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PHASE I BOOK EXPLOITATION 999

Predvoditelev, Aleksandr Savvich, Professor, Corresponding Member, Academy of Sciences, USSR; Stupochenko, Yevgeniy Vladimirovich, Professor; Pleshanov, Aleksandr Sergeyevich; and Rozhdestvenskiy, Igor' Borisovich

Tablitsy termodinamicheskikh funktsiy vozdukha dlya temperatur ot 6000° do 12000° K i davleniy ot 0,001 do 1000 atmosfer (Tables of Thermodynamic Functions of Air for Temperatures of 6,000° to 12,000° K and Pressures of 0.001 to 1,000 Atmospheres) Moscow, Izd-vo AN SSSR, 1957. 301 p. 3,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Energeticheskiy institut. Laboratoriya fiziki goreniya, Moscow. Universitet. Fizicheskiy fakul'tet, SSSR. Ministerstvo vysshego obrazovaniya

Resp. Ed.: Predvoditelev, Aleksandr Savvich, Professor; Tech. Ed.: Zelenkova, Ye.V.

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PLESHAKOVA, A.V.

From the history of the struggle of the Communist Party to utilize professional teaching personnel in building up the Soviet higher school (1918-1920). Trudy LIAP no.25:27-43 '58. (MIRA 11:10)
(Education, Higher)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

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MAL'TSEV, I.T.; PLESHAKOVA, A.V.; SHALAGINOVA, F.I.; GAYDAMAK, N.A.

Diagnosis and treatment of chronic colitis. Kaz. med. zhur. no.1:14-19 Ja-F '62. (MIRA 15:3)

1. Omskaya zheleznodorozhnaya klinicheskaya bol'nitsa (nachal'nik - S.F. Mel'nik, nauchnyy konsul'tant - deystvitel'nyy chlen AMN SSSR prof. A.F. Bilibin).
(COLITIS)

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PLESHAKOV, V.V., polkovnik

Test of combat readiness. Vest.Vozd.Fl. no.3:14-18 Mr '60.
(MIRA 13:9)

(Flight training)

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KOLESNIKOV, I.S.; VIKHRIYEV, B.S.; SHCHERBA, B.V.; POKROVIN, P.I.; PLESHAKOV, V.T.

Differential diagnosis of lung cancer and abscess. Vop.onk. 11 no.11:3-7 '65. (MIRA 19:1)

1. Iz kafedry gospital'noy khirurgii (zav. - laureat Leninskoy premii, chlen-korrespondent AMN SSSR, zasluzhennyy deyatel' nauki RSFSR prof.I.S.Kolesnikov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

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PLESHAKOV, V. I.

2217 PLESHAKOV, V. I. AND BUDIN, K. Z.

Vyrashchivaniye Kartofyelya V Poymakh Stalingradskoy Oblasti. Stalingrad, Kn IZD. 1954, 48s 20sm. 3.000 EKZ. 65K.-
(54-56532)p

635.2(47.874)

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KRIVOSHEYEV, Aleksandr Kos'mich, dots.; ZHITKOV, V.Ya., starshiy prep., otv. red.; PLESHAKOV, V.D., dots., red.; ZARIF'YAN, A.Z., dots., red.; NAUMOVA, Yu.A., tekhn. red.

[Types of apartments planned for the third climate region of the U.S.S.R.] Perspektivnye tipy kvartir dlia tret'ego klimaticheskogo raiona SSSR. Novocherkassk, Redaktsionno-izdatel'skii otdel NPI, 1962. 74 p. (MIRA 16:4)

1. Novocherkassk. Politekhnicheskiy institut. Kafedra arkhitektury.

(Apartment houses--Design and construction)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

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PLESHAKOV, V.E.; SINEV, O.P.; SEMENOVA, V.S.; LUPANOVA, L.F.

Settling of the waste waters from viscose manufacture under conditions of high pH values. Trudy NPI 157:47-53 '64.
(MIRA 19:1)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, V.D.; MATSNEV, A.I.; SINEV, O.F.

Testing of clarifiers with suspended precipitate in the purification of waste waters from viscose manufacture. Trudy NPI 157:39-45 '6X. (MIRA 19:1)

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PLESHAKOV, V.D.; MATSNEV, A.I.

Utilization of wastes from the hydraulic ash removal in heat and electric power plants for the neutralization and additional purification of waste waters from viscose production. Trudy NPI 157:29-37 '64. (MIRA 19:1)

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PLESHAKOV, V.

Mixing pumps used for cleaning sediment basins in garages. Avt.transp. 37 no.1:20-21 Ja '59. (MIRA 12:2)

1. Novocherkasskiy avtomobil'no-dorozhnyy tekhnikum.
(Pumping machinery)

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PLESHAKOV, V., inzh., prepodavatel'

Multiple-purpose motortruck for service stations. Avt.transp. 41 no.2:23-24 F '63. (MIRA 16:2)

1. Novocherkasskiy avtodorozhnyy tekhnikum.
(Motortrucks)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, S.

Follow-up of materials published in the journal. Den. i kred. 19 no.12:77-82 D '61. (MIRA 14:12)
(Banks and banking--Accounting)
(Machine accounting)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, S.

Tasks and prospects for the development of accounting and control in the State Bank. Den. i kred. 20 no.11:3-12 N '62. (MIRA 16:1)

(Banks and banking--Accounting)
(Machine accounting)

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PLESHAKOV, N.

We will make 50 million bricks. Sel'. stroi. 13 no. 7:13-14 Jl '58.
(MIRA 11:8)

1. Starshiy inzhener Orlovskogo upravleniye po stroitel'stvu v kolkhozakh.
(Orel Province--Brickmaking)

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SELEZNEV, G.S.; PLESHAKOV, M.I.

New reinforcing bandage for the armpit. Fel'd. i akush. 22 no.1:43 Ja '57 (MLRA 10:4)

(BANDAGES AND BANDAGING)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, M.G.; VASIL'YEV, A.Ye.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Synthesis of 4, 7, 9, 12-hexadecatetrayne-1, 16-dicarboxylic acid. Zhur.ob.khim. 31 no.5:1545-1547 My '61. (MIRA 14:5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

(Hexadecatetraynedicarboxylic acid)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

L 45450-66

ACC NR: AP6022724

of a 1% thiourea and 1% antioxidant. The viscosity of the polymer remained virtually unchanged after heating when these mixtures were used. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11, 07 / SUBM DATE: 13 Jan 65 / OTH REF: 001

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

L 45450-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6022724 (A) SOURCE CODE: UR/0183/66/000/002/0014/0016

AUTHOR: Pleshakov, M. G.; Tikhonova, T. I.; Gribova, T. A.; Yegidis, F. M.; Otmakhova, V. M.

ORG: [Pleshakov, Tikhonova, Gribova] VNIISV; [Yegidis, Otmakhova] NIIkhimpolimer

TITLE: Thermostabilization of polypropylene

SOURCE: Khimicheskiye volokna, no. 2, 1966, 14-16

TOPIC TAGS: polymer chemistry, high temperature research, synthetic material, thermal stability, polypropylene

ABSTRACT: The use of synergistic mixtures made of sulfur compounds and phenol derivatives to strengthen polyolefines against destruction caused by heat and oxidation is most effective. The authors, in 1965, showed that thiourea markedly increased the oxidation inhibitory effect of 2,2-bis-(4-oxyphenyl)-propane. Thiourea is a common product and here its synergistic effect is investigated on other phenol type antioxidants. Inhibitors used are listed and their effect in various combinations was tested on polypropylene of 1.2 viscosity. This polymer was oxidized at high temperature (200°C and 140°C) under an O_2 pressure of 200 mm Hg. The induction was considered finished when the O_2 pressure dropped 3 mm Hg. The stabilizer's value was judged by the viscosity changes of the polymer after 5 hours of heating at 140°C. The effect of various possible concentrations and mixtures of the antioxidants on the oxidation kinetics of polypropylene is charted. The best effect was obtained with a 1:1 mixture

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PLESHAKOV, M.G.

Vitamin "P". Nauka i zhizn' 28 no. 2:77-78 F '61.
(LIRA 14:2)

1. Vitaminnyy institut, Moskva.
(VITAMINS)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

VOLKOV, V.P.; Prinimal uchastiye PLESHAKOV, V.G.

Synthesis of fiber forming polyurea. Khim.volok.no.5:26-28 '64.
(MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstv[illegible] volokna.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

S/079/60/030/009/019/022/XX
B001/B066

AUTHORS: Pleshakov, M. G., Sarycheva, I. K., and Preobrazhenskiy, N. A.

TITLE: Synthetic Investigations in the Field of Polyacetylene Fatty Acids

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 9, pp. 2983 - 2985

TEXT: The synthesis of arachidonic acid (Refs. 1,2) and other higher polyacetylene acids of the aliphatic series is related to the synthesis of the poly-yne hydrocarbons and their derivatives. The authors synthesized 1-chloro undecadiyne-2,5 (IV), 2-(octadiyn-4',7'-yl)-1,3-dioxolane (VII), tridecatriyne-1,4,7 (VIII), the ethyl ester of 7-chloro heptynoic-5-acid (X), and the ethyl ester of eicosatetrainic-5,8,11,14-acid (I). 1-chloro undecadiyne-2,5 (IV) was obtained from heptyne-1 (II) (Refs. 3,4) with 1,4-dichloro butyne-2 (III) (Ref. 5) under the action of organomagnesium compounds. As initial product

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SARYCHEVA, I.K.; SHATENSHTEYN, G.A.; PLESHAKOV, M.G.; PREOBRAZHENSKIY, N.A.

