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KOSTIN,S.I., doktor geograficheskikh nauk, professor.

Some remarks on the problem of the development of climatology.
Meteor.i gidrol. no.5:9-12 My '53. (MLRA 8:9)

1. Gosudarstvennyy universitet, Voronezh.
(Climatology)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S.I.

Climatic regions of the central Chernozem provinces. Vop.geog. no.32:189-193 '53. (MIRA 10:11)
(Central Black Earth Region--Climate)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S. I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Kostin, S. I. Podrovskaya, T. V.	"Climatology"	Main Geophysics Observatory imeni A. I. Voyeykov

SO: W-30604, 7 July 1954

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S. I.

"The Influence of Forest on Climate".
Trudy in-ta Lesa AN SSSR, 22, pp 129-134, 1954.

The influence of forest on climate is determined first of all by its action upon the microclimatic conditions under the forest cover, which mainly depends upon the geographical location of the forest mass, composition, growth, completeness of planting, etc. The author considers the influence of continuous forest masses upon the climatic conditions in a forest steppe region (Voronezhskaya Oblast) in accordance with data of observations (with use of automatic recorders) in an oak forest and at a distance of 500 meters from the outskirts. On bright summer days the forest canopy admits 10-12% of the radiation. The forest floor litter possesses the least heat conduction, less than the bare soil; therefore during the day it is heated more and during the night it is cooled more. (RZhGeol, No 11, 1955)

SO: Sum No 884, 9 Apr 1956

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S. I.

"Climatic Zones and Regions of the Central and Eastern Forest Steppe and of the Russian Lowland Steppe".
Trudy Voronezhsk. un-ta, 30, pp 3-21, 1954.

A climatic regional classification of the central and eastern regions of the southern half of the European part of the USSR is given. At the basis of a distinction of four climatic zones lies the following index of local moisture: $K = P/E$, where P is the amount of precipitation during a given period and E is the conditional index of evaporability for the same period, as calculated from the formula $E = (dn/4)(1 + 0.004t)^2$ (d is the mean deficit of moisture for the period, n is the number of days in the period, and t is the mean temperature for this same period). Indexes of moisture which were computed by this method for the period May-September were represented by isolines on a map. (RZhGeol, No 7, 1955)

SO: Sum No 884, 9 Apr 1956

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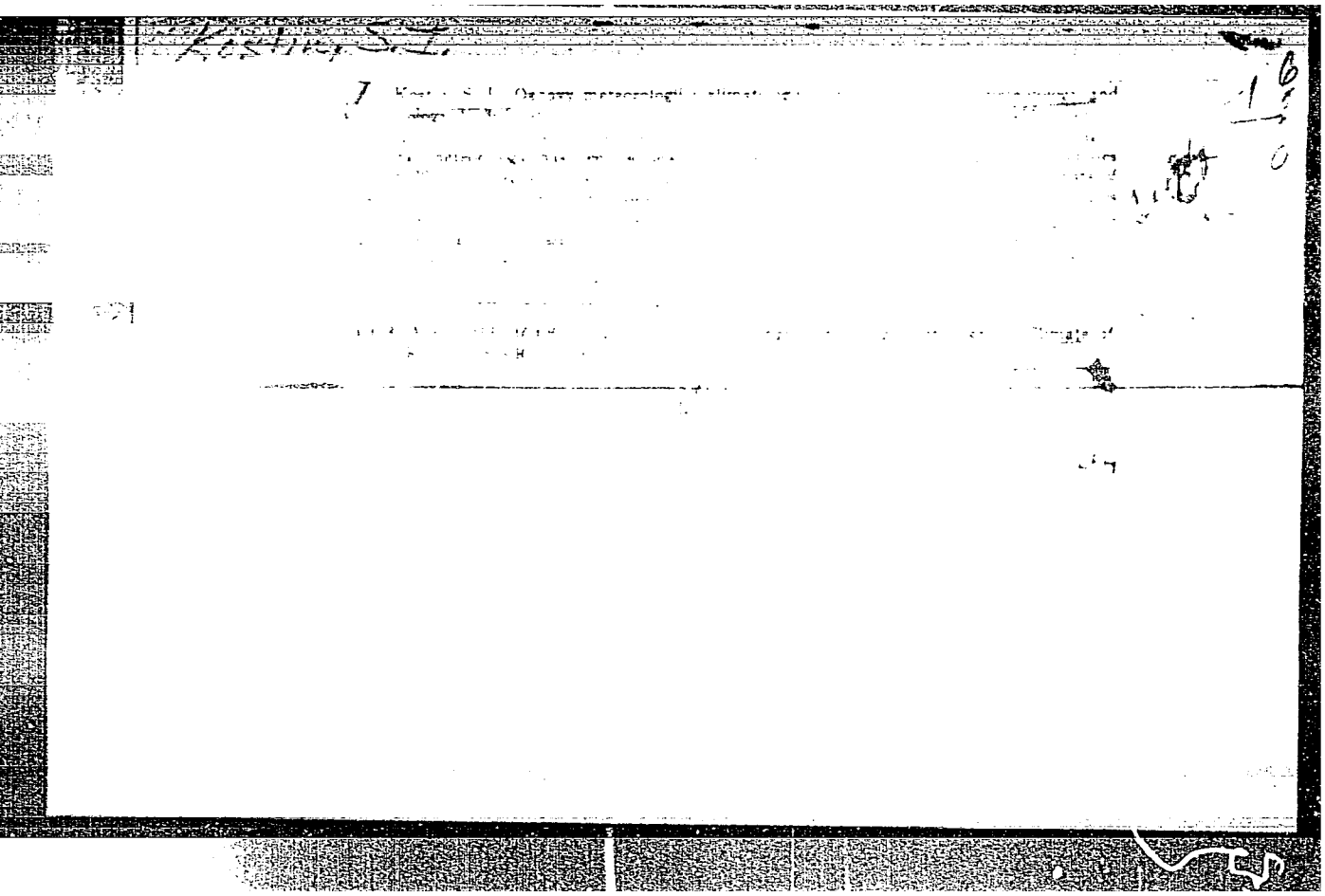

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PHASE I BOOK EXPLOITATION 997

Kostin, Sergey Iosifovich, Doctor of Geographical Sciences

Osnovy meteorologii i klimatologii (Principles of Meteorology and Climatology) 4th ed., rev. and enl. Leningrad, Gidrometeoizdat, 1958. 403 p. 10,000 copies printed.

Ed.: Yasnogorodskaya, M.M.; Tech. Ed.: Soloveychik, A.A.

PURPOSE: This is a textbook for students of universities, especially of forestry institutes. The book may be of interest to practical meteorologists and climatologists and to technical personnel employed in agriculture and silviculture.

COVERAGE: The book describes the principal physical phenomena of the atmosphere, particularly the processes effecting the growth of vegetation. In addition, the book analyzes the impact of vegetation on meteorological factors and climatic conditions, discusses plant protection from frosts and dry winds, and finally outlines the main climatic zones of the world in general, and of the USSR in particular. The author acknowledges the assistance of A.I. Rudenko, Yu.D. Yanishevskiy, and the Chinese scientists Van-Pen-Fei who translates the book into Chinese. There are 29 Soviet references, 143 figures (including maps), and 9 tables in the appendix.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S.I.

Solar activity and its influence on the growth of trees and the state of forest stands in the central steppe of the Russian Plain. Trudy GGO no.111:108-117 '61. (MIRA 15:1)
(Voronezh Province--Forests and forestry)
(Meteorology, Agricultural) (Growth (Plants))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

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PHASE I BOOK EXPLOITATION SOV/5941

Kostin, Sergey Iosifovich, and Taisiya Vasil'yevna Pokrovskaya

Klimatologiya (Climatology) 2d ed., rev. and enl. Leningrad, Gidrometeoizdat, 1961. 485 p. Errata slip inserted. 5000 copies printed.

Resp. Ed.: O.A. Drozdov; Ed.: L.P. Zhdanova; Tech. Eds.: A.A. Soloveychik and M.I. Braynina.

PURPOSE: This book is intended for students of climatology, meteorology, and hydrometeorology.

COVERAGE: The present volume is a revised edition of a handbook on climatology which first appeared in 1953. Part I (except for Ch. III and sections 35 and 39) was revised by its author, S.I. Kostin; and Part II and Ch. III and sections 35 and 39 of Part I were revised by T.V. Pokrovskaya, the original writer of Part II. The following are discussed: principles, scope, and application of climatology and climatography; general atmospheric circulation; the role of radiation and circulation in the formation of climate; effect of underlying surfaces (land, water, relief, snow, vegetation) and human activity on microclimate; individual climatic elements (temperature, humidity, precipitation, cloud cover, moisture

Card 1/4

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and heat balance, etc.); climatic changes and variations; principles and methods of processing climatological observations and data; and the application of climatology to agriculture, industry, commerce, transportation, communications, construction, and city planning. A large portion of the book is devoted to a detailed and thorough description and analysis of climate in different parts of the world, with particular attention given to the climate of the USSR. Several systems of climate classification, of which L.S. Berg's and B.P. Alisov's are considered the most important, are discussed. The historical development of the science of climatology in the USSR is briefly outlined. The following participated in reviewing the present volume: V. Yu. Milevskiy, V.M. Mikhel', S.A. Sapozhnikova, I.A. Gol'tsberg, R.F. Usmanov, T.G. Beryland, L.I. Zubenok, and K.M. Komnatnaya. There are 25 references, all Soviet.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S.I., prof.

