L 15476-63

ACCESSION NR: AP3005457

3

It was shown that the antioxidizing effect of various 2,6-di-tert-butyl-substituted phenols increases with an increase of the electron-donor capability of the para-substitutions R_1. The logarithm of the relative inhibitor effectiveness shows a linear dependence on the Gamma constant of the substitution R_1. The anti-oxidation activity of phenols decreases with an increase of the OH-bond polarity. "The authors express their gratitude to N. M. Emanuel and to K. Ye. Kruglyakova for their help in this work." Orig. art. has: 1 table, and 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki, AN SSSR (Institute of chemical physics, A N SSSR)

SUBMITTED: 04Sep62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 009 OTHER: 005

Card 2/2

YERSHOV, V.V.; VOLOD'KIN, A.A.; BOGDANOV, G.N.

Phenol-diene regroupment in the reactions of phenols. Usp.khim. 32 no.2:154-194 F '63. (MIRA 16:4)

1. Institut khimicheskoy fiziki AN SSSR.
(Phenols) (Cyclohexadienone)

BOGDANOV, G.N.; YERSHOV, V.V.

New stable phenoxy radicals. Izv.AN SSSR.Ser.khim. no.8:1516-1518 Ag '63. (MIRA 16:9)

1. Institut khimicheskoy fiziki AN SSSR.
(Phenoxy group)

BOGDANOV G.N.; VINOGRADOV, Yu.G.; IVANOV, D.P.; KOGAN, L.B.

Increasing the resistance of cast iron chills. Lit. proizv. no.12: 24-26 D '54. (MIRA 18:3)

GORBUL'SKIY, G.F.; BOGDANOV, G.N.; VINOGRADOV, Yu.G.

Method of testing the heat resistance of materials for metal molds. Lit. proizv. no.4:27-28 Ap '64.

(MIRA 18:7)

L 59350-65
ACCESSION NR: AP5019335 UR/0020/64/157/003/0707/0709

AUTHOR: Konovalova, N. P.; Bogdanov, G. N.; Miller, V. B.; Neyman, M. V.; Rozantsev, E. G. 14 B

TITLE: Antitumor activity of stable free radicals

SOURCE: AN SSSR. Doklady, v. 157, no. 3, 1964, 707-709

TOPIC TAGS: biochemistry, neoplasm

ABSTRACT: The antitumor activity of free radicals was studied in the light of literature data indicating that a vital role in the mechanism of the antitumor action of inhibitors of radical processes is played by the action of comparatively stable free radicals formed from the inhibitors. Stable free radicals of a number of 4-substituted 2,2,6,6-tetramethylpiperidine oxides were investigated by a kinetic method of determining antitumor effectiveness. The kinetics of the changes in the weight of the spleen, number of leukocytes and hemocytoplasts per cubic millimeter of blood and percent content of hemocytoplasts in the [illegible] were studied in mice of the C57BL line with grafted leukemia from the La strain. Antileukemic activity was discovered in three free radicals; the

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L 59350-65

ACCESSION NR: AP5019335

antileukemic activity of one of the preparations was found to be due to the presence in its molecule of both an unpaired electron and of a urethan group.

Orig. art. has: 4 graphs, 1 table.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 19Mar63 ENCL: 00 SUB CODE: LS, GC

NR REF SOV: 005 OTHER: 003 JPRS

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000205820010-3"

EMANUEL', N.M.; KONOVALOVA, N.P.; BOGDANOV, G.N.; VASIL'YEVA, L.S.

Kinetics of the development of ascitic leukemia L-1210. Dokl. AN SSSR 160 no.6:1421-1423 F '65. (MIRA 18:2)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Emanuel').

BOGDANOV, G.N.; BOLDIN, A.A.

Influence of the polar effect of substituents on the oxidation inhibiting activity of sterically hindered phenols. Neftekhimiia 3 no.4:594-597 Jl-Ag '63. (MIRA 16:11)

1. Institut khimicheskoy fiziki AN SSSR.

BOGDANOV, G.P.

Patents for spring suspensions abroad. Avt. prom. 29 no.8: 41-43 Ag '63. (MIRA 16:11)

12(2) SOV/113-59-7-17/19

AUTHOR: Bogdanov, G. P., Candidate of Technical Sciences

TITLE: A Scientific-Technological Conference on Automobile Suspensions

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 7, pp 45 - 47 (USSR)

ABSTRACT: A scientific-technological conference on automobile suspensions was convened at NAMI in February 1959. More than 200 suspension specialists exchanged their experience on automobile suspensions and coordinated their future design and research work. The participants came from NAMI, NII shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry), MVTU imeni Bauman, Gor'kovskiy politekhnicheskiy institut imeni Zhdanova (Gor'kiy Polytechnic Institute imeni Zhdanov) and other organizations. A total of 24 papers and reports was submitted. Doctor of Tech-

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nical Sciences, Ya.M.Pevzner (NAMI) read his paper "Automobile Vibrations on a Road with an Irregular Microprofile". Vertical vibrations of the points of the body along the base of an automobile were discussed in this paper, based on the methods of statistical regularities, as well as angular vibrations for boundary cases - the practical equality and the considerable difference of suspension vibration frequencies. The zones of the least vertical accelerations depend on the ratios and amplitudes of suspension vibrations. Practical conclusions for selecting parameters and design of automobiles were derived. Candidate of Technical Sciences I.G. Parkhilovskiy, Gor'kovskiy avtozavod (Gor'kiy Automobile Plant) stated that the application of the theory of probability is necessary for studying the road effect on an automobile,

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since these affects are random functions. Based on road tests for measuring accelerations of truck body vibrations, it was established by means of the theory of probability that the quality of the suspension may be estimated by mean square acceleration of body vibrations above the axles and by correlation coefficients. Studies of rear axle suspension vibrations on the "Volga" sedan under different operational conditions showed that the laws of amplitude distribution are close to the normal distribution in regard to vibrations of the body and the wheels. Doctor of Technical Sciences R. V. Rotenberg reported on the possible application of electronic computers and analogs for developing engineering calculation methods for automobile suspension vibrations. Having solved several hundred equations on the electrical analog NM-2, R. V. Rotenberg plotted graphs for the appro-

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ximated estimation of automobile suspensions by initial design parameters without solving differential equations in each individual case. He also suggests using approximated calculation formulas. The calculations of suspension and vibration parameters of automobiles should be obligatory in the same way, as for example, the traction calculations. V. B. Tsimbalin, Gor'kiy Automobile Plant, discussed in his paper the smoothness of ride of an automobile and the functioning of the suspension. Chang Hung-hsing, Gor'kiy Polytechnic Institute imeni Zhdanov, reported on test stand experiments concerning smoothness of ride. Shih Chin-shou, Gor'kiy Polytechnic Institute imeni Zhdanov, reported on the vibration of the passenger's body in an automobile. The principal regularities of the function of pneumatic rubber springs, their design and operational pecularities and problems connected

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with the technology of manufacturing these springs, were the topics of the papers submitted by Doctor of Technical Sciences Ya. M. Pevzner and Candidate of Technical Sciences A. M. Gorelik (NAMI); R. A. Akopyan from the L'vovskiy avtobusnyy zavod (L'vov Bus Plant); I. I. Seleznev, Candidate of Technical Sciences R. L. Guslitser, I. A. Chizhov (Scientific Research Institute of the Tire Industry) and V. A. Galashin (MVTU imeni Bauman). They all acknowledged the advantages of pneumatic suspensions. Automatic controls of pneumatic suspensions will provide equal smoothness of ride with different loads. NAMI developed the first Soviet pneumatic suspension with automatic controls which was installed on a ZIL-164 truck. The preliminary experimental data obtained when testing these automatic controls on a ZIL-164 bus may be used for determining the required values

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for additional volumes, dynamic motions, etc. In cooperation with NAMI, the L'vov Bus Plant developed a pneumatic suspension for the front and rear wheels of the LAZ-695e bus with independent front suspension. The tests of the LAZ-695e bus and the ZIL-164 truck (25,000 km) showed the advantages of the pneumatic suspension. Experimental diaphragm pneumatic suspensions, developed by MVTU in cooperation with the Leningradskiy shinnyy zavod (Leningrad Tire Plant), were installed in the rear suspension of a GAZ-63 automobile and will undergo road tests. A paper of the Scientific Research Institute of the Tire Industry dealt with problems of calculating, designing and manufacturing pneumatic springs. Methods have been developed for the mass production of pneumatic springs. Candidate of Technical Sciences V. L. Biderman and B. L. Blukhin (Scientific Research Institute of the Tire

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Industry) reported on the calculation of rubber elements of pneumatic suspensions which they developed on the basis of the general method of calculating rubber-cord shells of rotation. The asymmetry of the shell in regard to the equator plane and the shape of the flanges were considered in this method. Besides work on improving the pneumatic suspension with rubber elements, experimental investigations are performed on pneumatic hydraulic suspensions. It is too early to state in which fields these suspensions will be used, but undoubtedly they will also find their application besides the pneumatic suspensions. Yu. B. Belen'kiy, I. F. Dimidovich and Yu. Yu. Belen'kiy reported on research and experimental design work in the field of pneumatic suspensions performed by the Minskiy avtozavod (Minsk Automobile Plant) in cooperation with the Belorusskiy politekhnicheskiy institu

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(Belorussian Polytechnic Institute). Preliminary tests of a pneumatic hydraulic suspension, manufactured for a MAZ-525 dump truck, proved its operational efficiency. B. M. Dyshman, from the Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev), presented an analytical approach for determining the optimum length of leaf springs, the number and thickness of spring leaves, as well as the average rated stress. This method may be used for designing lighter springs. Candidates of Technical Sciences Z. I. Talantova and I. N. Uspenskiy, from the Gor'kiy Polytechnic Institute imeni Zhdanov, analyzed the efficiency of the design of the main rear springs of the GAZ-51A. V. V. Gnetnev reported on road tests of GAZ-51A, GAZ-52 and GAZ-56 trucks conducted by the Gor'kiy Automobile Plant with springs

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seated in rubber mounts. The experimental installation of springs with rubber mounts increases the service life of springs 2-5 times as compared to springs fastened by ordinary steel pins. Candidate of Technical Sciences A. M. Gorelik reported on rubber compression springs with a progressive rigidity characteristics developed at NAMI. A. P. Artemenko from the Yaroslavskiy motornyy zavod (Yaroslavl' Engine Plant) reported on calculation and design work on an independent front torsion suspension for the 10-ton, three-axle YaAZ-210Ye dump truck. The operation of trucks with such suspensions showed positive results during their operation in quarries. Doctor of Technical Sciences, Ya. M. Pevzner and Candidate of Technical Sciences A. M.Gorelik reported on the results of research work conducted at NAMI and NII rezinovoy promyshlennosti (Scientific Research Insti-

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tute of the Rubber Industry) and reported on investigations, design work and tests of a torsion rubber suspension. New types of rubber compounds, new calculation and test methods are under development for rubber torsion springs. V. D. Samartsev (NAMI) reported on the experience in manufacturing "braided" rubber suspensions for trailers having a nunlinear characteristic and a long service life at low manufacturing costs. Telescope shock absorbers are now introduced at Soviet automobile plants, replacing the lever shock absorbers. Candidates of Technical Sciences I. B. Skinder and Yu. A. Liepa from NAMI and the Moskovskiy karbyuratornyy zavod (Moscow Carburetor Plant) explained a type assortment of telescope shock absorbers with piston diameters of 30, 40 and 50 mm for Soviet automobiles. Special road tests of "Moskvich",

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"Volga", ZIL-164 and PAZ-652 vehicles, in which telescopic shock absorbers were installed, and the operational experience with MZMA automobiles and experimental buses of the L'vov and Pavlovskiy automobile plants confirm the efficient selection of the standardized series of telescope shock absorbers. The demand for such shock absorbers will rise rapidly and special plants must be built for producing them. A. D. Derbaramdiker (report of the Moscow Carburetor Plant and NAMI) explained investigations of the work of telescope shock absorbers and the development of basic data for their practical application under consideration of hydrodynamic and thermodynamic dependencies. The conference participants decided to establish at NAMI a permanent commission for automobile suspensions. This commission must coordinate the research work in the field of automobile suspen-

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sions. The conference participants agreed on recommendations for speeding up and expanding experimental design and research work in the field of automobile suspensions.

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BOGDANOV, G.P., kand.tekhn.nauk

Characteristics of new designs of car suspensions. Avt.prom. no.7: 35-39 Jl '60. (MIRA13:7)

(Automobiles--Springs)

BOGDANOV, G.P.