Synthesis of 3-methyl-1,16-hexadecanedioic acid. Zhur.ob.khim. 30 no.8:2539-2542 Ag '60. (MIRA 13:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Hexadecanedioic acid)

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KRAYEVSKIY, A.A.; PLESHAKOV, M.G.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Higher acids of the aliphatic series. Part 10: Synthesis of cis-, cis-, cis-9,12,15-octadecatrienoic, linolenic, acid. Zhur.ob.khim. 33 no.6:1835-1839 Je '63. (MIRA 16:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

(Oxtadecatrienoic acid)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

S/079/62/032/001/004/016
D213/D302

AUTHORS: Pyatnova, Yu.B., Kovtun, I.A., Pleshakov, M.G., Krayevskiy, A.A., Sarycheva, I.K., and Preobrazhenskiy, N.A.

TITLE: Studies in the synthesis of poly-yne compounds

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 1, 1962, 138-139

TEXT: Methods of preparing decadi-yne-1,4, and tetradecatriyne-2,5 8-ol-1 are described. The above compounds are intermediates in the synthesis of arachidonic and other unsaturated acids. (1) Chlorobutyne-2-ol-1: Butyne-2-diol 1,4 was treated in pyridine and benzene ((1:1) mixture) at 3-5°C with excess $SOCl_2$ (1.1 equiv.) with temperature being kept at 15-20°C. The yield was 60 %. (2) Octyne-2-ol-1: Prepared in 59 % yield from 1 chlorobutyne-2-ol-4, with n-butyl magnesium bromide, the former being added over 90 mins. The fraction of b.p. 98-100°C/16 mm was collected. (3) 1-Bromo-octyne-2: To octyne-2-ol-1 in dry ether kept at 0 - 2°C, PBr_3 in slight excess and catalytic amounts of pyridine were added over 15 mins. The yield

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PLESHAKOV, M., inzh.

Automatic vacuum machinery for manufacturing of canned meat pastes.
Mias.ind.SSSR 30 no.6:11-14 '59. (MIRA 13:4)
(Automatic control) (Meat, Canned)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, I.B.; NESVIT, D.S.; BERSON, G.L.

Stratigraphy of Kronotskiy Tertiary sediments along the eastern shores of the Kamchatka Peninsula. Avtoref. nauch. trud. VNIGRI no.17:205-207 '56. (MIRA 11:6)
(Kamchatka--Geology, Stratigraphic)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, I. B.

"The Pattern of Carpathian Tectonics." p. 193

Geologicheskiy sbornik, 3, (Collection of Articles in Geology, Vol. 3), Leningrad Gostoptekhizdat, 1958, 471pp. (Trudy, vyp 126, Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut)

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The Geological Structure and Oil Potential (Cont.) 15-57-7-10042

elements oriented from northerly to northwesterly. Movement of the mass from west to east is clearly expressed. From east to west, the entire region may be subdivided into four tectonic zones: 1) an eastern zone of simple folds in Tertiary rocks; 2) a zone of Tertiary and Cretaceous rocks with imbricate overthrust structure; 3) a zone of strongly folded Cretaceous and Paleogene deposits; and 4) a western zone of intensely disturbed rocks of the Val'za series. The author believes that the most intensive folding took place in the Paleogene and Neogene. Sakhalin subsided in the Quaternary, as witnessed by the strong erosion of the shores, and a shelf zone in the Sea of Okhotsk was developed. Numerous oil seeps have been found in the region, associated with rocks of the Pilenga series and the lower part of the Borskiy series. A bibliography with 23 references is attached.

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N. A. Bogdanov

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15-57-7-10042

The Geological Structure and Oil Potential (Cont.)

sandstones, total thickness about 700 m; and e) the Mutnaya group of black shales, 800 m thick, with foraminifers and marine molluscs of late Oligocene age. 5) The Neogene deposits lie unconformably on the Paleogene rocks. They are divided by the author into four series: a) The Pilenga series of gray siliceous shales, with which oil seeps are associated, is lower Miocene and ranges up to 1400 m in thickness. b) The Borskoye series of bluish to dark gray sandstones and clays, containing conglomeratic inclusions, is characterized by marine molluscs, foraminifers, and diatoms, which identify it as middle Miocene; it is more than 1000 m thick. c) The Uranay series of upper Miocene age, blue-gray fine-grained sands with lenses of calcareous sandstones, has a total thickness of 450 m. d) The Khuzi series of assumed lower Miocene stratified sandy clays and cross-bedded sands is 500 m thick. 6) The Quaternary deposits consist of stream and marine terraces and present-day alluvial accumulations. Tectonically the region is characterized by a folded-overthrust structure with narrow structural

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The Geological Structure and Oil Potential (Cont.)

of Sakhalin, consists of graphitic glaucophane-chlorite schists. It has been intruded by granites and quartz porphyrites and is provisionally assigned to the lower Paleozoic or to the Precambrian. 2) The Nabil'skiy series consists of variegated cherts containing various radiolarians. The age of this series is uncertain. In content it suggests the middle part of the Chichibu series of Japan. It is possible that some of the rocks of this series may prove to be Mesozoic. 3) The Rymnik series consists of black shales and mudstones, sandstones, and conglomerates, with layers of porphyrites (spilites), diabases, and tuffites. The author considers this series to be Upper Cretaceous in age. 4) Paleogene rocks are divided by the author into: a) a basal boulder conglomerate of early Eocene and Paleocene age, 100 m thick; b) the Lyukami series of stratified dark gray sandy clays, containing Unio cf. clinipisthus White and Viviparus cf. urynensis Jok., which are characteristic of the Eocene, 1000 m thick; c) the Tereshkinskiy series of black thin-bedded sandy clays, up to 800 m thick; d) the Patmanova series, flysch-like alternations of shales and calcareous

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15-57-7-10042

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 192-193 (USSR)

AUTHOR: Pleshakov, I. B.

TITLE: The Geological Structure and Oil Potential of the Pogranichnyy Region of Eastern Sakhalin (Geologicheskoye stroyeniye i neftenosnost' Pogranichnogo rayona Vostochnogo Sakhalina)

PERIODICAL: Tr. Vses. neft. n.-i. geologorazved. in-ta, 1956, Nr 99, pp 42-71

ABSTRACT: The region from the Poronay Valley to the Sea of Okhotsk is a mountaincus country embracing the Nabil'skiy, Val'zinskiy, Oleniy, and Khayskiy Ranges. These ranges are separated from one another by the Moyginskiy, Langeriyskiy, and Lyukaminskiy basins. The following stratigraphic sequence has been recognized: 1) The Val'za series, the oldest series

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PLESHAKOV, G. Ya.

"Selection of an Efficient System of Working the Large Sloping Stratum in the Kzyl-Kiyskiy Lignite Deposit." Cand Tech Sci, Acad of the Coal Industry, Min Coal Industry USSR, Moscow, 1955. (KL, No 9, Feb 55)

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

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PLESHAKOV, G.F., inzh.

Machines for harvesting potato tubers and tops. Trakt. i sel'khozmash. 33 no.4:45-46 Ap '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvenogo mashinostroyeniya.
(Potato digger (Machine))

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LOMTEVA, K.; PLESHAKOV, D.

System of subsurface work in nonferrous mines. Biul.nauch. inform.: trud i zar.plata no.5:16-21 '59. (MIRA 12:6)
(Arctic regions--Mining engineering)

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PREDVODITELEV, Aleksandr Savvich, prof.; STUPOCHENKO, Yevgeniy Vladimirovich; IONOV, Viktor Pavlovich; PLESHANOV, Aleksandr Sergeyevich; ROZHDESTVENSKIY, Igor' Borisovich; SAMUYLOV, Yevgeniy Vasil'yevich

[Thermodynamic functions of the air for temperatures from 1000 to 12000°K and pressures from 0.001 to 1000 atm.; graph of the functions] Termodinamicheskie funktsii vozdukha dlia temperatur ot 1000 do 12000°K i davlenii ot 0.001 do 1000 atm; grafiki funktsii. Moskva, Izd-vo Akad.nauk SSSR, 1960. 53 p.

(MIRA 13:7)

1. Chlen-korrespondent AN SSSR (for Predvoditelev).
(Thermodynamics--Tables, calculations, etc.)

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PLESHANOV, A.S.

[illegible] September, [illegible].

