +12 - 13° the polarization of the investigated details increases toward the red end of the spectrum, which contradicts the results obtained by E. K. Cohan. For other phases the degree of polarization is an almost monotonically varying function of wavelength which increases intensely in ultraviolet light ($\lambda_{eff} = 358$ nm). The author has also established a dependence between the

Card 1/2

L 24804-65

ACCESSION NR: AT4049980

2

maximum degree of polarization P_{max} and albedo A in narrow parts of the spectrum ($\lambda_{eff} = 430$ and 560 nm). At the phase -20° polarization was not detected in any part of the spectrum investigated. Comparison with the results obtained by E. K. Cohan and K. N. Derkach (Tr. Khar'k. astron. obs., 14, 79, 1962) shows that the results of the latter are 40% below the true values. "In conclusion, the author wishes to thank A. V. Murkov and V. P. Konopleva who were responsible for the formulation of this study." (Orig. art. has: 6 formulas, 6 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 07May64

ENCL: 00

SUB CODE: AA

NO REF SOV: 012

OTHER: 004

Cord 2/3

L 3219-65 EWT(1)/FCC GS/GW

ACCESSION NR: AT5024608

UR/0000/65/000/000/0112/0120

AUTHOR: Avramchuk, V. V.

TITLE: Multicolor polarimetry of the light of the twilight and day sky at the zenith

SOURCE: AN UkrSSR. Voprosy astrofiziki; issledovaniye atmosfer Venery i Marsa (Problems in astrophysics; investigation of the atmospheres of Venus and Mars). Kiev, Izd-vo Naukova dumka, 1965, 112-120

TOPIC TAGS: twilight, day sky, polarimetric investigation, light polarization, planetary atmosphere, atmospheric optics

ABSTRACT: Measurements of the degree of light polarization of the twilight and day sky in 12 spectral regions of the 355-600 nm band were carried out with the 70-cm Cassegrainian reflector and electropolarimeter with rotating polaroid of the Main Astronomical Observatory of the Ukrainian Academy of Sciences. The measurements show that the observed values of the degree of polarization in the zenith are considerably less for all wavelengths than the theoretically derived values of polarization of first-order scattering computed for a Rayleigh atmosphere. Data show further that the value of maximum polarization never exceeds
Cord 1/2

L 3219-66

ACCESSION NR: AT5024608

70--75% for the red region of the spectrum and 50--60% for the ultra-violet. The results of observations indicate that in the spectral interval 420--600 nm the degree of polarization has only a negligible dependence on wavelength. A sharp drop in the degree of polarization is evident at 420 nm. Orig. art. has: 4 figures and 6 tables. [DM]

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN UkrSSR (Main Astronomical Observatory, AN UkrSSR)

SUBMITTED: 05Jun65 ^{44,55}

ENCL: 00

SUB CODE: ES

NO REF SOV: 004

OTHER: 000

ATD PRESS: 4104

GC
cont. 2/3

PAVLOV, I.F., kand.biolog.nauk; LEBEDEVA, K.K., nauchnyy sotrudnik;
AVRAMENKO, A.I., staryiy tekhnik

Methods for protecting grain crops. Zashch. rast. ot vred.
i bol. 7 no.7:22-24 J1 '62. (MIRA 15:11)

..(Central Black Earth Region--Grain--Diseases and pests)
(Central Black Earth Region--Plants, Protection of)

ACC NR: AP6015710

(A)

SOURCE CODE: UR/0413/66/000/009/0125/0125

INVENTOR: Naydis, N. M.; Avramenko, A. K.; Yakuts, B. L.; Ryzhov, L. S.; Korchin, Yu. M.; Kalyuzhnyy, O. K.; Kushinskiy, V. A.

