

A. J. ...

transverse waves in a circular stress free cylinder. The paper is part of a series of papers dealing with the propagation of electric waves by the Earth.

NESHUMOV, B.V., kand.iskusstvoved.nauk; KOSHELEV, A.Ye., arkhitektor;  
ASTROVA, T.Ye., arkhitektor; SHIKHEYEV, V.N., arkhitektor;  
VOSHCHANOVA, G.K., arkhitektor; GORBUNOVA, V.A., arkhitektor;  
KOVAL'KOV, V.G., arkhitektor; MARKEYEV, Yu.S., arkhitektor;  
YAVOROVSKAYA, M.E., arkhitektor; OGRYZKO, P.V., arkhitektor;  
TIKHONOVA, N.V., arkhitektor; MANANNIKOVA, L.V., arkhitektor;  
GRADOV, G.A., red.; PAVLENKO, M.V., red.

[Furniture and equipment for public buildings; catalog based on materials from the Exhibition of Furniture and Equipment for Public Buildings, 1959-1960] Mebel' i oborudovanie dlia obshchestvennykh zdani; katalog sostavlenn po materialam vystavki mebeli i oborudovaniia dlia obshchestvennykh zdani, 1959-1960 gg. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 186 plates. (MIRA 14:2)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut obshchestvennykh zdaniy i sooruzheniy. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Gradov).  
(Furniture--Catalogs) (Public buildings--Equipment and supplies)

PROCESSES AND PROPERTIES INDEX

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ca

The heats of solution and the heats of dilution of phosphoric acid salts of potassium and ammonium. K. G. Khomyakov, S. F. Yarovskaya and P. K. Shirokikh. *Trans. Sci. Inst. Ferrous (U.S.S.R.)* No. 110, 34-40 (1953).—The heats of soln. and of diln. of K and NH<sub>4</sub> phosphates were detd. including the first, total and last heat of soln. The solubilities of K<sub>2</sub>PO<sub>4</sub>, KAlPO<sub>4</sub>, and NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub> were detd. from the relation of the d. of the solns. to concn. For K<sub>2</sub>PO<sub>4</sub> at 22° it was 55.0% or 10.75 moles in 100 moles of H<sub>2</sub>O; for KAlPO<sub>4</sub> 17.75 moles; for NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub> at 21° 0.1170 moles. The integrals of the heat of soln. in relation to concn. are expressed by an interpolated formula. For K<sub>2</sub>H<sub>2</sub>PO<sub>4</sub>:  $L_c$  (the integral of the heat of soln.  $L_c$  is the heat effect of the soln. of 1 mole of salt in a quantity of H<sub>2</sub>O that gives a definite concn. C) =  $-4097 + 184.3C - 12.20C^2$ ; for KH<sub>2</sub>PO<sub>4</sub>:  $L_c = 511.725C - 63.2C^2 + 2.394C^3$  and  $dL/dC = 25.502 - 15.91C + 1.378C^2$  in 100 moles of H<sub>2</sub>O,  $L_c = 25.502 - 15.91C + 1.378C^2$  for concn. from 10 to 18 moles of salt per 100 moles of H<sub>2</sub>O; for K<sub>2</sub>PO<sub>4</sub>, concn. 0 to 4 moles per 100 moles of H<sub>2</sub>O,  $L_c = 9538 + 823.32C + 184.94C^2 + 13.014C^3$ ; or (NH<sub>4</sub>)<sub>2</sub>HPO<sub>4</sub>,  $L_c = -3180 + 425C - 62.00C^2 + 3.39C^3$ . A discussion and derivation of the formula used, based on the Hess law, are given. J. S. Joffe

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

OPEN MATERIALS INDEX

1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900



27

ca

Cleansing preparation. S. F. Yavorikaya, U.S.S.R. 67,688, Dec. 31, 1946. Mineral oil is emulsified by an aq. alk. ext. of peat. The emulsification is carried out in the presence of kaolin and pumice or in the presence of kaolin, pumice, cresol, and an addnl. quantity of potash. M. H.

DETALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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CA

Comparative evaluation of solid and liquid mercury adsorbents (demercurizers). S. F. Yavorovskaya. *Gigiena i Sanit.* 11, No. 6, 27-33 (1946). Pumice, active carbon, silica gel, active MnO<sub>2</sub> (granules 2-4 mm. in diam.) coated with a mixt. of CuI + I<sub>2</sub> and active iodized carbon (Pyankov's sorbent) were studied. Demercurization proceeded according to Hg + I<sub>2</sub> = HgI<sub>2</sub> and CuI + HgI<sub>2</sub> = [CuI · HgI<sub>2</sub>]. Active MnO<sub>2</sub> was prepd. by pptg. MnO<sub>2</sub> on mixing solns. of KMnO<sub>4</sub> and MnCl<sub>2</sub>, drying and granulating; traces of Cl remain adsorbed. Pyankov's sorbent is made by treating active carbon with a 0.5% alc. iodine soln. and drying at 50°. The new sorbents were prepd. by mixing active carbon or silica gel with a satd. soln. of CuSO<sub>4</sub>, letting stand for several hrs., decanting the soln., adding a satd. soln. of KI, letting stand for 2 hrs., decanting, and drying at 70-80°. Among liquid demercurizers tested were distil. H<sub>2</sub>O, mineral oil, a 10% HNO<sub>3</sub> soln., KMnO<sub>4</sub> acidified with HCl, H<sub>2</sub>S water (satd.), CuSO<sub>4</sub> + KI in aq. soln., a mineral oil-water emulsion (1 pt. water and 3 pts. oil and 10% iodized sulfur as emulsifier). In static tests at room temp. pumice coated with CuI + I<sub>2</sub> over three months, active C 3 months, pumice with life of 450 days, active C 3 months, pumice coated with CuI + I<sub>2</sub> over three months. In dynamic tests (aeration tests at 50° (amt. of sorbent about 10 g., air velocity 1 l./min.), the life of the sorbent depended on the particle size and method of prepn. Pyankov's sorbent was best, followed, in order, by active carbon coated with CuI + I<sub>2</sub>, silica gel with CuI + I<sub>2</sub>, pumice with CuI + I<sub>2</sub>, and MnO<sub>2</sub>. Tests of liquid sorbents by the static method at room temp. gave the following lifetimes: distil. H<sub>2</sub>O, 2 hrs.; HNO<sub>3</sub> (10%), 2 hrs.; KMnO<sub>4</sub> soln., 2 hrs.; KI (0.2%) with CuSO<sub>4</sub>, 20 hrs.; the same soln. contg. 1% KI, 8 days; H<sub>2</sub>S water (satd.), 15 days. The dynamic method at an aeration rate of 1 l./min. at 20° gave results in good agreement with those of the static test.

C. S. Shapiro

YAVOROVSKAYA, S. F.

Cand Chem Sci

Dissertation: "Removal and Detoxification of Mercury and Its Vapors."

25 May 49

Moscow Order of Lenin State V imeni M. V. Lomonosov

SO Vecheryaya Moskva  
Sum 71

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CA

Decontamination and removal of spilled mercury by ferric chloride. S. P. Yavorovskaya. *Gigiena i Sanit.* 1949, No. 3, 19-22.—A 20% soln. of FeCl<sub>3</sub> is a most effective decontaminant for Hg drops; the coating produced on the droplets is more effective and durable than is that formed by other agents: oil, dil. HNO<sub>3</sub>, KMnO<sub>4</sub>, H<sub>2</sub>S, S emulsions, clay. The effect is that of sharp lowering of the vapor pressure of Hg in the surrounding air; thus 1.5 mg./cu. m. concn. was reduced to 0.01 in expts. Lasting up to 70 days (at the end of the period a rise of 0.07 was noted).  
G. M. Kosolapoff



20

CA

Evaluation of some building and technical materials as to permeability and adsorption of mercury vapor. S. N. Yarovskaya. *Gigiena i Sanit.* 1950, No. 11, 23-8. Usually poorly permeable materials show poor adsorption and desorption of Hg. This does not apply to plaster, asbestos wall panels, and black textiles. The behavior in respect to Hg vapor is detd. largely by porosity size and shape, with some effect of fibers within the structure. Sata. with tars, oils, and bitumens significantly reduces permeability and adsorption of Hg. The detn. was done in Petri dishes contg. Hg covered with sheets of the test materials, with detection being done on the outer side of the covering by means of Frieshaev test papers at 18-22°. Expts. on sorption were run for 3 months. The following results were obtained: asbestos cardboard: rapid permeability, good rates of adsorption and desorption; asbestos wallboard: poor permeability, good adsorption; concrete: high permeability, poor adsorption, good desorption; ferroconcrete: very poor permeability, poor adsorption; porous paper: very good permeability, good adsorption, and desorption; wood board: medium permeability, poor adsorption, and desorption; oil-treated wood: very poor permeability, very

poor adsorption (anthracene oil used); unglazed cardboard: good permeability, adsorption, and desorption; red brick: good permeability, poor adsorption, good desorption; paint on porous surfaces: poor permeability, medium adsorption, and desorption; linoleum: very poor permeability, adsorption, and desorption; same for glazed tiles; oil panels and lacquers: medium permeability, adsorption, and desorption; nitrocellulose paints: very poor permeability, poor adsorption; parchment: medium permeability; red rubber: sorption; parchment: medium permeability; red rubber: very poor permeability, poor adsorption; gray rubber: very poor permeability, good adsorption; microporous rubber: good permeability, medium adsorption, and desorption; white textiles: very good permeability, medium adsorption, very good desorption; black textiles: very good sorption, very good desorption; black textiles: very good medium, poor., resp.

G. M. Kosolapoff

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~~S.F.~~ Yavorovskaya, S.F.

2

Rendering mercury vapor noninjurious or removing it.  
S. F. Yavorovskaya. *Novosti Med.* 1952, No. 20, 72-9. *CH*  
lined and treated with  $CuSO_4$  and  $KI$  adsorbs Hg vapor ef-  
fectively. Workrooms can be freed from small quantities  
of metallic Hg with the aid of solns. of  $FeCl_3$  or of emulsions  
of sulfur and clay. The walls of workrooms can be lined  
with porous material treated to increase its adsorptive prop-  
erties for Hg vapor. Light-colored cotton clothing finished  
to high gloss is recommended as best for protection of the  
body against Hg vapors. B. S. Levine

MA  
MET

YAVOROVSKAYA, S.F.

Comparative evaluation of permeability and adsorptive ability of mercury vapors in various construction and technical materials. Gig. sanit., Moskva no.12:35-39 Dec 1952. (GLML 23:4)

1. Of the Central Scientific-Research Laboratory of Hygiene and Epidemiology of the Ministry of Ways of Communication USSR.