Suspensions of foreign automobiles of 1962. Avt.prom. 29 no.1: 44-47 Ja '63. (MIRA 16:1)
(Automobiles--Springs)

VOINOV, I.I.; ZEYBEL', Ye.Ya., zaveduyushchiy; SLASTENOV, Ye.P., dotsent, zaveduyushchiy; BOGDANOV, G.R., direktor.

Microbiological characteristics of cultures of dysentery bacilli. (Authors' abstract). Zhur.mikrobiol.epid. i immun. no.3:20-21 Mr '53. (MLRA 6:6)

1. Epidemiologicheskiy otdel Sverdlovskogo instituta epidemiologii i mikrobiologii (for Slastenov). 2. Rayonnaya sanitarno-bakteriologicheskaya laboratoriya (for Zeybel'). 3. Sverdlovskiy institut epidemiologii i mikrobiologii (for Bogdanov). (Dysentery)

BOGDANOV, Georgiy Terent'yevich; CHEKHOVSKAYA, T.P., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Handbook for determining the cost of drainage operations] Spravochnoe posobie dlia opredeleniia stoimosti rabot po osusheniiu. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 149 p. (MIRA 15:4)
(Mine drainage--Costs)

S/068/62/000/005/002/002
E071/E435

AUTHORS: Kolpovskiy, N.M., Grenberg, Ye.I., Bogdanov, G.U., Sipovich, S.Yu.

TITLE: Tubes with a corrosion resistant lining

PERIODICAL: Koks i khimiya, no.5, 1962, 48-49

TEXT: Tubes lined with vinyl and polyethylene plastics (tube diameter 2", thickness of lining about 3.5 mm) produced at the Dnepropetrovsk Tube-Rolling Mill were tested in the pyridine and sulphate plants of the Dnepropetrovsk Coal-Tar Chemical Works. The tubes were used for transportation of corrosive media of the following characteristics: acid solutions with various contents of sulphuric acid (0.5, 6 to 8, 30 to 40, 70 to 80%), in some cases crystals of ammonium sulphate were present; weakly alkaline solutions, containing pyridine bases, hydrogen sulphide, hyposulphite, thiocyanides, etc. The temperature of solutions were up to 50°C, the pressure did not exceed 2 to 3 atm. Tubes under these conditions have been in operation for two years and are still in service. For comparison, bimetallic (steel-copper) and

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S/068/62/000/005/002/002
E071/E435

Tubes with a corrosion ...

stainless 1X18H9T (1Kh18N9T) tubes were tested. After carrying media containing ammonia, hydrogen sulphide or hyposulphite, bimetallic tubes placed after neutralizers and vacuo filters in the desulphurizing plant become unserviceable after one month, in the pyridine plant (acidity 6 to 8%), after 6 months and in the benzole washing plant after one year. Stainless steel tubes are still in operation after 2 years. It is concluded that plastic lined tubes can successfully replace stainless and non-ferrous tubes for transporting corrosive media at temperatures up to 70 to 80°C. The necessity of development of improved types of connections is stressed.

ASSOCIATIONS: Dnepropetrovskiy truboprokatnyy zavod im. Lenina (Dnepropetrovsk Tube-Rolling Mill imeni Lenin)
Kolpovskiy, N.M., Grenberg, Ye.I., Bogdanov, G.U.
Dnepropetrovskiy koksokhimicheskiy zavod (Dnepropetrovsk Coal-Tar Chemical Works)
Sipovich, S.Yu.

Card 2/2

BOGDANOV, Georgiy Terent'yevich; CHEKHOVSKAYA, T.P., red.izd-va; BOLDYREVA, Z.A., tekhn.red.

[Reference book for determining the cost of drainage work] Spravochnoe posobie dlia opredeleniia stoimosti rabot po osusheniiu. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 149 p. (MIRA 14:6)
(Drainage)

BOGDANOV, G.Ya.

Limans in the northern part of the Caspian Lowland as accumulators of fresh ground waters. Izv. vys. ucheb. zav.; geol. i razv. 1 no.10: 111-120 O '58. (MIRA 12:9)

1.Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze. Kafedra gidrogeologii.
(Caspian Lowland--Water, Underground)

KAMENSKIY, G.N. [deceased]; GARMONOV, I.V.; BOGDANOV, G.Ya.; GURKINA, N.F.; RASPOPOV, M.P.; YARTSEVA, Ye.Ya.; BELYAKOVA, Ye.V., red. izd-va; KOLOKOL'NIKOV, K.A., tekhn.red.

[Ground waters of the Caspian Depression and their regimen in the Volga-Ural interfluve] Gruntovye vody Prikaspiiskoi nizmennosti i ikh rezhim v predelakh Volgo-Ural'skogo mezhdurech'ia. Moskva, Izd-vo Akad.nauk SSSR, 1960. 179 p. (Akademiia nauk SSSR, 1960 179 p. (Akademiia nauk SSSR. Laboratoriia gidrogeologicheskikh problem. Trudy, vol. 27).

1. Chlen-korrespondent AN SSSR (for Kamenskiy)
(Volga Valley--Water, Underground)
(Ural Valley--Water, Underground)

BOGDANOV, G.Ya.

Division of the northwestern part of the Caspian Lowland in the trans-Volga portion of Stalingrad Province according to the types of hydrochemical conditions. Izv. vys.ucheb.zav.; geol.i razv. no.3:109-115 My '60.
(MIRA 13:7)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.
(Stalingrad Province--Hydrology)

BOGDANOV, G.Ya.

Underground water conditions in the northwestern Caspian Lowland in the trans-Volga portion of Stalingrad Province. Izv.vys.ucheb. zav.; geol.i razv. 3 no.1:121-133 Ja '60. (MIRA 13:7)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.
(Stalingrad Province--Water, Underground)

BOGDANOV, G. Ya., Cand. Geol-Mineral. Sci. (diss) "System, Balance, and Formation of Soil Waters of Northwestern Caspian Lowland in Volgograd Trans-Volga Area," Moscow, 1961, 34 pp (Moscow State Univ.)(Geol. Fac.) 180 copies (KL Supp 12-61, 258).

BOGDANOV, G.Ya.

Hydrodynamic ground water zones in the northwestern part of the Caspian Lowland. Izv. vys. ucheb. zav.; geol. i razv. 4 no.3: 67-81 Mr '61. (MIRA 14:6)

1. Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze.
(Caspian Lowland--Water, Underground)

BOGDANOV, G.Ya.

Studying the balance of salt of a land area by G.N.Kamenskii's equation. Trudy Lab.gidrogeol.probl. 40:125-130 '62. (MIRA 15:11)
(Salt) (Water, Underground—Analysis)

BOGDANOV, G.Ya.

Methodology of hydrogeological studies in accumulation plains under dry climate conditions. Razved. i okh. nedr 29 no.7:49-54 Jl '63.
(MIRA 16:9)

1. Moskovskiy geologorazvedochnyy institut.
(Water, Underground) (Surveying)

BOGDANOV, I.

State Farms

Developing state farm production in the fifth five-year plan. Sots. sel'khoz. 24, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress June 1953. UNCL.

BULGARIA / Chemical Technology. Chemical Products and Their Application. Ceramics. Glass. Binding Materials. Concrete. H-13

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 2111.

Author : Bogdanov, I.
Inst : Not given.
Title : The Rapid Roasting Lime.

Orig Pub: Leka promyshlenost, 1958, 7, No 1, 27-29.

Abstract: The author considers a series of steps directed toward increasing the efficiency of lime reasting in Bulgaria: introduction of additional blowing, rationalized method for loading etones into a furnace, a proper distribution of labor and other measures contributing to the speedy roasting. It is pointed out that the average op-

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BULGARIA / Chemical Technology. Chemical Products and Their Application. Ceramics. Glass. Binding Materials. Concrete. H-13

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 2111.

Abstract: erating capacity of a shaft furnace in Asenovgrad, after being switched to rapid burning and a reconstruction of the ventilation unit, was doubled from 12-14 to 25-28 tons. -- Ya. Satunovsky.

Card 2/2

BOGDANOV, I.

Competition of Ukrainian firemen. Pozh.delo 5 no.1:3-4 Ja '59. (MIRA 11:12)

1. Zamestitel' ministra vnutrennikh del USSR.
(Ukraine--Firemen) (Ukraine--Socialist competition)

BOGDANOV, I.; GEORGIEV, A.; MILEV, V.

"On the economic value of lead-zinc deposits."

MINNO DELO, Sofiia, Bulgaria, Vol. 14, no. 2, Mar./Apr. 1959

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Sept 59
Unclas

BOGDANOV, I. (Petropavlovsk)

Flour mills should be supplied with nylon sieves. Muk.-elev. prom. 28 no.5:31 My '62. (MIRA 15:5)
(Flour mills--Equipment and supplies)

BOGDANOV, I. (Sverdlovsk)

Let's analyze the financial indices of a branch of trade.
Sov. torg. 36 no.8:17-19 Ag '63. (MIRA 16:11)

KISLYAKOV, Nikolay Timofeyevich, kand. tekhn. nauk [deceased]; BOGDANOV, I.A., red.; VERINA, G.P., tekhn. red.

[Principles of analysis of the operation of railroads] Osnovy analiza ekspluatatsionnoi raboty zheleznykh dorog. Izd.2., ispr. i dop. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 194 p.
(Railroads--Traffic) (MIRA 11:7)

BOGDANOV, Igor' Aleksandrovich; TSARENKO, A.P., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Cooperation practices between railroad sections and Economic Councils] Opyt sodruzhestva otdelenii dorog i sovnarkhozov. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 41 p. (MIRA 13:1)
(Railroads—Management)

BOGDANOV, Ivan Aleksandrovich; KONDYUKOVA, P.D., red.; YELAGIN, A.S., tekhn. red.

[The power of socialist competition] Sila sorevnovaniia. Moskva, Izd-vo Sovetskaia Rossiia, 1963. 63 p. (MIRA 16:12)
(Volga-Vyatka Economic Region—Socialist competition)

CA

11 c

Volatile antibiotics and phytoncides. Vl. N. Markov and Iv. Bogdanov (Inst. Microbiol. Serol., Sofia, Bulgaria). *Annuaire univ. Sofia, Faculté méd.* 28, 209-95(1948-1949) (French summary).—During their vegetative periods, a great no. of gram-pos. and gram-neg. bacteria, spore-forming bacilli, actinomycetes, saccharomycetes, and fungi produce volatile substances (I) with more or less bactericidal and bacteriostatic properties; these were called *ß-antibiotics* (I). Detailed studies were made on I produced by *Penicillium aromaticum* (II), which was isolated from a barrel contg. wine. II was grown in different culture media and agar plates freshly inoculated with test organisms were exposed to the generated I. The antagonistic activity of I on gram-pos. bacteria was selective; gram-neg. bacteria required higher concns. of I; the formation of I did not depend on the production of aromatic compds.; in synthetic media the activity of I was not proportional to the completeness of growth of II; and, the amt. of I decreased with increase of acidity. While II generated only I, *P. notatum* produced both I and penicillin; I started forming at the time of max. production of penicillin. Steam distillates yielding fractions with different bactericidal properties were found with large numbers of molds. The 1st fraction was the most aromatic and the weakest, and the last (tenth) the strongest. The chem. nature of I has not been detd. It was shown also that *E. coli* produced two types of I. I and phytoncides are compared. G. M.

1951

C-2.
181

11 Microbiology

Soya broth as culture medium in the production of penicillin. Vl. N. Markov and Iv. Hodjanov. (Inst. Microbiol., Sofia, Bulg.). *Annuaire univ. Sofia, Faculté méd.* 28, 293-9(1948-49)(in French).—*Penicillium notatum* produced greater amts. of penicillin (I) in soya broth (II) than in Czapek-Dox and modified Ca.-D. media. After treating 100 g. crushed soya beans with 1500 ml. water for 18 hrs. at room temp., the mixt. was heated for 15 min. at 120° and filtered; addn. of 5 g. NaCl to the filtrate and sterilization by steam completed the prepn. of II. Filtration was facilitated by the addn. of AcOH or *Lactobacillus bulgaricus* which also caused the production of most active I. The agar diffusion method was used to det. the activity of I upon staphylococci. Native I was colorless and comparatively very stable. The addn. of about 4% glucose to II hastens the destruction of I, probably due to the formation of gluconic acid. G. Meguerian

POPKHRISTOV, P.; BOGDANOV, I.; BALABANOV, V.

Antibiosis in the oral cavity. Vest.ven. i derm. no.3:56-57 My-Je '53.
(MLRA 6:7)
(Mouth--Bacteriology)

POPKHRISTOV, P.; BOGDANOV, I.; BALABANOV, V.