ORG: None

TITLE: Fuel delivery controller for internal combustion engines. Class 46, No. 181445

SOURCE: Izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, no. 9, 1966, 125

TOPIC TAGS: engine fuel system, air temperature, fuel control

ABSTRACT: This Author's Certificate introduces: 1. A fuel delivery controller for internal combustion engines. The unit consists of a device for transmitting signals to a servomechanism, a stack of aneroid capsules and two correctors with pickups. These pickups are made in the form of bimetallic plates equipped with manual adjustment screws. Each of these bimetals varies fuel delivery as a function of air temperature. The second corrector is connected to the fuel delivery channel supplying fuel to the engine to allow for the variation in the specific weight of the fuel with temperature. 2. A modification of this controller in which transition from one type of fuel to another is simplified by a scale on the device for correcting temperature (specific weight). The indicating needle of the corrector scale can be set by a manual adjustment screw.

SUB CODE: 21/ SUBM DATE: 28Jun63

Card 1/1

UTC: 621.43,031-441.2

AKHUNDOV, E.B.; AVRAMENKO, A.V.; BAMPI, Yu.S.

Optimum power of a condensing electric power plant
operated on peat. Trudy Inst.energ. AN BSSR no.10:12-21
'59. (MIRA 13:6)
(Peat) (Electric power plants)

TROITSKIY, N.A.; AVRAMENKO, B.I.

Correlation between the dose and absorbed dose in the irradiation of
seeds. Radiobiologia 4 no.1:180-181 '64. (MIRA 17:4)

1. Institut biologii AN BSSR, Minsk.

L 55133-65

UR/0251/65/009/003/1202/0204 2/

ACCESSION NR: AP5011090

AUTHOR: Avramenko, B. I.; Ipat'yev, A. N.; Mushinskaya, L. G.; Savchenko, A. P.; Zhebrak, A. R.

TITLE: Male sterility in plants caused by penetrating radiation

SOURCE: AN BSSR. Doklady, v. 9, no. 3, 1955, 202-204

TOPIC TAGS: radiobiology, gamma ray, cobalt 60, radiation effect, seed, plant genetics

ABSTRACT: It is a laborious and costly process to obtain hybrid seeds by the usual method of flower castration. The authors studied the possibility of inducing male sterility in plants by irradiating air-dried cucumber, rye, wheat, tomato, radish and other seeds with gamma rays from Co⁶⁰ in the atomic reactor of the AN BSSR. Critical doses for each species of plants were used. A relationship was noted between sterility and the radiation dose in the case of mustard, cabbage, cucumber, and rape. In corn and beans, some varieties were less sensitive than others to the same radiation dose. Pollen was found to be sterile in non-irradiated plants, indicating that male sterility may be due to some other factors. In

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L 55133-65

ACCESSION NR: AP5011090

general, however, the results of the experiments show that irradiation of seeds increases pollen sterility so that joint planting of an irradiated maternal variety with a non-irradiated paternal variety increases the hybridity of the seeds. Orig. art. has: 4 tables.

ASSOCIATION: Otdel genetik i tsitologii AN BSSR (Genetics and Cytology Section AN BSSR)

SUBMITTED: 29Jan64

ENCL: 00

SUB CODE: LS

NO REF SOV: 017

OTHER: 003

Card 2/2

AVRAMENKO, F.D.

~~SECRET~~
For a fundamental change of the system of standardizing the quality
of coal. Ugol' 30 no.216-9 F '55. (MLRA 8:4)

1. VNIUgleobogashcheniye.
(Coal)

AVRAMENKO, B.I.; IPAT'YIV, A.N.; MUSHINSKAYA, L.G.; SAVCHENKO, A.P.