4. Following is a list of the Soviet papers submitted to the combustion symposium:

L A Lovachev	The Dependence of Laminar Flame Properties on the Mechanism of Chain Reactions
L A Lovachev	The Theory of Flame Propagation in Systems Involving Branched Chain Reactions
NIKITIN, Ye.Ye	On the Mechanism of Non-Adiabatic Relaxation in Molecular Collisions
I N Denisov K I Shchelkin Ya K Troshin	Some Questions of Analogy Between Combustion in a Thrust Chamber and in a Detonation Wave
K I Shchelkin	On the Criterion of High-Frequency (screaming) Vibrations Generation in a Turbulent Combustion Chamber
A I Serbinov	A Simple Method for Determining Effective Activation Energies for Thermal Decomposition and Spontaneous Ignition of Certain Complex Molecules
L G Bolkhovitinov	On the Theory of Detonation Initiation by Impact
P A Tesner	The Energy of Activation of Gaseous Reactions with Solid Carbon
P A Tesner	Formation of Dispersed Carbon by Explosion and Thermal Decomposition of Acetylene
TESNER, P.A. RAFALKES, I.S. ROBINOVICH, Ye. Ya.	Formation of Dispersed Carbon in Hydrocarbon Diffusion Flames
BAZHANOVA, T.V. LAYTSEV, S.G.	Effect of Dissociation on the Parameters of Reflected Shock Waves in Carbon Dioxide
LAYTSEV, S.G. SOLOUKHIN, R.I.	Study of Combustion of Adiabatically Heated Gas Mixture
I N Sundukov E K Chekalin	Some Methods for Studying Two-Phase Fuel-Air Mixtures in a Flow
E K Chekalin	Propagation of Flame in Turbulent Flow of Two-Phase Fuel-Air Mixture
STUPOCHENKO, Ye. V. SAMUYLOV, Ye. V. [illegible] [illegible], I.B. [illegible], I.I.	Thermodynamic Properties of Air at High Temperatures
A S Predvoditelev	Conditions of Regular Movement of Strong Shocks and Detonation
A S Predvoditelev	Some Remarks on the Regular Movement of Shocks with Spherical and Cylindrical Symmetry
A S Predvoditelev	Regular Motion of Shocks and of Detonation from the Viewpoint of Maxwell's Transfer Equations

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S/058/60/000/02/14/023

24.5300

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 2, p. 100, # 3248

AUTHORS: Stupochenko, Ye. V., Stakhanov, I. P., Samuylov, Ye. V., Pleshanov, A. S., Rozhdestvenskiy, I. B.

TITLE: Thermodynamic Properties of Air Within the Temperature Range From 1,000 to 12,000°K and the Pressure Range From 0.001 to 1,000 atm

PERIODICAL: V sb.: Fiz. gazodinamika, Moscow, AN SSSR, 1959, pp. 3-38

TEXT: A method is described in detail for the calculation of thermodynamic properties of a mixture of gases capable to chemical reactions and ionization. The thermodynamic functions of the air were determined in two stages. First the calculation was carried out of the thermodynamic parameters of the "pure" components, which was reduced to the calculation of the statistical sums for atoms, molecules and their ions. Then the composition of the air and its thermodynamic functions were calculated. For determining the composition of the air the system of non-linear algebraic equations was solved. The system included equations of the law of acting masses for each of the possible reactions in air and the processes of ionization, the equation of Dalton's law, the equations

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PLESHAN', A.

Constructing efficient farm buildings on state farms of Stavropol Territory. Sel'.stroi. 14 no.12:12-15 D '59. (MIRA 13:4)

1. Upravlyayushchiy trestom "Stavropol'sel'khozstroy.
(Stavropol Territory--Farm buildings)

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AMINOVA, R.Kh., kand. ist. nauk; TETENEVA, L.G., kand. ist. nauk; ALIMOV, I.A.; DMITRIYEV, G.L.; DZHAMALOV, O.B., doktor ekon. nauk, redaktor ; DZHURAYEVA, T., kand. ist. nauk, red.; ATFENYUK, S.Ya., red.; DANILOV, V.P., glav. red.; BELOV, G.A., red.; GRIGOR'YAN, L.L., red.; IBRAGIMOV, Z.I., red.; IVNITSKIY, N.A., red.; IL'YASOV, S.I., red.; KAKABAYEV, S.D., red.; KAMENSKAYA, N.V., red.; KRAYEV, M.A., red.; KULIYEV, O.K., red.; MAKHARADZE, N.B., red.; OBICHKIN, G.D., red.; PLESHAKOV, S.T., red.; RADZHABOV, Z.I., red.; SELEZNEV, M.S., red.; TURSUNBAYEV, A.B., red.; FEDOROV, A.G., red.; SHEPELEVA, T.V., red.; PATLAKH, B., red.; MASHARIPOVA, D., red.; BULATOVA, R., red.; GOR'KOVAYA, Z.P., tekhn. red.; KARABAYEVA, Kh.U., tekhn. red.

[Socialist reorganization of agriculture in Uzbekistan] Sotsialisticheskoe pereustroistvo sel'skogo khoziaistva v Uzbekistane, 1917-1926 gg. Pod red. O.B.Dzhamalova. Tashkent, Izd-vo Akad. nauk UzSSR. Vol.1. 1962. 792 p. (MIRA 16:5)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut istorii i arkheologii.

(Uzbekistan--Agriculture)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

ACCESSION NR: AP4042583

SUBMITTED: 29Dec63 ENCL: 00

SUB CODE: NP NR REF SOV: 002 OTHER: 008

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ACCESSION NR: AP4042583

of an interpolation formula for accurate reduction of experimental low-energy data. The nuclear scattering amplitude is determined by using the model of van Hove (Phys. Rev. v. 88, 1358, 1952). Using by way of an example the determination of the s-wave phase shifts, it is shown that π-mesic atom plays an important role in the results. The main conclusion is that a theoretical interpretation of the experimental data, such as obtained by Hamilton and Woolcock (Phys. Rev. 118, 291, 1960; Rev. Mod. Phys. 35, 737, 1963) is impossible without consistent account of the Coulomb effects. "The author is grateful to V. A. Mescheryakov of OIYaI for initiative and great help in the work, and also to S. T. Belyayev, I. F. Ginzburg, V. V. Serebryakov, and D. V. Shirkov for useful discussions." Orig. art. has: 9 formulas.

ASSOCIATION: Institut matematiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Mathematics, Siberian Department of the Academy of Sciences SSSR)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

ACCESSION NR: AP4042583 S/0056/64/046/006/2183/2187

AUTHOR: Pleshakov, V. F.

TITLE: Determination of the parameters and phase shifts for low-energy pion nucleon scattering

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2183-2187

TOPIC TAGS: pion scattering, inelastic scattering, nuclear scattering, Coulomb repulsion force, Coulomb scattering, phase shift

ABSTRACT: After noting that the role of Coulomb effects has hitherto not been explained sufficiently and was furthermore analyzed before reliable experimental data became available at low energies, the author shows how the inclusion of these data modifies the analysis method and evaluates the contribution from inelastic processes to the parameters and phase shifts of low-energy πN scattering. It is also shown that the Coulomb effects contribute to the derivation

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MELIK-ABBASOV, T.; PLESHAKOV, V.

Training is very necessary. Voen. znan. 41 no.8:21-22 Ag '[illegible]

[illegible]

1. Zaveduyushchiy otdelom Bakinskogo gorodskogo komiteta Kommunisticheskoy partii Azerbaydzhana (for Melik-Abbasov). 2. Rabotnik Azerbaydzhanskogo respublikanskogo shtaba grazhdanskoy oborony (for Pleshakov).

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PYATNOVA, Yu.B.; KOVTUN, I.A.; PLESHAKOV, M.G.; KRAYEVSKIY, A.A.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Synthetic study in the field of polyyne compounds. Zhur. ob. khim. 32 no.1:138-139 Ja '62. (MIRA 15:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.
(Unsaturated compounds) (Acids, Organic)

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KRAYEVSKIY, A.A.; VOLKOVA, V.I.; PLESHAKOV, M.G.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Complete synthesis of 9,12-octadecadienoic (linoleic) acid. Zhur.ob.khim. 32 no.3:742-745 Mr '62. (MIRA 15:3)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

(Linoleic acid)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, M.G.; TIKHONOVA, T.I.; GRIBOVA, T.A.

Thermal stabilization of polypropylene with a mixture of diane and thiourea. Khim. volok. no.4:6-8 '65. (MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh volokon, g. Kalinin.

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PREDVODITELEV, A.S., prof.; STUPOCHENKO, Ye.V., prof.; PLESHANOV, A.S.; SAMUYLOV, Ye.V.; ROZHDESTVENSKIY, I.B.

[Tables of the thermodynamic functions of air; for temperatures ranging from 12000 to 20000° K and pressures between 0.001 and 1000 atmospheres] Tablitsy termodinamicheskikh funktsii vozdukha; dlia temperatur ot 12000 do 20000° K i davlenii ot 0,001 do 1000 atmosfer. Moskva, Izd-vo Akad.nauk SSSR, 1959. 229 p. (MIRA 13:2)

1. Chlen-korrespondent AN SSSR (for Predvoditelev).
(Air) (Thermodynamics)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, Anatoliy Illarionovich; BARSHAY, G.S., redaktor; PETROVA, E.A., redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor.

[Advanced experience in the repair of turbine drills] Peredovoi opyt remonta turboburov. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gotno-toplivnoi lit-ry, 1955. 78 p. (MLRA 9:4)
(Drilling and boring machinery)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200011-6

PLESHAKOV, A. A.

PLESHAKOV, A. A.: "The development of highly productive hayfields and pastures in the southeast by means of estuary irrigation." All-Union Sci Res Inst of Fodders imeni V. R. Vil'yams. Chkalov, 1956. (Dissertation for the Degree of Candidate in Agricultural Science.)

Knizhnaya Letopis'
No 32, 1956. Moscow.

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PLESHAKOV, A.