YAVOROVSKAYA, S.F.

Rapid method of determination of mercury vapors in air. Gid. sanit.,  
Moskva no.4:48-49 Apr 1953. (CML 24:4)

1. Of the Central Scientific-Research Laboratory of Hygiene and Epidemi-  
ology of the Ministry of Communication Routes USSR.

YAVORSKAYA, S.F.

Rapid indicator determination of the content of mercury in structural materials. *Gigiena i Sanit.* '53, No.4, 49-50. (MLRA 6:4)  
(CA 47 no.21:11072 '53)

YAVOROVSKAYA, S.F., kandidat khimicheskikh nauk; POLUBINSKIY, A.L.

Pseudoliquefaction applied in gas purification. Khim.prom. no.2:91-94  
Mr '55. (MIRA 8:8)

1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya gigiyeny i epidemiologii Ministerstva putey soobshcheniya.  
(Scrubber (Chemical technology))

EXCERPTA MEDICA Sec 17 Vol 5/3 Public Health Mar 59

926. RAPID METHOD OF DETERMINATION OF FUMES OF BENZOL AND  
BENZOL HOMOLOGUES (Russian text) - Yavoroskaya S. F. -  
KHIM. PROMYSH. 1956, 6 (46-47)

A rapid method has been developed for the determination of fumes of benzol and its homologues based on the reaction of the aromatic hydrocarbons taking place on silica gel, using formaldehyde sulphuric acid as indicator. The content of the vapours of benzol, toluol and xylol in the air is determined by comparison of the length and shade of the stained layer of the indicator with a standard scale. The organic substances, with the exception of the higher aromatic hydrocarbons, do not interfere with this reaction. Where only benzol or one of its homologues is present in the air, it is possible to determine its content with an accuracy of up to 0.05-0.1 mg./l. The method recommended permits a rapid and simple determination of the vapours of benzol, toluol and xylol in air, with a degree of accuracy, in the author's opinion, that is adequate from the public health point of view.

(S)

YAVOROVSKAYA, S.F.

USSR/Analysis of Organic Substances.

G-3

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 19685

Author : S.F. Yavorovskaya.

Title : Express Indicator Method of Determination of Vapors of Benzene and Its Homologs.

Orig Pub : Khim. prom-st', 1956, No 6, 366-367

Abstract : In order to prepare the indicator, silica gel (ASK, MSK, ShSK or KSK), grain size 0.25 to 0.5 mm, is treated with boiling diluted HCl (1:1), washed, roasted at 800°, treated with concentrated H<sub>2</sub>SO<sub>4</sub> (5 to 6 ml per 3 g), heated until SO<sub>3</sub> is eliminated, and 4 to 5 l of air are sucked through it, the air having been passed preliminarily through a 30% solution of CH<sub>2</sub>O. The indicator containing about 30% of H<sub>2</sub>SO<sub>4</sub> and 3% of CH<sub>2</sub>O is put into tubes (dia. 1.5 mm, length 80 mm, layer height 60mm) and closed on both sides with cotton plugs and powdered porcelain or glass. The contents of C<sub>6</sub>H<sub>6</sub>, toluene and

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Cent. Sci. Res. ~~IAB~~ Hygiene + Epidemiology,  
Min. of. Ways of Communication.



5(3)

SOV/64-59-4-21/27

AUTHOR:

Yavorovskaya, S. F., Candidate of Technical Sciences

TITLE:

A Rapid Method for the Determination of Chloro-organic Compounds in the Air (Bystryy metod opredeleniya khlororganicheskikh soyedineniy v vozdukh)

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 4, pp 77-79 (USSR)

ABSTRACT:

With the development of the chemistry of synthetic fibre the investigation of air as to the presence of poisonous chloroorganic compounds, as for instance tetrachloro alkene (I), becomes important. The different investigation methods of this kind may be subdivided into four groups. The rapid determination method which is based on the coloring of the test paper or the flame is not so precise as the analytical method but it is of interest because of the short time it requires. Since the (I) molecules have four chlorine atoms and thus intensive coloring of the flame is obtained, in the present case a corresponding rapid method was worked out, which is based on the Beilstein-reaction. The operation curves were plotted after several analyses which were made after the microcombustion and flame coloring. The organic substances in the air sample were absorbed

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A Rapid Method for the Determination of  
Chloro-organic Compounds in the Air

SOV/64-59-4-21/27

either on a resting coal layer (activated charcoal) in a special glass tube (Fig 2) or on a pending coal layer in a special absorption vessel (Fig 3). Complete absorption occurs with air current velocities of 10-15 l/minute. The activated coal with the absorbed substance is put above the flames on a copper grid above the flame in an attachment (Fig 4) and the duration of the flame coloring is measured with a stop watch. According to the aforementioned operation curves the content of (I) may be calculated. The determination results obtained from air and alcohol solutions (Tables 1, 2) show that the minimum chlorine content which must be in the sample amounts to 0.5 mg chlorine. The method was checked under working operations and yields results which are well in line with those obtained after micro-combustion. There are 6 figures, 2 tables, and 8 references, 3 of which are Soviet.

ASSOCIATION: Institut gigiyeny truda i profzabolevaniy Akademii nauk SSSR  
(Institute of Working Hygiene and Occupational Diseases of the  
Academy of Sciences, USSR)

Card 2/2

~~YAVOROVSKAYA, S.F.~~

Determination of small amounts of chlorine organic compounds in the air by gas chromatography. Khim.prom. no.8:573-577 Ag '61.

(MIRA 14:8)

1. Institut gigiyeny truda i profzabolevaniy Akademii meditsinskikh nauk SSSR.

(Chlorine organic compounds) (Gas chromatography)

YAVOROVSKAYA, S.F.

Separate determination of the components of certain gaseous mixtures in the air of industrial enterprises by the method of gas-liquid distribution chromatography. Trudy Kom.anal.khim. 13:269-276 '63.  
(MIRA 16:5)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR.  
(Gas chromatography) (Air—Analysis)

YAVOROVSKAYA, S.F., kand.khim.nauk

Absorption of gaseous and vaporous harmful ingredients from  
the air by a boiling layer of solid sorbents. Gig. i san. 28  
no.1:36-38 Ja'63. (MIRA 16:7)

1. Iz Instituta gigiyeny truda i professional'nykh zabolevaniy  
AMN SSSR.

(AIR ---PURIFICATION)

DREYZIN, R.S.; ZUBOVA, Z.F.; YAVOROVSKAYA, V. Ye.; BOCHAROV, Ye.F.;  
FOKINA, G.I.; BALANDINA, A.M.; ROZINA, E.E.; VOROB'YEVA, N.N.;  
ZALESSKIY, G.D.; ZHDANOV, V.M.

Serological properties and pathogenicity of the R-virus in  
suckling mice. Vop. virus 9 no.4:462-468 J1-Ag '64

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR,  
Moskovskiy nauchno-issledovatel'skiy institut virusnykh  
preparatov i Novosibirskiy meditsinskiy institut.

YAVOROVSKAYA, V. F.: Master Chem Sci (diss) -- "On the effect of sulfuryl chloride on certain terpenes". L'vov, 1958. 20 pp (Min Higher Educ, Dnepropetrovsk State U in 300th Anniversary of the Unification of the Ukraine with Russia, Chem Faculty), 200 copies (KL, No 8, 1959, 135)

MALINOVSKIY, M.S.; YAVOROVSKAYA, V.F.

Effect of sulfuryl chloride on  $\alpha$ -pinene. Ukr.khim.zhur. 25 no.1:  
107-110 '59. (MIRA 12:4)

1. Dnepropetrovskiy gosudarstvennyy universitet.  
(Sulfuryl chloride) (Pinene)



YAVOROVSKAYA, V. Ye., Cand Med Sci -- (diss) "Aggressive properties of hemolytic streptococcus and immunobiological indices in patients ill with scarlet fever." Novosibirsk, 1958. 10 pp; (Novosibirsk State Medical Inst); number of copies not given; price not given; (KL, 21-60, 132)

DREYZIN, R.S.; YAVOROVSKAYA, V.Ye.; BALANDINA, A.M.; SHURIN, S.P.;  
VORON'YEVA, N.N.; MOSOLOV, A.N.; ZALESSKIY, G.I.; ZHDANOV, V.M.

Group of new virus strains, the so-called R virus. Vop. virus. 6  
no.5:521-532 S-0 '61. (MIRA 15:1)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva i  
Novosibirskiy meditsinskiy institut, Novosibirsk.  
(VIRUSES)

ASHBEL', S.I.; KHIL', R.G.; YAVOROVSKAYA, Yu.S. (Gor'kiy)

Prevention of occupational poisoning in workers of granozane plants due to inhalation of unithiol aerosol. Gig. truda i prof. zab. 4 no.12:16-20 D '60. (MIRA 15:3)

1. Gor'kovskiy gosudarstvennyy nauchno-issledovatel'skiy institut gigiyeny truda i professional'nykh zabolevaniy.  
(MERCURY ORGANIC COMPOUNDS--TOXICOLOGY)

YAVORSKAYA, Z.A.; APYKHITIN, P.S.

Experience in the decating of felt footwear. Tekst. prom. 24 no.7:  
76-77 JI '64. (MIRA 17:10)

1. Starshiy inzh.-tehnolog Ukrainskogo nauchno-issledovatel'skogo instituta tekstil'noy promyshlennosti (UkrNIITP) (for Yavorskaya).
2. Zavoduyushchiy sektorom valyal'no-voylochnykh i fatrovyykh izdeliy Ukrainskogo nauchno-issledovatel'skogo instituta tekstil'noy promyshlennosti (for Apykhtin).

YAVORKOVSKIY, L. I.

YAVORKOVSKIY, L. I. -- "Diagnostic Significance of Lactic Acid in the Gastric Juice."  
Latvian State U, 1949. In Latvian  
(Dissertation for the Degree of Candidate of Medical Sciences)

SO: Izvestiya Ak. Nauk Latviyskoy SSR, No. 9 Sept., 1955

YAVROVSKIY, A. A.

"The Mechanism of the Grignard-Wurtz Reaction and the Synthesis of Some Fatty-Aromatic Hydrocarbons of  $C_{10}$  -  $C_{24}$  Composition." Cand Chem Sci, L'vov State U, L'vov, 1954, (RZhkhim, No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

USSR/Chemistry - Organic chemistry

Card 1/1 Pub. 116 - 16/24

Authors : Malinovskiy, M. S., and Yavorovskiy, A. A.