Morphological and biological changes in plants subjected to
gamma irradiation. Dokl. AN BSSR 9 no. 5:340-343 My '65
(MIRA 19:1)

1. Institut genstiki i tsitologii AN BSSR. Submitted February
28, 1964.

L 23922-66 - ENT(m)

ACC NR: AP6014957

SOURCE CODE: UR/0250/65/009/005/0340/0343

AUTHOR: Avramenko, B. I.; Ipat'yev, A. N.; Mushinskaya, L. G.; Savchenko, A. P. ³⁵ 13

ORG: Institute of Genetics and Cytology, AN BSSR (Institut genetiki i tsitologii AN BSSR)

TITLE: Morphological and biological changes in plants induced by gamma rays

SOURCE: AN BSSR. Doklady, v. 9, no. 5, 1965, 340-343 19

TOPIC TAGS: gamma ray, radiation plant effect, plant chemistry

ABSTRACT: Critical and sublethal doses of gamma rays stunted the growth of tomatoes, cucumbers, cabbage, mustard, radishes, beans, beets, and onions. Seeds exposed to such doses germinated 1-14 days later than did the control. Subsequent development was also slower. These doses likewise altered the plants' morphology, particularly the leaves. However, all the changes gradually disappeared by the time the plants flowered, indicating that plants recover at a certain stage of development, even after receiving very high doses of radiation. Irradiation also affected the biochemical composition of the plants. For example, it reduced the fat content of mustard and cabbage seeds below that of the control.

Low doses of gamma rays, on the other hand, had a stimulating effect. They hastened the ripening of the fruits and increased the plants' productivity. This paper was presented by Academician AN BSSR A. R. Zhebrak. Orig. art. has: 3 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 28Feb64 / ORIG REF: 007 / OTH REF: 003

Card 1/1 OK 2

8(6)

PHASE I BOOK EXPLOITATION

SOV/2382

Avramenko, F.D., V.I. Veyts, B.A. Gurevich, V.I. Denisov, A.G. Zakharin,
N.A. Karaulov, I.S. Kolosov, N.N. Krachkovskiy, S.N. Kritskiy, M.M.
Lebedev, T.K. Leont'yeva, M.F. Menkel', A.S. Nekrasov, G.I. Rossiyeviskiy,
and B.I. Shvorin

Osnovnyye voprosy planirovaniya yedinoy energeticheskoy sistemy SSSR (Basic
Problems in Planning a Unified Power System for the USSR.) Moscow,
Izd-vo AN SSSR, 1959. 174 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Energeticheskiy institut.

Eds.: G.M. Krzhizhanovskiy, Academician and V.I. Veyts, Corresponding
Member, USSR Academy of Sciences; Tech. Ed.: S.G. Markovich.

PURPOSE: This book is intended for government planning circles, scientific
research organizations and others interested in the electrification of the
USSR.

COVERAGE: The book examines the principal problems of a unified power system

Card 1/11

Basic Problems (Cont.)