Does Brikner's cycle exist? Priroda 54 no.2:78-79 F '65.
(MIRA 18:10)

1. Voronezhskiy lesotekhnicheskiy institut.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S.I.

Climatic fluctuation on the East European Plain in the historical epoch. Trudy GGO no.181:56-74 '65.

(MIRA 18:10)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, S.M., inzh.- kapitan 2-go ranga; [illegible], [illegible], kand. voyenno-morskikh nauk, kapitan 2-go ranga

Statistical study of the efficiency of tactical maneuvers. Mor. sbor. 48 no.12:15-20 D '64. (MIRA 18:2)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

S/169/62/000/009/075/120
D228/D307

AUTHOR: Kostin, S. N.

TITLE: Radiation and heat balance on the territory of the central black-earth regions

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 20, abstract 9B121 (Nauchn. Zap. Voronezhsk. lesotekhn. in-ta, 24, 1961, 57-65)

TEXT: The components of the underlying surface's radiation and heat balance were calculated for the territory of the central black-earth regions. The summary radiation $(Q + q)_n$ was computed from the empirical formula: $(Q + q)_n = (Q + q)_0 [1 - (1 - k)_n]$. Here $(Q + q)_0$ is the summary radiation when the sky is clear; n is the average cloudiness in parts of a unit; and k is the factor for the territory under consideration, taken as being equal to 0.36 - 0.37. The values of n were determined from the data of observations over

Card 1/3

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Radiation and heat ...

a 20-year period. The calculated values of $(Q + q)_n$ were compared with the actual ones for Voronezh in 1936-1938. The divergences between the calculated and observed values constituted 3 - 12% for separate seasons and an average of 0.4% for the year. It is hence concluded that the adopted method of calculation is sufficiently precise for determining the yearly magnitudes of $(Q + q)_n$. The values of the underlying surface's albedo were established with allowance for the fact that it changes during the year. The magnitudes of absorbed radiation were derived. The effective radiation was ascertained from the formula: $I = I_0(1 - cn^2)$; where I_0 is the effective radiation when the sky is clear, n is the cloudiness index, and c is a coefficient. I_0 was found from the table in M. Ye. Berlyand's work (Predskazaniye i regulirovaniye teplogo rezhima prizemnogo sloya atmosfery (Predicting and controlling the heat regime of the atmosphere's near-ground layer), Gidrometeoizdat, 1956); n was obtained from the data of observations over a 20-year period. A value of 0.72 - 0.73 was taken for c. Evaporation from

Card 2/3

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D228/D307

Radiation and heat ...

the ground surface was determined from V. B. Polyakov's graphs (Gidrologicheskiy analiz i raschety (Hydrologic analysis and calculations), Gidrometeoizdat, 1946). The calculation's results were compared with the data of 3-year measurements by a ГИИ-500 (GII-500) evaporator, set up at Voronezh, under conditions of vegetationless ground. The divergences between the calculated and observed data amount to 6% for the period May -September. The turbulent flow of heat for the year was determined as a residual term of the heat balance, the ground heat flow in this case being taken as equal to zero. A chart of the annual values of absorbed radiation, the radiation balance, and the turbulent heat flow is presented for the territory under consideration. The results obtained are discussed.
[Abstracter's note: Complete translation.]

Card 3/3

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.

American military satellites. Av.i kosm. 45 no.10:94-95 '62.
(MIRA 15:10)

(United States--Artificial satellites)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

EKONOMOV, Lev Arkad'yevich; KOZTIN, V., nauchn. red.; FEDCHENKO, V., red.

[Commanders of fiery arrows; word about rocket engineers and rockets] Povelitel'i ognennykh strel; slovo o raketchikakh i raketakh. Moskva, Molodaia gvardiia, 1964. 318 p. (MIRA 18:1)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.

How to sell clothes. Sov. torg. 35 no.6:19-22 Je '62. (MIRA 15:7)
(Clothing industry)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.; SHLEMIN, I.

Equipment for transporting ready-made clothing. Sov.torg. no.6: 59-60 Je '57. (MLRA 10:8)
(Clothing and dress--Transportation)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.

Permanent exhibition in Ivanovo. Pozh.delo 3 no.3:26 Mr '57.

1. Zamestitel' nachal'nika upravleniya pozharnoy okhrany Ivanovskoy oblasti. Pozh.delo 3 no.3:26 Mr '57. (MIRA 10:4)

(Ivanovo Province--Fire prevention--Exhibitions)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

YAMPOL'SKIY, Boris Borisovich; KOSTIN, V., red.; KLIMOVA, T., tekhn. red.

[Time is our ally] Nash drug - vremia. Moskva, Gos. izd-vo polit. lit-ry, 1961. 53 p. (MIRA 14:10)
(Russia--Economic conditions) (United States--Economic conditions)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

97 - 1 - 10/10

AUTHOR : Kostin, V.A., Engineer

TITLE: Joining Secondary Beams with Main Beams in Floor Constructions. (Sopryazheniye vtorostepennykh balok s glavnoy v rebristom perekrytii).

PERIODICAL: Beton i zhelezobeton, 1957, No. 1, pp. 32-33. (U.S.S.R.)

ABSTRACT: A type of joint between a secondary and the main reinforced concrete beam as illustrated in the article is evaluated. This joint is made with the aid of steel stirrups and plates concreted to the main beam and welded together in the form of an anchor. The end-reinforcement of the secondary precast beam is welded to a steel collar. The top reinforcement of the secondary beam passes through the collar and is welded to the opposite number across the main beam by butt welding. Finally, all the steel components are welded together and the connections are grouted with expanding cement. The steel parts on the surface are covered with an expanded mesh and rendered with cement grout. The reinforced concrete slab has a thickness of 4 - 7 cm. The ЦНИПС recommends the above floor construction but advocates savings in steel to

Card 1/2

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TITLE: Joining Secondary Beams with Main Beams in Floor Constructions. (Sopryazheniye vtorostepennykh balok s glavnoy v rebristom perekrytii).

be achieved and also the positioning of the secondary beam at least 5 cm above the main beam.

There is 1 drawing.

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Card 2/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.

"The Soviet worker and automation" by A.Osipov, I. Kovalenko, E.Petrov. Reviewed by V.Kostin. NTO 2 no.9:55 S '60. (MIRA 13:9)

(Osipov, A.) (Automation) (Kovalenko, I.) (Petrov, E.)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.

New developments in Sverdlovsk trade. Sov. torg. 36 no.1:25-28 Ja '63. (MIRA 16:2)
(Sverdlovsk—Retail trade)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

FROLOV, S.; KOSTIN, V.; VARVARIN, N.

Production organization and the establishing technical standards. Sots. trud 8 no.1:89-91 Ja '63. (MIRA 16:2)
(Machinery industry—Production standards)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

DVOYCHENKOVA, Yu.; KOSTIN, V.

Conversion of the "Krasnoe Sormovo" plant to the seven-hour working day. Biul.nauch.inform.; trud i zar.plata no.5:28-31 '59. (MIRA 12:6)

(Gorkiy--Metallurgical plants)
(Industrial efficiency).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.A., inzh.; VARVARIN, N.N., inzh.; REKUSHIN, A.N., inzh.

Reduction of labor necessary for shipbuilding at the "Krasnoe Sormovo" Shipyard. Sudostroenie 25 no.1:69-71 Ja '59. (MIRA 12:3)
(Gorkiy Province--Shipbuilding)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.B., kand.tekhn.nauk

Performance of elastic nitrile rubber coatings. Tekst.prom. 25 no.1:31-33 Ja '65. (MIRA 18:4)

1. Glavnyy inzh. Tashkentskogo tekstil'nogo kombinata.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

VETROV, V.D.; KOSTIN, V., red.; DANILINA, A., tekhn. red.

[When you love your work....] Kogda liubish' svoe delo. Moskva, Gospolitizdat, 1962. 94 p. (MIRA 15:6)
(Labor and laboring classes)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

REYFMAN, V.G.; KOSTIN, V.D.

Concentration of virus X in potato leaves during the growing period. Soob.DVFAN SSSR no.13:65-72 '60. (MIRA 14:3)

1. Dal'nevostochnyy filial im. V.L.Komarova Sibirskogo otdeleniya AN SSSR.
(Potatoes—Diseases and pests) (Virus diseases of plants)

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KOSTIN, V.D.; KRYLOV, A.V.; IVLIYEV, L.A.

Leaf beetle Galeruca tanaceti L., a potential potato pest in Kamchatka. Soob. DVFAN SSSR no.17:97-99 '63.
(MIRA 17:9)

1. Dal'nevostochnyy filial im. V.L. Komarova Sibirskogo otdeleniya AN SSSR.

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

TETERUK, G.I.; ZAVYAZKIN, P.G.; ALIYEV, T.M.; ALIYEV, A.G.; MELIK-SHAKHNAZAROV, A.M.; ARULIS, B.K.; BARTENEV, G.M.; YEL'KIN, A.I.; KOSTIN, V.I.; KHARKHARDIN, S.I.; SERGEYEV, A.I.; VARTANOV, S.Kh.; PRIMANCHUK, L.I.; MOLODTSOV, A.A.; SHMELEV, N.V.; ROVINSKIY, M.I.; ABRAMOV, N.N.; YEROFEYEV, L.V.; RYAKHIN, V.A.; ZELENIN, A.N.; BERKMAN, I.L.

Patent certificates for Soviet inventions. Stroi. truboprov. 9 no.5: 35-36 My '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V. I.

Mathematical Reviews
Vol. 14 No. 11
December, 1953
Geometry.