Title : Synthesis of alpha-bromethyl benzene and alpha-bromisopropyl benzene and their application in Grignard reactions

Periodical : Ukr. khim. zhur. 21/2, 240-244, 1955

Abstract : It was established that the saturation of styrene or methylstyrene with hydrogen bromide in an ester, chloroform or carbon tetrachloride solution offers high yields of alpha-bromethyl benzene. The properties of alpha-bromisopropyl benzene obtained through high vacuum distillation of the saturation product are described. The conditions favorable for the formation of organo-magnesium compounds of alpha-bromethyl benzene are discussed. The yields of organo-magnesium compounds obtained during the saturation in a nitrogen atmosphere are listed. Eight references: 5 German, 2 Russian and USSR and 1 French (1882-1950). Table.

Institution : The Ivan Franko State University, L'vov

Submitted : April 20, 1954

1. Malinovskiy, M. S.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 116 - 8/29

Authors : Malinovskiy, M. S., and Yavorovskiy, A. A.

Title : Synthesis of 2-phenylbutane and 2-phenyl-2,3,3-trimethylbutane with the aid of lithium-organic compounds

Periodical : Ukr. khim. zhur. 21/6, 723-725, Dec 1955

Abstract : By combining alpha-bromo-isopropylbenzene with tertiary butyllithium and lithiumtriethylmethane the authors obtained two hydrocarbons - 2-phenyl-2,3,3-trimethylbutane and 2-phenyl-2-methyl-3,3-diethylpentane. Another hydrocarbon - 2-phenylbutane - was obtained in an analogous manner from lithium ethyl and alpha-bromomethylbenzene. It was established that the very same reactions but with organo-magnesium compounds instead of lithium-organic ones did not produce the hydrocarbon desired or the yield of the hydrocarbon was extremely low. Five references: 1 USSR, 3 USA and 1 Germ. (1876-1949).

Institution : L'vov State University im. I. Franko, Faculty of Organ. Chem.

Submitted : May 28, 1955



YAVOROVSKIY, A. N.

✓ Effect of ultraviolet irradiation on organomagnesium  
compounds. M. S. Mahmudskii and A. A. Yavorovskii.  
J. Gen. Chem. U.S.S.R. 25, 857-02(1955)(Engl. transla-  
tion). See C.A. 49, 13788d. H. M. R.

SMM

①

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YAVOROVSKIY, A. A.

Effect of ultraviolet irradiation on organomagnesium compounds, M. B. Mollagorkii and A. A. Yavorovskii (State Univ., Lvov). Zash. Oshchekh Khim. 25, 621-7 (1955).—It is suggested that the reaction of Mg with RX in the presence of ultraviolet radiation is a radical reaction, while the formation of free radicals on irradiation of RMgX solns. is established. When RX was added to Mg and Et<sub>2</sub>O while being illuminated with ultraviolet, the reaction usually commenced immediately. Ultraviolet illumination during the formation of RMgX gave improved yields (improvement or drop in %) for EtMgBr (8.7%), BuMgBr (13.4%), and PhMgBr (6.3%), while the following gave lower yields: iso-PrMgBr (4.5%), iso-BuMgBr (6%), MeEtCHMgBr (9.4%); in C<sub>6</sub>H<sub>6</sub>, as the solvent with catalysis of the reaction by a little PhNMe<sub>2</sub>, the following showed decreased yields of RMgX when illuminated with ultraviolet: iso-PrMgI (11.1%), iso-BuMgI (13.1%), and iso-AmMgI (14.4%). PhCH<sub>2</sub>MgBr gave the same results in both instances. These results indicate the initial formation of R radicals which react with MgX radicals for the primary halides, and R radicals reacting with MgX<sub>2</sub> for secondary R radicals. The reactions run in C<sub>6</sub>H<sub>6</sub> gave not only R<sub>2</sub> products but also RPh, which indicates the radical nature of the reaction (iso-PrPh, iso-BuPh, and iso-AmPh were isolated). Illumination of prepd. RMgX resulted in no gas evolution from MeMgI, while EtMgBr gave a mixt. of satd. and unsatd. gaseous hydrocarbons, apparently C<sub>2</sub>H<sub>4</sub> and C<sub>2</sub>H<sub>2</sub>, formed from Et radicals; the latter reaction also yielded a ppt., which on treatment with H<sub>2</sub>O gave C<sub>2</sub>H<sub>2</sub>; the quant. results indicate that illumination lowered the concn. of Et<sub>2</sub>Mg in the soln. and raised that of EtMgBr; the reaction of Et<sub>2</sub>Mg is of radical type involving decomps. into RMg and R radicals which then yield RMgX and X radicals; the latter reacting with RMg yield RMgX. BuMgBr did not yield gases under ultraviolet illumination. When mixts. of RMgX and RX were irradiated there was a slight (5-7%) apparent reduction of available RMgX, possibly through formation of R<sub>2</sub>. Cf. Gilman and Heck, C.A. 24, 2426. G. M. Kosolapoff.

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YAVOROVSKIY, A.A.

61

Mechanism of the Grignard-Wurtz reaction, II. Synthesis and properties of 2,3-diphenyl-2,3-dimethylbutane.

A. A. Yavorovskii and M. S. Malinovskii (State Univ., Lvov). *Zhur. Obshchei Khim.*, 25, 2002-4 (1955); cf. *Usraia, Khim. Zhur.*, 21, 240 (1955).—The hydrocarbons reported by O. Wallach (cf. *Chem. Zentr.*, 1899, 11, 1047) and Klages [*Ber.*, 35, 2033 (1902)] as having the formula  $C_{16}H_{18}$  differ from each other in phys. properties. The hydrocarbon reported by Klages, m. 119-20°, on heating with iodine in an ampul 8 hrs. at 235-40° gave 2 products of isomeric structures: one of these has m. 151-2°, the other, m. 200-0.5°. Oxidation of all 3 substances with  $KMnO_4$  gave AcPh, indicating the same structure for all three; x-ray diffraction diagrams of the 3 substances show similar disposition of the patterns but different spacings, indicating different lattice parameters. The Grignard reaction of  $PhCBrMeEt$  gave  $C_{16}H_{18}$ , m. 119-20° (cf. Lapkina and Lyubimova, *C.S. U.S.S.R.*, as well as the liquid form, which was also noted in (1) (a), of the solid substance. Wurtz reaction of  $PhCBrMeEt$  also gave the product, m. 119°, and greater amts. of the liquid product. Prepn. of  $C_{16}H_{18}$  according to Wallach gave a low yield of product, m. 62-3°. G. M. K.

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(2)

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YAVOROVSKIY, A.A.

*Ch* Mechanism of the Grignard-Wurtz reaction. I. Syn-  
thesis of some alkaromatic hydrocarbons from benzyl  
chloride,  $\alpha$ -bromoethylbenzene, and  $\alpha$ -bromo- $\alpha$ -methyl-ethyl-  
benzene. M. S. Malinovskii and A. A. Yavorovskii. *J.*  
*Gen. Chem. U.S.S.R.* 25, 2169-73(1963)(Engl. translation).  
--See *C.A.* 50, 9311d. B. M. P.

2

ГЛУХОВСКИЙ, А. А.

9

✓ Mechanism of the Etzard-Wurtz reaction. 1. Synthesis of some aliphatic hydrocarbons from benzyl chloride, n-hexamethylbenzene and α-bromo-α-phenyltoluene. M. S. Malinovskii and A. A. Yavorovskii (State Univ., Lvov). Zhur. Obshchei Khim. 25, 220-13 (1955); cf. C.A. 50, 8581a.—Reaction of PhCH<sub>2</sub>Cl with iso-AmMgBr in 9 hrs. at 90° gave 33% iso-AmCH<sub>2</sub>Ph, 21.7% 2,7-dimethyloctane, 5% MePh, 7% PhCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>Ph, and 13% unidentified products. With Me<sub>2</sub>CHMgBr there was formed 30% PhCH<sub>2</sub>CH<sub>2</sub>MeEt, 10.7% 3,4-dimethylhexane, and some MePh. With Me<sub>2</sub>CMgCl there formed 24% PhCH<sub>2</sub>CMe<sub>2</sub>, 20.5% MePh and 8% C<sub>11</sub>H<sub>16</sub>. With Et<sub>2</sub>CMgCl there formed 19.6% PhCH<sub>2</sub>CEt<sub>2</sub>, 2.0% MePh, and 8.7% higher hydrocarbons. Reaction of PhCHMeBr with EtMgBr gave similarly 8% PhCHMeEt; BuMgBr gave 25% PhCHMeBu and 6% n-octane; MeEtCHMgBr gave 4% PhCHMeCHMePh and 20% 3,4-dimethylhexane; Me<sub>2</sub>CMgCl gave 43% Me<sub>2</sub>CCMe<sub>2</sub>; PhCH<sub>2</sub>MgCl gave 20% PhCH<sub>2</sub>MeCH<sub>2</sub>Ph and 44% (PhCH<sub>2</sub>)<sub>2</sub>. Reaction of PhCMe<sub>2</sub>Br with EtMgBr gave 34% PhCMe<sub>2</sub>Et; with iso-PrMgBr there was formed 25.5% PhCMe<sub>2</sub>CHMe<sub>2</sub>; with iso-BuMgBr, 18.3% PhCMe<sub>2</sub>CH<sub>2</sub>CHMe<sub>2</sub>; with BuMgBr, 27% PhCMe<sub>2</sub>Bu; with Me<sub>2</sub>CMgCl, 45% (CMe<sub>2</sub>)<sub>2</sub>; and with iso-AmMgBr, 0.2% iso-AmCMe<sub>2</sub>Ph and 10.6% 2,7-dimethyloctane. 1-Phenyl-2,2-dimethylbutane b<sub>11</sub> 112-15°, d<sub>20</sub> 0.807, n<sub>D</sub><sup>20</sup> 1.4995; 2-phenyl-3-methylpentane b<sub>11</sub> 110-12°, d<sub>20</sub> 0.802, n<sub>D</sub><sup>20</sup> 1.4990; 2-phenyl-2,3-dimethylbutane b<sub>11</sub> 107-200° d<sub>20</sub> 0.878, n<sub>D</sub><sup>20</sup> 1.4945. G. M. Kosolapoff

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PM

YAVOROVSKIY, N. H.

137-58-1-2138

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 290 (USSR)

AUTHORS: Yavorovskiy, A. A., Galibey, L. I.