sov/2382

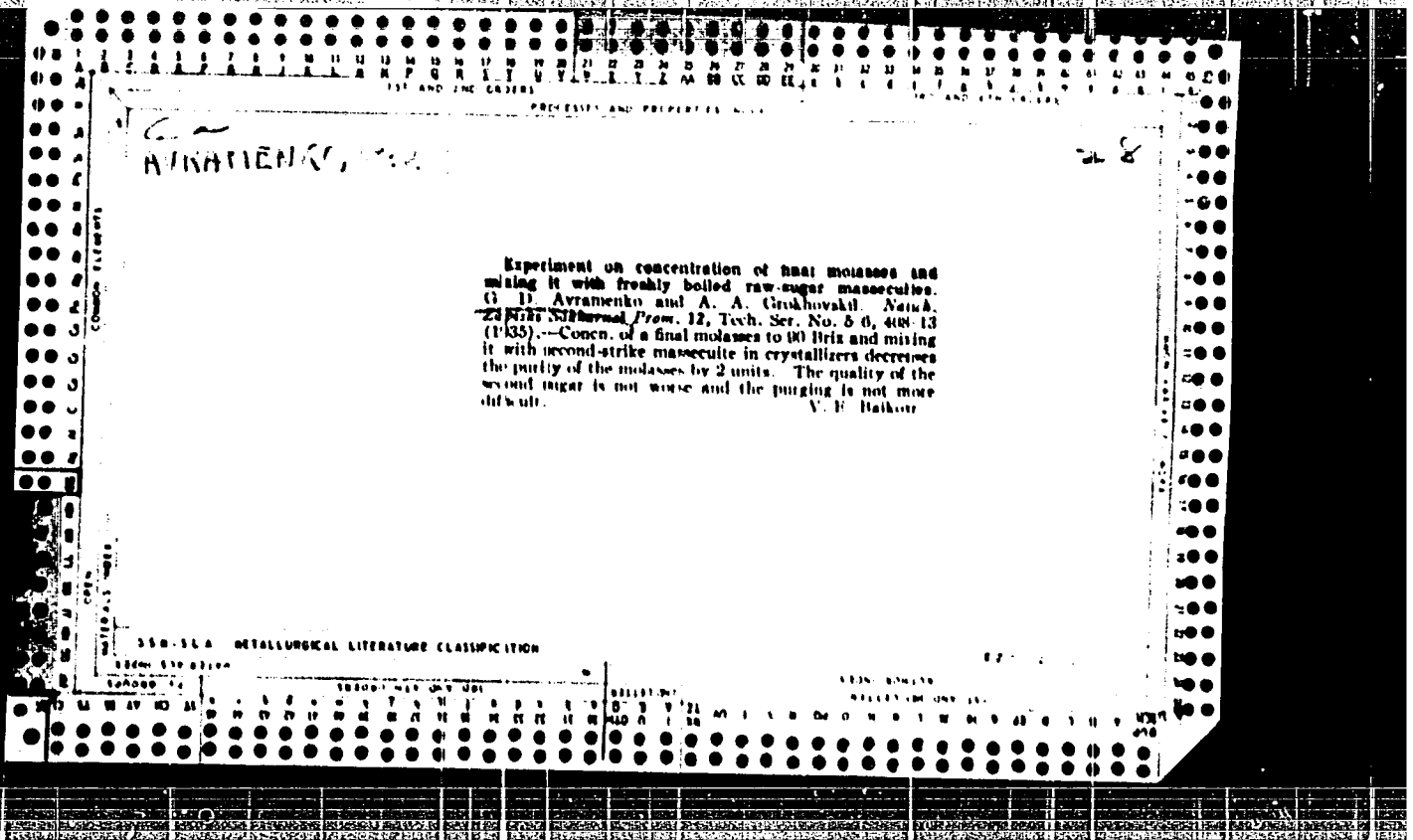
of the system, the increasing use of semiconductors, the use of various types of fuels, etc. These problems were presented in two earlier publications of the Academy of Sciences: *Nauchnyye osnovy sozdaniya i razvitiya yedinoi energeticheskoy sistemy SESR (Scientific Bases in the Creation and Development of a Unified Power System in the USSR; Conclusions of a Coordinating Conference, Moscow, 1957)*; and *Razrabotka nauchnykh osnov razvitiya energeticheskikh sistem i ikh ob'yedineniya yedinuyu energeticheskuyu sistemu (Working Out of Scientific Bases in the Development of Power Systems and Their Integration Into a Unified Power System. Series: Voprosy sovetskoy nauki, Moscow, 1958)*. The following persons participated in writing the book: F.D. Avramenko (Chapters 2 and 4); V.I. Veyts (Chapters 2, section 4 of Chapter 3, Chapter 4, section 1 of Chapter 6, Chapters 8 and 9); B.A. Gurevich (Chapter 1, section 1 of Chapter 7); V.I. Denisov (Chapters 4 and 8); A.G. Zakharin (section 2 of Chapter 7); N.A. Karaulov, S.N. Kritskiy and M.F. Menkel' (Chapter 5); N.N. Krachkovskiy (section 4 and 5 of Chapter 6); I.S. Koslov (section 8 of Chapter 1); M.M. Lebedev (Chapter 6, section 1 of Chapter 7, Chapters 9,10,11); T.K. Leont'yeva (section 1 of Chapter 3); A.S. Nekrasov (sections 2 and 3 of Chapter 9); G.I. Rossiyskiy (Chapter 3); B.I. Shvorin (Chapter 2). Those who participated in preparing the material were: M.M. Albegov, K.N. Bestuzheva, V.A. Bondarova, M.S. Vdovchenko, A.L. Velikanov, Ye.A. Volkova, V.A. Gadiyeva, I.M. Kon'ya, D.N. Korobova, Yu.S. Kretina, M.A.