The sections don't have enough engineers. Mast. ugl.6 no.3:22 Mr '57. (MLRA 10:4)

1. Nachal'nik Gukovskoy rayonnoy Gosudarstvennoy gornotekhnicheskoy inspektsii.
(Donets Basin--Coal miners)

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129-4-12/12

All-Union Conference on industrial use of high frequency currents held in Leningrad.

equal conditions of heating and cooling. Cooling in a 30 to 35% solution of glycerine and a 5% solution of potassium permanganate brings about a reduction in the deformation and in the crack formation, particularly in the case of alloy steels (40X, 40XH). Tempering at 140 to 200°C reduces the dimensions as compared to the hardened state and thereby the changes in the dimensions of the height and the internal diameter are compensated but the changes of the external diameter are amplified. Increase of the tempering temperature brings about an increase of the deformation.

Representatives from Romania and East Germany participated in the Conference. The German delegate, E. Trippmacher, reported on the designs of compact h.f. transformers with built-in magnetic paths produced in East Germany.

NOTE: This is a complete translation and not an abstract.

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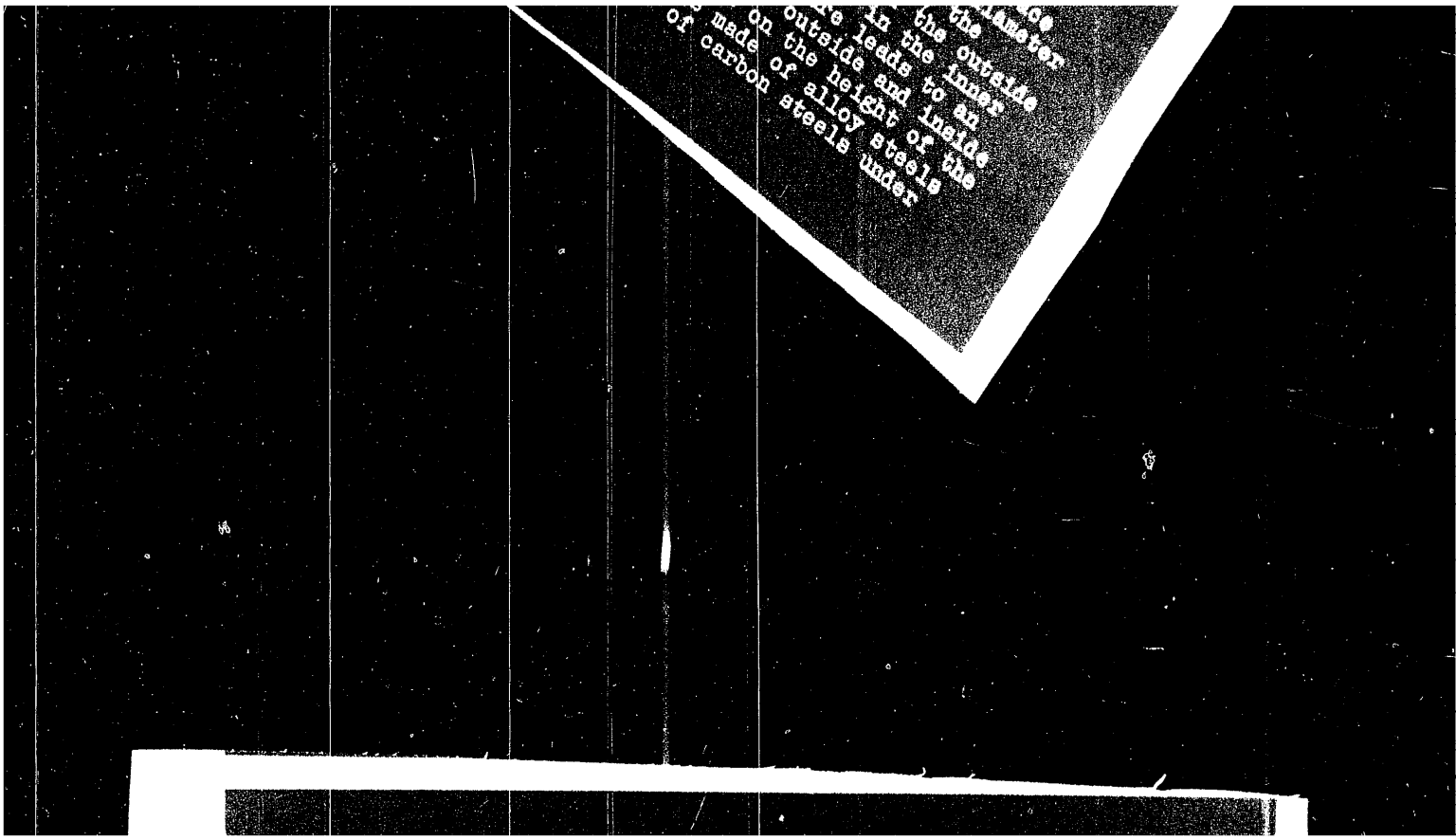

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All-Union Conference on Industrial use of high frequency currents held in Leningrad.

hardening regimes which would conserve the character of generally valid relations under conditions which are reproduceable in normal production. V. P. Pleshachkova (TsNIITMASh) read an interesting paper on the deformation of surface hardened steel. H.F. surface hardening permits reducing the deformation of the steel. The author investigated the influence on the deformation of the following factors: heating temperature, cooling speed, depth of the hardened layer, structure of the starting material and also of the temperature and time of heating in the case of low temperature tempering. The results have shown that in the case of h.f. surface hardening of ring specimens with small height to ratios (1:4; 1:7) produced from various steels deformation manifests itself in a decrease of the diameter and an increase in the height and increase in the deformation along the diameters and manifests itself less rings. The deformation of rings made

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use of high frequency currents

a favourable combination can be obtained
strength and ductility and also an increased
stance to wear which is of practical interest.
their paper I. N. Kidin, Doctor of Technical Sciences,
and Yu. A. Bashnin, Moscow Institute of Steel
(Moskovskiy Institut Stali) expressed the view that the
higher the heating speed the larger will be the
temperature range in which phase transformations will
take place. Experimental data show that pearlite-
austenite transformations proceed in the range of higher
temperatures. In the case of high frequency hardening,
higher temperatures are required than in the case of
heating in an ordinary furnace. This is attributed to
the fact that the phase transformations proceed with a
higher speed due to the more rapid rise in the temperature
and due to the sharp acceleration of the dissociation of
carbides and the diffusion of carbon in the ferrite. The
authors showed that it is justified to introduce a new
thermal parameter, namely, the speed of induction heating
in the range of phase transformations. This would enable
the plotting of diagrams of proferential and permissible

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(Moskovskiy Institut Stali) expressed the view that the higher the heating speed the larger will be the temperature range in which phase transformations will take place. Experimental data show that pearlite-austenite transformations proceed in the range of higher temperatures. In the case of high frequency hardening, higher temperatures are required than in the case of heating in an ordinary furnace. This is attributed to the fact that the phase transformations proceed with a higher speed due to the more rapid rise in the temperature and due to the sharp acceleration of the dissociation of carbides and the diffusion of carbon in the ferrite. The authors showed that it is justified to introduce a new thermal parameter, namely, the speed of induction heating in the range of phase transformations. This would enable the plotting of diagrams of preferential and permissible

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diameter. An increase in the temperature increase in the deformation along the outside and inside diameters and manifests itself less on the height of the rings. The deformation of rings made of alloy steels is greater than for rings made of carbon steels under

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and properties of [illegible]

Card 11/14 the case of electric tempering showed that at elevated

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heating speeds a favourable combination can be obtained of the strength and ductility and also an increased resistance to wear which is of practical interest.

In their report I. N. Kidin, Doctor of Mechanical Sciences

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Staleprokatniy Zavod). The optimum frequency depends on the thickness and the width of the strip. For a thickness of 0.2 to 0.6 mm and a width of 100 mm it is recommended to use a current of 8000 c.p.s.; for strip of 200 mm a current of 2500 c.p.s. and for a width of 400 mm a current of 1000 c.p.s. On heating strip to 700-900°C the uniformity of the temperature along the breadth of the strip is ± 25°C. For heating, a two-turn inductor was used, whereby the conductors of the current and of the magnetic flux were water cooled. This method was applied in the case of bright annealing of cold rolled strip. For a speed of movement of the strip of 25 m/min the required power was 200 kW (for a frequency of 2500 c.p.s.). The productivity of the equipment equalled 1 ton/hr. The specific power consumption during induction heaving is 180-190 kWh/ton. Compared with annealing in chamber furnaces, this method has a number of advantages since thereby the productivity per m² of production space is increased two to threefold, the annealing time is several hundred times, uniform mechanical along the entire length of the

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gears made of [illegible] were heated by means of an [illegible]000 c.p.s. current of 100 kW capacity for a duration of [illegible]4 secs. The heating was effected in a ring-shaped inductor after which the gears were moved into a ring-shaped shower with a fixed direction of the holes. The teeth and the rims of the gears were subjected to hardening. The strength of the hardened teeth was investigated by loading until failure. In the case of gears made of the steel 30ХГТ (after carburization and hardening) this load was 15.6 tons, for the steel ЭИ 937 the load was [illegible] tons. In the case of hardening of gears made of the steel ЭИ 937, a minimum deformation occurs, the fluctuations along the pitch circle after hardening amounted to 0.01-0.02 mm. In some cases the contact strength should be increased by increasing the carbon content to 0.[illegible]-0.[illegible]%.