Kostin, V. I. Some questions of the metric duality of the geometry of Riemann. Trudy Sem. Vektor. Tenzor. Analizu 6, 444–446 (1948). (Russian)

This is an abstract of a paper that failed to be included in the fifth volume of the above publication. The paper is concerned with the gonometric (angular) invariants of an m-parameter family of hyper-surfaces of an n-dimensional Riemannian space. If $u(x^i, \xi^k)=0$, $i=1, 2, \cdots, n$; $k=1, 2, \cdots, m$, is the equation of the family and $ds^2=g_{\alpha\beta}dx^\alpha dx^\beta$ is the metric, then the angular metric is $d\theta^2=\Omega_{\gamma\delta}(x, \xi)d\xi^\gamma d\xi^\delta$ where Ω is expressible in terms of $g^{\alpha\beta}$ and the partial derivatives of u with respect to x are ξ.

For two nearby hypersurfaces one must have $u=0$ and $(\partial u/\partial\xi^\alpha)d\xi^\alpha=0$. If, because of these two equations, $\Omega_{\gamma\delta}$ reduce to functions of ξ alone, the angular metric is then Riemannian and is in a sense the dual of ds^2. Writing $u=-x^n+f(x^1, \cdots, x^{n-1}, \xi)=0$, the necessary and sufficient conditions that f must satisfy in order to define a gonometric family is a set of first-order partial differential equations of the second degree, each involving only one pair of parameters. The concluding remarks deal with some integral invariants of the family in case of n-, $(n-1)$- and 1-parameter families. *M. S. Knebelman* (Pullman, Wash.).

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V. I.

USSR/Minerals
Lignites
Coal Gas

Apr 49

"Experimental Gasification of Karaganda Lignites," V. I. Yermin, V. I. Kostin, Engineers, 6 pp

"Za Ekonomiyu Topliva" Vol VI, No 4

Karaganda lignite is a satisfactory gas-generating fuel. During prolonged storage, Karaganda lignite rapidly breaks up into bits of unsuitable for gasification. Higher indexes were obtained in gasification of Karaganda lignite than in gasification of Chelyabinsk coal. One deficiency of Karaganda coal, as a gas-generating fuel, is the small difference between the temperature of the start of ash deformation and the melting point (20°C).

PA 42/49T77

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.I., tekhnik

Rewinding of electromagnets to operate on different current.
Energetik 11 no.10:37-38 O '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.I.

LIOZNYANSKAYA, S.G.; KOSTIN, V.I.; VORONIN, P.V.

Accelerated cooling of the glass ribbon in the stack of a vertical drawing machine. Stek.i ker.13 no.11:9-10 N '56. (MLRA 10:1)
(Glass manufacture)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

TAYTS, N.Yu., doktor tekhn.nauk; KOLESNIK, B.P., kand.tekhn.nauk; YANKOVSKIY, V.M., kand.tekhn.nauk; KADINOVA, A.S., inzh.; KAUFMAN, M.M., inzh.; Prinimali uchastiye: POLYAKOVA, N.K., inzh.; VOVSINA, A.D., inzh.; SHANINA, A.S., inzh.; KOSTIN, V.I., inzh.

Rapid heat treatment of drill pipes. Stal' 22 no.1:57-60 Ja '62. (MIRA 14:12)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (for Polyakova).

(Pipe, Steel)
(Steel—Heat treatment)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

15(2)

SOV/72-59-5-4/23

AUTHORS: Bronshteyn, Z. I., Kostin, V. I.

TITLE: High-efficiency Gluing Method of Curved Windshields (Vysokoproizvoditel'nyy sposob skleyki gnutykh avtomobil'nykh stekol)

PERIODICAL: Steklo i keramika, 1959, Nr 5, pp 11 - 13 (USSR)

ABSTRACT: The Institut stekla (Glass Institute) worked out the technical method mentioned in the title by tests with the moderate panorama windshields of the car of the type "Volga". The glass packets glued together are rolled on a special apparatus (Fig 1). Figure 2 shows the various rolling cylinders. The tubes ZS-3 with a capacity of 500 w and a mirror reflector are used for heating the glass packets. Figure 3 shows the heat curves. This method makes it possible to reduce the duration of gluing and pressing the glasses to a small amount of the production time so far necessary. There are 3 figures.

Card 1/1

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KOSTIN, V. I.

O giperbolicheskoy geometrii kelikleyna. Gor'kiy, Uchen. Zap. un-ta, 12 (1939), 183-195.

SO: Mathematics in the USSR, 1917-1947
Edited by Kurosh, A. G.,
Markusevich, A. I.
Rashevskiy, P. K.
Moscow-Leningrad, 1948

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

ACC NR: AT6036568 SOURCE CODE: UR/0000/66/000/000/0177/0178

AUTHOR: Zinov'yeva, I. P.; Rubashkina, L. A.; Kostin, V. K. 29

ORG: none

TITLE: Blood transaminase as an index of human tolerance to landing impact accelerations [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 177-178

TOPIC TAGS: space medicine, space physiology, blood chemistry, impact acceleration, biologic acceleration effect, human physiology

ABSTRACT: A "tolerance criterion" of impact acceleration is blood transaminase activity. The literature shows that the activity of these enzymes increases as a result of injury to tissues.

In this study, a change in the activity of glutamic-alanine, and glutamic-aspartic transaminase was studied. Human subjects were exposed to landing accelerations with various buildup rates (2500—6000 G/sec and higher) acting along the longitudinal or transverse axes of the body in 32 experiments.

It was found that large accelerations (32—42 G) with a buildup rate of

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ACC NR: AT6036568 APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

2500 G/sec (chest-back) and 22—25 G accelerations (head-pelvis) with a buildup rate of 2500—6000 G/sec (7.5 m/sec landing velocity) increased transaminase activity by a factor of 1.5—2.0. The activity of these enzymes was occasionally accompanied by fresh erythrocytes in the urine. At lower magnitudes, enzyme activity was not altered. The highest indices of transaminase activity occurred 24 hr after exposure to acceleration. After 4—5 days, these indices returned to normal. In the majority of cases, the increase in transaminase activity, which reflected disrupted tissue integrity, preceded other functional changes and indicated that acceleration which could be well tolerated. These tests showed that the activity of transaminase enzymes during impact accelerations is a sufficiently sensitive index by which to judge the reaction of the organism to an applied stress. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2 bp

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V. M.

AID P - 3975

Subject : USSR/Mining

Card 1/1 Pub. 78 - 20/27

Author : Kostin, V. M., Drilling Foreman of the Chapayev Drilling Bureau of the United Kuybyshev Petroleum Industries (Kuybyshevneft')

Title : For a high rate of drilling speed in complex conditions.

Periodical : Neft. khoz., v. 33, #12, 85-87, D 1955

Abstract : Report on the highly satisfactory results of drilling works for the first 9 months of 1955.

Institution : None

Submitted : No date

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.M.

Hydraulic resistance of a reflux packing in a uniflow motion of gas and liquid. Khim. prom. 40 no.10:731-733 O '64.
(MIRA 18:3)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

S/076/60/034/007/019/042/XX
B004/B068

AUTHORS: Skripov, V. P. and Kostin, V. M.

TITLE: Specific Heat of Solutions of Triethyl Amine Forming Separate Layers in Light and Heavy Water

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 7, pp. 1503-1507

TEXT: Starting from a theory developed by V. K. Semenchenko (Ref. 1) on critical phenomena, the predictions of a specific-heat maximum in the neighborhood of the critical concentration in separate-layer-forming solutions made according to this theory were examined. For this purpose, the specific heats of triethyl-amine (I) solutions in heavy water (II) and in light water (III) were measured with an adiabatic rocking calorimeter which contained a thermistor and was heated electrically. Five solutions of I and II containing 19.3; 25.6; 30.5; 33.0; and 43.0 % by weight of I, and four solutions of I and III containing 20.1; 25.6; 28.8; and 31.5 % by weight of I were examined. Fig. 2 shows C_p, expressed in cal/mole·degree, as a function of temperature (in $^{\circ}C$), and Fig. 4 shows C_p as a function of

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the percent by weight of I. For 6.76 mole% of I, a shift of the critical cal separation temperature equal to 3.8°C is observed if H_2O is used instead of D_2O. The highest C_p values are near the critical temperature at which separation of the solution into two layers occurs. This is explained by the fluctuation which precedes the macroscopic layer separation and leads to microscopic latent separation dependent on concentration and temperature. A visual method developed by Alekseyev is mentioned but not described. There are 4 figures and 8 references: 7 Soviet and 1 US.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova, Sverdlovsk (Ural Polytechnic Institute imeni S. M. Kirov, Sverdlovsk)

SUBMITTED: September 23, 1958

Text to Fig. 2: 1: Triethyl Amine and Heavy Water; 2: Triethyl Amine and Light Water. Molar Concentration of Triethyl Amine in Both Experiments: 6.76%; a) cal/mole·degree.

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KOSTIN, V. N.