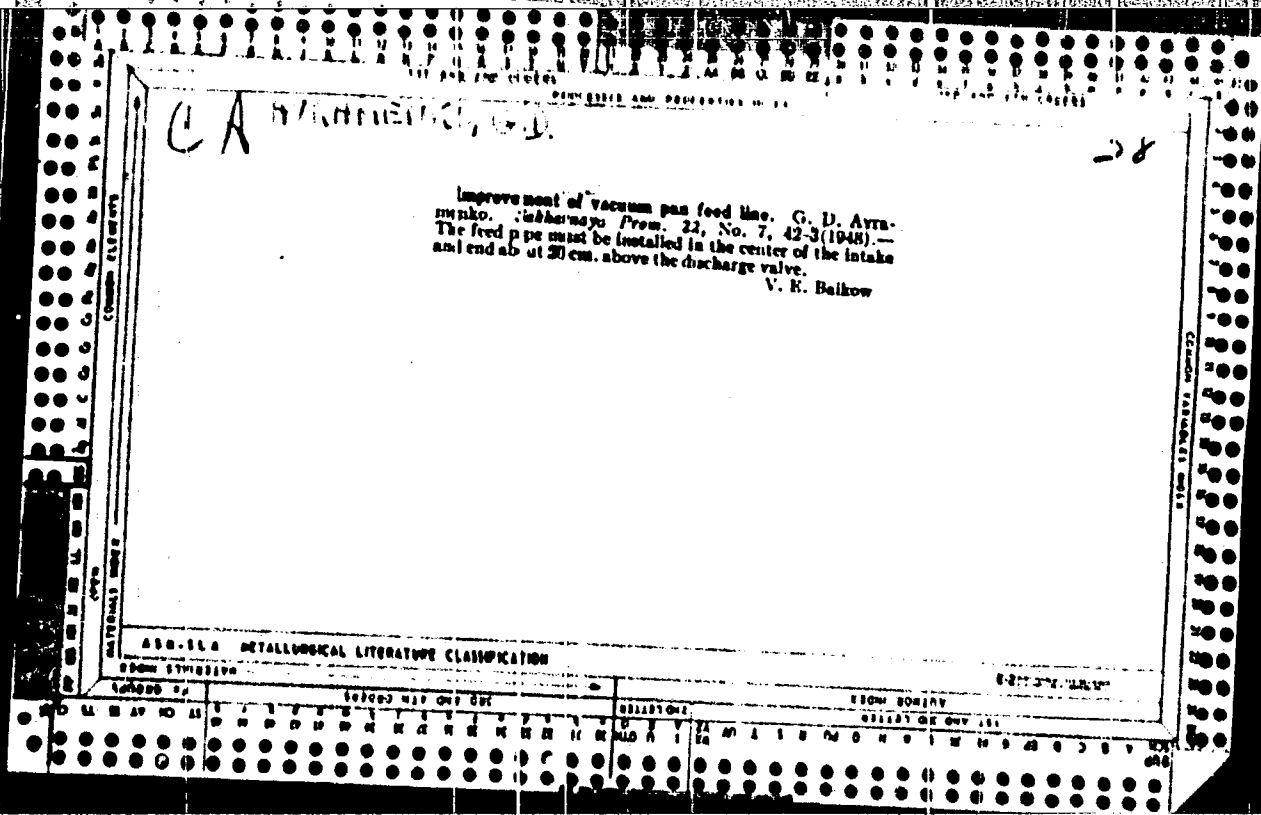
Card 3/11

AVRAMENKO, Fedor Dmitriyevich; BRUSANOVSKIY, Semen Genrikhovich;
MAKAROVA, E.A., rel.; DROZDOV, G.M., tekhn. red.