TITLE: Polarographic Analysis of Type Metal (Polarograficheskiy analiz tipografskikh splavov)

PERIODICAL: Sb. tr. Ukr. n. -i. in-t poligr. prom-sti, 1956, Vol 4, pp 104-126

ABSTRACT: Conditions have been found for simultaneous polarographic analysis of Sb-Sn and Pb-Sb. Determination of Sn in the presence of Pb requires prior separation of the two, as their half-wave potentials coincide under all conditions. 0.2 g type metal is dissolved in concentrated  $H_2SO_4$  and  $H_2O$  is added to the foregoing, together with the  $PbSO_4$  precipitate, to bring it up to 50 cc. The solution is filtered and 25 cc filtrate is supplemented by a background solution (132 g  $NH_4Cl$ , 80 cc 15 percent  $HCl$ , 24 cc 0.5 percent gelatin solution, and 600 cc  $H_2O$ ) up to a total of 100 cc. The Sb and the Sn are subjected to polarography in an  $H_2$  atmosphere. Cu and Fe may be analyzed simultaneously. If the Cu and Fe content is greater than 1-2 percent, the peaks of the Sb and Sn waves diminish, and this results in under-

Card 1/2.

137-58-1-2138

Polarographic Analysis of Type Metal

reading of the results. If this is the case, additional curves have to be plotted for purposes of calibration. Under these conditions, Ni and Zn do not yield diffusion current and may be determined separately against an ammonia background after separation of the Pb in the form of  $PbCO_3$ . It is desirable that Cu also be determined against an ammonia background. The disagreement of the results with those obtained by chemical methods is approximately 2.5 percent for Sb and approximately 5 percent for Sn.

N. G.

1. Type metals--Polarographic analysis

Card 2/2

*YAVOROVSKIY, A. A.*

137-58-1-2137

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 290 (USSR)

AUTHORS: Yavorovskiy, A. A., Shimanskiy, V. M.

TITLE: . . . Semimicroanalysis of Tin and Antimony in Type Metals  
(Polumikroanaliticheskoye opredeleniye olova i sur'my v tipografskikh splavakh)

PERIODICAL: Sb. tr. Ukr. n. -i. in-t poligr. prom-sti, 1956, Vol 4,  
pp 127-134

ABSTRACT: 0.1 g alloy is dissolved with heating in 3 cc concentrated  $H_2SO_4$ . After cooling, 10 cc HCl (1:1) are added to the solution. It is heated until the solution clears and is then titrated by 0.1 N  $KBrO_3$  in the presence of 0.2 percent methyl orange until it is colorless (at 70-80°). A control experiment is conducted parallel thereto. After titration 5 cc 15 percent HCl are added, as are 10 cc of water, and a 30 cm spiral-shaped iron wire is introduced. The flask is closed by a plug with a bunsen valve. As a result the  $PbSO_4$  dissolves, the  $Sb^{+5}$  is reduced to the metallic state, and the  $Sn^{+4}$  to  $Sn^{+2}$ . The solution is held at a temperature close to the boiling point for 20 minutes and is filtered through absorbent cotton in a flask with 2-3 pieces of

Card 1/2



137-58-1-2137

Semimicroanalysis of Tin and Antimony in Type Metals

marble and 2-4 cc 5 percent HCl. The flask is closed by a plug with a bunsen valve, cooled by water, pieces of marble are added, and the analysis is completed with iodometry. The time required for the analysis is one hour. The results of a verification of the method are presented.

P. K.

1. Type metals—Preparation
2. Tin—Determination
3. Antimony—Determination
4. Titration

Card 2/2

~~YAVOROVSKIY, A.A.~~

USSR/Physical Chemistry - Colloid Chemistry, Dispersion Systems.

B-14

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 4044.

Author : R.V. Kucher. A.A. Yavorovskiy, M.A. Kovbuz.

Inst :

Title : Study of Colloid Properties of Sodium Salts of Sulfosuccinic Acid Esters.

Orig Pub: Kolloidn. zh., 1957, 19, No 4, 454-458.

Abstract: The surface tension isotherms of aqueous solutions of sodium salts of dimethyl, diethyl, dibutyl and diisooamyl esters of sulfosuccinic acid were studied. The micelle formation in the three lower salts is displayed in aqueous solutions at an insignificant degree, which is confirmed with the values of the critical concentration of micelle formation and of the micelle-molar weight determined by the light diffusion method. Diisooamyl ester possesses clearly expressed colloid properties. The conjugate solubility of sudan III starts to increase no-

Card : 1/2

-5-

USSR/Physical Chemistry - Colloid Chemistry, Dispersion Systems.

B-14

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 4044.

ticeably in the series of aqueous solutions of lower succinic acid esters beginning from dibutyl ester and it is especially great in the case of diisooamyl ester.

Card : 2/2

-6-

IZAKOV, Feliks Yakovlevich, kand. takhn. nauk, dotsent; YAVORSHCHENKO, Nina  
Yevgen'yevna, aspirantka.

Accuracy of sorting materials using drum-type electric corona  
discharge separators. *Izv. vys. ucheb. zav.; elektromekh.* 8  
no. 8: 246-248 '65.

(MIRA 18:10)

1. Chelyabinskiy institut mekhanizatsii i elektrifikatsii sel'skogo  
khozyaystva (for Izakov). 2. Kafedra elektrotehniki Rostovskogo  
instituta sel'skokhozyaystvennogo mashinostroyeniya (for Yavorshchenko).

NESMEYANOV, A.N., akademik; YAVORSKIY, B.M.; ZASLAVSKAYA, G.B.; KOCHETKOVA,  
N.S.

Absorption spectra of some ferrocene derivatives. Dokl. AN SSSR  
160 no.4:837-840 P 1965. (MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

LYASHCHENKO, T.V.; YAVOROVSKIY, O.K. [IAvorovs'kyi, O.K.]

Experience in the mechanization of production processes. Leh.prom.  
no.4:53-54 O-D '62. (MIRA 16:5)

1. Khar'kovskaya shveytnaya fabrika No.4.  
(Kharkov--Clothing industry)

S/194/62/000/005/021/157  
D256/D308

AUTHOR: Yavorovskiy, V.G.

TITLE: A system for controlling and simultaneous indicating the water level in the head tank of a thermoelectric power plant

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1962, abstract 5-2-99 f (Sakharn. prom-st', 1961, no. 4, 46)

TEXT: Description of a system for regulation and remote indication of water level in the pressure tank of the thermoelectric power installation of the Lannovskiy sugar plant. A throttle shutter was installed in the water supply pipe of the tank, and connected with a float inside the tank by means of a lever mechanism; the same mechanism couples the float to a magnetic system comprising a choke coil on an old 212/12 V transformer core. The choke coil has 200 turns of 1 mm<sup>2</sup> diam. enamelled wire and current is supplied to it from the mains through a 220/12 V reducing transformer. A 5 A ammeter is included into the coil circuit indicating the current flowing through  
Card 1/2

A system for controlling and ...

S/194/62/000/005/021/157  
D256/D308

the coil, the scale of the ammeter being calibrated in the units of the water level in the tank. If the water level drops, the float opens the throttle shutter and the magnetic circuit of the choke. A further drop of the level increases the opening of the shutter and the air gap in the magnetic circuit. The ammeter indicates the drop of the water level in the tank. Should the level rise, the process is repeated in the opposite direction. The described system reduces excessive water consumption and saves el. energy. [Abstractor's note: Complete translation].

Card 2/2

1. This procedure is for the purpose of...

1968



SOV/137-57-10-19182

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 106 (USSR)

AUTHOR: Yavorshchenko, Ye. I.

TITLE: Employment of Odd-shaped Pipe in the Building of Farm Machinery  
(O primenenii fasonnykh trub v sel'skokhozyaystvennom mashino-  
stroyenii)

PERIODICAL: V sb.: Ratsionalizatsiya profiley prokata. Moscow, Profizdat,  
1956, pp 279-283

ABSTRACT: The VISKhOM (All-Union Scientific Research Institute for Agri-  
cultural Machinery) has developed and perfected the techniques  
required to produce 15 models and sizes of shaped pipe (SP) of  
square, rectangular, and triangular section, while until last year  
the plants of the ferrous-metals industry made only 2 models and  
sizes of SP. It is necessary to hasten the work of the scientific  
research institutions and plants in developing and introducing new  
economical sections, to accelerate the development and production  
of lightened hot-rolled shapes in accordance with the present GOST  
government standard, and to undertake the development of SP pro-  
duction by shaping. V.O.

Card 1/1

YAVORSKAYA, A.A.

Working with a textbook and distributed material in anatomy lessons.  
Fel'd.i akush. 27 no.7:59-60 J1 '62. (MIRA 15:9)

1. Vinnitskoye meditsinskoye uchilishche.  
(ANATOMY--STUDY AND TEACHING)

KOZIN, V.M.; CHERVATYUK, V.F.; YAVORSKAYA, A.K. [Iavors'ka, A.K.];  
NAKONECHNAYA, A.O. [Nakonechna, A.O.]

Using the dilatometric method for determining the complete setting  
(polymerization) of "plastic" concrete. Khim.prom. [Ukr.] no.1:  
12-15 Ja-Mr '64. (MIRA 17:3)

YAVORSKAYA, A.R.

Using a planetary mechanism with noncircular wheels for generating  
an intermittent periodic motion. Trudy Inst.mash. Sem. po teor.mash.  
21 no.81/82:16-29 '60. (MIRA 13:11)  
(Mechanical movements)

YAVORSKAYA, B.M.; OSIPOVA, G.I.; YEGORSHINA, L.A.

Epidemiological effectiveness of prophylactic action of phage in  
dysentery nidi. Zhur.mikrobiol.epid.i immun. no.2:69 F '54.  
(MLRA 7:3)

1. Iz Tomskogo instituta vaktsin i syvorotok.  
(Dysentery) (Bacteriophage)

YAVORSKAYA, I.M.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1933  
AUTHOR JAVORSKAJA, I.M.  
TITLE The Solution of some Problems of Detonation in a Medium with Varying Density.  
PERIODICAL Dokl. Akad. Nauk 111, fasc. 4, 783 - 786 (1956)  
Issued: 1 / 1957

For the purpose of studying the initial stage of the flashing up of new stars, the extension of compression "jumps" in gas masses with eigengravitation and with a flow of heat on the front of the compression flow (detonation, radiation, etc.) is investigated. A glass sphere is assumed to be at rest at the moment  $t = 0$ , in which initial density is distributed in accordance with the law  $\rho_0 = A/r^\omega$ . - The author investigated the not steadied adiabatic motion of a gas caused by the detonation which began in the center of the sphere. This gas motion is described by four partial differential equations. The motion of the gas is, in general, not automodellike. Here strong detonation waves are investigated, the velocity  $D$  of which is considerably greater than the velocity  $a_0$  of the sound before this wave. ( $q = a_0^2/D \sim 0$ ). The term describing the effect of gravitation can be neglected in the equation. The problem investigated here is reduced to that of the propagation of a detonation wave in a glass sphere irrespective of back pressure and the forces of gravitation; on this occasion the problem becomes automodel-like. New dimensionless variables are introduced, and the equations of motion are expressed by them. Also the HUGONIOT conditions on the front of the shock wave are given.