(11) 6

Synthesis of hydrocarbons. New reaction of tetrahydrophthalic anhydrides (products of diene synthesis) with phosphorus pentoxide. R. Ya. Levina, V. R. Skvarchenko, V. N. Kostin and N. S. Kateeva. *Doklady Akad. Nauk S.S.S.R.* 91, 95-8(1953).—Tetrahydrophthalic anhydrides heated with P_2O_5 split off 2 moles CO and H_2O, forming aromatic hydrocarbons. Thus, 20 g. 3,6-dimethyltetrahydrophthalic anhydride (I) treated in the molten state with 23 g. P_2O_5 and heated carefully to 110–20° reacted vigorously with heat evolution and distn. of the product (completed by heating to 230°); washing and distn. gave 80% *p*-xylene, identified by oxidation to *p*-$C_6H_4(CO_2H)_2$. Similarly the 3,5-di-*Me isomer* of I gave 60% pure *m*-xylene, and the 4,5-isomer (II) gave 40% pure *o*-xylene. Heating II with 10% KOH, evapn., and acidification gave *4,5-dimethyltetrahydrophthalic acid* (III), decomp. 135°, which heated similarly with P_2O_5 gave 80% *o*-xylene. II treated with dry HCl in abs. EtOH gave 72% *di-Et ester* of III, b$_7$ 153°, n_D^{20} 1.4679, d_{20} 1.0450, which heated with P_2O_5 similarly gave 31% *o*-xylene, with CO and C_2H_4. G. M. Kosolapoff

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KOSTIN, V.N.

7

Synthesis of hydrocarbons. XLIII. Partial reduction of diene hydrocarbons with conjugated system of double bonds by sodium in liquid ammonia. R. Ya. Levina, V. B. Skvarchenko, V. N. Kostin, E. G. Treshchova, and A. S. Okunevich (Moscow State Univ.). *Sbornik Statei Obshchei Khim., Akad. Nauk S.S.S.R.* 1, 355–61(1953); cf. *C.A.* 47, 12210d.—Reduction by Na-NH_3 of 3,3-dimethyl-1,3-butadiene results in addn. of H mainly (98–6%) in the 1,4-positions, and to a minor extent in the 1,2-positions. With the unsym. diene, 2-methyl-2,4-pentadiene, 1,4-addn. predominates also (93–4%). To 37 g. Na in 500 ml. liquid NH_3 was added with stirring an Et_2O soln. of 39 g. 2,3-dimethyl-1,3-butadiene; after 2 hrs. the mixture was dild. with Et_2O, evapd. at room temp., washed and dried, yielding 58% total reduction products, which were sepd. into 3 g. crude material, b_{760} 50–72.1°, and 19 g. *2,3-dimethyl-2-butene*, b_{760} 72.1–2.2°, n_D^{20} 1.4134, d_{20} 0.7077; the Raman spectrum of the product had a 1674 cm.$^{-1}$ line characteristic of the above structure. Raman spectrum of the forerun showed the presence of 2,3-dimethyl-1-butene. Similar reduction of 25 g. 2,4-dimethyl-1,3-pentadiene with Na-NH_3 gave 72% reaction products composed of material, b_{760} 81.9°, n_D^{20} 1.4038, d_{20} 0.6917, whose Raman spectrum showed the absence of any contaminant in the *2,4-dimethyl-2-pentene* produced (for comparison a specimen was prepd. by pyrolysis of diisopropylcarbinol acetate; the product, b_{760} 82.1–2.2°, n_D^{20} 1.4072, d_{20} 0.6927, Raman spectrum given. Similar Na-NH_3 reduction of 2-methyl-2,4-pentadiene (b_{760} 70.3°, n_D^{20} 1.4520, d_{20} 0.7200) gave 2 fractions: 50% *2-methyl-2-pentene*, b_{760} 57.5–8.5°, n_D^{20} 1.3905, d_{20} 0.6663, and about 8% material, b_{760} 58.5–67°, which also contained some 2-methyl-3-pentene, confirmed by Raman spectrum of this mixt. in comparison with that of a pure synthetic specimen. Satn. of $MeCH{:}CHCH{:}CH_2$ (25 g.) with 30 g. dry HBr with cooling, followed by addn. of the crude resulting bromide to MeMgBr (from 39 g. MeBr) and stirring 1.5 hrs. in the cold and 6 hrs. at reflux, gave 40% pure *2-methyl-2-pentene*, b_{760} 57.5–8.5°, n_D^{20} 1.3905, d_{20} 0.6665; whose Raman spectrum was not given in the paper; that of the specimen prepd. by Na-NH_3 reduction is given. Similarly, 24 g. $CH_2{:}CMeCH{:}CH_2$ treated with dry HBr and the resulting bromide treated with MeMgBr gave 13 g. (43%) *2-methyl-1-pentene*, b_{760} 67°, n_D^{20} 1.4035, d_{20} 0.6919, Raman spectrum given.

G. M. Kosolapoff

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.N.

(3)

Reaction of cyclopropane hydrocarbons with salts of mercuric mercury. II. New organomercury compounds from 1,1,2,2-tetramethylcyclopropane. K. Ya. Levina and V. N. Kostin (M. V. Lomonosov State Univ., Moscow). *Zhur. Obshchei Khim.* 23, 1054–6(1953); cf. *C.A.* 44, 8321c.—1,1,2,2-Tetramethylcyclopropane (I), b_{760} 75.2°, n_D^{20} 1.4003, d_{20} 0.7185, (12.8 g.) and 41.6 g. $Hg(OAc)_2$ in 150 g. H_2O kept 6 days at −5° with occasional shaking gave 64% *3-hydroxy-2,2,3-trimethylbutylmercuric acetate* (from heptane), m. 69–70°. Exchange with the corresponding K salts gave: 92% *chloride*, m. 116.5–17.0°; *bromide*, 90%, m. 123.5–4.5°; *iodide*, 85%, m. 102–2.5°; *cyanide*, 96%, m. 95.5–6.0°; *thiocyanate*, 93%, m. 73–3.5°. Similarly the reaction in MeOH gave *3-methoxy-2,2,3-trimethylbutylmercuric acetate*, 71%, m. 31.5–3.0°, which yielded: 90% *chloride*, m. 103–3.5°; 91% *bromide*, m. 133–3.5°; 85% *iodide*, m. 147–7.5°; *cyanide*, 90%, m. 53–4°; *thiocyanate*, 85%, m. 91–1.5°. I in EtOH gave 56% oily *3-ethoxy-2,2,3-trimethylbutylmercuric acetate*, which gave: 75% *chloride*, m. 58.5–9.0°; 72% *bromide*, m. 61–1.5°; 70% *iodide*, m. 66–6.5°; 60% *oily cyanide*; 82% *thiocyanate*, m. 80.5–1.0°. The acetates stirred with aq. NaOH and $SnCl_2$ 1 hr. symmetrized to: *bis(3-hydroxy-2,2,3-trimethylbutyl)mercury*, 90%, m. 113–14°; *MeO analog*, 85%, m. 59–9.5°; *EtO analog*, 83%, m. 52–2.5°.

G. M. Kosolapoff

10-15-54

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V. N. (Engr.)

Dissertation: "The effect of the Material and Character of a Heating Surface on Heat Emission During Boiling." Cand. Tech. Sci., Moscow Institute of Chemical Machine Building, 1 July 54. (Vechernyaya Moskva, Moscow, 22 Jun 54)

SO: Sum. 318, 23 Dec 54

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KUSTIN, V. N.

USSR

Reaction of cyclopropane hydrocarbons with salts of mercuric oxide. Organomercury compounds from 1,1,2-trimethylcyclopropane. R. Ya. Levina and V. N. Kustin (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 97, 1027–30(1954); cf. *C.A.* 48, 8171e.—The reaction between *1,1,2-trimethylcyclopropane* (I) (b. 52–2.4°, n_D^{20} 1.3846, d_4 0.6500) and $Hg(OAc)_2$ in aq. medium and in MeOH or EtOH was performed as described previously. The reaction of I with $Hg(OAc)_2$ in aq. soln. or in POH yields $Me_2C(OR \text{ or } OH)CHMeCH_2HgOAc$, which treated with KCl, KBr, KI, KCN, or KCNS gave the expected exchange products. The cleavage of the 3-membered ring of I occurs at 1–3 link since reduction of $Me_2C(OH)CHMeCH_2HgCl$ with Na-Hg in H_2O gave 74% iso-$PrCMe_2OH$. The following substances are reported: $Me_2C(OR)CHMeCH_2HgX$ (R, X, % yield, and m.p. given): *H, OAc*, 62, 34.5–5°; *H, Cl*, 90, 60.5–1°; *H, Br*, 85, 65.5–6°; *H, I*, 80, 58–8.5°; *H, CN*, 92, 84–3°; *Me, Cl*, 92, 33–4°; *Me, Br*, 92, 58.5–9°; *Me, I*, 85, 51–2°; *Me, CNS*, 85, 53.5–4°; *Et, I*, 70, 40–40.5°; *Et, CNS*, 80, 45–6°.

G. M. Kosolapoff

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.N.

Name: KOSTIN, V. N.