[Magnitogorsk and Kuznetsk; competition between the steelworkers
of the Urals and Siberia] Magnitka-Kuznetsk; sornovovanie metal-
lurgov Urala i Sibiri. Moskva, Izd-vo VTsSPS Profizdat, 1962.
97 p. (MIRA 15:5)

(Novokuznetsk--Steel industry)
(Magnitogorsk--Steel industry)
(Socialist competition)





AVRAMENKO, G. I.

37434. Opyt razdoya korov v kolkhozakh molokovskogo zoovetuchastka. [Leninskiy rayon mosk. Obl.] Sots. zhivctnovodstvo, 1949, No. 8, s. 40-45.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

AVRAMENKO, G. I. Cand Agr Sci -- (diss) " Effect of various types of combination of succulent fodders upon the growth and development of heifers and their subsequent milk productivity." Mos, 1959. 17 pp (All-Union Order of Lenin Acad Agr Sci im V. I. Lenin. All-Union Sci Res Inst of Animal Husbandry), 150 copies (KL, 45-59, 148)

AVRAMENKO, I., redaktor; KIRILLINA, L., tekhnicheskii redaktor.

[Youth outstrips time; the participation of Communist Youth and young people in the struggle to raise labor productivity] Molodsh' obgoniaet vremia; ob uchastii komsomol'tsev i moldezh' v bor'be za povyshenie proizvoditel'ni truda. Moskva, "Molodaiia gvardiia," 1955. 79 p. (MLRA 8:5)

(Labor productivity)

KUDRYAVT'SHVA-MOLODCHIKOVA, Larisa Pavlovna; AVRAMENKO, I., red.;
KHAENIN, M., tekhn.red.

[Grain ears; stories from the life of cultivated cereals]
Khlebnye kolos'ia; rassказы iz zhizni kul'turnykh zlakov.
Moskva, Izd-vo TsK VLSM "Molodaia gvardiia," 1959. 174 p.
(MIRA 12:10)

(Grain)

KUDRAVTSEVA-MOLOLCHIKOVA, Larisa Pavlovna; AVRAMENKO, I., red.;
VOLKOVA, L., red.

[History of an apple trees; true stories on the wonderful
life of a fruit tree] Istoriiia odnoi iablon'ki; pravdivye
rasskazy ob udivitel'noi zhizni plodovogo dereva. Moskva,
Molodaiia gvardiia, 1964. 126 p. (MIRA 17:4)

RUDNEV, D.F.; AVRAMENKO, I.D.; KRAZHEVSKAYA O.N.

Using DDT oil solutions for combating pests in the Kiev greenbelt.
Nauch.trudy Inst.ent.i fit. 6:80-88 '55. (MIRA 9:7)
(Kiev--DDT (Insecticide)) (Kiev--Trees--Diseases and pests)

AVRAMENKO, I. D., Cand Biol Sci (diss) -- "Bark-chewing rodents of the Kazan'-
Veshenskaya massif and measures for combatting them". Khar'kov, 1960. 17 pp
(Min Agric Ukr SSR, Khar'kov Order of Labor Red Banner Agric Inst im V. V
Dokuchayev), 200 copies (KL, No 14, 1960, 129)

MARDZHANYAN, G.M.; ASATRYAN, E.V.; MARKOSYAN, A.A.; UST'YAN, A.K.;
AVRAMENKO, I.D., kand. biolog. nauk (Gomel'); MISKO, L.A.;
AGAFONOVA, Z.Ya., kand. biolog. nauk; ABBASOV, Ya.M., mladshiy
nauchnyy sotrudnik; SIDDYKHOV, D.M., aspirant

Brief information. Zashch. rast. ot vred. i bol. 8 no.10:
55-57 0 '63. (MIRA 17:6)

1. Armyanskiy institut zemledeliya (for Mardzhanyan, Asatryan,
Markosyan, Ust'yan). 2. Poltavskiy sel'skokhozyaystvennyy
institut (for Misko). 3. Kurskaya sel'skokhozyaystvennaya
opytnaya stantsiya (for Agafonova). 4. Azerbaydzhanskiy
nauchno-issledovatel'skiy institut khlopkovodstva, Kirovabad
(for Abbasov). 5. Vsesoyuznyy institut zashchity rasteniy (for
Sadykhov).