I. L. Glukhanov, V. N. Bogdanov, Ye. D. Makarova, N.F. Scientific Research Institute imeni V.P. Vologdin

Card 6/14 (NII TVCh imeni V. P. Vologdina) presented a paper on

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"valleys" form at spacings equalling the half-wave of the supersonic oscillations generated by the high frequency. In non-magnetic steels no such phenomenon was observed. It was also observed that with increasing number of cycles, heating-cooling, the diameter of the cylindrical specimens in the heating zone increases, whilst the height of the specimens decreases. Furthermore, the author reported on the method of G. V. Uzhik which enables increasing the static strength up to 300%; this is achieved by using h.f. heating of a thin layer in the zone of stress concentrations at the surface of steel components. Thus, for instance, cylindrical specimens made of hardened 40X steels with a stress concentrator in the form of a notch will be 2.5 times stronger if the notch zone is tempered by using h.f. heating. M. G. Lozinskiy considers that use of the method of strengthening applying h.f. tempering of the stress concentration zones will permit evolving specifications which would justify more rational designs than those used hitherto.

K. Z. Shepelyakovskiy (ZIL) read the paper "On reducing the hardenability as a means of achieving contour (surface)

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50 c.p.s. current for heating to 700-750°C followed by heating with high frequencies to 1100-1150°C. The two-frequency induction heating reduces the consumption of electricity in the case of heating right through of blanks. For tempering and annealing of weld joints, induction heating with 50 c.p.s. and with higher frequencies is used. The paper of M. G. Lozinskiy, Doctor of Technical Sciences, Institute of Engineering Technology, Ac.Sc. USSR (Institut Mashinovedeniya AN SSSR) dealt with the problems of strength of surface hardened components and the features of high frequency heating. The deformation detected by the author in engineering magnetic steels "45" and "40X" forms in the surface layer as a result of magnetostriction caused by the a.c. electromagnetic field of the inductor. On a smooth surface of blanks consisting of magnetic steels which were subjected to repeated cycles of heating and cooling, "mounds" and

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6. Heating and hardening of [illegible] machines.
7. High speed tempering of hardened components using high frequency heating etc. For automating technological processes, the following are at present manufactured: An automatic machine for heating and hardening of leaf springs; manipulator for horizontal forging machines; automatic machines for hardening of small components. Of the new apparatus used in induction heating, the author mentioned a stabiliser of the temperature of components being heated, a photo-electric pyrometer with a direct reading off of the temperature, relay for dosing the energy, etc. Of particular interest were the data he gave on the two-frequency heating of gears. The entire process

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takes only a few seconds and can be used in mass production for heat treatment of gears with average moduli. Heating of blanks which are to be shaped by applying pressure is also effected by two-frequency induction heating using 50 c.p.s. current for heating to 700-750°C followed by [illegible] to 1100-1150°C. The two-

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with a frequency of [illegible] at the bottom of the [illegible] inductor is generated mainly at the bottom of the [illegible] inductor following that, radio frequency is fed to the inductor for a duration of 0.5 to 0.8 sec for heating the tips of the teeth. Subsequent quenching permits obtaining a hardened layer which reproduces the shape of the teeth.

2. Gas case hardening of toothed gears using induction heating ensures a sharp increase of the speed of the

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chemical-heat treatment and is used successfully in the automobile industry.

3. Hardening of the drilling bits for use in the oil industry.

4. "Bright" annealing of steel strip.

5. Two-frequency heating of steel blanks for heating by applying pressure, particularly for rolling.

6. Heating and hardening of leaf springs on automatic machines [illegible] of hardened components using [illegible]

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currents held in Leningrad. (Vsesoyuznoye [illegible]
po promyshlennomu primeneniyu t.v.ch. v g. Leningrade).

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, No.4, pp. 61-64 (USSR).

ABSTRACT: The conference held in November, 1957 was convened by the Leningrad Scientific and Technical Society of the Engineering and Power Generation Industry (Leningradskoye Nauchno-Tekhnicheskoye Obshchestvo Mashinostroitel'noy i Energeticheskoy Promyshlennosti). The task of the conference was to report on advanced experience, to discuss achievements in this field outside the Soviet Union and to evolve recommendations for expanding the use of high frequency in industry and introduction of progressive technology and also evolving organisational measures for improving the quality of high frequency equipment and apparatus. The conference included sections for induction heating technology, metals technology, non-conducting materials and equipment.
Candidate of Technical Sciences, M.A. Spitsyn (NII TVCh imeni V. P. Vologdin) read the paper "New developments in the field of industrial application of high frequency

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PLESHACHKOVA, V.P.

129-4-12/12

AUTHOR: Bunten, S.L.

TITLE: All-Union Conference on industrial use of high frequency currents held in Leningrad. (Vsesoyuznoye soveshchaniye po promyshlennomu primeneniyu t.v.ch. v g. Leningrade).

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, No.4,

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KUZNETSOV, Yevgeniy Semenovich. Prinimali uchastiye: KUROPTEV, V.T.; LEYDERMAN, S.R.; NOSOV, L.I.; PLEKHANOV, I.P.; PLESHAKOVA, T.I.; SALOSHIN, N.P.; SOKOLOV, O.V.; SHIBIN, P.V.; YAKOVLEV, A.V.. MARTENS, S.L., red.; ZUYEVA, N.K., tekhn.red.

[Efficient conditions for the maintenance of motor vehicles and methods for its improvement] Ratsional'nye rezhimy tekhnicheskogo obsluzhivaniia i metodika ikh korrektirovaniia. Moskva, Avtotransizdat. Pt.1. [Every day and the first maintenance of motor vehicles] Ezhednevnoe i pervoe tekhnicheskoe obsluzhivanie. 1958. 35 p. (MIRA 13:5)

(Motor vehicles--Maintenance and repair)

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KRUGLYAK, G.; KUZNETSOV, Ye.; PLESHAKOVA, T.

Using niger oil in lubricating motortruck chassis. Avt. transp. 37 no.11:26-27 N '59. (MIRA 13:2)
(Motortrucks--Lubrication)

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PLESHAKOV, V.D.

Planning equipment for the biochemical extraction of hydrogen sulphide. Trudy NPI 114:13-18 '61. (MIRA 15:2)
(Hydrogen sulphide)

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PIESHAKOV, S.

For the further improvement of accounting and control. Den. i kred. 21 no.9:40-46 S '63. (MIRA 16:10)

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L 63787-65

ACCESSION NR: AP5019629

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the oxidation process after this period has ended (in contrast to most inhibitors, whose action is associated with a self-acceleration of the oxidation at the end of the induction period). A 1:1 thiourea-diane mixture (total weight equal to 1% of the weight of the polymer) produces the greatest increase in the induction period, while the intrinsic viscosity remains the same, i.e., the polymer retains its fiber-forming properties. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: VNIISV

SUBMITTED: 22Sep64 ENCL: 00 SUB CODE: MT,TD

NO REF SOV: 005 OTHER: 001

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L 63787-65 EWT(m)/EWP(j)/T RM

ACCESSION NR: AP5016629 UR/0183/65/000/004/0006/0008
677.494.742.2.004.12

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AUTHOR: Pleshakov, M. G.; Tikhonova, T. I.; Gubova, T. A.

TITLE: Thermal stabilization of polypropylene by a mixture of diane and thiourea

SOURCE: Khimicheskiye volokna, no. 4, 1965, 6-8

TOPIC TAGS: polypropylene plastic, thermal stability, oxidation inhibition, chemical decomposition, urea resin

ABSTRACT: The inhibiting influence of thiourea, 2,2-bis(4-hydroxyphenyl)propane (diane), and their mixtures on the decomposition of polypropylene was investigated. The stabilizing effectiveness was evaluated by determining the induction period as a function of the concentration of thiourea, diane, and their mixtures, and also by measuring the intrinsic viscosity after heating polypropylene for 5 hr at 140°C. Kinetic curves for the oxidation of polypropylene by oxygen showed that thiourea inhibits the oxidation much more than diane. The mixture has a synergistic effect, i.e., is more effective than either of the components taken separately. Thiourea and thiourea-diane mixtures not only extend the induction period, but also retard

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PLESHAKOV, A.A., kand. sel'skokhoz. nauk

Why did meadow grasses disappear? Priroda 52 no.9:99 '63. (MIRA 16:11)

1. Orenburgskiy nauchno-issledovatel'skiy institut molochno-myasnogo skotovodstva.

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PLESETSKIY, Petr Fedorov

DECEASED 1949

see ILC

Botany

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PITHA, J.; PLESEK, J.; HORAK, M.

Condensation reaction of aldols. Part 5: Configuration of derivates of 2,3-cyclohexano-(1,3,3)-bicyclononan-2-OL-9-ONS. Coll Cz Chem 26 no.4: 1209-1212 Ap '61.

1. Institut fur organische Chemie und Biochemie, Tschechoslowakische Akademie der Wissenschaften, Prag. 2. Jetzige adresse: Fa. Dental, Prag (for Plesek)

(Adols)

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PLESEK, J.

Aldol condensation reactions. III. 2, 6-dicyclohexylidenecyclohexan-1-one.

p. 771 (CHEMICKE LISTY) Vol. 51, no. 4, Apr. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

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PLESEK, J.

" Chain-extensions of acids by five carbon atoms. III. Synthesis of octadecane-1, 18-dicarboxylic acids."

p. 533 (Institute of Applied Physics - Czechoslovak Academy of Science)
Vol. 51, No. 3, March 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5 May 1958

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PLESEK, J.