Dissertation: Cyclopropane hydrocarbons in the synthesis of mercury organic compounds

Degree: Cand Chem Sci

Defended at; Affiliation: Moscow State U imeni M. V. Lomonosov

Publication ~~Defense Date~~, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 2, 1957

LEVINA, R.Ya.; KOSTIN, V.N.; TARTAKOVSKIY, V.A.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-

Interaction of cyclopropane hydrocarbons and mercury oxide salts. Part 4. Effect of mercury acetate on 1,1,2-trimethyl-2-ethylcyclopentylsulfide. Vest.Mosk.un.11 no.2:77-82 F '56. (MLRA 9:8)

1. Kafedra organicheskoy khimii.
(Mercury acetate) (Cyclopropane)

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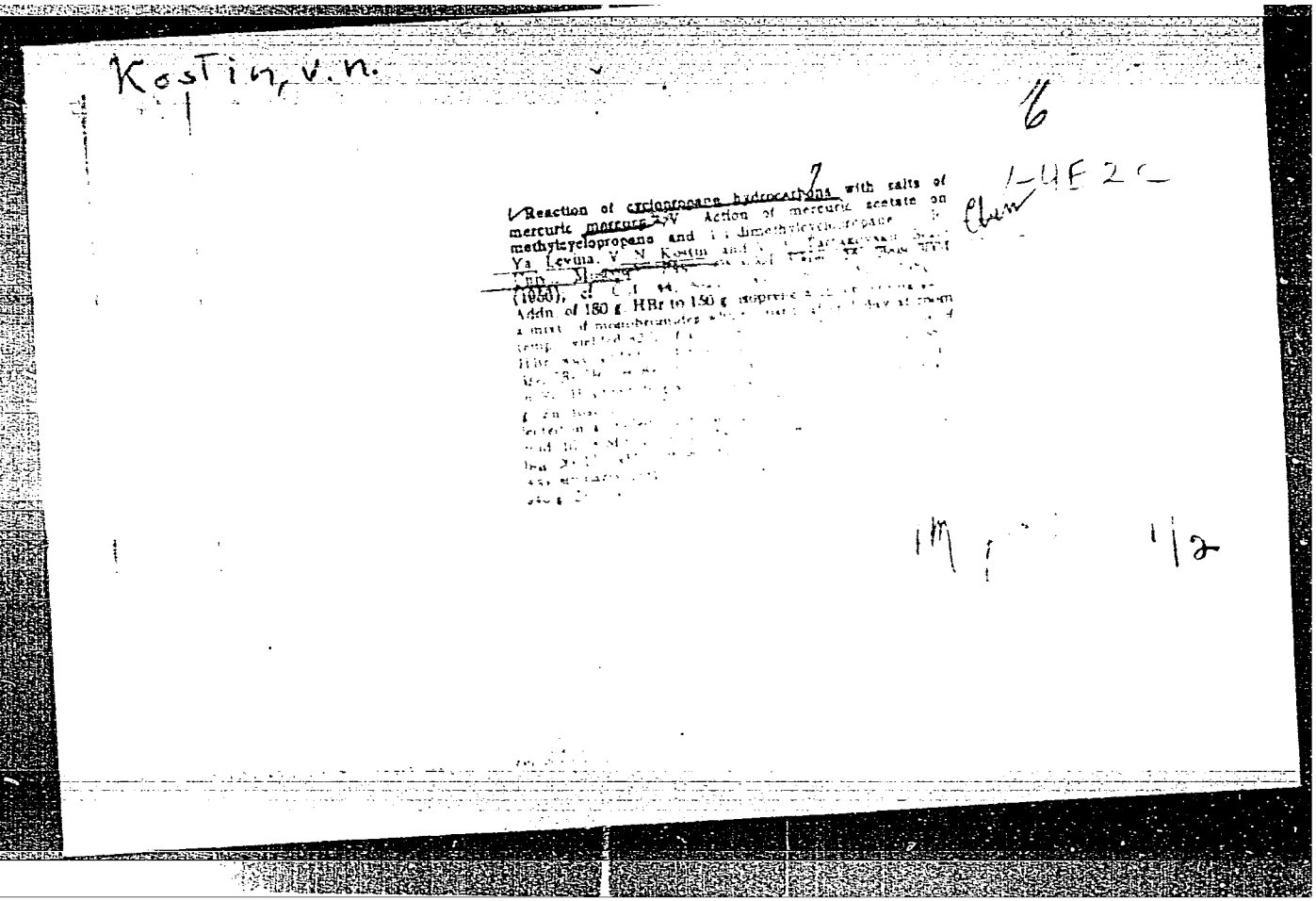

Kostin, V.N.

6

Reaction of cyclopropane hydrocarbons with salts of mercuric mercury. V. Action of mercuric acetate on methylcyclopropane and 1,1-dimethylcyclopropane. Ya. Levina, V. N. Kostin and [illegible] (1950). CA 44.

Addn. of 160 g. HBr to 150 g. [illegible] a mixt. of [illegible]

1-HF 2-

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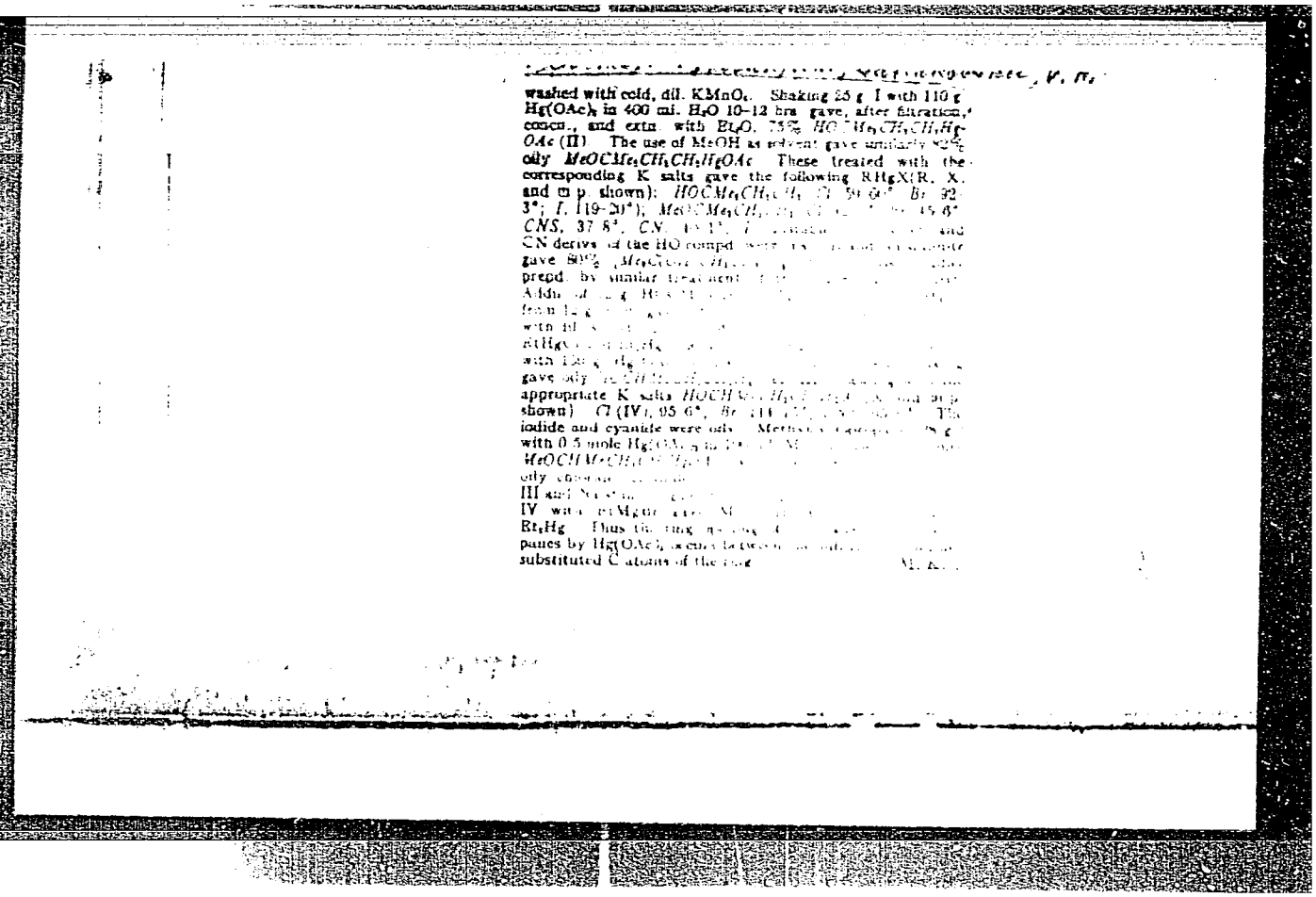

washed with cold, dil. $KMnO_4$. Shaking 25 g. I with 110 g. $Hg(OAc)_2$ in 400 ml. H_2O 10–12 hrs. gave, after filtration, concn., and extn. with Et_2O, 75% *HOCMe$_2$CH$_2$CH$_2$HgOAc* (II). The use of MeOH as solvent gave similarly 92% only *MeOCMe$_2$CH$_2$CH$_2$HgOAc*. These treated with the corresponding K salts gave the following RHgX (R, X, and m.p. shown): *HOCMe$_2$CH$_2$CH$_2$* Cl 50–60°; Br 92–3°; I, 119–20°); *MeOCMe$_2$CH$_2$CH$_2$* 45.6°; *CNS*, 37.8°; *CN* [illegible] and CN derivs. of the HO compd. [illegible] gave 80% *Me$_2$C(CN)CH$_2$CH$_2$HgOAc*, prepd. by similar treatment [illegible] Addn. [illegible] g. [illegible] from [illegible] with [illegible] RHgX [illegible] with [illegible] gave only [illegible] appropriate K salts *HOCH$_2$CH$_2$CH$_2$* [illegible] shown) Cl (IV), 95.6°; Br [illegible] I [illegible] iodide and cyanide were only [illegible] Methoxy [illegible] with 0.5 mole $Hg(OAc)_2$ in [illegible] *MeOCH$_2$CH$_2$CH$_2$* [illegible] only [illegible] III and [illegible] IV with [illegible] Et_2Hg. Thus the [illegible] panes by $Hg(OAc)_2$ [illegible] substituted C atoms of the [illegible]

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

Kostin, V.N.

SOV/137-58-8-16597

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 51 (USSR)

AUTHOR: Kostin, V.N.