Antibiosis in the skin. Vest.ven. i derm. no.3:57 My-Je '53. (MLRA 6:7)
(Skin--Microorganisms)

POPKHRISTOV, P.; BOGDANOV, I.; BALABANOV, V.

Antibiosis in the foreskin and urethra in men. Vest.ven. i derm. no.3: 57 My-Je '53. (MLRA 6:7)
(Genitourinary organs--Bacteriology)

POPKHRISTOV, P.; BOGDANOV, I.; BALABANOV, V.

Antiobiosis in the vagina and the female urethra. Vest.ven. i derm. no.3: 57 My-Je '53. (MLRA 6:7)

(Genitourinary organs--Bacteriology)

POPKHRISTOV, P.; BOGDANOV, I.; BALABANOV, V.

Antibiosis in the oral cavity as a factor of resistance of the oral mucosa to fungous and pyococcic agents. Vest.ven. i derm. no.3:57-58 My-Je '53. (MLRA 6:7)

(Mouth--Bacteriology)

BOGDANOV [redacted]

Fungistatin, a new antibiotic with antimycotic action; preliminary communication. Suvrem. med., Sofia 5 no.9:29-31 1954.

1. Iz Katedrata po epidemiologiia i mikrobiologiia pri ISUL. Direktor: dots D.D.Khadzhidimova, doktor na meditsinskite nauki.
(FUNGICIDES,
fungistatin)

POPKHRISTOV, P.; BOGDANOV, I.; BALABANOV, V.

. ole of normal microflora in man and appearance of fungus and bacterial infections following antibiotic therapy. Suvrem. med., Sofia 7 no.5:11-23 1956.

(ANTIBIOTICS, injurious effects,
bact. balance disord. & superinfect. (Bul))

BOGDANOV, I.; POPKHRISTOV, P.

Experimental and clinical studies on the antineoplastic activity of the antibiotic blugaricum. Izv. nauchnoizsled inst. protivorak. antibiot. 1:1-94 '61.

(ANTIBIOTICS ther) (NEOPLASMS ther)

BELOBROV, Andrey Pavlovich. Prinimali uchastiye: BASKIN, A.S., inzh.-gidrograf; BOGDANOV, I.A., inzh.-gidrograf, dots.; VIL'NER, B.A., inzh.-gidrograf; VOLKOV, P.D., inzh.-gidrograf; GORSHKOV, N.M., inzh.-gidrograf; CHUROV, Ye.P., inzh.-gidrograf; YASHKEVICH, Ye.V., inzh.-gidrograf; STUPAKOVA, L.A., red.

[Marine hydrography] Gidrografiia moria. Moskva, Transport, 1964. 514 p. (MIRA 17:9)

AKSENOV, Ivan Yakovlevich; BOGDANOV, I.A., inzh., retsenzent; TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn.red.

[Railroad operational indices] Pokazateli ekspluatatsionnoi raboty zheleznykh dorog; kratkii spravochnik. Izd.2., perer. i dop. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1962. 206 p. (MIRA 15:5)
(Railroads—Management)

4/6

ZUBKOV, Ivan Ivanovich, kand. tekhn. nauk; UGRYUMOV, Arkadiy Konstantinovich, kand. tekhn. nauk; BERNGARD, K.A., doktor tekhn. nauk, retsenzent; BOGDANOV, I.A., inzh., retsenzent; ZHURAVLEV, M.M., inzh., retsenzent; KOZAK, V.A., inzh., retsenzent; ROZENBERG, A.D., inzh., retsenzent; RYAZANTSEVA, Yu.A., inzh., retsenzent; SKALOV, K.Yu., kand. tekhn.nauk, retsenzent; PREDE, V.Yu., inzh., red.; KHITROVA, N.A., tekhn. red.

[Traffic organization in railroad transplrtation]Organizatsiia dvizheniia na zheleznodorozhnom transporte. Izd.2., perer. i dop. Moskva, Transzheldorizdat, 1962. 399 p. (MIRA 16:1)
(Railroads--Traffic)

KISLYAKOV, N.T., kand. tekhn. nauk; BOGDANOV, I.A., red.; VERINA, G.P., tekhn. red.

[Fundamentals of the analysis of the operation of railroads] Osnovy analiza ekspluatatsionnoi raboty zheleznykh dorog. Moskva, Transzheldorizdat, 1954. 125 p. (MIRA 16:8)
(Railroads—Management)

BOGDANOV, I.A., inzh.

Reducing car detention time in loading and unloading stations is an important potential. Zhel. dor. transp. 45 no.5:18-22 My '63. (MIRA 16:10)

BOGDANOV, I.A., inzh.

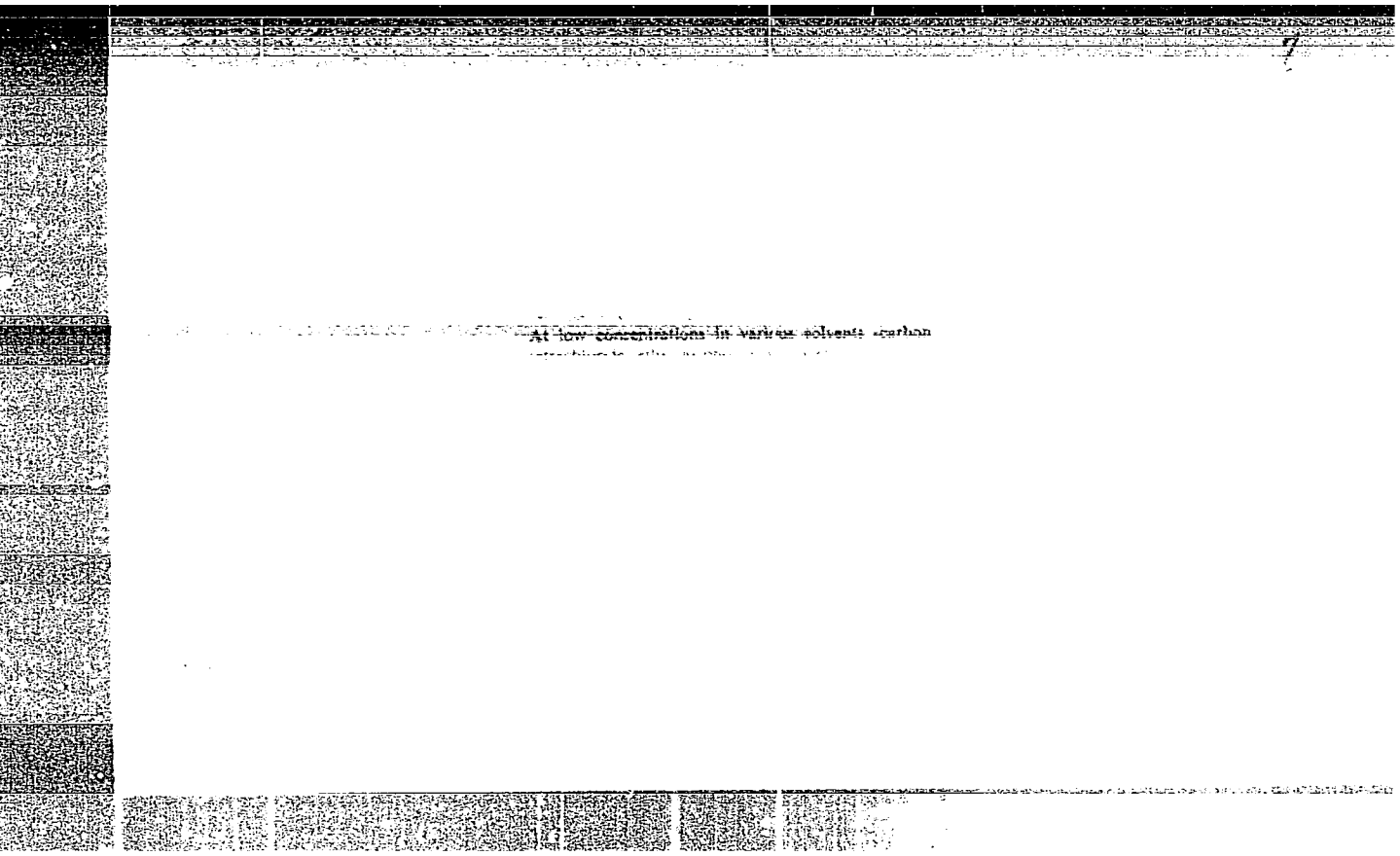
Planning the mechanization and automation of production management. Mekh.i avtom.proizv. 17 no.9:22-26 S '63. (MIRA 16:10)

BOGDANOV, Igor' Aleksandrovich; PIVENSHTEYN, David Il'ich; PREDE, V.Yu., red.

[Analysis of the operation of railroads] Analiz ekspluatatsionnoi raboty zheleznykh dorog. Moskva, Transport, 1964. 195 p. (MIRA 17:6)

BOGDANOV, I.A.; VUKS, M.F.

Use of method of light scattering in solutions in determining the optical anisotropy and geometrical shape of molecules. Vest. LGU 20 no.16:46-57 '65. (MIRA 18:9)



USSR/ Physics - Spectral analysis

Card 1/1 Pub. 43 - 11/62

Authors : Vuks, M. F., and Bogdanov, I. A.

Title : Determination of optical anisotropy and form of certain molecules of aromatic hydrocarbons by the light diffusion in solutions

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 667-668, Nov-Dec 1954

Abstract : Experiments were conducted to determine the optical anisotropy and polarizability tensor of molecules of certain aromatic hydrocarbons having two benzene rings for the purpose of establishing the form of these molecules and the mutual orientation of the benzene rings. The hydrocarbons selected for the experiments were: diphenyl, diphenylmethane, dibenzyl, diphenyl ether, diphenylamine and benzophenone. The results obtained are shown in graphs. Four references: 3 USSR and 1 USA (1937-1953). Graphs.

Institution : The A. A. Zhdanov State University, Leningrad and the L. M. Kaganovich Military-Transport Academy

Submitted : .....

AUTHORS: Bogdanov, I.A., Vuks, M.F. and Yelfimov, V.I. 51-4-15/25

TITLE: Determination of the optical anisotropy and the polarizability tensor of molecules from scattering of light in solutions. (Opredeleniye opticheskoy anizotropii i tenzora polyarizuyemosti molekul po rasseyaniyu sveta v rastvorakh)

PERIODICAL: "Optika i spektroskopiya" (Optics and Spectroscopy) 1957, Vol.2, No.4, pp502-509 (U.S.S.R.)

ABSTRACT: If the refractivity (i.e. the average polarizability) and the dipole moment of molecules are preserved on solution then their polarizability tensor remains unchanged. In such cases the light scattering of solutions can be used for the study of the optical anisotropy of the solute molecules. The hypothesis of preservation of the polarizability tensor of the solute is supported by Raman and electron absorption spectra which do not change much on solution. This paper describes experimental evidence confirming this hypothesis. CS_2, benzene and nitrobenzene were dissolved in liquids with weak anisotropic light scattering: CCl_4, cyclohexane, heptane, ethyl alcohol ether and acetone. CS_2 was also dissolved in benzene. Concentrations of the solute were 2-30% by volume. The polarizability tensor for CS_2, benzene and nitrobenzene is known from measurements of the Kerr constant and the light depolarization coefficient of their vapours. These molecules also possess strong optical anisotropy, conveniently

Determination of the optical anisotropy and the polarizability tensor of molecules from scattering of light in solutions. (Cont.)

large for accurate measurements. For these reasons any change in the polarizability tensor could be easily found from the changes in anisotropy. The method of measurements was described in detail earlier for pure liquids (M.F.Vuks and I.I. Bilenko, Zh. Eksper. Teor. Fiz., Vol.23, 105, 1952). Light from a Na lamp after scattering at 90° in a liquid was directed on to a photometer via a polarizing prism. By suitable rotation of the prism a parallel component of the scattered ray was separated out. The benzene component was taken as the intensity standard. Solutions of nitrobenzene in heptane were studied at 50°C, the rest at room temperature. Measured intensities (relative to benzene) were proportional to the solute concentration with constant of proportionality increasing from benzene via nitrobenzene to CS_2 corresponding to the increase of the optical anisotropy. Optical anisotropies calculated from measured intensities for CS_2, benzene and nitrobenzene were nearly the same irrespective of the solvent and practically equal to the values for isolated molecules (in vapours). This confirms the preservation of their

Determination of the optical anisotropy and the polarizability tensor of molecules from scattering of light in solutions. (Cont.)

polarizability tensor on solution. Similar tests are carried out on monosubstituted derivatives of benzene: toluene, phenol, aniline, chlorobenzene, bromobenzene and iodobenzene. The same solvents as before were used and the solute concentrations were 4-20% by volume. Solutions of phenol and aniline in cyclohexane and in heptane, and of iodobenzene in ethyl alcohol were studied at 50°C, the rest at room temperature. Except for solutions of aniline in ether and acetone, where a noticeable solute-solvent interaction occurred, the results followed the pattern for CS_2, benzene and nitrobenzene. Solutions of paradichlorobenzene, paradibromobenzene and paradiiodobenzene (mainly in CCl_4 and benzene) were also studied. Again results similar to those for CS_2, benzene and nitrobenzene were obtained. Values of the optical anisotropy obtained from measurements for mono and di-substituted benzene were compared with those calculated on the basis of additivity of polarizabilities. These values differ considerably (up to

Determination of the optical anisotropy and the polarizability tensor of molecules from scattering of light in solutions. (Cont.)