"Hydrolysis of the carbon-carbon bond in some B-halogen ketones. II. Preparation of (+)- citronellic acid from pulegone. In German.

P. 644. Collection of Czechoslovak Chemical Communications. Sbornik Chekhoslovatskikh Khimicheskikh Rabot. (Praha, Czechoslovakia) Vol. 22, no. 2, Apr. 1957.

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7. No. 5, May 1958

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[illegible], J.

"Synthesis of some derivative of juniperic acid. In German."

p. 49 (Journal on chemistry and biochemistry - Czechoslovak Academy of Science)
Vol. 22, No. 1, Feb. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

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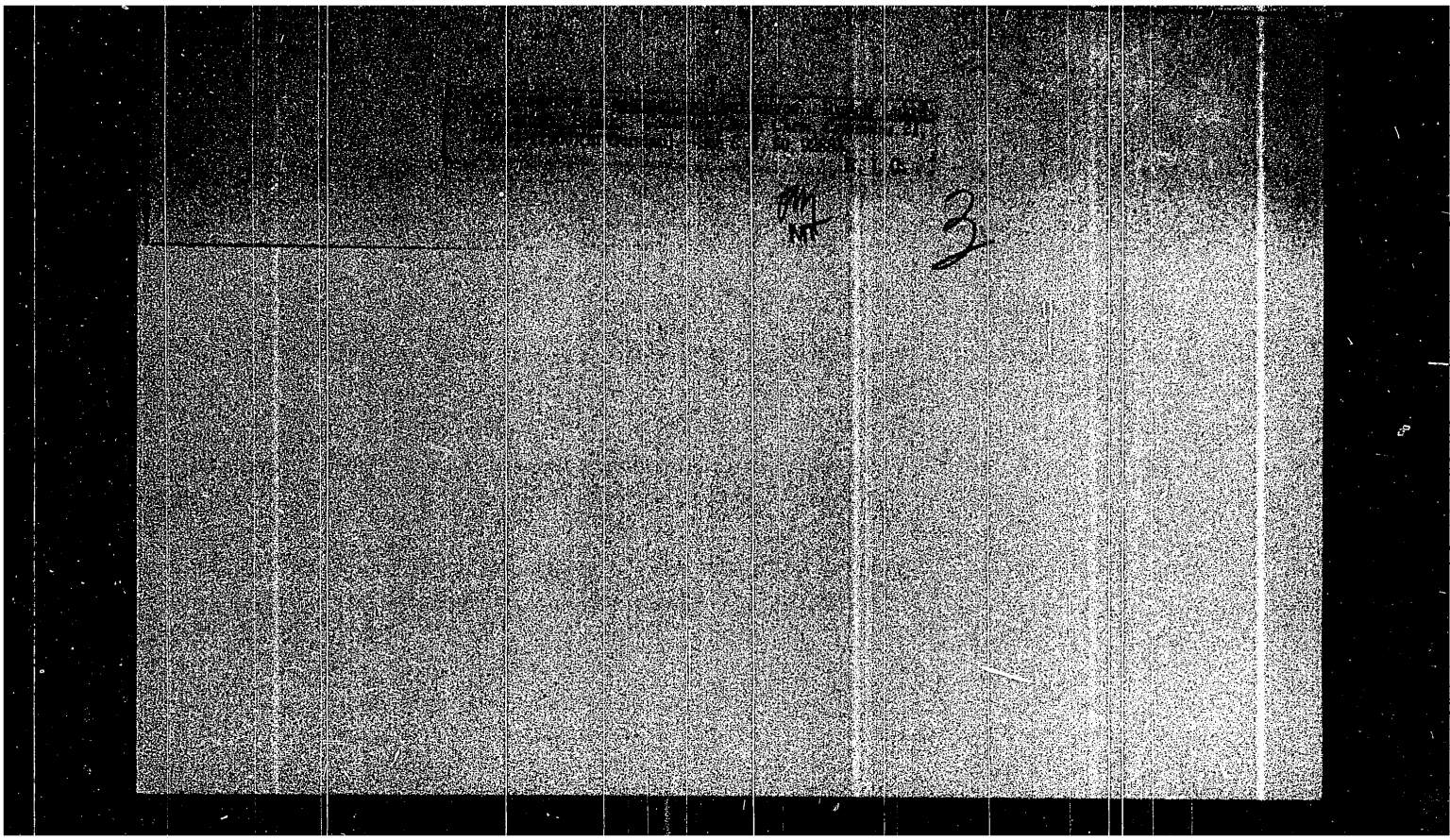

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PHASE I BOOK EXPLOITATION CZECH/4539

Plešek, Jaromír, Engineer, Doctor, and Alena Zobáčová, Engineer

Preparativní reakce v organické chemii, Díl. 5: Aldolisace a příbuzné reakce (Reactions of Formation in Organic Chemistry, Vol. 5: Aldolization and Related Reactions) Prague, Náklad. Československé Akademie věd, 1960. 976 p. 2,000 copies printed.

Sponsoring Agency: Československá akademie věd. Sekce chemická.

Ed.: Miloš Hudlický, Engineer, Doctor; Scientific Ed.: Vladimír Bažant, Engineer, Doctor; Ed. of Publishing House: Jarmila Klejnová.

PURPOSE: This book is intended for organic chemists and industrial chemists interested in reactions for the preparation of aldehyde resins. It may also be used by chemistry teachers and chemistry students at the university level.

COVERAGE: The book discusses an important branch of aldol syntheses, i.e., reactions catalyzed by all kinds of bases. Those reactions

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~~JAROSLAV, PLESEK~~

PLESEK, Jaroslav

M.A. Yo[illegible]2

2 copies

Degradation of some polymethylol derivatives. Rudolf Lukeš and Jaroslav Plešek (Vysoká škola chem. technol., Prague). *Chem. Listy* 49, 1825-31(1955).—Whereas di-isopropylidenepentaerythritol and pentaerythritol tetraacetate distl. at atm. pressure without decompn., isopropylidenepentaerythritol and *methylenepentaerythritol monoacetate* (I) suffer thermal decompn. and yield the same product as the decompn. of $C(CH_2OH)_4$ (II), viz. $CH_2:CMeCHO$ (III). $CH_2:C(CH_2OH)_2$ (IV) is supposed to be an intermediate and was actually isolated when $C(CH_2OH)_3CH_2Br$ (V) was treated with boiling $Ba(OH)_2$ or Ag_2O. The reaction seems to be general for the formation of $CH_2:CRCH_2OH$ from the derivs. of the formula $RC(CH_2OH)_4$. As a further example, *trimethylol-4-picoline* (VI) was degraded thermally to *2-(4-pyridyl)propen-3-ol* (VII) and *2-(4-pyridyl)propene* (VIII). Catalytic hydrogenation of VII, as well as NI reduction of VII and VIII, yielded *4-isopropylpyridine* (IX); reduction of VII and VIII with Na in EtOH gave *4-isopropyl-1,2,5,6-tetrahydropyridine* (X). Satg. 34 g. II, 15 g. 40% CH_2O, and 15 g. AcOH with HCl and distg. the mixt. at normal pressure up to 145° and the residue *in vacuo* yielded I, $b_{2.5}$ 142-3°, n_D^{20} 1.4691, sol. in H_2O, and *methylene pentaerythritol diacetate*, b_1 135-40°, n_D^{20} 1.4540. Distg. 23 g. II at 350° gave, with decompn., besides a small amt. of II, and $(CH_2O)_n$, 7.5 g. III, $b_{7.5}$ 67-72° [*semicarbazone*, m. 195-7° (from H_2O); *2,4-dinitrophenylhydrazone*, 199-200° (decompn.)]. Refluxing a mixt. of 68 g. II, 80 g. AcOH, and 36 g. 66% HBr 12 hrs., adding to the boiling mixt. in the course of 2 hrs. 60 g. 66% HBr and 20 g. AcOH, refluxing 18 hrs., distg. *in vacuo* up to 100°, reësterifying the residue twice with 200 ml. EtOH, evapg. the AcOEt and EtOH *in vacuo*, extg. from the residue $C(CH_2OH)_2(CH_2Br)_2$ with 300 ml. boiling Et_2O, and extg. the residue with boiling $CHCl_3$ gave 40 g. V, m. 70°. Refluxing 15 g. V with 150 g. $Ba(OH)_2$ in 500 ml. H_2O 10 hrs., distg. 30 ml. of the liquid $(CH_2O)_2$, satg. the boiling residue with CO_2, treating the filtrate with

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PLESEK J.