Dokl. Akad. Nauk 111, fasc. 4, 783-786 (1956) CARD 2 / 2

PA - 1933

For the determination of gas motion behind the detonation wave the field of the integral curves of the equation of motion and the modification of a parameter along these integral terms are studied. A graph illustrates the integral curves for different  $\omega$ . Furthermore, an expression for the modification of the character of the singular points on the occasion of the modification of  $\omega$  is given.

At  $0 \leq \omega \leq 2\gamma/(\gamma + 1)$  the CHAPMAN-JOUGET condition can be satisfied. At  $\omega > 0$  (contrary to  $\omega = 0$ ) there is no nucleus at rest in the center, and the moving gas occupies the entire space within the wave front and pressure in the center is finite. At  $\omega > 2\gamma/(\gamma + 1)$  the CHAPMAN-JOUGET condition cannot be satisfied, and velocity and pressure behind the detonation wave then surpass their values which hold in the case of the CHAPMAN-JOUGET wave condition being satisfied. At  $\omega = 3(\gamma + 1)/(3\gamma - 1)$  an exact solution is obtained. In conclusion the case  $\omega > 3(\gamma + 1)/(3\gamma - 1)$  is discussed. If the motion is automodellike, it is possible, by means of a qualitative investigation to determine the characteristics of the gas on the wave front and thus solve the problem. However, in the case of non-automodellike motions, considerable difficulties may be encountered when solving the problem.

INSTITUTION: Moscow State University

*YAVORSKAYA, I. M.*

SOV/124-58-3-3044D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 71 (USSR)

AUTHOR: Yavorskaya-Shapshal, I. M.

TITLE: Investigation of Some Transient Motions of Gravitating Gas in the Presence of Detonation Shock Waves and a Magnetic Field  
(Issledovaniye nekotorykh neustanovivshikhsya dvizheniy gravitiruyushchego gaza pri nalichii udarnykh voln detonatsii, magnitnogo polya)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Physical and Mathematical Sciences, presented to the MGU (Moscow State University), Moscow, 1957

ASSOCIATION: MGU (Moscow State University), Moscow.

*KL. 26-57, 104-105*

Card 1/1



*YAVORSKAYA, I. M.*

20-5-19/60

AUTHOR  
TITLE

YAVORSKAYA, I.M.

The Oscillations of an Infinite Self-Gravitating Gas Cylinder in the Presence of a Magnetic Field.

(Kolebaniya beskonечноgo gazovogo tsilindra s sobstvennoy gravitatsiyey v magnitnom pole - Russian)

Doklady Akad.Nauk SSSR, 1957, Vol 114, Nr 5, pp 988 - 990 (U.S.S.R.)

PERIODICAL  
ABSTRACT

The author here investigates onedimensional motions of a gas which have become nonsteady and may be connected with the motion of cosmic masses under the influence exercised by magnetic fields. The author especially presupposes the following: The electric conductivity of the gases is assumed to be so high that the magnetic lines of force may be supposed to be practically "Frozen" in in the medium. The author furthermore investigates the problems of radial motions with cylindrical symmetry under the effect of the forces of Newton's gravitation and the interior magnetic field. The velocity is assumed to depend linearly on the distance from the symmetry axis. Reference is made to works dealing with this subject.

1. The interior magnetic field is assumed to be directioned along the symmetry axis, and the corresponding system of equations of motion is written down in cylinder coordinates. Also the strict particular solution of this problem, which is to be investigated here, is written down. The motion of the gas depends on the amount of the coefficients occurring in this solution. All possible cases are described: I. The gradients of pressure and of magnetic intensity are assu-

Card 1/2

20-5-19/60

The Oscillations of an Infinite Self-Gravitating Gas Cylinder in the Presence of a Magnetic Field.

med at the beginning to be positive. II. The gradient of magnetic intensity is negative. III. The gradient of pressure is negative, the gradient of magnetic intensity is positive. IV. The magnetic field is constant. V. Gas pressure is at first constant. VI. The magnetic field is constant and gravitation forces are lacking. This case agrees with that in which mass forces are lacking. VII. The forces of gravitation are lacking. Pressure and magnetic intensity are constant. In the case of the existence of gravitation forces and a magnetic field which is directioned along the symmetry axis it is possible that, in the case of the here studied initial distributions, gas configurations fly apart.

2. In conclusions the author deals with the case in which the magnetic lines of force are closed concentric circles. The solution of this problem which is mentioned here does not depend on an arbitrary function. The effect of gravitational forces is in this case equivalent to the change of the gradient of magnetic intensity. (1 illustration)

ASSOCIATION Moscow State University "M.V. Lomonosov"  
PRESENTED BY SEDOV L.I., Member of the Academy  
SUBMITTED 27.3.1957  
AVAILABLE Library of Congress.  
Card 2/2

YAVORSKAYA, I. M.

Voprosy Hamitonov Gidrodinamiki i Dinamiki Plazmy. Trudy  
Kongressa po Hamitonov Gidrodinamike. Riga, 2-10 Iyulya  
1958 g. (Problems of Magnetohydrodynamics and Plasma Dy-  
namics. Works of the Conference on Magnetohydrodynamics,  
Riga, 2-10 July 1958), Riga, 1959, 339 pp

The majority of the texts of the 35 conference reports and discussions  
of reports are presented in the source in abridged form. Previously pub-  
lished reports are included there as brief abstracts only. The material  
published there for the first time (abridged and unbridged) are as  
follows:

- "The Role of Magnetohydrodynamics and Plasma Dynamics in Certain  
Problems of Astrophysics," by D. A. FRANK-KAMENETSKIY, Moscow, pp 7-11
- "Magnetohydrodynamics and the Study of Variations of Cosmic Rays,"  
by L. I. DUBINSKIY, Moscow, pp 13-14
- "Cosmic Ray Spectra and Their Role in Cosmic Gas Dynamics," by S. I.  
SYRONISKIY, Moscow, pp 15-15
- "The Influence of a Magnetic Field on the Stability of Flow of a  
Conducting Fluid," by Ye. P. YALIKHAR, Moscow, pp 19-25
- "Some Problems of the Motion of a Ionized Plasma in a Magnetic Field,"  
by Ye. P. YALIKHAR, Moscow, pp 59-62
- "On Nonlinear Steady-State Motions of a Ionized Plasma in a Magnetic  
Field," by R. M. SHEPETER, Moscow, pp 63-65
- "On One Criterion of Applicability of the Equations of Magnetohydro-  
dynamics to a Plasma," by S. I. IZMIRNIKIY, Moscow, pp 67-72. (Discussion  
of the report by R. V. POLYANSKIY, Dzharkov, pp 71-72)
- "On the Possibility of Accelerating Charged Particles by Means of  
Shock Waves in a Magnetized Plasma," by L. I. DORMAN and G. E. FRYZMAN,  
Moscow and Gorkiy, pp 77-81
- "On the Acceleration of Charged Particles During Powerful Impulse  
Discharges and During the Collision of Magnetized Clouds," by L. I.  
DORMAN, Moscow, pp 83-88
- "The Influence of a Longitudinal Magnetic Field on the Temperature of  
the Electrons in a Plasma," by N. Y. KOMPANOV, Tula, pp 89-92
- "Investigation of Certain Characteristics of a Plasma of Inert and  
Argon Behind a Powerful Shock Wave," by S. E. DOLIN, Moscow, pp 93-105
- "Observation of Electrodynamic Contraction of an Arc with the Aid of  
an Electro-Optical Converter," by Y. L. GRISHCHIKOV, M. S. SIZEMAN, Y. I.  
SARVAKIN, and G. G. ZHELEZNYI, Moscow, pp 107-115
- "On the Interaction of Heat Perturbations with Discontinuities and  
the Stability of Shock waves in Magnetohydrodynamics," by Y. M. LOMTSOVICH  
Dzharkov, pp 117-125
- "On the Stability of Shock Waves in Magnetohydrodynamics," by S. I.  
SYRONISKIY, Moscow, pp 127-131
- "On the Scattering of Subsonic Waves on Turbulent Fluctuations,"  
by A. G. SITENKO and Yu. A. KLOCHIKIN, Dzharkov, pp 143-146
- "On the Damping of Magnetohydrodynamic Waves in a Plasma," by R. E.  
BAGDASARYAN, Moscow, pp 147-149
- "Simple Waves in Magnetohydrodynamics," by A. I. ABRAMOVICH, G. Ye.  
LYUBARSKIY, and R. V. POLYANSKIY, Dzharkov, pp 151-157
- "Two-Dimensional Problems of Magnetohydrodynamics," by G. S. GOLITSIN  
Moscow, pp 161-165
- "On Vortex-Induced Flows in Magnetohydrodynamics," by A. S. IMENOVSKIY,  
Moscow, pp 167-171
- "Oscillations of an Infinite Gas Cylinder With Its Own Gravitation  
in a Magnetic Field," by I. M. YAVORSKAYA, Moscow, pp 175-183
- "On Magnetic Boundary Layers and Electric Current Discharges in  
Moving Media," by V. N. ZHIGALEV, Moscow, pp 185-190

YAVORSKAYA, I., kand.fiz.-mat.nauk

Man conquers space. Rabotnitsa 37 no.2:26 F '59. (MIRA 12:3)

1. Uchenyy sekretar' Komissii po mezplanetnym soobshcheniyam pri  
AN SSSR.

(Cosmic physics)

YAVORSKAYA, I. M. (Moscow)

"On Some One-Dimensional Unsteady Gas Motions, with Consideration of Radiation Effects."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

L 12157-66 EWT(d) IDP(C)

ACC NR: AP60005A1

SOURCE CODE: UR/0040/65/029/006/1023/1034

AUTHOR: Yavorskaya, I. M. (Moscow)

ORG: none

TITLE: Short wave asymptotes of a diffraction field on a sphere under incident plane transverse waves

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 6, 1965, 1023-1034

TOPIC TAGS: shock wave diffraction, transverse wave, Bessel function, complex function, plane wave, asymptotic property, *AEROSPACE STRUCTURE*

ABSTRACT: The problem of plane wave diffraction on a spherical obstacle was investigated and short wave asymptotes were found for the scattered wave displacement in various regions of elastic space: light, umbra, and penumbra. The incident wave is assumed polarized in the x-direction

$$W_0 = w_0 \exp(-i\omega t) = x_0 \exp[-i(\omega t + k_2 z)],$$

and the general displacement field in the stationary waves is described by

$$\frac{1}{k_1^2} \nabla \nabla w - \frac{1}{k_2^2} \nabla \times \nabla \times w + w = 0.$$