25%) due to interaction between various bonds (e.g. methyl group and benzene ring in toluene). There are three figures, three tables and five references, all Slavic.

ASSOCIATION: Leningrad State University, War Academy of Supply and Transport. (Leningr. Gos. Universitet. Voennaya Akademiya Tyla i transporta).

SUBMITTED: July 3, 1956.
AVAILABLE: Library of Congress

Card 4/4

BOGDANOV, I.B., inzhener.

Technological characteristics of the stitch and paste method of shoemaking. Leg.prom. 17 no.3:50-52 Mr '57. (MLRA 10:4)
(Shoe industry)

ESKIN, G.G.; BOGDANOV, I.B.

Method of manufacturing straps for women's summer open shoes.
Obm. tekh. opyt. [MLP] no.37:3-7 '57. (MIRA 12:9)
(Shoe manufacture)

BOGDANOV, I.B.; ESKIN, G.G.

Guiding support for the Class 34 PMZ stitching machine used for stitching inner belts to the lining. Obm. tekh. opyt. [MLP] no.37: 9-10 '57. (MIRA 12:9)

(Shoe machinery)

BOGDANOV, I.B.

Universal support clamp for the Class 23 PMZ machine. Obm. tekh. opyt. [MLP] no.37:10-11 '57. (MIRA 12:9)
(Shoe machinery)

BOGDANOV, I.; YEVZLIN, L.; CHUDAKOV, V.

On the question of moistening stiff leathers before rolling.
Kozh.-obuv.prom. no.6:40-3 of cover. Je '59. (MIRA 12:9)
(Leather)

BOGDANOV, IVAN DANILOVICH

BELEN'KIY, Aleksandr Davydovich; BOGDANOV, Ivan Danilovich; YEROSHIN, Mikhail Mikhaylovich; MARTYNENKO, Roman Dmitriyevich; RAKHMATULIN, M.D., inzhener, redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Eliminating defects in locomotives] Ustranenie neispravnostei teplovoza. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 102 p. (MIRA 10:9)

(Locomotives--maintenance and repair)

Bogdanov, I.D.

OVSYANNIKOV, V.N., inzh.; LARIN, V.N., inzh.; BELEN'KIY, A.D., inzh.; MAKHNO, Ye.B., inzh.; BOGDANOV, I.D., inzh. (Ashkhabad); MANKULOV, R.G., dots. (Tbilisi). [redacted]

Textbook on diesel locomotives ("The diesel locomotive industry." G.S. Ryleev and others. Reviewed by V.N. Ovsiannikov and others). Zhel. dor. transp. 39 no.12:89-90 D '57. (MIRA 11:1)
(Diesel locomotives) (Ryleev, G.S.)

BOGDANOV, I.D., inzh.

Modernization of the MVT 25/9 exciter. Elek. i tepl. tiaga 2 no.11:25 N '58. (MIRA 11:12)
(Diesel locomotives--Electric equipment)

BELEN'KIY, Aleksandr Davydovich; BOGDANOV, Ivan Danilovich; YEROSHIN, Mikhail Mikhaylovich; MARTYNENKO, Roman Dmitriyevich; RAKHMATULIN, M.D., inzh., red.; BOBROVA, Ye.N., tekhn.red.

[Eliminating malfunctions in diesel locomotives] Ustranenie neispravnostei teplovoza. Izd.2., ispr. i dop. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 156 p. (MIRA 13:1)
(Diesel locomotives--Handbooks, manuals, etc.)

BOGDANOV, I.D., inzh.; ODNOPOZOV, Sh.M., inzh.

Fuel feeding of the D50 diesel engine under emergency conditions. Elek.i tepl.tiaga 3 no.7:18 Jl '59.
(MIRA 13:3)

(Diesel engines)

. BOGDANOV, I.D.

NESTEROV, A.I. (Moskva); TUSHINSKIY, M.D. (Leningrad); GOREV, N.N.(Kiyev); DOLGO-SABUROV, B.A. (Leningrad); ZAKUSOV, V.V. (Moskva); MUROMTSEV, S.N. (Moskva); CHUMAKOV, M.P. (Moskva); ZHDANOV, V.M., prof. (Moskva); NEGOVSKIY, V.A., prof. (Moskva); BIRYUKOV, D.A. (Leningrad); LITVINOV, N.N., prof. (Moskva); SOKOLOVA-PONOMAREVA, O.D. (Moskva); KUPALOV, P.S. (Leningrad); BATKIS, G.A. (Moskva); KOSYAKOV, P.N., prof. (Moskva); SHMELEV, N.A. (Moskva); BUSALOV, A.A., prof. (Moskva); MOLCHANOVA, O.P. (Moskva); STRASHUN, I.D.; BLOKHIN, N.N. (Moskva); PREOBRAZHENSKIY, B.S. (Moskva); VISHNEVSKIY, A.A. (Moskva) CHERNIGOVSKIY, V.N. (Moskva); PAVLOVSKIY, Ye.N., akademik (Leningrad); MYASNIKOV, A.L. (Moskva); VINOGRADOV, V.N. (Moskva); MAYEVSKIY, V.I.: DAVYDOVSKIY, I.V. (Moskva); IOFFE, V.I. (Moskva); KURASHOV, S.V.: ANOKHIN, P.K. (Moskva); BOGDANOV, I.D. (Kiyev); ZIL'BER, L.A. (Moskva); BRONOVITSKIY, A.Iu.; CHEBOTAREV, D.F., prof.

Debate on the address by Professor V.V.Parin, academician secretary of the Academy of Medical Sciences of the U.S.S.R.; abridged comments by members of the Academy of Medicine and the directors of institutes. Vest.AMN SSSR 14 no.8:19-31 '59. (MIRA 12:11)

1. Deystvitel'nyye chleny AMN SSSR (for Nesterov, Tushinskiy, Gorev, Zakusov, Kupalov, Strashun, Preobrazhenskiy, Vishnevskiy, Chernigovskiy, Myasnikov, Vinogradov, Anokhin, Zil'ber).

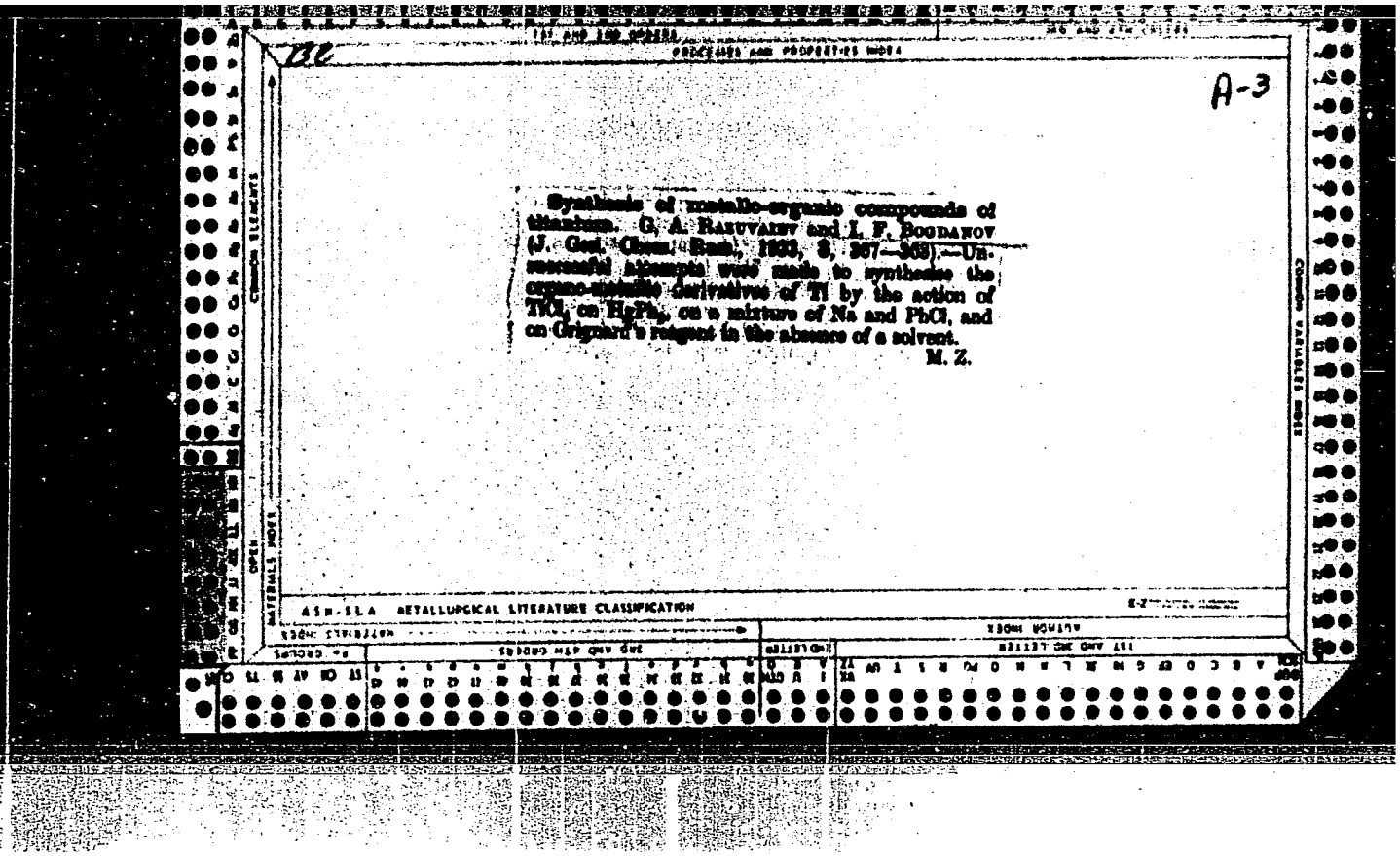
(Continued on next card)

NESTEROV, A.I.----(continued) Card 2.

2. Chleny-korrespondenty AMN SSSR (for Dolgo-Saburov, Chumakov, Zhdanov, Biryukov, Sokolova-Ponomareva, Batkis, Shmelev, Molchanova, Blokhin, Ioffe, Bogdanov). 3. Direktor Instituta gerontologii AMN SSSR (for Gorev). 4. Direktor Instituta farmakologii i khimioterapii AMN SSSR (for Zakusov). 5. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (VASKhNIL); direktor Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR (for Muromtsev). 6. Direktor Instituta po izucheniyu poliomiyelita AMN SSSR (for Chumakov). 7. Direktor Instituta eksperimental'noy meditsiny AMN SSSR (for Biryukov). 8. Direktor Instituta obshchey i kommunal'noy gigiyeny AMN SSSR (for Litvinov). 9. Direktor Instituta pediatrii AMN SSSR (for Sokolova-Ponomareva). 10. Direktor Instituta virusologii AMN SSSR (for Kosyakov). 11. Direktor Instituta tuberkuleza AMN SSSR (Shmelev). 12. Direktor Instituta grudnoy khirurgii AMN SSSR (for Busalov). 13. Direktor Instituta pitaniya AMN SSSR (for Molchanova). 14. Direktor Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR (for Blokhin). 15. Direktor Instituta khirurgii AMN SSSR (for Vishnevskiy).

NESTEROV, A.I.--- (continued) Card 3.