Hydrolysis of carbon-carbon bond in some β-halo ketones. II. Synthesis of (+)-citronellic acid from pulegone. J. Plesek (Vysoké škola chem. technol., Prague). Chem. Listy 10, 1854-6 (1956); cf. C.A. 50, 10665i.—Addn. of HCl to pulegone (I) gave a β-chloro ketone whose hydrolysis yielded (+)-citronellic acid (II) together with some I and isopulegone (III). Hydrogenation of II gave (+)-dihydrocitronellic acid (IV), reduction with $LiAlH_4$, (+)-citronellol (V). Satg. 15.2 g. I, [α]$^{20}_{D}$ 20°, with HCl under cooling with ice, allowing the mixt. to stand overnight, stirring the brown oil with 340 g. 5% aq. KOH 2 hrs. at 20°, extg. the neutral portions (6 g., 39% of I and III) with Et_2O, and acidifying the aq. layer gave 10 g. II, b_3 119°, d_{20} 0.9255, n^{20}_{D} 1.4530, [α]$^{20}_{D}$ 8.18°. *Me ester*, b_3 78°, d_{20} 0.8973, n^{20}_{D} 1.4417, [α]$^{20}_{D}$ 5.54°; *hydrazide*, m. 85-6°. Hydrogenation of II over 5% Pd on Al_2O_3 in MeOH gave a quant. yield of IV, b_3 109°, d_{20} 0.8943, n^{20}_{D} 1.4327, [α]$^{20}_{D}$ 5.70°; *amide*, m. 109-10° (from Et_2O-petr. ether). Adding 1.6 g. II in 50 ml. Et_2O to 2 g. $LiAlH_4$ in 300 ml. Et_2O gave 5.7 g. V, b_{10} 110°, d_{20} 0.8558, n^{20}_{D} 1.4558, [α]$^{20}_{D}$ 5.37°. M. Hodlicka

Chem

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Plešek, Jaromír

synthesis of some deri-
atives of nitrilotriacetic acid. (from
Czech). Sborník Chem. Technol. Praze
(Prague) 1956, 4:1-11(Czech).

Bromoformic acid (I), obtained
in 5% yield by acid. in
aqueous HBr solution of 3 g. 1-pentadecen-
ylnitrilotriacetic acid (II) (II)
was from lignoceric in
in $MeCO_2H$ (I), yield 62%
boiling 10 hr. conc. 40 g. or
hrs. After recrystn. II, the
(I) 0.6, the insol. K salts and
the filtrate was slightly
acid (III), b.p. 134°, m.p. 13
300 g. consisting of a mixture
IV boiling 80% aq. Na
(from C_6H_6) in a 98% yield.
acetic acid (IV) was
(from 81 g. H_2O separating
bromodicyclohexyl chloride
with AcOH and 48 hr. in
g. 0 in 77-8° (from C_6H_6)
in 70% yield by addition of
carbonic acid to the phenolate
IV in 370 ml. H with dropping
pension of dry K_2CO_3 in 2
yield 3 g. 2-dodecyl-1-bromo-
36%. Saponif. of V by boiling
yield 2-undecylacetic acid, m.p.
crystn. m. 14°. (from H_2O).

atives of nitrilotriacetic acid. (from
Czech). Sborník Chem. Technol. Praze
(Prague) 1956, 4:13-25(Czech).

Bromoformic acid (I), obtained
H_2O soln. of 3 g. 1-pentadecen-
g. in the presence of 0.04 g. Ba_2C
70-1°. A soln. of 2.1 g. I in 100
ped during 30 hrs. into 100 m
K_2CO_3 and the mixt. refluxed 4
residue was dissolved in 80 m
ing 1.6 g. of VII. 1-Bromodecyl
besides 10 g. of a fraction b.
mative residue of II. Saponif.
VI gave pentadecyl, m. 94.5
1-Bromopentadecane 11 mm. 18
prepd. by the Grignard reaction
monocyclohexyl, m.p. 91.0 g. a
The reaction product was hydro
d poured into water, yielding 2
(product) obtained more easily in
HBr to 1-pentadecen-1-one. 15
ies of Ba_2O_3. A soln. of 18.5 g
during 18 hrs. into a boiling sus
100 ml. H and refluxed 10 hrs.
sodium salt (V), b.p. 186°, m.
with alc. KOH gave a 98%
-octa-5 (from C_6H_6), recrystn.

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HYDROLYSIS OF THE CARBON-

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PLESEK, JAROMIR

[illegible]

Hydrolysis of the carbon-carbon bond in some 1-halo [illegible] [illegible] (1955). Whereas contd. NaOH transforms 4-(1-chlorocyclohexyl)cyclohexanone (I) to 1-(1-cyclohexen-1-yl)cyclohexanone (Ia), 5% NaOH hydrolyzes I to 6-cyclohexylidenecaproic acid (II), giving on hydrogenation cyclohexanecaproic acid (III) and on oxidation cyclohexanone (IV) and $(CH_2CH_2CO_2H)_2$ (V). Similar reaction of 4-(1-chloro-3-methylcyclohexyl)-1-methyl-3-cyclohexanone (VI) yields 6-(3-methylcyclohexylidene)-4-methylcaproic acid (VII), giving 6-methylcyclohexanone (VIII) and $HO_2C(CH_2)_3CHMeCH_2CO_2H$ (IX) on oxidation. Heating II with a small amt. of its Na salt to 300° gives 1-cyclohexene-1-caproic acid (X), also obtained by addn. of HCl to II and splitting of the HCl from the 1-chlorocyclohexane caproic acid (XI) thus formed. Satg. 100 g. IV with HCl below 30°, allowing the mixt. to stand overnight, and washing the crystals with MeOH gave 86 g. I, m. 42°, also obtained from Ia and gaseous HCl. Stirring 50 g. I with 225 ml. 5% NaOH at 40-50°, extg. the mixt. with Et_2O, acidifying the aq. layer with HCl to Congo red, extg. the pily acid with Et_2O, and distg. in vacuo gave 34 g. II, m. 10°, b. 146°; benzylthiuronium salt, m. 154-4.5° (from 40% EtOH). Hydrogenation of II in EtOH over PdO gave in quant. yield III, m. 32-3°; amide, m. 114-15°. II (10 g.) in 100 ml. 3% K_2CO_3 with 17 g. $KMnO_4$ in 300 ml. H_2O in the cold gave 6 g. IV, b_{10} 155-6° (semicarbazone, m. 163°), and 6 g. V, m. 151°. Satg. 50 g. VIII with HCl and treating the VI with 5% NaOH yielded 10 g. VIII, 16 g. 1-methyl-4-(6-methyl-1-cyclohexen-1-yl)-4-cyclohexanone, b. 120-2°, and 20 g. (40%) VII, b_{10} 186°; benzylisothiuronium salt, m. 143-5° (from 40% EtOH).

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A NEW METHOD FOR

(V) (with alkaline solns). A Grignard reagent prepd. from 1.6 g. magnesium and 7.8 moles EtBr in 8 moles Et_2O was treated rapidly with stirring HO 1.4 moles I in 3 moles Et_2O, 1 mole RCO_2H in 3 moles Et_2O were added after the vigorous reaction of CaH_2 ceased, the mixt. was refluxed overnight, stirring & boiling, decomposed with H_2O, the ether layer w. with 1.6 moles 4% aq. Na_2CO_3 to CO_2 evolution ceased, the aq. layer was acidified to Congo red, the separated IV or V was taken up with amount of ether, with H_2O, and the unreacted monocarboxylic acids were recovered by petr. ether extr., and the unreacted dicarboxylic acids by extrn. of the crude product from H_2O or EtOH. The following IV were prepd.: Ia, yield in % based on RCO_2H, m.p. (from petr. ether) of IV and m.p. (from MeOH) of its anilide (bottom given): Me, 18, 91°, 145-6°, IV 55, 91°, 80°, Pr, 70, 45°, 109-9°, Et, C_6H_{11}, 44, 68°, 125-6°, $CyCH_2$, 70, 72, 138°, $CH_2CH_2CO_2H$ (VI), 78, 77-8°, 128-9°, Ethyl, 63, 68-9°, 181-2°, Ph, 89, 78°, 190-1°, $BzNH(CH_2)_3$, 28% (based on $BzNH(CH_2)_3CO_2H$), 103-4° (from $CHCl_3$-petr. ether), 139-40°. The following V were prepd. in yields in % m.p. (from H_2O) and m.p. of the anilide given: Et, 60, 111°, 201-2°, Et, 10 (from glutaric anhydride), 215-16°, 170-80°, Et, 80, 110-11°, 190-1°, $HO_2CCH_2CH_2CO(CH_2)_3CO_2H$, 40, 130-1°. Heating 4 g. VI, 8.25 g. NaH, H_2O, and 28 g. powd. KOH to 110° (the temp. rose spontaneously to 140° and stayed for 20 min.), then heating the mixt. 2 hrs. at 130°, 10 hr. the cooled mixt. with H_2O, acidifying to Congo red, extg. the crude acid with 10 ml. petr. ether, and evapg. the solvent gave 3 g. (78%) $CH_3CH(CH_2)_3CO_2H$, m.p. 88° (from petr. ether).

M. Hoffickst

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PIESER, JAROMIR

5

A new method for extending the chain length of carboxylic acids by five carbon atoms. A new synthesis of [illegible] acids. Jaromir Pieser (Vysoka skola chem. technol., Prague) [illegible] 1960). — A new method for extending the chain length of carboxylic acids by 5 C atoms (with monobasic acids), and by 5 or 10 C atoms (with dibasic acids) is based on the transformation of *Bi 1-cyclopentanone-2-carboxylate* (I) in its Mg or Zn (II) and acylation of the II in position 2 with an acyl chloride or anhydride to give *Bi 1-acyl-1-cyclopentanone-2-carboxylate* (III) which on hydrolysis yields $RCO(CH_2)_5CO_2H$ (IV) or $HO_2C(CH_2)_5CO(CH_2)_5CO_2H$

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PLEŠEK, J.