TITLE: [Shortcomings in Gas Cleaning in Nonferrous Metallurgy and Methods of Improving the Situation] ([O nedostatkakh v oblasti pyleulavlivaniya v tsvetnoy metallurgii i mery po uluchsheniyu yego])

PERIODICAL: Sb. materialov po pyleulavlivaniyu v tsvetn. metallurgii. Moscow, Metallurgizdat, 1957, pp 9-12

ABSTRACT: A paper delivered at the conference on problems of gas cleaning (G) in nonferrous metallurgy held in Moscow April 10-14, 1956. Improvement in the state of G at nonferrous metals plants during recent years are noted. It is noted that the rates of construction and launching of new gas-cleaning installations are found to be inadequate. Examples of shortcomings in the servicing of gas-cleaning plants are cited. Ideas are put forth on the organization of planning and scientific research in the field of G. Note is taken of the need to improve organization of the structure of G services and of the system of payment of service personnel. 1. Gases--Cleaning 2. Industrial plants G.G. --Performance

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KOSTIN, V.N.

LEBEDEVA, M.N.; YEFREMOVA, S.A.; KOSTIN, V.N.; LEVINA, R.Ya.

Bacteriostatic properties of -mercurated alcohols and their alkyl ethers. Vest.Mosk.un.Ser.mat.,mekh.,astron.,fiz., khim. 12 no.3:149-158 '57. (MIRA 11:3)

1.Kafedra mikrobiologii I Moskovskogo ordena Lenina meditsinskogo instituta i Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta.
(Alcohol) (Ethers) (Bacteriostasis)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

Kostin, V. N.

Reaction of cyclopropane hydrocarbons with mercuric salts. VI. Organomercury compounds from phenylcyclopropane. R. Ye. Levina, V. N. Kostin, and V. A. Tartakovskii (State Univ., Moscow). *Zhur. Obshchei Khim.* 27, 881–5 (1957); cf. *C.A.* 51, 9858a.—Shaking 122 g. $Hg(OAc)_2$ with 45 g. phenylcyclopropane (I) and H_2O 2 hrs. gave after extn. with Et_2O and distn. of the ext. 71% $PhCH(OH)CH_2CH_2HgOAc$, m. 65–6°; this in ice-cooled aq. soln. was treated with KBr, KI, KCNS, and KCN, but only $PhCH(OH)CH_2CH_2HgCNS$, m. 61°, was isolated. Treatment of the acetate with Na stannite gave $Hg[CH_2CH_2CH(OH)Ph]_2$, m. 77–8° (aq. Me_2CO). Shaking 37 g. $Hg(OAc)_2$ and 10 g. I in dry MeOH 12 hrs. gave 82% $PhCH(OMe)CH_2CH_2HgOAc$, oil. This with appropriate K salts gave: $PhCH(OMe)CH_2CH_2HgCl$, m. 82°; $PhCH(OMe)CH_2CH_2HgBr$, m. 87°; $PhCH(OMe)CH_2CH_2HgI$, m. 79°; $PhCH(OMe)CH_2CH_2HgCN$, m. 84°. To $EtMgBr$ from 7 g. Mg was added dropwise 30 g. $PhCH(OH)CH_2CH_2HgCl$ in Et_2O; after refluxing 1 hr. and decompn. with aq. AcOH there was obtained $EtHgCH_2CH_2CHPhOH$, an oil, which heated *in vacuo* symmetrized and yielded 51% Et_2Hg and 47.5% $Hg[CH_2CH_2CH(OH)Ph]_2$. When 3 moles $EtMgBr$ was used/mole Hg deriv. and the mixt. refluxed 12 hrs. there were obtained Et_2Hg and 44% $EtPhCHOH$, identified as the 3,5-dinitrobenzoate, m. 67–8°. G. M. Kosolapoff

Distr: 4E4j/4E3d/4E2c(j)

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KOSTIN, V. N.

7

Distr: 4E4j/4E2c(j)/4E3d

* Reaction of cyclopropane hydrocarbons with salts of mercuric mercury. VII. Thermal decomposition of products of symmetrization of γ-mercurated alcohols. R. Ya. Levina, V. N. Kostin, and V. A. Tartakovskii (State Univ., Moscow). *Zhur. Obshchei Khim.* 27, 2049–52(1957); cf. *C.A.* 52, 3713i.—Heating $(PhCH(OH)CH_2CH_2)_2Hg$ to 120–30° at 15 mm. gave a distillate of Hg and a mixt. of $EtPhCHOH$ and $EtCOPh$. Similar heating to 100–10° of $(Me_2C(OH)CH_2CH_2)_2Hg$ gave *tert*-AmOH and Me_2CO and Hg, with apparently 1-hexene. The 1st substance apparently yields free radicals the HO group of which is the source of H for the final products. The 2nd compd. in its decompn. yields tertiary free radicals which are cleaved at the central C atom to yield the above products with probably intermediacy of Me_2CO, C_2H_4, and H.

G. M. Kosolapoff

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K. S. T. N, V. N.

18(5,6); 25(1) P.5

PHASE I BOOK EXPLOITATION SOV/3134

Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola

Dostizheniya nauki i tekhniki i peredovoy opyt v promyshlennosti i stroitel'stve. Vyp. 2, chernaya i tsvetnaya metallurgiya (Progress in Science and Technology and Advanced Methods Applied in Industry and Construction. No. 2, Ferrous and Nonferrous Metallurgy) Moscow, Izd-vo VPSh i AON pri TsK KPSS, 1958. 157 p. 22,000 copies printed.

Ed. (Title page): G. I. Pogodin-Alekseyev, Doctor of Technical Sciences, Professor;
Ed. (Inside book): G. V. Popova; Tech. Ed.: K. M. Naumov.

PURPOSE: This book is intended for the informed reader and should also be of interest to metallurgists.

COVERAGE: This is a collection of lectures, presumably delivered at the Vysshaya partiynaya shkola (Higher Party School) of the Communist Party, USSR, describing recent advances in the field of metallurgy. The approach is basically nontechnical, though a number of processes are briefly described. Specific ore deposits and metallurgical plants are referred to.

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Progress in Science (Cont.)

Some statistics are given. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Myrtsymov, A. F., Candidate of Technical Sciences. Technical Progress in Ferrous Metallurgy. Ways of Increasing the Productivity of the Blast-furnace Process 3
Claims of actual achievements described in this article include the highest blast-furnace operating efficiency in the world in 1955, when the Soviet yield of pig iron per cubic meter of useful blast furnace is stated to have been 11 percent higher than in the United States. The 1956 Soviet yield of open-hearth steel per square meter of hearth is given as 7 metric tons per 24-hr period, as compared with 5.7 for the United States. Current objectives in Soviet ferrous metallurgy include the following: 1) greater application of open-pit mining, increased mechanization of mining operations, prospecting for additional deposits, accelerating concentration operations, construction of several large ore-beneficiation combines in the Krivoy Rog Basin, and new concentration plants in other areas;

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Progress in Science (Cont.)

process; vacuum melting and teeming; high-temperature refractories; and direct reduction of iron from ore.

Tselikov, A. I., Corresponding Member, Academy of Sciences, USSR. Progressive Methods and Basic Trends in the Development of Metal Forming 43
According to the author, improvements in metal-forming techniques are currently being achieved with two basic objectives, 1) reduction of metal waste, and 2) automation of processes. Attempts are being made to attain the first objective by designing lighter finished products and by using presized blanks and slugs to reduce allowances. As regards the increased-automation program, the main line of attack is the conversion of noncontinuous to continuous forming processes, especially in rolling, drawing, and extruding. In the case of hot and cold upsetting continuity of auxiliary operations is the aim, while in stamping operations, continuous feed is considered important. Particular reference is made to the Soviet method of helical cross rolling, by means of which cavities may be developed in originally solid bodies. The method is frequently used in the rolling of hollow bodies of rotation.

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Progress in Science (Cont.)

Charikhov, L. A. Automation of Production Processes in Ferrous Metallurgy 54
An account is given of recent Soviet advances in the automation of blast-furnace, steelmaking, and rolling processes.

Kornev, Yu. V., Candidate of Physical and Mathematical Sciences. Radio- 80
active Isotopes in Metallurgy
Basic information on both natural and artificial radioactive isotopes is given. Production of artificial isotopes is briefly discussed. Such applications of radioactive isotopes in metallurgy as the following are described: use of cobalt 60 in the continuous casting of steel to measure the level of liquid metal in the crystallizing mold; flaw detection; measurement of metal thicknesses; controlling composition of alloys; determining rate of wear of blast-furnace well lining; tracing the motion of charge materials in the blast furnace; and determining the weight of steel in the teeming ladle.

Kostin, V. N. Nonferrous Metallurgy and Basic Trends in Its Development 104
Nonferrous ore deposits and their locations are described. It is stated that 63 nonferrous metals are currently being extracted from ores in the Soviet Union, 45 in metallic form, the remainder as

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KOSTIN, V.N.

136-1-2/20

AUTHOR: Kostin, V.N.

TITLE: Electrothermics Should be Adopted in Lead and Zinc Metallurgy (Dorogu elektrotermii v metallurgii svintsa i tsinka)

PERIODICAL: Tsvetnyye Metally, 1958, No.1, pp. 3 - 10 (USSR).