16. Direktor Instituta fiziologii AMN SSSR (for Chernigovskiy). 17. Direktor Instituta terapii AMN SSSR (for Myasnikov). 18. Direktor Gosudarstvennogo izdatel'stva meditsinskoy literatury (for Mayevskiy). 19. Vitse-prezident AMN SSSR (for Davydovskiy). 20. Ministr zdravookhraneniya SSSR (for Kurashov). 21. Direktor Instituta infektsionnykh bolezney AMN SSSR (for Bogdanov). 22. Chlen-korrespondent AN BSSR: predsedatel' Uchenogo meditsinskogo soveta Ministerstva zdravookhraneniya BSSR (for Bronovitskiy). 23. Predsedatel' Uchenogo meditsinskogo soveta Ministerstva zdravookhraneniya USSR (for Chebotarev).
(MEDICINE)

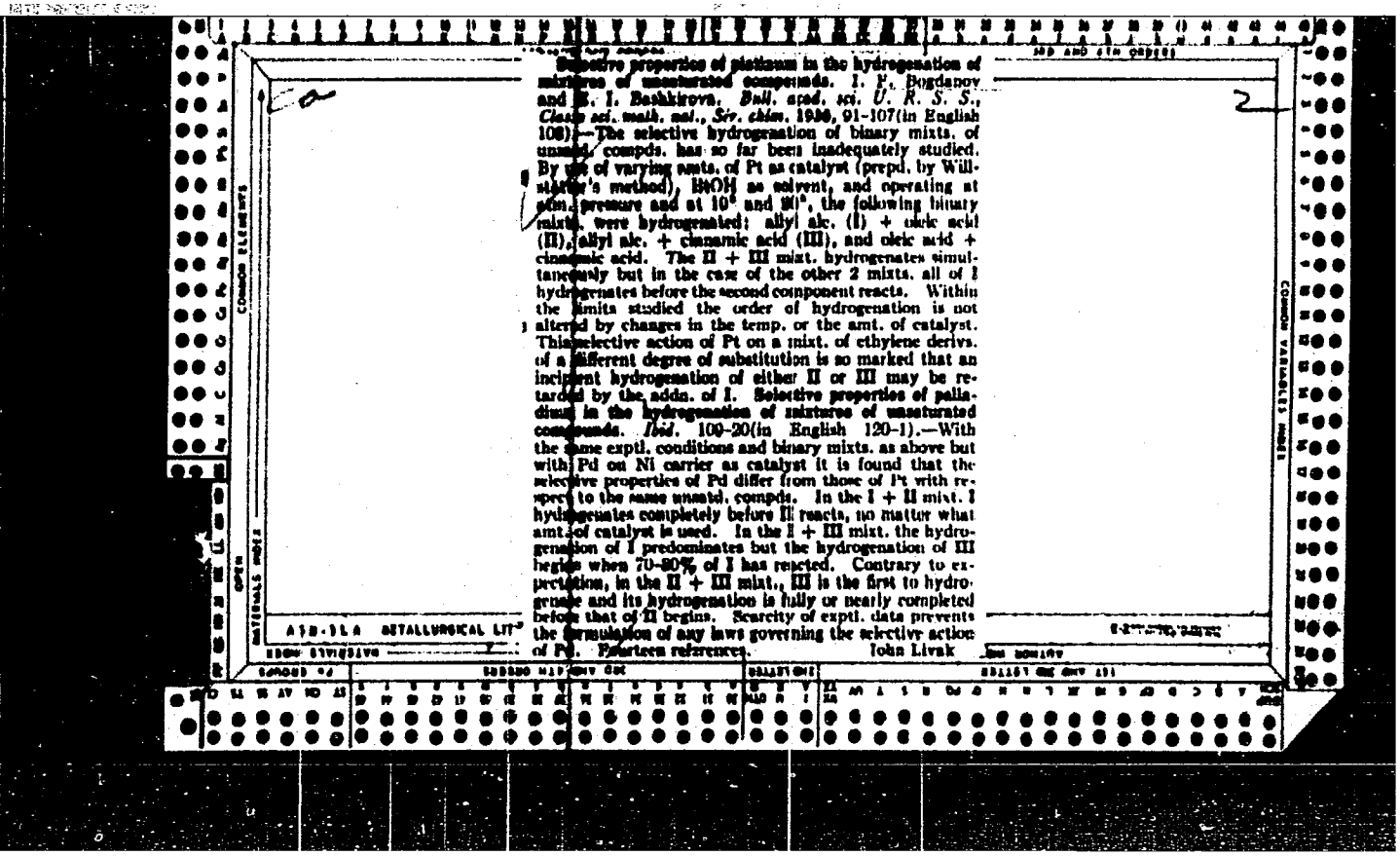


A-3

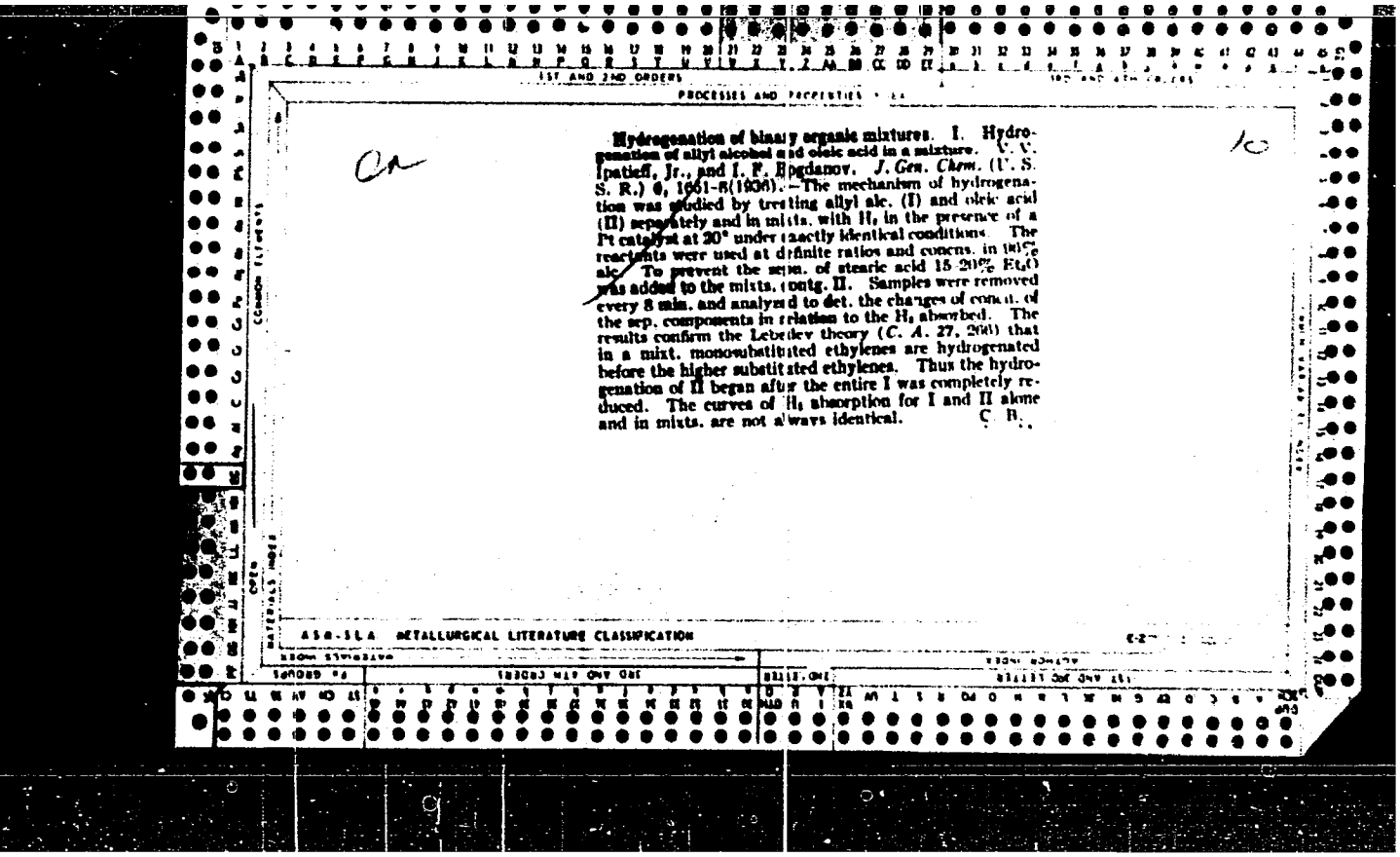
Synthesis of metallo-organic compounds of titanium. G. A. Razuvaiev and I. F. Boodanov (J. Gen. Chem. Russ., 1933, 3, 367—369).—Unsuccessful attempts were made to synthesise the organo-metallic derivatives of Ti by the action of $TiCl_4$ on Hg_2Ph_2, on a mixture of Na and PbCl, and on Grignard's reagent in the absence of a solvent.

M. Z.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Selective properties of platinum in the hydrogenation of mixtures of unsaturated compounds. I. P. Bogdanov and R. I. Bashkirova. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Sér. chim.* 1936, 91-107(in English 108).—The selective hydrogenation of binary mixts. of unsatd. compds. has so far been inadequately studied. By use of varying amts. of Pt as catalyst (prepd. by Willstätter's method), EtOH as solvent, and operating at atm. pressure and at 10° and 20°, the following binary mixts. were hydrogenated: allyl alc. (I) + oleic acid (II), allyl alc. + cinnamic acid (III), and oleic acid + cinnamic acid. The II + III mixt. hydrogenates simultaneously but in the case of the other 2 mixts. all of I hydrogenates before the second component reacts. Within the limits studied the order of hydrogenation is not altered by changes in the temp. or the amt. of catalyst. This selective action of Pt on a mixt. of ethylene derivs. of a different degree of substitution is so marked that an incipient hydrogenation of either II or III may be retarded by the addn. of I. **Selective properties of palladium in the hydrogenation of mixtures of unsaturated compounds.** *Ibid.* 109-20(in English 120-1).—With the same expti. conditions and binary mixts. as above but with Pd on Ni carrier as catalyst it is found that the selective properties of Pd differ from those of Pt with respect to the same unsatd. compds. In the I + II mixt. I hydrogenates completely before II reacts, no matter what amt. of catalyst is used. In the I + III mixt. the hydrogenation of I predominates but the hydrogenation of III begins when 70-80% of I has reacted. Contrary to expectation, in the II + III mixt., III is the first to hydrogenate and its hydrogenation is fully or nearly completed before that of II begins. Scarcity of expti. data prevents the formulation of any laws governing the selective action of Pt. Fourteen references. John Livak



PROCESSES AND PROPERTIES

Ca

10

Hydrogenation of binary organic mixtures. I. Hydrogenation of allyl alcohol and oleic acid in a mixture. V. V. Ipatieff, Jr., and I. F. Bogdanov. *J. Gen. Chem.* (U. S. S. R.) 6, 1661-8(1936).—The mechanism of hydrogenation was studied by treating allyl alc. (I) and oleic acid (II) separately and in mixts. with H_2 in the presence of a Pt catalyst at 20° under exactly identical conditions. The reactants were used at definite ratios and concns. in 96% alc. To prevent the sepn. of stearic acid 15-20% Et_2O was added to the mixts. (cntg. II. Samples were removed every 8 min. and analyzed to det. the changes of concn. of the sep. components in relation to the H_2 absorbed. The results confirm the Lebedev theory (*C. A.* 27, 260) that in a mixt. monosubstituted ethylenes are hydrogenated before the higher substituted ethylenes. Thus the hydrogenation of II began after the entire I was completely reduced. The curves of H_2 absorption for I and II alone and in mixts. are not always identical. C. B.