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1-Methylpyrrole reduction products. R. Lukeš, J. Plešek, and J. Trojánek (Vysoká škola chem. technol., Prague). *Collection Czechoslov. Chem. Communs.* 24, 1987–92(1959)(in German).—One of the higher boiling *1-methylpyrrole* reduction products ($C_{10}H_{18}N_2$) is probably *1-methyl-3-(1'-methyl-2'-pyrrolidyl)-Δ^2-pyrroline* (I). One of the alk. degradation products of *cuscohygrine* (Hess and Fink, *C.A.* 14, 3239) is presumably also identical with I. Hydrogenating on PtO_2 1 g. of the $C_{10}H_{18}N_2$ mixt. (*C.A.* 48, 12732*d*) in aq. HCl, adding with agitation 10 g. $PhSO_2Cl$ followed by 10% NaOH to the alk. reaction, heating 2 hrs. to 60–80°, steam-distg., titrating the distillate with 1*N* HCl (36% consumption), filtering with C, and evapg. gave a cryst. HCl-salt, from which a cryst. picrate mixt. was prepd. as usual. Systematic crystn. gave 450 mg. *1-methyl-3-(1'-methyl-2'-pyrrolidyl)pyrrolidine* (II) *dipicrate A*, m. 218–20°, leaflets and prisms (decompn.) (previous softening) (aq. EtOH and then H_2O), and 100 mg. diastereomeric II *dipicrate B*, m. 193–5° (needles). Extg. the steam-distn. residue with Et_2O, drying the exts. with K_2CO_3, and evapg. gave 898 mg. oil which was chromatographed on 30 g. basic Al_2O_3 (activity IV). The C_8H_6 fraction gave 601 mg. oil, b_1 210–20° (bath temp.), probably the *$PhSO_2$ deriv. of 1-methylamino-4-(1'-methyl-3'-pyrrolidyl)butane.* Adding in 10 min. at 50° 50 g. *N*-methylsuccinimide dissolved in 100 ml. warm PhMe to a warm, clear soln. prepd. from 60 g. 2-methyl-2-hexanol, 13 g. NaOH, and 300 ml. boiling PhMe, gave a green ppt. Stirring the mixt. 1 hr. without heating, keeping overnight, adding 20 ml. H_2O and 50 ml. concd. aq. HCl, filtering the pptd. NaCl, extg. the NaCl and the aq. layer of the filtrate with $CHCl_3$, combining the $CHCl_3$ exts. with the PhMe layer of the filtrate, evapg., and crystg. the reddish residue from C_6H_6 and then H_2O (with C) gave 30 g. *1-methyl-2,5-dioxo-3,2'-dehydro-3-(1'-methyl-5'-oxo-2'-pyrrolidyl)pyrrolidine* (III), needles, m. 184–5° (prepns. of III on a larger scale gave lower yields). Refluxing 24 hrs. 5 g. III with 30 ml. concd. HCl, evapg., esterifying the residue 2 hrs. with 50 ml. methanolic HCl, evapg., dilg. the residue with H_2O, extg. with Et_2O, drying the exts., and evapg. gave 2 g. *di-Me hydrochelidonate*, m. 55–6°, which on hydrolysis with concd. HCl at the boil yielded *hydrochelidonic acid*, m. 141–2°. Hydrogenating 5.6 g. III in 500 ml. H_2O at 80° in the presence of 1 g. 5% Pd/Al_2O_3 (H-uptake in 30 hrs. 75%), filtering off the catalyst, evapg. *in vacuo* to 30 ml., and collecting gave 4 g. *1-methyl-2,5-dioxo-3-(1'-methyl-5'-oxo-2'-pyrrolidyl)pyrrolidine* (IV), prisms (H_2O), m. 156–7° (from the mother liquors, 0.95 g. starting III was obtained). Placing 2.4 g. IV into a thimble of a Soxhlet extractor, reducing 20 hrs. with 1.5 g. $LiAlH_4$ in 250 ml. Et_2O (with a reflux of 750 ml. Et_2O/hr.), decompg. the mixt., steam-distg., titrating the distillate with 0.1*N* HCl (consumption 86.5%), filtering with C, and evapg. gave the II *di-HCl salt* from which the II *dipicrate A*, m. 218–20° (decompn.; previous softening) (H_2O), and the II *dimethiodide*, m. 262–3° (MeOH), were obtained in quant. yield. JHP Plimi

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26717.

ester solution prepared by the action of C_2H_5MgBr on ethyl ester of cyclopentanone-carboxylic acid, it is boiled 18 hours after which it is saponified by heating 2 hours with 50% aqueous HBr in aqueous CH_3COOH, the result is 69% of 1-bromopentadecanone-11-carboxylic-15 acid (VI), melting point 77 - 78°; 25% of IV is recovered. VI was prepared also by the interaction of pentadecene-1-one-11-carboxylic-15 acid with HBr (gas) in C_6H_6 in presence of III (yield 80%). VI with K_2CO_3 in boiling $CH_3COC_2H_5$ produces 6-ketohexadecanolide-1,16 (VII), yield 84%, boiling point 155°/0.5 mm, melting point 35°, together with the corresponding dilactone $C_{32}H_{56}O_6$, melting

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intensity. Pentadecene-1-carboxyl-15 acid is saturated with HBr (gas) in petroleum ether in presence of $(C_6H_5COO)_2$ (III). The yield of ω-bromopalmitic acid (IV) is 78%, melting point 70 - 71° (from petroleum ether). In the duration of 30 hours IV is added to boiling methylethylketone containing K_2CO_3. The yield of hexadecanolide-1.16 is 80%, boiling point 124°/0.5 mm, melting point 1[illegible]. The latter produced 98% of I, melting point 94 - 95° (from benzene), having been boiled with NaOH in aqueous alcohol. $SOCl_2$ acting on ω-bromoundecane (V) acid produced its acid chloride (Yield 86%, boiling point 141°/1 mm.). Acid chloride of V is added to the

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PLEŠEK, Jaromir

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26717.

Author : Plešek, Jaromir.
Inst :
Title : Synthesis of Some Derivatives of Juniperic Acid.

Orig Pub : Chem. listy, 1956, 50, No. 4, 561 - 564; Sb. chekhosl. khim. rabot, 1957, 22, No. 1, 49 - 52.

Abstract : The synthesis of juniper (I) and 6-ketojuniper (II) acids was accomplished by the method of lengthening the chain of carboxylic acid with 5 atoms of C, which was described earlier (see RZhKhim, 1956, 71644). The smell of lactones of I and II is more less of the same

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PLESEK, J.

PLESEK, J. Synthesis of some derivatives of juniperic acid. p. 561.
Vol. 50, no. 4, Apr. 1956. [illegible] LISTY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

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HASEK, J. - Condensation reactions of the aldehyde. I. Self-condensation of cyclopentanone. II. Self-condensation of Cyclohexanone. p. 246, Vol. 54, no. 2, Feb. 1956
CHEMICKE LISTY (Ceskoslovenska Akademie ved. Chemicky ustav) Praha, Czech.

SOURCE: EAST EUROPEAN ACCESSIONS LIST (EEAL) VOL 6 NO 4 April 1957

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PLESEK, J.

[illegible]

[illegible] Chem. Commun. 20, 1253-5(1955)(in German).—The propn. of AmCO(CH$_2$)$_2$CO$_2$H (I) is described as an example of a general method of propn. of 4-kern acids by nitrosation fission of 1-alkyl-2-cyclopentanones. 2-Carbethoxycyclopentanone (45 g.) was added to a soln. of 8 g. Na in 200 ml. EtOH, followed by 50 g. Antifr. the mixt. refluxed 8 hrs., poured into H_2O, extd. with Et_2O, the ext. evapd., and the residual oil stirred 4 hrs. at 20° and 30 min. at 100° with 100 ml. 7.5% NaOH to give 30 g. [illegible] deriv. (II) of I, bu 139-40°, n_D^{18} 1.4520; semicarbazone, m. 149-3° (from 50% EtOH). Sapon. of II by heating 15 min. at 100° with 25% aq. NaOH, extn. of the acidified soln. with Et_2O, evapn. of the ext. to 50 ml., and cooling the soln. to −70° gave 93% HO-C(CH$_2$)$_2$CH(CO$_2$H)Am (III), m. 48-9°; anilide, m. 171-3° (from 50% EtOH); benzylisothiuronium salt, m. 138° (from 50% EtOH). Heating a mixt. of 2 g. III and 1.2 g. Ba(OH)$_2$·8H$_2$O at 100 mm. on the steam-bath until all the H_2O distd. off, raising the temp. to 300°, dissolving the distillate in 15 ml. Et_2O, washing the ext. with 5 ml. 5% NaOH, drying and distg. gave 1.2 g. 2-amylcyclopentanone (IV), m. 90°, n_D^{18} 1.4480; semicarbazone, m. 194-5° (from MeOH). To a soln. of 0.1 g. Na in 10 ml. EtOH was added dropwise at 0° a mixt. of 0.5 g. IV and 0.4 ml. EtONO in 3 ml. EtOH. After 24 hrs. the mixt. was diluted with 20 ml. 2.5% NaOH, the EtOH distd. off from the steam bath, finally in vacuo, the aq. soln. satd. with CO_2, extd. with 10 ml. Et_2O, the aq. layer acidified with HCl to Congo red, and the oily I distd. at 1 mm. to give 0.5 g. I, m. 58°; semicarbazone, m. 111° (from 50% EtOH).

M. Hudlicky

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