The plane incident vector is then expanded in spherical functions with boundary conditions applicable to solid as well as hollow spheres. The resulting displacement

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ACC NR: AP600541

field takes the form

$$\begin{aligned}
 w = \sum_{n=1}^{\infty} (-i)^n \frac{2n+1}{n(n+1)} \left\{ r_0 a_n h_n^{(1)}(k_1 r) P_n^1(\mu) \cos \varphi + \vartheta_0 \frac{a_n}{k_1 r} h_n^{(1)}(k_1 r) \times \right. \\
 \times \frac{\partial P_n^1(\mu)}{\partial \theta} \cos \varphi - \varphi_0 \frac{a_n}{k_1 r} h_n^{(1)}(k_1 r) \frac{P_n^1(\mu)}{\sin \theta} \sin \varphi + \\
 \left. + r_0 \frac{n(n+1)}{k_2 r} [b_n h_n^{(1)}(k_2 r) + i j_n(k_2 r)] P_n^1(\mu) \cos \varphi + \vartheta_0 \frac{1}{k_2 r} \frac{\partial}{\partial r} \times \right. \\
 \times [b_n r h_n^{(1)}(k_2 r) + i j_n(k_2 r)] \frac{\partial P_n^1(\mu)}{\partial \theta} \cos \varphi - \varphi_0 \frac{1}{k_1 r} \frac{\partial}{\partial r} [b_n r h_n^{(1)}(k_1 r) + i j_n(k_1 r)] \times \\
 \left. \times \frac{P_n^1(\mu)}{\sin \theta} \sin \varphi + \vartheta_0 [c_n h_n^{(1)}(k_2 r) + j_n(k_2 r)] \frac{P_n^1(\mu)}{\sin \theta} \cos \varphi - \right. \\
 \left. - \varphi_0 [c_n h_n^{(1)}(k_2 r) + j_n(k_2 r)] \frac{\partial P_n^1(\mu)}{\partial \theta} \sin \varphi \right\} .
 \end{aligned}$$

The solution of this equation is studied in the complex plane  $\nu$  for  $k_1 a$  and  $k_2 a \gg 1$  according to the Watson transformation (G. N. Watson. Diffraction of electric waves by the earth. Proc. Roy. Soc. A, 1918, vol. 95, No. 666) (see also Fig. 1). The short wave asymptotes of the above transformation are studied next, using the asymptotic expressions for spherical Bessel functions and associated Legendre functions. The longitudinal displacement is found to converge fast everywhere in the umbra region whose bounds

$$r_1 = a / \cos(\theta - \alpha^*)$$

represent a conic section with an apex angle  $\pi - 2\alpha^*$ . The transverse displacement series shows convergence in the same region, coincident with the geometric domain of

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L 12157-66

ACC NR: AP6000541

the umbra whose boundaries are shown in Fig. 2.

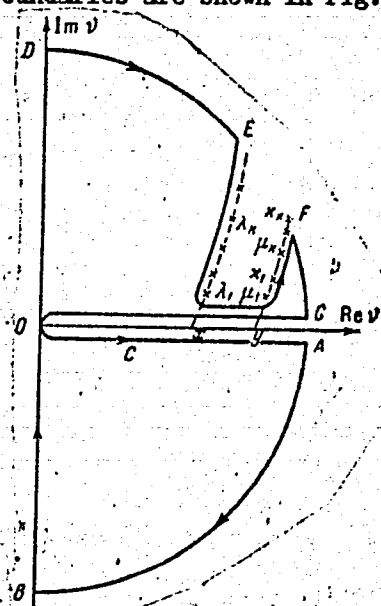


Fig. 1.

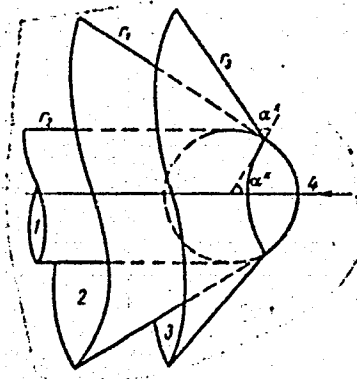


Fig. 2.

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L 12157-66

ACC NR: AP6000541

A similar diffraction map is constructed for the "illuminated" region, and a modified contour integration is carried out to calculate the transitional regions of wave diffraction as well. The author expresses her thanks to G. A. Skuridin for his influence on the work. Orig. art. has: 35 equations and 6 figures <sup>3</sup> 4/55

SUB CODE: 20/ SUBM DATE: 22Jul65/ ORIG REF: 009/ OTH REF: 016

HW  
Card 4/4

L 32003-66 EWT(1)

ACC NR: AP6013160

SOURCE CODE: UR/0387/66/000/004/0003/0014

AUTHOR: Yavorskaya, I. M.

ORG: Mathematics Institute, Academy of Sciences, SSSR (Matematicheskiy institut, Akademiya nauk SSSR)

TITLE: Scattering of high frequency plane longitudinal waves from convex bodies

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 4, 1966, 3-14

TOPIC TAGS: elastic scattering, shear wave, compression shock wave

ABSTRACT: Scattering of stationary waves from rigid spheres and spherical cavities in various zones of the elastic space is studied. The results are applied to smooth bodies of arbitrary convexity. A method suggested by Watson (1918) and further developed by Fok (1946) and Bremmer (1949) for the acoustical and electrodynamic problems is applied for the solution of diffraction problems, by setting up basic equations and certain boundary conditions. The equations for "creeping" waves in the "shadow" zone and diffraction waves in the "light" zone were developed and applied to diffraction phenomenon from smooth convex bodies using a method developed by Levy and Kellov (1959). The author thanked G. A. Shuridin for her interest in the work. Orig. art. has: 6 figures, 31 formulas.

SUB CODE: 0820/      SUBM DATE: 10Sep65/      ORIG REF: 012/      OTH REF: 014

Card 1/1 *Jo*

UDC: . 534.26

YAVORSKAYA, I.M. (Moskva)

Short-wave asymptotic behavior of a diffraction field on a sphere  
under the effect of incident plane transverse waves. Prikl. mat.  
i mekh. 29 no.6:1023-1034 N-D '65. (MIRA 19:2)

1. Submitted July 22, 1965.

IOTKOVSKIY, Aleksandr Arturovich; YAVORSKAYA, I.S., red.

[Economic problems of the automation of Soviet trade]  
Ekonomicheskie problemy avtomatizatsii sovetskoi trgovli.  
Leningrad, Izd-vo Leningr. univ., 1965. 122 p.  
(MIRA 18:10)

TOLMACHEV, Aleksandr Innokent'yevich; YAVORSKAYA, I.S., red.; ZHUKOVA,  
Ye.G., tekhn. red.

[Fundamentals of the study of the ranges of plants; introduction  
to the chorology of plants] Osnovy ucheniia ob arealakh; vvedenie  
v khorologiiu rastenii. Leningrad, Izd-vo Leningr. univ., 1962.  
99 p. (MIRA 16:1)

(Phytogeography)

LAGUTINA, Yekaterina Ivanovna; SEMEVSKIY, B.N., prof., red.;  
YAVORSKAYA, I.S., red.; BLIZAROVA, N.A., tekhn. red.

[Africa; economic and geographical study] Afrika; ekonomiko-  
geograficheskii ocherk. Uchebnoe posobie dlia studentov-  
zaochnikov pod red. B.N.Semevskogo. Leningrad, Izd-vo Leningr.  
univ., 1962. 73 p. (MIRA 15:7)

(Africa--Economic geography)

ALEKHIN, Yuriy Mikhaylovich; YAVORSKAYA, I.S., red.; ZHUKOVA,  
Ye.G., tekhn. red.

[Statistical forecasts in geophysics; dynamic and statical  
method for the forecast of geophysical macroprocesses] Sta-  
tisticheskie prognozy v geofizike; dinamiko-statisticheski  
metod prognoza geofizicheskikh makroprotsessov. Leningrad,  
Izd-vo Leningr.univ., 1963. 84 p. (MIRA 16:10)  
(Geophysics)

PAVLOVA, Nina Nikolayevna; BABKOV, I.I., otv. red.; YAVORSKAYA,  
I.S., red.

[Physical geography of the Crimea; a textbook] Fizicheskaya  
geografiya Kryma; uchebnoe posobie. Leningrad, Izd-vo Le-  
ningr. univ., 1964. 104 p. (MIRA 17:7)




YAVORSKAYA, K. Ya.: Master Med Sci (diss) -- "The problem of the effect of removal of the cerebellum on the conditioned-reflex activity of birds and mammals (Experiments on doves and cats)". Leningrad, 1959. 19 pp (Inst of Experimental Medicine, Acad Med Sci USSR, First Leningrad Med Inst im Acad I. P. Pavlov), 200 copies (KL, No 16, 1959, 110)

SOV/35-59-9-6979

Translation from: Referativnyy zhurnal, *Astronomiya i Geodeziya*, 1959, Nr 9, p 15 (USSR)

AUTHORS: Demenko, I.M., Lysyakova, R.F., Yavorskaya, L.N.

TITLE: The Exact Positions of the Minor Planet Hebe 

PERIODICAL: *Astron. tsirkulyar*, 1958, September 18, Nr 195, pp 5 - 6

ABSTRACT: Seventeen photographic positions of Hebe are cited, (epoch, 1950.0). The plates were obtained by the astrograph MAO AS UkrSSR (D = 40 cm, F = 5.5 m) during 1955 - 1957; the coordinates of the reference stars were taken from the Yale catalogues.

Card 1/1

1. YAVORSKAYA, M. T.

2. SSSR (600)

4. Fur

7. Comparative study of group components of the microflora of raw furs preserved with acid salts and with brine.  
Trudy VNIO No. 10, 1951

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

YAVORSKAYA, M.T.  
CHERKASSKIY, Ye.S.; YAVORSKAYA, M.T.