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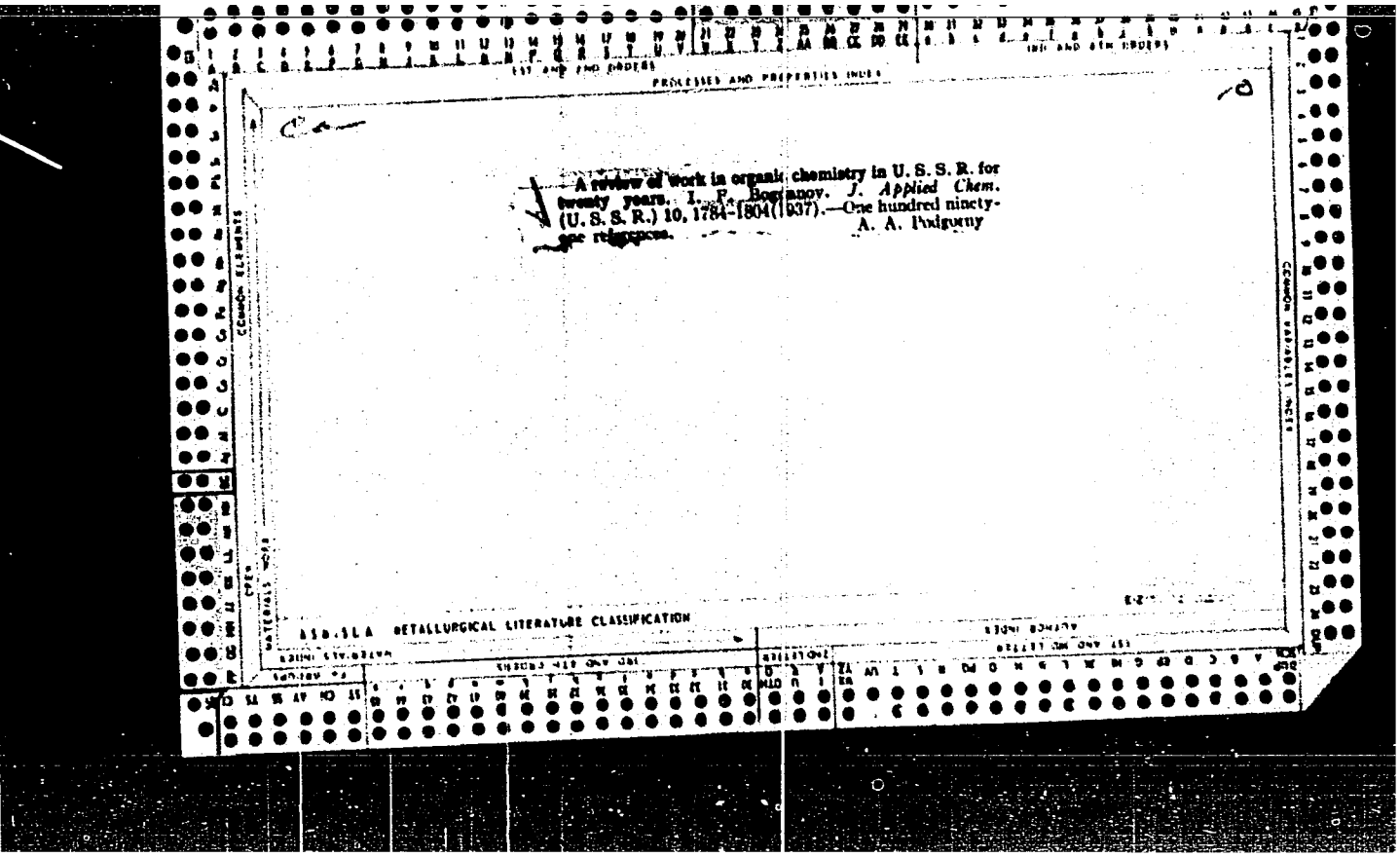
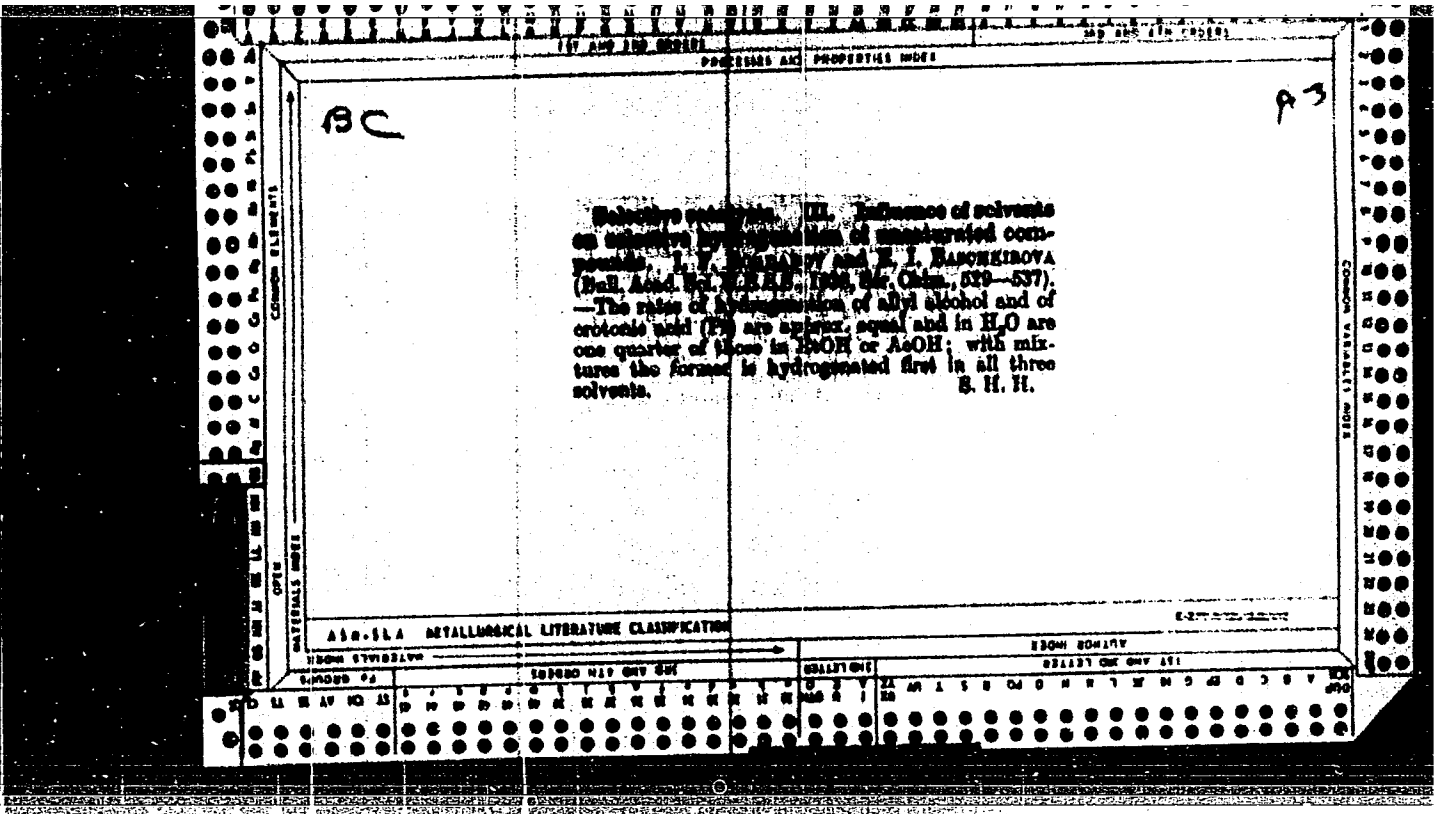
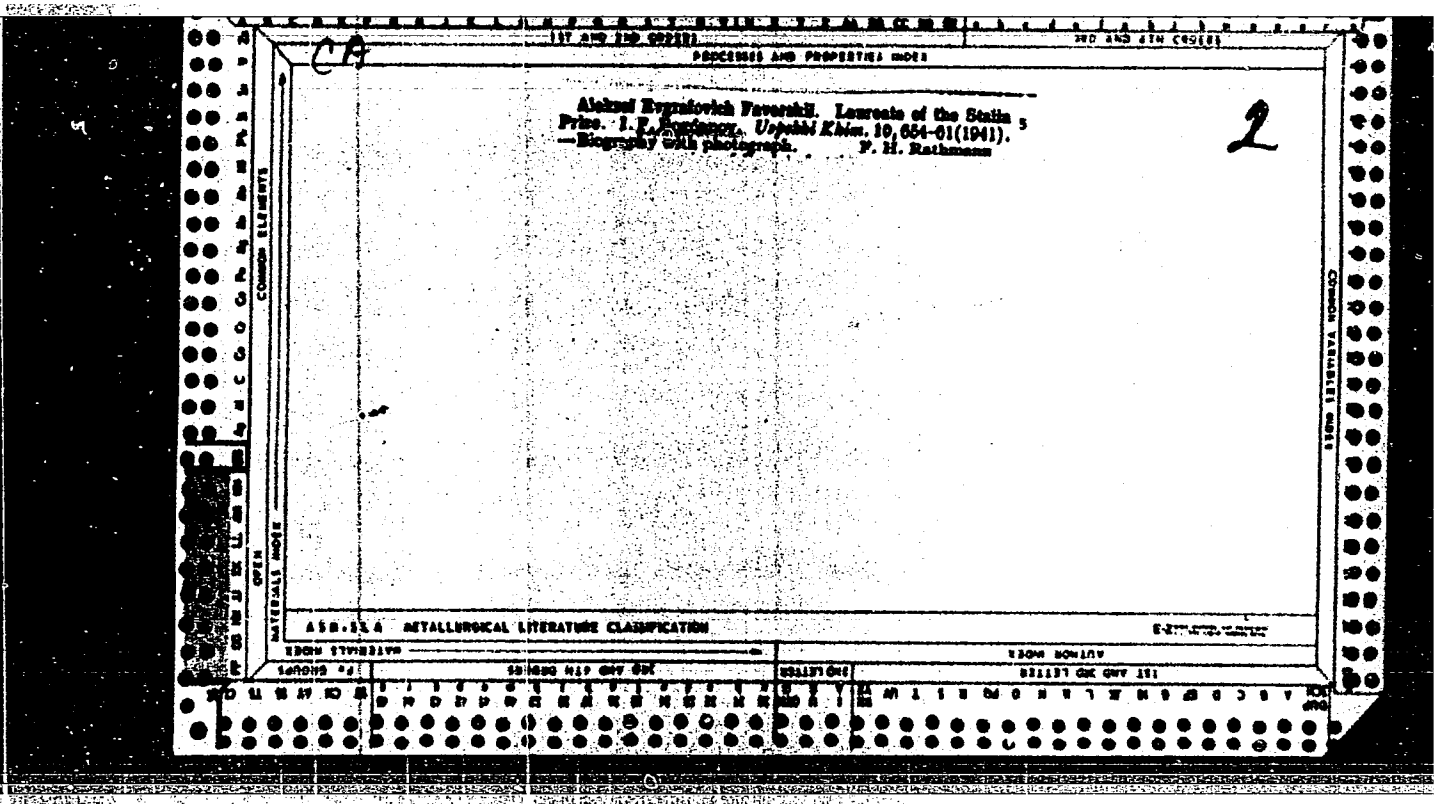


A review of work in organic chemistry in U. S. S. R. for twenty years. I. F. Bogdanov. *J. Applied Chem.* (U. S. S. R.) 10, 1784–1804(1937).—One hundred ninety-one references. A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