USSR/Diseases of Farm Animals. Noninfectious Diseases R-2

Abs Jour : Ref Zhur-Biol., No 2, 1958, 2766

Author : Avramenko I. P.

Inst : Not given

Title : Cause of Diarrhea in Newborn Lambs

Orig Pub : Oytevodtstvo, 1957, No 4, 42-44

Abstract : Clinical observations and experimental tests have shown that poor care and low food value of the fodder given to pregnant ewes and newborn lambs are the reasons for the mass incidence of diarrhea in lambs and their high mortality (up to 50%) in kolkhozes in a number of rayons in Buryat-Mongolian ASSR. By improving the care and fodder given to pregnant ewes, and the administration of sintomycin or bionycin to newborn lambs it was possible to prevent the lambs from contracting

Card 1/1

KSENZUK, F.A., inzh.; AVRAMEIKO, I.N., inzh.; MIRENSKIY, Yu.M.; TROSHCHENKOV,
N.A.

Relation between the degree of deformation and the speed and tension
during the straightening of sheet steel for automobiles, Stal' 25
no.7:632-634 Ji '65. (MIRA 18:7)

1. Zavod "Zaporozhstal".

ACC NR: AT6012089

(N)

SOURCE CODE: UR/3177/65/021/000/0038/0052

AUTHOR: Chekmarev, A. P. (Academician AN UkrSSR); Saf'yan, M. M. (Professor); Meleshko, V. I. (Candidate of technical sciences); Prokof'yev, V. I. (Candidate of technical sciences); Ayramenko, I. N. (Engineer); Dodoka, V. G. (Engineer); Ksenzuk, F. A. (Engineer); Kudin, D. P. (Engineer); Lola, V. N. (Engineer); Movshovich, V. S. (Engineer); Pavlishchev, V. B. (Engineer); Soroko, L. N. (Engineer); Sukhobrus, Ye. P. (Engineer); Kholodnyy, V. P. (Engineer); Yudin, M. I. (Engineer)

ORG: nono *

TITLE: Improvements in the techniques of production of Kh18Ni0T cold-rolled wide-strip steel at the Zaporozhstal' Plant

SOURCE: * Dnepropetrovsk. Institut chernoy metallurgii. Trudy, v. 21, 1965. Prokatnoye proizvodstvo (Welding production), 38-52

TOPIC TAGS: stainless steel, bright stock lubricant, metal rolling, sheet metal, industrial plant / Kh18Ni0T stainless steel, P-28 bright stock lubricant

ABSTRACT: On increasing to 11.8 tons from the previous 10.3 tons the weight of the ingots

Card 1/2

LUN'S, I.G.; AVRAIBENKO, K.S.

Cysts and tumors of the mediastinum. Trudy Vor. med. inst. 52.

221-225 '63.

(MIR 18.3)

AVRAMENKO, I. I.; KOLESNIKOVA, R. V.; KUZNETSOVA, N. I.

Reaction rate constants and the mechanism of reactions of oxygen atoms with methane and ethane. Izv. AN SSSR. Otd. khim. nauk no. 4: 620-627 Ap '63. (MIRA 16:3)

1. Institut khimicheskoy fiziki AN SSSR.
(Paraffins) (Oxygen) (Chemical reaction, Rate of)

KITLINSKAYA, Vera Kazimirovna; AVRAMENKO, I.K., red.; BRUSILOVSKAYA, S.I.,
tekhn. red.

[China today and tomorrow] Kitai segodnia i zavtra. Leningrad,
Sovetskii pisatel', 1958. 393 p. (MIRA 1:18)
(China--Description and travel)