Secondary microbes associated with distemper and their variability.  
Trudy VNIO no.13:204-206 '53. (MLRA 7:5)  
(Distemper) (Pseudomonas)

*Yavorskaya, T.I.* 98-58-4-12/18  
AUTHOR: Arkhipov, P.Ya., Candidate of Technical Sciences; Yavorskaya, T.I., Engineer

TITLE: Suction Silt-Condenser (Vsasyvayushchiy sgustitel' pul'py)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, <sup>27</sup>Nr 4 pp 47-48 (USSR)

ABSTRACT: Investigation of the process of sand dredging has revealed the possibility of separating part of the indrawn water, rushing into the tube between the edge of the suction nozzle and the ground. The flow of water entering the dredging tube under the suction action of the dredge forms a sort of cylindrical sleeve, entraining at its center the mass of silt. By introducing a thin walled pipe into the suction nozzle, it is possible to transport through this pipe a more-highly-concentrated silt. This interior pipe separates the water surrounding the silt (when it enters the nozzle) from the silt in the center of the flow. To increase the effectiveness of the dredge, the section nozzle can be given the shape of a flange or a funnel as shown in figure 2. It is recommended to use pumps "MF" when working with dredging machines "HZ".

AVAILABLE: Library of Congress  
Card 1/1 1. Dredging machines-Equipment

20-5-23/60

AUTHOR: SPIVAK, G.V., KROKHINA, A.I., YAVORSKAYA, T.V., DURASOVA, YU.A.  
TITLE: Etching of Dielectrics by Ionic Bombardment. (Travleniye dielektrikov ionnoy bombardirovkoj, Russian)  
PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 5, pp 1001-1003 (U.S.S.R.)  
ABSTRACT: The following is shown by the present paper: On the occasion of the bombardment of the surface of a dielectric by means of gas ions geometrically regular etching figures may form which reflect the crystal structure of the object. Bombardment with positive ions was carried out in a low pressure discharge. The action of neon ions upon crystalline and amorphous dielectrics was investigated. Reference is made to some previous works dealing with this subject. When the cathode was constructed, the fact was taken into account that cathode spattering is proportional to the density of the ion flux, and that there is less depositing of metal at those points where current density is greater. If, therefore, a greater current density is produced on the surface of the dielectric than at neighboring points of the metal, the dielectric is not powdered with metal. This happens in the case of a periodic development of the potential being caused, so that indentations correspond to the domains of the dielectric to be spattered. The crystalline dielectrics used were quartz, Iceland spar, rock salt, and seignette

Card 1/2

20-5-23/60

Etching of Dielectrics by Ionic Bombardment.

salt. Besides, also the amorphous dielectrics amber and plexiglass were etched. Etching with ions took place on the occasion of different kinds of discharge. For amber and plexiglass the method of ion etching must be selected with particular care;  $I = 2 - 2,5 \text{ ma/cm}$ ,  $V = 1,5 \text{ kV}$  and  $t = 2 - 3$  hours. The surfaces of the amber and the plexiglass were uniformly destroyed and the figures of destruction had no geometrical pattern. On the occasion of the etching of quartz with ions in the Z-section, distinctly marked triangles were obtained. Of all dielectrics, quartz is the most difficult to investigate. With a weak ion bombardment no figures at all are formed, and in the case of a heavy bombardment the same figures are obtained as in glass. When rock salt is etched (surface  $\{100\}$ ) cubes are formed. The etching figures thus obtained can be used for determining the symmetry of the crystal. This method is simpler and often more reliable than that employed in connection with other processes. (With 3 Illustrations).

ASSOCIATION:

Moscow State University "M.V. LOMONOSOV" (Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova)

PRESENTED BY:

A.V. SHUBNIKOV, Member of the Academy, on 24.1.1957

SUBMITTED:

7.1.1957

AVAILABLE:

Library of Congress

Card 2/2

YAVOROVSKAYA, V. Ye.; MOSOLOV, A. N.; BALANDINA, A. M.

Cultural and various antigenic properties of strains of the virus isolated from patients with rheumatic fever. Vop. virus. 5 no. 6:695-701 N-D '60. (MIRA 14:4)

1. Kafedra mikrobiologii Novosibirskogo meditsinskogo instituta i revmatologicheskaya laboratoriya.  
(RHEUMATIC FEVER) (VIRUSES)



SHURIN, S.P.; YAVORSKAYA, V.Ye.; LOZOVY, V.P.

Detection of the virus isolated from patients with rheumatic fever  
in a culture of fibroblasts with the aid of labelled fluorescent  
serum. Vop.virus. 7 no.3:273-276 My-Je '61. (MIRA 14:7)

1. Iz kafedry fakul'tetskoy terapii i revmatologicheskoy laboratorii  
Novosibir'skogo meditsinskogo instituta.  
(RHEUMATIC FEVER) (VIRUSES)

YAVORSKAYA, Yelena Stanislavovna; URBANOVICH, Lyudmila Ivanovna;  
DANILEVSKIY, N.F., red.

[Pulpitis] Pul'pity. Kiev, Zdorov'ia, 1964. 231 p.  
(MIRA 17:12)

YAVORSKAYA, Ye. G.  
COUNTRY : USSR  
CATEGORY :

ABS. JOUR. : RZBiol., No. 1959, No. 10310

AUTHOR : Plantonov, F. P., Yavorskaya, Ye. G.  
INST. : Moscow Agricultural Academy Inent K. A. \*  
TITLE : Testing Dichloroethane in the Control of the Root-Knot Nematode

ORIG. PUB. : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1957, No 31, 152-154

ABSTRACT : \* Timiryazev

In a small scale experiment treatment of the soil with dichloroethane, 2 liters per square meter, with the use of mulching completely eliminates the nematode. With the use of 2-3-4- liters per square meter without mulch 78.6-18.2-2.3% of the plants, respectively, were affected. When the soil is fumigated its moisture should not exceed 20%. When the soil water content is 37% even the use of 4 liters per square meter reduces the

CARD: 1/2

Country :  
CATEGORY :

ABS. JOUR. : RZBiol., No. 1959, No. 10310

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : involvement of cucumbers by only 45%.  
Dichloroethane can be introduced into the soil  
with an injector to a depth of 10-15 centimeters,  
working in gas masks. The dichloroethane should  
not be introduced under the root -- the cucumber  
seedlings die. -- A. P. Adrianov

CARD: 2/2

YAVORSKIYA, Ye. S.

"Biological Method of Treatment of Acute Cases of Pancreatitis." Cand Med Sci, Kiev  
Order of Labor Red Banner Medical Inst imeni A.A. Bogomoilyets, Kiev, 1955.  
(KL, No 14, Apr 55 )

SO: Ser.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (16).

**"APPROVED FOR RELEASE: 09/19/2001      CIA-RDP86-00513R001962310019-9**

**APPROVED FOR RELEASE: 09/19/2001      CIA-RDP86-00513R001962310019-9"**

YAVORSKAYA, Ye.S., kandidat meditsinskikh nauk (Kiyev)

Biological method for treating acute pulpitis. Probl. stom.  
3:99-103 '56 (MLRA 10:5)

(TEETH--DISEASES)

YAVORSKAYA, Ye.S., kandidat meditsinskikh nauk (Kiyev)

Histological studies of dental pulp treated with antibiotics. Probl.  
stom. 3:115-120 '56 (MLRA 10:5)  
(ANTIBIOTICS) (TEETH)



LAVORSKAYA, Ye.S., dots. (Kiyev)

Condition of the periodontium in diseases of the hemopoietic  
organs. Probl.stom. 4:225-228 '58. (MIRA 13:6)  
(GUMS--DISEASES) (HEMOPOIETIC SYSTEM--DISEASES)

YAVORSKAYA, Ye.S., dotsent

Problem of the "normal" and "pathological" function of organism  
in the light of the dialectical theory of mutual relation. *Nek.*  
*filos.vop.med.i est.* no.2:387-394 '60. (MIRA 15:7)

1. Kafedra terapevticheskoy **stomatologii** Kiyevskogo meditsinskogo  
instituta imeni Bogomol'tsa.

(DISEASES---CAUSES AND THEORIES OF CAUSATION)

(MEDICINE---PHILOSOPHY)

YAVO:SKAYA, Ye.S.

Modern trend in the treatment of pulpitis. Probl. stom. 5:146-151  
'60. (MIRA 15:2)

1. Kiyevskiy meditsinskiy institut.  
(TEETH...DISEASES)

YAVORSKAYA, Ya.S.; MARCHENKO, A.I.; PETROVA, O.V.

Changes in the dental pulp under fillings of plastic. Probl. stom.  
5:169-174 '60. (MIRA 15:2)

1. Kiyevskiy meditsinskiy institut.  
(PLASTICS IN MEDICINE) (DENTISTRY, OPERATIVE)

DANILEVSKIY, N.F.; FRANKOVSKAYA, S.I.; FLIS, Z.A.; YAVORSKAYA, Ye.S:

Use of propolis in stomatology. Probl. stom. 5:122-128 '60.  
(MIRA 15:2)

1. Kiyevskiy meditsinskiy institut.  
(PROPOLIS) (STOMATOLOGY)

YAVORSKAYA, Ye.S., dotsent; SHEINA, A.K., dotsent; BISSIKALOVA, N.A., dotsent

Probeless determination of gastric juice acidity in glossodynia.  
Vrach. delo no.6:45-47 Je '61. (MIRA 15:1)

1. Kafedra terapevticheskoy stomatologii (zaveduyushchiy - prof. I.O. Novik), kafedra terapii (zaveduyushchiy - prof. G.I.Burchinskiy) stomatologicheskogo fakul'teta i kafedra biokhimi (zaveduyushchiy - prof. Ye.F; Shamray) Kiyevskogo meditsinskogo inatituta.  
(GASTRIC JUICE) (TONGUE...DISEASES)

YAVORSKAYA, Ye.S. (Kiyev)

Classification of pulpitis. Probl.stom. 6:155-161 '62.

(MIRA 16:3)

(TEETH--DISEASES)

VISHNYAK, G.N., kand. med. nauk; FRANKOVSKAYA, S.I., dotsent; YAVORSKAYA,  
Ye.S., dotsent

Effect of autohemotherapy on the activity of cholinesterase in  
paradentosis patients. Stomatologiya 42 no.3:95-96 My-Je'63.  
(MIRA 17:1)

1. Iz kafedry terapevticheskoy stomatologii (zav. - prof. I.O.  
Novik) Kiyevskogo meditsinskogo instituta (rektor- dotsent  
V.D. Bratus').



YAVORSKAYA, Ye. V.