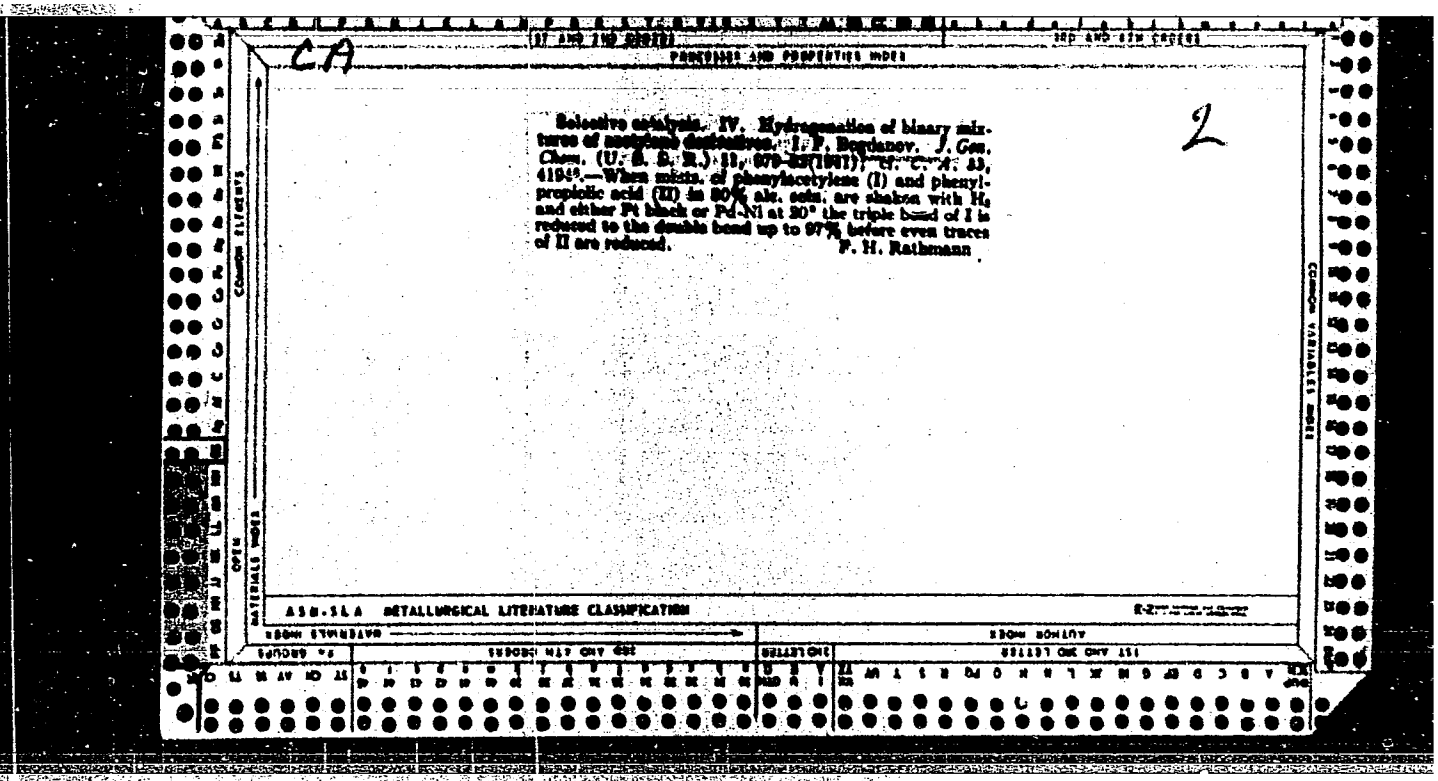


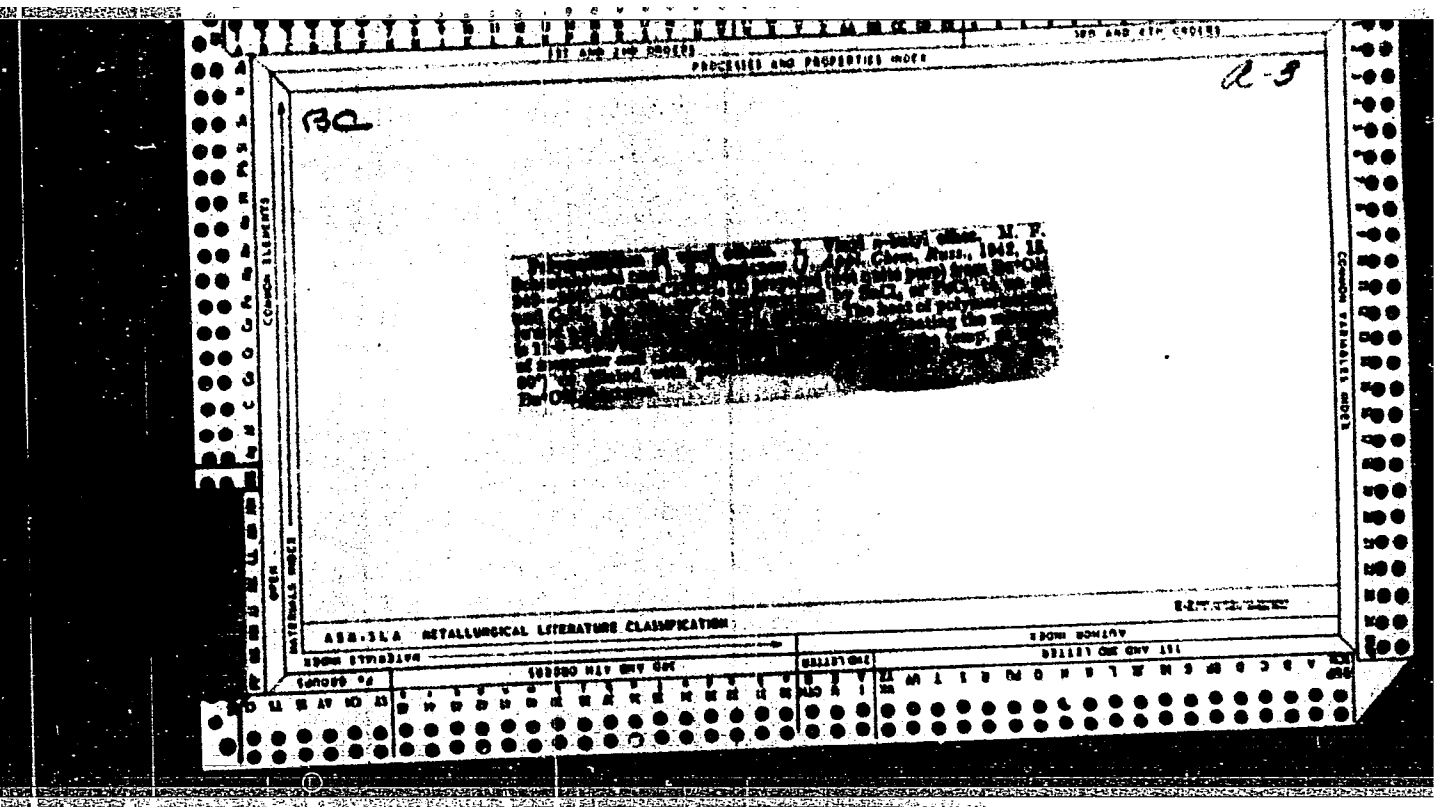


CA

2

Aleksei Evgenievich Favorskii. Laureate of the Stalin Prize. I. L. Knunyants. *Uspekhi Khim.* 10, 654-61(1941). —Biography with photograph. P. H. Rathmann





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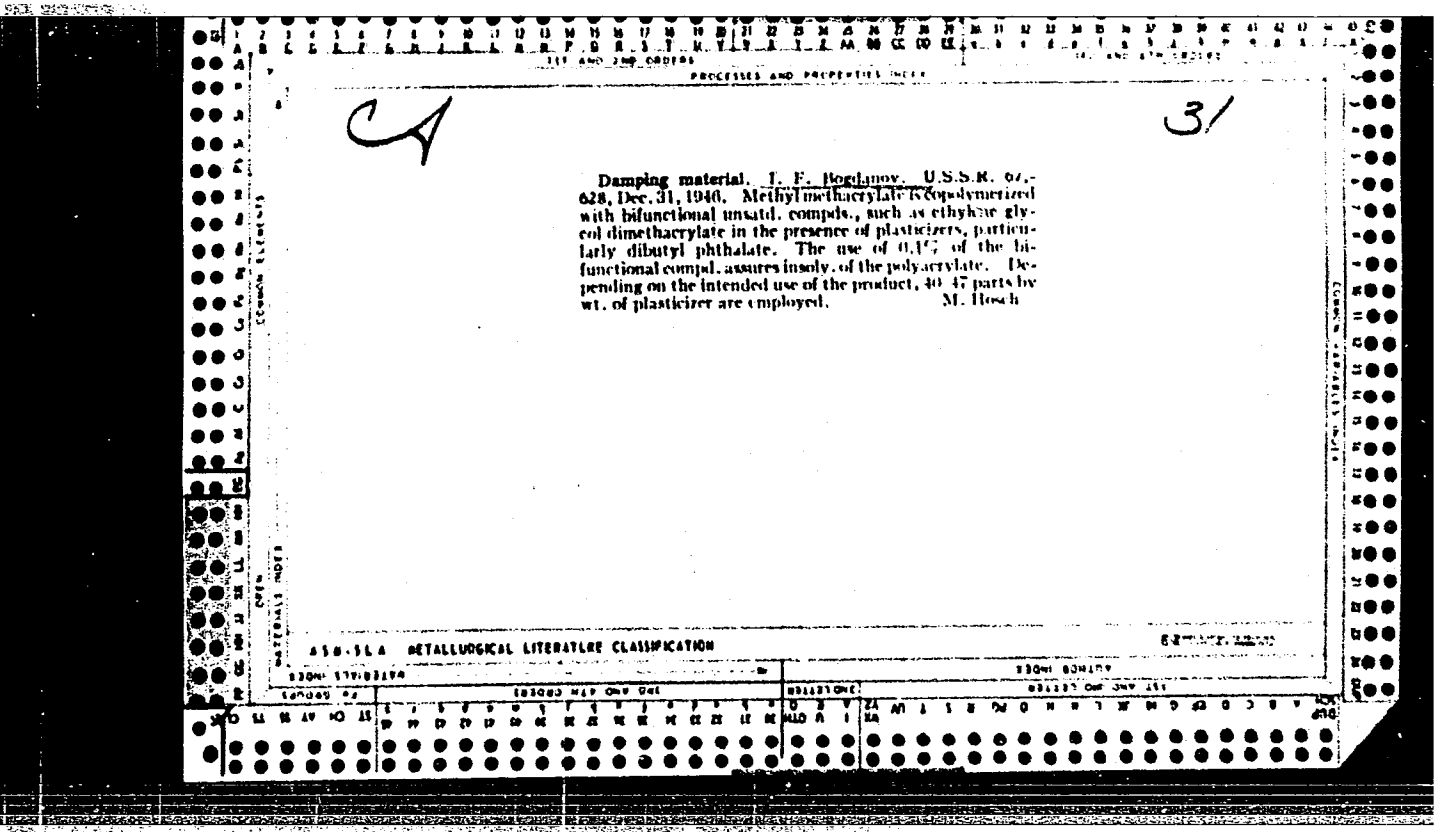

PROCESSES AND PROPERTIES INDEX

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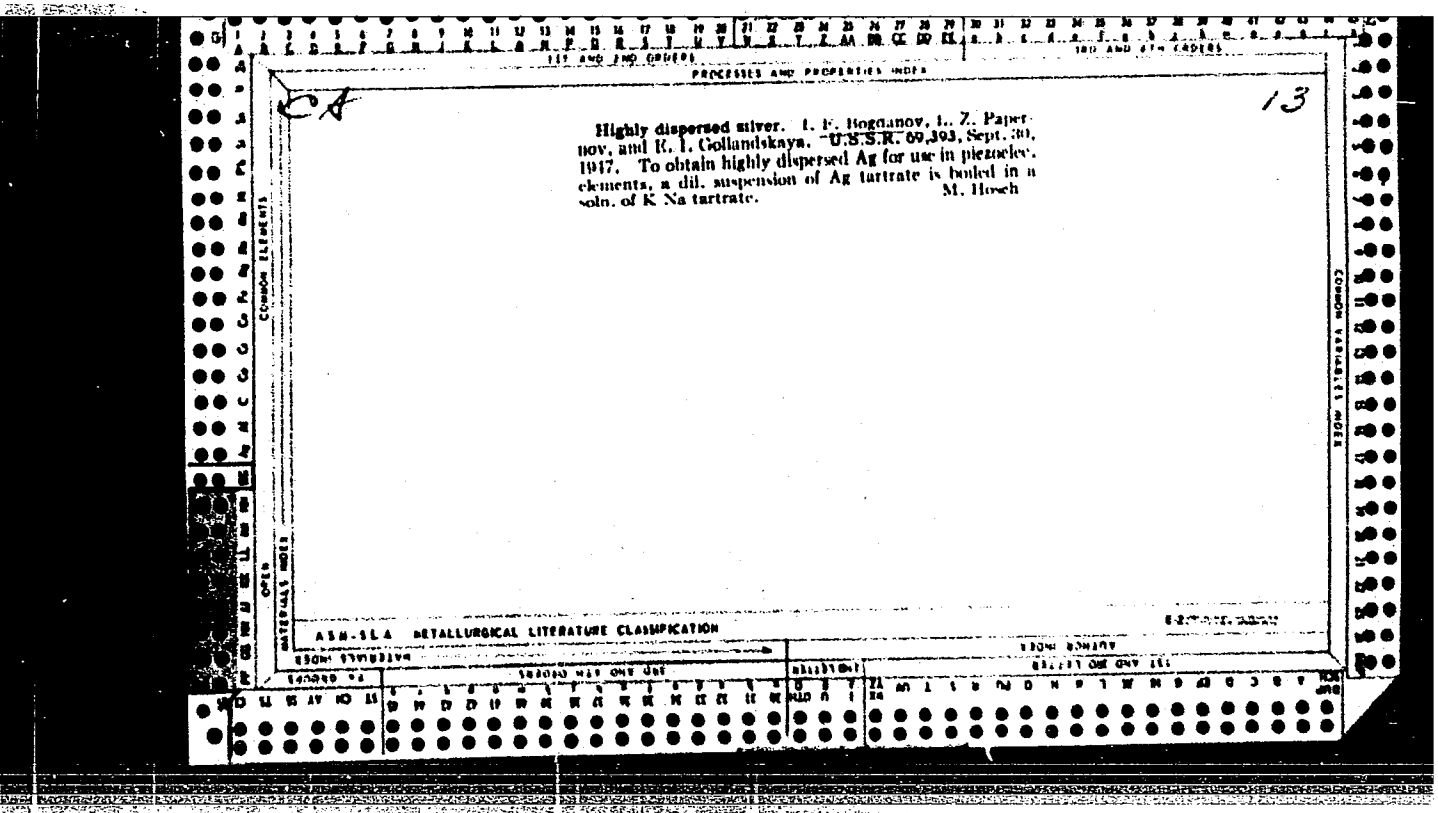
31