ABSTRACT: The author states that electrothermics represents a potentially valuable technical development for lead and zinc production in the near future. He lists possible fields of application and, without going into process details, examines the main peculiarities of those developments and touches on reasons for comparative slowness of the adoption of electrothermics. The author deals with work carried out since 1953 by the VNIItsvetmet institute and the Leninogorsk Combine (Leninogorskiy kombinat) on the electric smelting of lead sinter on a scale up to that of a 2 500 kVA furnace. He summarises results obtained in twenty days of operation in the autumn of 1957 with a fine sinter containing 38.2% lead with the furnace operating at 2 000 kVA, 84 V, and a daily production rate equivalent to 3.6 tons of sinter per m^2 of furnace bottom. The power consumption was 600 - 650 kWh per ton sinter, and the author recommends the adoption of this procedure at existing plants. For new plants he advocates the adoption of a process so far only based on laboratory-scale experiments by the VNIItsvetmet in

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which a granular lead concentrate, roasted in a fluidised bed, is smelted. The author lists and discusses the advantages of both the variants over shaft smelting. He states that the power cost of 6-8 kopeks per kWh prevailing in several regions of the USSR makes the process competitive with shaft smelting. He makes suggestions on a programme for the near future, which includes the construction at the Leninogorsk Combine of a two-furnace electric shop in 1958 and of new electric shop at the Ust'-Kamenogorsk Works (Ust'-Kamenogorskiy zavod) in 1959-1960 from designs to be worked out by the Giprovetsmet organisation; an extensive research programme on the second variant in 1958 by VNIItsvetmet; the adoption of electric smelting at the "Elektrotsink" Works after appropriate estimates by the works staff, together with the Kavgiprotsvetmet organisation; the adoption of electric smelting at the Chimkentskiy Works, plans being drawn up in 1958. The author urges the VNIItsvetmet and Giprotsvetmet organisations to take a more positive attitude towards the wider adoption of the process and touches on the functions of a number of research and design organisations, including these and Gintsvetmet and Giredmet. He advocates the creation of large, suitably supported planning offices (SKB).

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

AUTHORS: Levina, R. Ya., Kostin, V. N. SOV/79-28-12-33/41

TITLE: Reaction of Cyclopropane Hydrocarbons With Salts of Mercury Oxide (Vzaimodeystviye tsiklopropanovykh uglevodorodov s solyami okisi rtuti) VIII. Reaction of γ-Mercurized Alcohols With Zinc Dust (VIII. Reaktsiya γ-merkurirovannykh spirtov s tsinkovoy pyl'yu)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 28, Nr 12, pp 3307-3311 (USSR)

ABSTRACT: The structure of the γ-mercurized alcohols (I) obtained by the authors by a synthesis earlier carried out by them, where the product was synthesized by the reaction of alkyl and aryl cyclopropanes with mercury salts dissolved in water (Refs 1-6), had to be proved by reduction (i.e. by means of substituting the HgX-group by hydrogen). The first reduction experiments were too complicated (Scheme 1). This time the authors attempted to realize the symmetrization of the γ-mercurized alcohols (I) and the thermal decomposition of the products obtained in this symmetrization in one stage by heating the γ-mercurized alcohols with zinc dust. The previous symmetrization stage was thus avoided to explain its

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Reaction of Cyclopropane Hydrocarbons With Salts of Mercury Oxide. VIII. Reaction of γ-Mercurized Alcohols With Zinc Dust

SOV/79-28-12-33/41

structure. Thus, the structural proof was made easier. A secondary alcohol and a ketone with the carbon skeleton of the organo-mercury compound used as initial product are formed from the γ-mercurized alcohols containing a secondary alcohol group. The γ-mercurized alcohols with a tertiary alcohol group form tertiary alcohols with the carbon skeleton of mercurized alcohol, whereas the formation of the ketones is connected with a cleavage of the C-C bond. On heating the β-mercurized alcohol obtained from triptene by the action of mercury acetate a separation of the mercury salt and the formation of the initial ethylene hydrocarbon, triptene, took place. The reaction of the thermal decomposition in the presence of zinc dust was also attempted with 3-oxy-2,3-dimethyl-butyl mercury acetate (III). From this γ-mercurized tertiary alcohol the dimethyl isopropyl carbinol, acetone and propylene were obtained (Scheme 4). There are 14 references, 10 of which are Soviet.

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Reaction of Cyclopropane Hydrocarbons With Salts of Mercury Oxide. VIII. Reaction of γ-Mercurized Alcohols With Zinc Dust

SOV/79-28-12-33/41

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: November 12, 1957

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

AUTHORS: Levina, R. Ya., Kostin, V. N., Shanazarov, K. S.

SOV/79-29-1-9/74

TITLE: Reaction of Cyclopropane Hydrocarbons With Salts of Mercury Oxide (Vzaimodeystviye tsiklopropanovykh uglevodorodov s solyami okisi rtuti) IX. γ-Mercurized Alcohols and Their Ethers From Aryl Cyclopropanes (IX. γ-Merkurirovannyye spirty i ikh efiry iz ariltsiklopropanov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 40-44 (USSR)

ABSTRACT: In an earlier paper the authors described (Ref 1) the decomposition of the three-membered cycle in phenyl cyclopropane under the action of mercury acetate. The present paper deals with the reaction of this acetate in an aqueous and methanol solution with aryl cyclopropanes which in the benzene ring contain a methyl- and methoxy group in para-position. It was found that the reaction takes place under the same conditions as in the case of phenyl cyclopropane, i.e. when the reaction mass is shaken for hours at low temperature. The addition of mercury acetate to the two aryl cyclopropanes (p-anisyl- and p-tolyl cyclopropane) leads to the formation of 3-oxy-3-aryl propyl mercury acetates and

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Reaction of Cyclopropane Hydrocarbons With Salts of Mercury Oxide. IX. γ-Mercurized Alcohols and Their Ethers From Aryl Cyclopropanes

SOV/79-29-1-9/74

3-methoxy-3-aryl propyl mercury acetates respectively. Under the action of potassium salts upon them the corresponding crystalline salts of γ-mercurized secondary alcohols and their methyl ethers (Scheme 1) are formed. The structure of the γ-mercurized secondary alcohols was determined according to the method which had already been previously worked out by the authors (Ref 2). The synthesis of the crystalline organo-mercury compounds can serve for the identification of p-anisyl cyclo- and p-tolyl cyclopropane. A new description was given of the following compounds: 3-oxy-3-p-anisyl propyl mercury acetate and its chloride, bromide, iodide, cyanide and thiocyanate; 3-oxy-3-p-tolyl propyl mercury acetate; 3-methoxy-3-p-tolyl propyl mercury chloride and its bromide. There are 2 tables and 6 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

Reaction of Cyclopropane Hydrocarbons With Salts of Mercury Oxide. IX. γ-Mercurized Alcohols and Their Ethers From Aryl Cyclopropanes

SOV/79-29-1-9/74

SUBMITTED: November 18, 1957

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

SOV/79-29-6-41/72

5(3)

AUTHORS: Levina, R. Ya., Kostin, V. N., Kim Dyay Gir, Ustynyuk, T. K.

TITLE: Reaction of Cyclopropane Hydrocarbons With Mercuric Salts (Vzaimodeystviye tsiklopropanovykh uglevodorodov s solyami okisi rtuti). X. Action of Mercury Acetate on (0,1,3)-Bicyclohexanes (X. Deystviye atsetata rtuti na (0,1,3)-bitsiklogeksany)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1956 - 1960 (USSR)

ABSTRACT: The products of the reactions described earlier (Refs 1-4) which are characteristic of the above hydrocarbons and which take place under the opening of the three-membered cycle i.e. the T- alcohols and their ethers were the products of the reaction with mercury acetate in aqueous and alcoholic solutions. Their investigation revealed the cleavage of the three-membered cycle between the hydrocarbon atoms which were the most strongly and the most weakly substituted (Scheme 1). The forming crystalline organomercury compounds may be successfully for the identification of the cyclopropane hydrocarbons. In the present paper it was found that the above reaction is also characteristic of the "bridge bicyclo hydrocarbons" in the system of which

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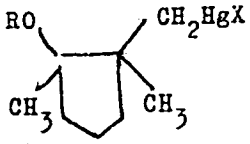
the three-membered cycle is integrated. It was shown (Scheme 2) that the opening of the three-membered cycle in the homologues of (0,1,3)-bicyclohexane in the action of mercury acetate on these homologues in aqueous or methanol solution does not take place at the bridge C-C-bond. The products of this reaction are cyclopentanoles γ -mercurized in the side chain or their methyl ethers. The synthesis of the crystalline γ -mercurized alcohols and their ethers may thus serve for the determination of 1,3-dimethyl-1,3,5-trimethyl and 1-methyl-3-ethyl-(0,1,3)-bicyclohexane. The structure of the γ -mercurized alcohols and their ethers is the following:

1)  from 1,3-dimethyl-(0,1,3)-bicyclohexane

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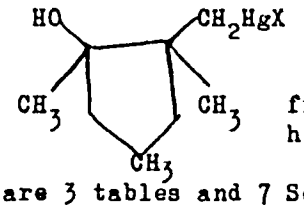
"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

Reaction of Cyclopropane Hydrocarbons With Mercuric Salts. X. Action of Mercury Acetate on (0,1,3)-Bicyclohexanes

SOV/79-29-6-41/72

2)  from 1,3,5-trimethyl-(0,1,3)-bicyclohexane.

There are 3 tables and 7 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: May 25, 1958

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

5 (3)
AUTHORS: Levina, R. Ya., Kostin, V. N., Gembitskiy, P. A.