Methods for the preparation of benzaldehyde and of benzoic acid from toluene. A. M. Perkenheim, Ye. V. Yavorskaya, O. P. Al'bitskaya and T. P. Dankova. *J. Applied Chem. (U. S. S. R.)* 7, 778-84(1934).—BzH and BrOH may be prepd. simultaneously by oxidizing PhMe with MnO<sub>2</sub> in the presence of H<sub>2</sub>SO<sub>4</sub>, MnO<sub>2</sub> being used only in a hydrated condition. The prevalence of l or the other compds. or of a mixt. of both depends upon the duration of the reaction, temp., and the ratios of PhMe, MnO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub>. Thus in the prepn. of BzH without an admixt. of BrOH the oxidation process must be carried out at 35-40° in the presence of 65% H<sub>2</sub>SO<sub>4</sub> for 6 hrs., using 4 parts (by wt.) of H<sub>2</sub>SO<sub>4</sub> and part of MnO<sub>2</sub>; yield, 20-22% BzH (calcd. on the PhMe used). For the simultaneous prepn. of BzH and BrOH the requirements are:

a temp. of 70-75°, H<sub>2</sub>SO<sub>4</sub> concn. of 60% and a duration of 16-18 hrs. The amt. of H<sub>2</sub>SO<sub>4</sub> required in this case is 13-15 parts by wt. and that of MnO<sub>2</sub> 3, calcd. on the PhMe introduced (20-25% of the latter is recovered). The yield of BrOH amounts to 60% of the total of the reaction products.

A. A. Bozhtinsk

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

CA YAVORSKAYA, Ye. V.

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Aryl derivatives of isoquinoline. II. Synthesis of 1-(*m*-nitrophenyl)-3,4-dihydroisoquinoline and their derivatives. V. M. Roslonov and Ye. V. Yavorskaya. *J. Gen. Chem.* (U. S. S. R.) 13, 491-6 (1943) (English summary); cf. C. A. 35, 6362. In continuation of their work on anti-malarial compds., the authors present some syntheses of quinoline type derivs. To 5 g.  $\text{PhCH}_2\text{CH}_2\text{NH}_2\cdot\text{HCl}$  there was added 2.6 g. NaOH in 20 cc. water, followed by 6 g.  $m\text{-O}_2\text{NC}_6\text{H}_4\text{COCl}$ , added with stirring at 35-40°; after stirring for 0.5 hr., there was obtained 61.8% *N*-(*m*-nitrobenzoyl)phenethylamine (I), m. 119-20° (from EtOH). A mixt. of 5.5 g. I and 11 g.  $\text{P}_2\text{O}_5$  in 20 cc. xylene was refluxed for 1.5 hrs., the xylene sepal., the solid dissolved in water and the soln. extd. with  $\text{Et}_2\text{O}$ ; the aq. soln. was neutralized by NaOH to yield 64.3% 1-(*m*-nitrophenyl)-3,4-dihydroisoquinoline, b. 205-8°, m. 51-2°; *HCl* salt, m. 213-4° (decomp.). The above (12 g.), 12 g. Fe shavings, 12 cc. AcOH and 420 cc. water was refluxed for 4 hrs.; the mixt. was neutralized with NaOH and filtered; the dried ppt. was extd. with  $\text{Et}_2\text{O}$  and the latter shaken out with dil. HCl, which on sepn. was neutralized with NaOH to yield 70.9% 1-(*m*-aminophenyl)-3,4-dihydroisoquinoline, m. 119-20°; *HCl* salt, m. 280-1° (decomp.). Treatment with AcO in benzene gave 1-(*m*-acetamidophenyl)-3,4-dihydroisoquinoline (80%), m. 114-17° (from 50% EtOH). The amino compd. reduced by Sn in EtOH-HCl gave 78.3% 1-(*m*-aminophenyl)-1,2,3,4-tetrahydroisoquinoline, m. 127-8° (from 50% EtOH). 1-(*m*-Amino-

phenyl)-3,4-dihydroisoquinoline (2.5 g.) and 2.5 g.  $\text{Et}_3\text{NCH}_2\text{CH}_2\text{CH}_2\text{Cl}$  was heated to 120-5° for 6 hrs.; the melt was dissolved in dil. HCl, treated with excess of dry  $\text{K}_2\text{CO}_3$  and extd. with  $\text{Et}_2\text{O}$ , and the latter distd. *in vacuo* to yield 1-[*m*-(3-diethylamino-propylamino)phenyl]-3,4-dihydroisoquinoline, b. 220-9° (47.7%); *HCl* salt, hygroscopic, decomp. readily on heating. *N*-(*m*-Nitrobenzoyl)phenethylamine, prepd. analogously to the deriv., m. 115-16° (from benzene). The above yielded 72.5% 1-(*m*-nitrophenyl)-3,4-dihydroisoquinoline, m. 84-5° (from dil. EtOH), which yielded the corresponding amino deriv. (63.4%), m. 85-6° (from EtOH); *HCl* salt, orange powder without definite m. p.; *Ac* deriv., m. 121-2° (from pptn. by  $\text{NH}_3$  of the acid ext.) (67%). The amino compd. readily reduces to 1-(*m*-aminophenyl)-1,2,3,4-tetrahydroisoquinoline, m. 108-9° (from aq. EtOH) (82%), and yields 46.6% 1-(*m*-(3-diethylamino-propylamino)phenyl)-3,4-dihydroisoquinoline, b. 215-19°, on condensation with  $\text{Et}_3\text{NCH}_2\text{CH}_2\text{CH}_2\text{Cl}$ ; *HCl* salt, hygroscopic, without definite m. p. Neither the *m*- nor the *p*-compds. showed activity against malaria in birds. G. M. Kosolapoff

ASB. 11A METALLURGICAL LITERATURE CLASSIFICATION

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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YAVURSKAYA, Ye. V.

PROCEDURES AND REAGENTS: V. M. Rodionov and E. V. Yavurskaya (2nd Moscow Med. Inst. J. Gen. Chem. (U.S.S.R.) 18, 110-13(1948)(in Russian). Contrary to Remsen (Am. Chem. J. 18, 151, 150(1896)), reaction of PCl<sub>5</sub> with *p*-H<sub>2</sub>NSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>K (I), or the free acid (II), gives not the normal acyl chloride, but *p*-ClOCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N:PCl<sub>2</sub>, which on distn. gives NCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl. Both the P chloride and the normal chloride give the same amide on treatment with NH<sub>3</sub>. 1 (10 g.) and 10 g. PCl<sub>5</sub> warmed 1.5-2 hrs. to 50-60°, extd. with C<sub>6</sub>H<sub>6</sub> and concd. gave 5 g. oil, which on distn. gave POCl<sub>3</sub> and NCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl, b.p. 90-5°, m. 107-3° (2.4 g.); the latter and NH<sub>3</sub> gave *p*-H<sub>2</sub>NSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CN, m. 107-8°, while extn. of the distn. residue with C<sub>6</sub>H<sub>6</sub> gave 0.2 g. *p*-ClOCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NH<sub>2</sub>, m. 139°. 1 (2.5 g.) and 5 g. PCl<sub>5</sub> were warmed 1-1.5 hrs. to 60-5° and extd. with benzene; concn. of the ext. gave ClOCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>N:PCl<sub>2</sub>, m. 83° (needles), which on treatment with dry NH<sub>3</sub> in benzene soln. gave *p*-H<sub>2</sub>NSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CONH<sub>2</sub>, m. 235°. 1 (2 g.) and 4 g. SOCl<sub>2</sub> were warmed 1 hr. on a steam bath, cooled, in vacuo and extd. with hot benzene to give on cooling 1.2 g. (85.6%) *p*-ClOCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NH<sub>2</sub>, m. 139°; this product is not hygroscopic, difficultly sol. in hot C<sub>6</sub>H<sub>6</sub>, moderately sol. in Et<sub>2</sub>O, sol. in alkali and reacts with NH<sub>3</sub> in Et<sub>2</sub>O soln., giving *p*-H<sub>2</sub>NOCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>NH<sub>2</sub>, while boiling in benzene soln. with *p*-toluidine 2 hrs. gave *p*-H<sub>2</sub>NSO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>(CO)NH<sub>2</sub>, m. 284° (from EtOH). G. M. K.

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

some of its derivatives...  
 22.5%  $\text{PhCH}(\text{NHMe})\text{CH}_2\text{CO}_2\text{H}$  (I), m. 167-8°, while the filtrate yielded 34.2% cinnamic acid. I (10 g.) treated with 22 g.  $\text{SOCl}_2$  with ice cooling, then heated 2 hrs. at 45-50°, gave 85.7%  $\text{HCl}$  salt of the acid chloride, a yellowish ppt. decomp. 128-9°. This (10 g.) in abs. EtOH was sat'd with dry  $\text{NH}_3$  in the cold, kept 8-10 days at room temp., the  $\text{NH}_4\text{Cl}$  removed, the soln. evaporated, and the residue taken up in  $\text{H}_2\text{O}$  and extd. with Et<sub>2</sub>O, the ext. gave 4 g. Et cinnamate, and the aq. soln. on concn. gave 20.7%  $\text{PhCH}(\text{NHMe})\text{CH}_2\text{CONH}_2\cdot\text{HCl}$  (II), m. 215-16° (from EtOH), which with  $\text{Na}_2\text{CO}_3$  in aq. soln. gave the free amide, m. 103-4° (from  $\text{C}_6\text{H}_6$ ). I (2 g.), 10 ml. abs. EtOH, and 2 g. concd.  $\text{H}_2\text{SO}_4$  refluxed 5 hrs. gave after the usual treatment the expected ester which on distn., cleaved  $\text{MeNH}_2$ , preventing its sep'n. from the Et cinnamate thus formed.  $\text{Et}$  ester was sepd. as the  $\text{HCl}$  salt, m. 113-14°, by passage of  $\text{HCl}$  into an Et<sub>2</sub>O soln. of the crude product. To 4 g. KOH in 20 ml.  $\text{H}_2\text{O}$  was added at -8° 2 g. Br, then 1 g. II, after 2 hrs. the mixt. was heated to 80° 10 min. and on cooling yielded a ppt. of 22.9% 1-methyl-5-p-acyl-4-glyoxalidione (III), m. 150-1° (from  $\text{H}_2\text{O}$  or EtOH). I (4 g.) in 40 ml. 5%  $\text{HCl}$  treated with 2 g.  $\text{NaNO}_2$  in  $\text{H}_2\text{O}$  at room temp., then at 30-5°, gave 81.7%  $\text{N}$ -nitroso deriv. of I, m. 107-8° (from  $\text{H}_2\text{O}$ ). I with  $\text{BrCl}$  in 10% KOH gave 74.5%  $\text{N}$ -Br deriv. (IV), m. 167-8° (from EtOH). IV (1 g.) and 1 g.  $\text{SOCl}_2$  heated 2 hrs. at 40-6° and freed of excess  $\text{SOCl}_2$  gave an oil which with  $\text{NH}_3$  in the cold yielded 50.4% IV amide, m. 175-6° (from EtOH), also formed from II with aq.  $\text{NaOH}$  and  $\text{BaCl}_2$ . III does not have blood activity. C. M. K.