Damping material. I. F. Bogdanov. U.S.S.R. 67,628, Dec. 31, 1946. Methyl methacrylate is copolymerized with bifunctional unsatd. compds., such as ethylene glycol dimethacrylate in the presence of plasticizers, particularly dibutyl phthalate. The use of 0.1% of the bifunctional compd. assures insoly. of the polyacrylate. Depending on the intended use of the product, 40–47 parts by wt. of plasticizer are employed. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA 13

Highly dispersed silver. I. F. Bogdanov, L. Z. Paperov, and R. I. Gollandskaya. U.S.S.R. 69,393, Sept. 30, 1917. To obtain highly dispersed Ag for use in piezoelec. elements, a dil. suspension of Ag tartrate is boiled in a soln. of K Na tartrate. M. Hosch

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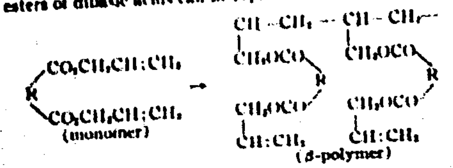
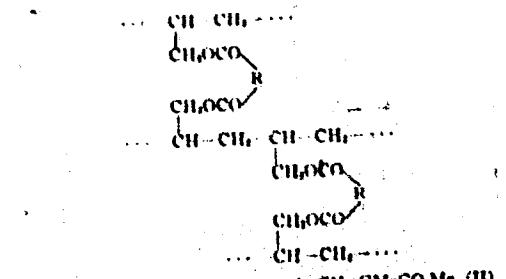
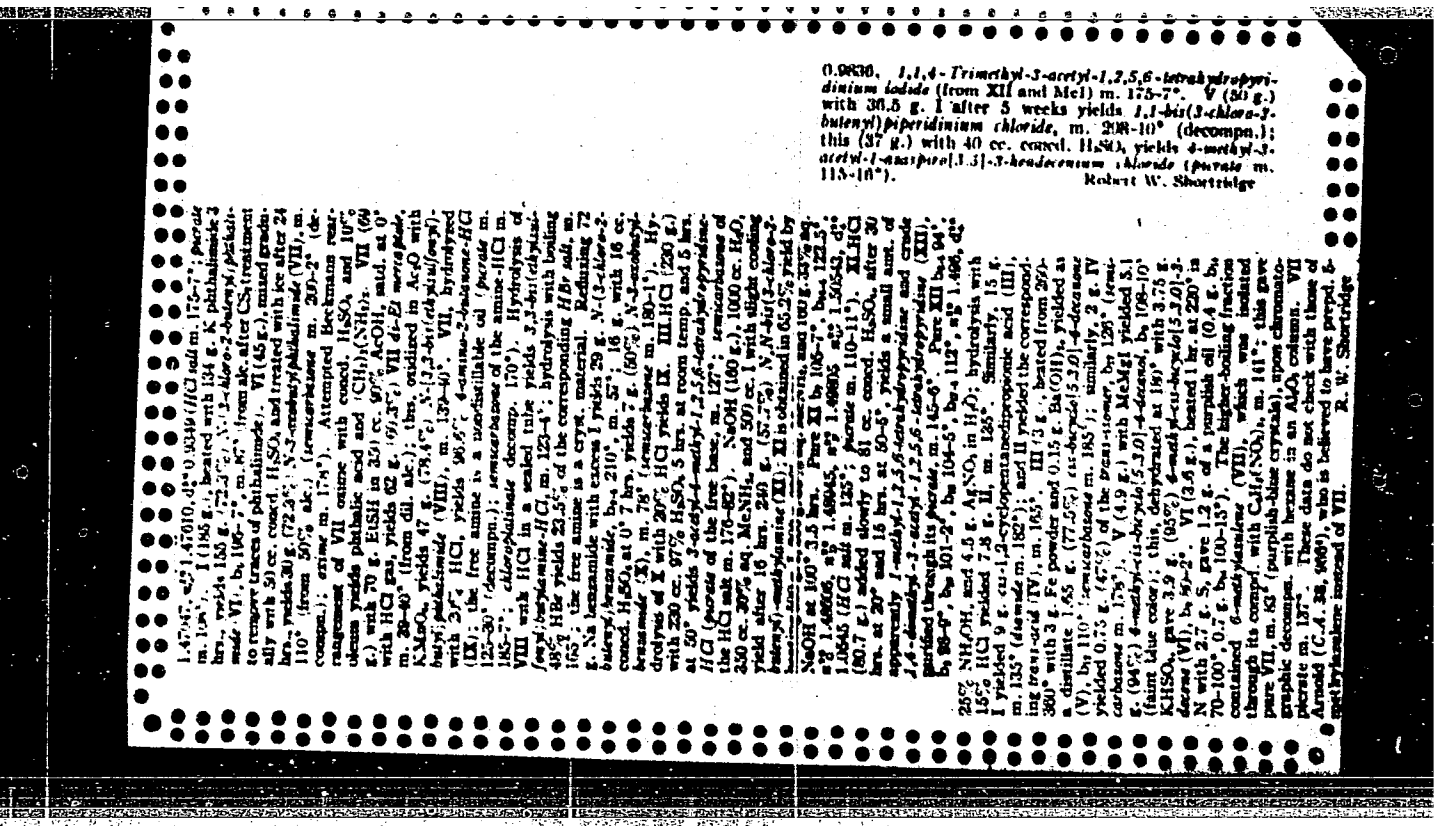
The chemistry and technology of synthetic high-molec-ular compounds. I. Polymerization of ethylene glycol dimethacrylate. A. A. Berlin and I. F. Bogdanov. *J. Gen. Chem.* (U.S.S.R.) 17, 1699-1708(1947)(in Russian). —(1) $(CH_2O_2CCMe:CH_2)_2$ (I) was synthesized by heating a mixt. of 750 g. $CH_2:CMeCO_2Me$ with 100 g. $(CH_2OH)_2$, 5 g. concd. H_2SO_4, and 50 g. hydroquinone 5-6 hrs. at 140-60° under a stream of dry N or CO_2; the reaction is considered completed after 100-120 ml. MeOH have boiled away. After neutralization with $NaHCO_3$ or $CaCO_3$ and distn. under 7.5 mm., the ester was obtained 99.5-99.8% pure in 40% yield. (2) The polymer obtained in either bulk or in soln. has d^{20} 1.2323 and does not soften up to 200-20°; depolymerization in vacuo at 310-90° under CO_2 yields 70% liquid products; vacuum distn. gives about 40% initial I, 40% residue, and 20% undetd. products. (3) Polymerization of I in the presence of Bz_2O_2 passes through an induction period, the length, τ, of which depends on the temp. and the amt. of catalyst; at 60°, with I and 0.5% Bz_2O_2, τ = 1-1.5 and 6-8 hrs., resp.; at 80°, τ = 15 min. and the reaction is completed in 1-1.5 hrs. The progress of the reaction was followed by the vol. contraction, complete polymerization corresponding to a contraction by 15.0%. The 1st-order rate consts. $k = (2.303/t) \log a/(a - x)$, with a and x expressed in terms of the corresponding indications of the dilatometer, are fairly const. in bulk polymerization and in 50% soln. in PhMe but rise significantly with time in 50% soln. in Me_2CO; thus, at 60 ± 0.2°, with 1% Bz_2O_2, in bulk, in 30 hrs., the degree of completion of the polymerization P = 55.6%, 10^4k = 154 → 200; in PhMe, 23 hrs., P = 60.0%, 10^4k = 198 → 410; in Me_2CO, 22 hrs., P = 89.0%, 10^4k = 233 → 1005. The relative slowness of the bulk polymerization as compared with the reaction in soln. is ascribed to mech. binding of the monomer by the insol. polymer. (4) In an attempt to detect intermediate formation of a sol. β-polymer in the liquid above the insol. polymer gel formed in bulk polymerization, samples of the liquid were treated at various stages with a 20-fold vol. of alc., yielding up to 1% of polymer insol. in alc. and in Me_2CO; the amt. of the ppt. did not change in the course of the reaction, and the characteristic consts. of the supernatant liquid remained practically unchanged (n_D^{20} 1.4553, η of a 10% soln. in PhMe 0.634 centipoise, d 1.071); hence, bulk polymerization of I does not proceed over an intermediate sol. β-polymer (prepolymer). This mechanism is proper only for polyfunctional compds. in which the double bonds are sepd. from the COO groups by CH_2 groups, with the result that resonance and polarizability of the double bonds are significantly reduced; thus, polymerization of allyl esters of dibasic acids can be represented by



further addn. of the monomer to the β-polymer results in



(5) I copolymerizes readily with $CH_2:CMeCO_2Me$ (II) at 60° in the presence of 1% Bz_2O_2. The polymer obtained with 0.5% I is practically insol. but swells to some extent in Me_2CO, C_6H_6, and $CHCl_3$; with over 0.5% I, the product is outright insol. and does not soften up to 200°. The induction period increases with the amt. of I, thus, with 0, 0.5, 1, 5, 10, and 50% I, τ = 1, 1.5, 2.8, 7.5, 9, and 13.3 hrs. The mechanism of the copolymerization is evidently basically different depending on the amt. of the polyfunctional I added to the monofunctional II; thus, with less than 0.1% I, the viscosity η of the liquid increases regularly and no insol. gel sepa.; with 0.1-0.2% I, the mechanism of the copolymerization becomes similar to that of the polymerization of pure I, with the insol. polymer beginning to sep. instantaneously after the long induction period, and η of the supernatant liquid remaining practically const. throughout the reaction. (6) Copolymerization of $CH_2:CMeCO_2Me$, of $CH_2:ClICO_2Bu$, and of $CH_2:CMeCO_2Bu$ with not over 1% I at 60° yielded elastic polymers insol. in org. solvents. N. Thon



BOGDANOV, I. F.

Chemical Manufacturing Processes

Dissertation: "Selective Hydrogenative of Organic Compounds and Their Significance in the Production of Synthetic Liquid Fuel," Dr Tech Sci, Inst of Mineral Fuels, Acad Sci USSR, 16 Mar 54. (Vechernyaya Moskva, Moscow, 4 Mar 54)

SO: SUM 213, 20 Sept 1954

Catalyst activity in destructive hydrogenation reactions. I. Hydrogenation of hydrocarbons with different types of unsaturated linkages. B. K. Klimov and I. F. Bordangy, *Trudy Inst. Goryuch. Iskopaemykh Akad. Nauk S.S.S.R.* 3, 140–50(1954).—An iron catalyst (I) was effective in hydrogenation of the ethylene linkage in styrene and cyclohexene and in the hydrogenation of naphthalene to Tetralin, but not for benzene hydrogenation, while WS$_2$ (II) is active for all these hydrogenation types, and is always accompanied by a partial isomerization of C_6 to C_5 rings. The Me groups in the benzene homologs facilitate hydrogenation. In mixtures of naphthalene and benzene, naphthalene was hydrogenated first. The mechanism of the reactions is discussed. II. Hydrogenation of oxygenated aromatics. *Ibid.* 151–66.—PhOH is hydrogenated with H at lower temperatures, and the benzene formed is only moderately hydrogenated at the higher temperatures, with a slight isomerization and condensation. PhOH and H_2O slow down the hydrogenation of toluene. I is not active in the hydrogenation of PhOH at temps. below 400°; at higher temps. PhOH is reduced and the ring hydrogenated. Some isomerization will only result in very prolonged interaction. With no catalysts present, dihydric phenols merely undergo condensation, but in the presence of I or II they are reduced, hydrogenated, and condensed. Less high-mol. wt. condensate is formed at higher temps., but it does not fall to below 50%. Only the OH groups are reduced in BzOH and phthalic acid and CH_4 is split off, which occurs even with no catalysts present. Oxygenated compds. are assumed to form 3 types of compds., namely with an active O (which can be reduced in the absence of catalysts) and with a passive O (phenol, anisole, etc.) which are not reduced without catalysts. The former can be reduced by H-carriers, e.g. Tetralin, and the reaction may be used industrially for a partial elimination of O in mixts. W. M. Sternberg

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(Hydrogenation) (Oxygen compounds)