SOV/79-29-7-80/83

TITLE: Letter to the Editor (Pis'mo v redaktsiyu). On the Photochemical Isomerization of Vinyl Ketones Into Allyl Ketones (O fotokhimicheskoy izomerizatsii vinilketonov v allilketony)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2456-2458 (USSR)

ABSTRACT: The acylation of triptene (2,2,3-trimethyl butene-3) with acetic anhydride in the presence of phosphoric acid yielded the unsaturated ketone, with a β,γ-position of the double bond with respect to the carbonyl group, the 2,2-dimethyl-3-methylene hexanone-5 (I) (Scheme 1). On standing for some months the ketone (I) isomerized to form the 2,2,3-trimethyl-hexen-3-one-5 (II), under rearrangement of the double bond. An equilibrated mixture of the ketone (I) and its isomerization product (II) is there formed

$$(I) \rightleftharpoons (CH_3)_3C - \underset{(II)}{C}(CH_3) = CH - COCH_3 .$$

If this resulting equilibrated mixture of the isomeric unsaturated ketones is irradiated with ultraviolet light in

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Letter to the Editor. On the Photochemical Isomerization of Vinyl Ketones Into Allyl Ketones

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quartz, its α,β-form, the vinyl ketone (II), isomerizes completely to produce the initial β,γ-form, the allyl ketone (I): [(II)$\longrightarrow$(I)]. In this way a pure β,γ-unsaturated ketone, the 2,2-dimethyl-3-methylene hexanone-5 is formed from the mixture of the α,β- and β,γ-unsaturated ketones. In order to clarify whether this photochemical isomerization of the vinyl into the allyl ketones is of general nature, 1-acetyl cyclohexene-1 was likewise irradiated; about the half of this compound was found to be isomerized into the 1-acetyl-cyclo-hexene-2 (Scheme 3). Thus the vinyl ketones isomerize by a photochemical process completely or partially to give the allyl ketones. There are 2 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: March 24, 1958

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E032/E514

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26.2420

AUTHORS: Kostin, V.N. and Zabara, M.Ya.

TITLE: Control of the Spectral Characteristics of Composite Photocathodes for the Ultraviolet Part of the Spectrum

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp.110-116

TEXT: The control of the spectral characteristics of composite photocathodes is particularly important in the ultraviolet region. In the dosimetry of ultraviolet radiation it is desirable for the spectral sensitivity of the dosimeter to be roughly the same as the spectral sensitivity of the corresponding biological or photo-chemical process. The most widely used method for obtaining this correspondence is based on the use of light filters in combination with photo-electric devices. The aim of the present paper was to obtain an approximate matching by controlling the spectral characteristics of the photocathode used in the dosimeter. The control of the spectral characteristics of a composite photo-cathode can be obtained as follows. In Fig.1 the curves marked 1 and 2 represent plots of sensitivity versus wavelength for two different

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Control of the Spectral Characteristics of Composite Photocathodes for the Ultraviolet Part of the Spectrum

materials. If the surface of the photocathode made of material 1 is covered by fine and uniformly distributed spots of metal 2 and the area covered by the latter metal is gradually increased, then the characteristic of the composite photocathode will be displaced from position AB to position CD, i.e. it will lie between the characteristics of metals 1 and 2. If the metals 1 and 2 have widely differing characteristics, then a composite photocathode made up of these two metals can be varied within relatively wide limits. In the present work the cathode 1 (Fig.2) was prepared from aluminium or red copper and was in the form of a hollow cylinder (25 mm long, internal diameter 18 mm) and cut along a plane containing its axis. The cathode was baked in a high vacuum and then deposits of cadmium or silver or silver spots on cadmium were evaporated onto the cathode. It was shown that by using cadmium in combination with silver it is possible to obtain a spectral characteristic which is similar to the erythematic effect curve in the region between 240 and 280 mμ. An investigation was also made of the stability of such photocathodes and the ion

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Control of the Spectral Characteristics of Composite Photocathodes for the Ultraviolet Part of the Spectrum

bombardment treatment ensuring constant photo-sensitivity. It was found that a photon counter filled with pure hydrogen and having a composite cadmium-silver cathode had stable characteristics after intense ion bombardment. Fig.7 shows a typical characteristic obtained with a cadmium-silver composite photocathode as well as the separate characteristics for cadmium and silver. Acknowledgments are made to Academician K. D. Sinel'nikov and Docent V. K. Tkach for valuable advice and assistance. There are 7 figures and 3 Soviet references.

ASSOCIATION: Khar'kovskiy gosuniversitet imeni A. M. Gor'kogo
(Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 3, 1959

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SOV/79-30-2-3/78

AUTHORS: Levina, R. Ya., Kostin, V. N., Ostriyuk, T. K.

TITLE: Reaction of Cyclopropanes With Mercuric Salts. XI. Cleavage of the Three-Membered Ring in (0, 1, N)-Bicycloalkanes (N = 2,3, and 4)

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 359-363 (USSR)

ABSTRACT: The action of mercuric acetate on (0,1,3)-bicyclohexane (I, northujane), (0,1,4)-bicycloheptane (IV, norcarane), and (0,1,2)-bicyclopentane (VI), as well as other (0,1,N)-bicycloalkanes, can be used to identify these substances by the final reaction products -mercurated alcohols and their derivatives. The reactions for compounds I, IV, and VI are represented below:

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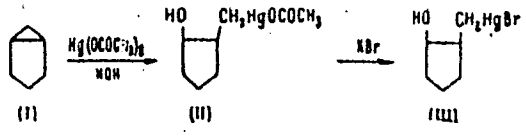
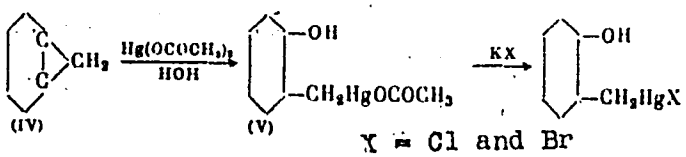


(I) (II) (III)



(IV) (V)

X = Cl and Br

(VI) (VII)

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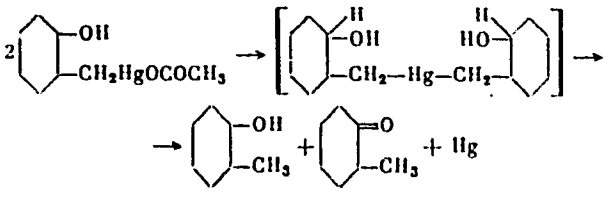
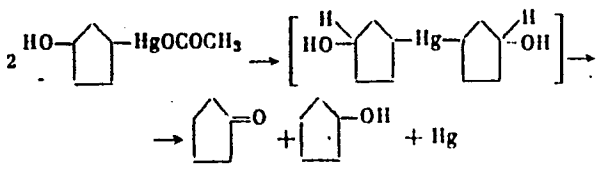
The reactions were performed by mixing the respective hydrocarbon with mercuric acetate (at room temperature for compounds I and IV and at 0° for VI) and by subsequent addition of potassium bromide to the product (the mercurated alcohols II, V, and VII) to obtain the halomercuri-derivatives. The cleavage of the three-membered ring in (0,1,2)-bicyclopentane takes place at the carbon-carbon "bridge" bond, while in the case of (0,1,3)-bicyclohexane and (0,1,4)-bicyclo-heptane the bond between the least and the most substituted carbon atoms is broken, leading to the formation of mercurated alcohols of the cycloheptane and cyclohexane series, respectively. The site of the ring cleavage was determined by results of thermal decomposition of mercurated alcohols. The reactions and final products for the pyrolysis of V and VII are shown below:

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-





The following derivatives of the mercurated alcohols were isolated and analyzed: 2-hydroxy-1-bromo-

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

Reaction of Cyclopropanes With Mercuric Salts. XI

77852
SOV/79-30-2-3/78

mercurimethylcyclopentane (III), 151-152°; 2-hydroxy-1-acetoxymercurimethylcyclohexane (V), mp 129-130°; 3-hydroxy-1-chloromercuricyclopentane, mp 97-98°; 3-hydroxy-1-bromomercuricyclopentane, mp 129-130°; 3-hydroxy-1-thiocyanomercuricyclopentane, mp 110-111°; 2-hydroxy-1-chloromercurimethylcyclohexane; mp 122-123°; 2-hydroxy-1-bromomercurimethylcyclohexane, mp 114-115°. There are 13 references, 4 Soviet, 5 German, 1 Belgian, 1 Swiss, 2 U.S. The U.S. references are: W. E. Doering, A. K. Hoffman, J. Am. Chem. Soc., 76, 6162 (1954); C. R. Noller, R. Adams, J. Am. Chem. Soc., 48, 1084 (1926).

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: March 2, 1959

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APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

5.3500

SOV/79-30-3-27/69

AUTHORS: Levina, R. Ya., Kostin, V. N., Gembitskiy, P. A., Treshchova, Ye. G.

TITLE: Cyclopropanes and Cyclobutanes. X. Acylation of Cyclopropanes

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 868-875 (USSR)

ABSTRACT: The behavior of the cyclopropane ring in phenylcyclopropane, an acylation with acetic anhydride in the presence of phosphoric acid, was studied. The reaction proceeds through isomerization of cyclopropanes into alkenes, which on further acylation yield an unsaturated ketone, 2-benzylidenbutanone (yield 36.5%), mp 30°. $C_6H_5-\langle\triangle\rangle \longrightarrow C_6H_5CH_2-CH(CH_3)$ $\xrightarrow[(H_3PO_4)]{(CH_3CO)_2O}$

$$\left[\begin{array}{l} C_6H_5CH \\ | \\ OCOCH_3 \end{array} \begin{array}{l} -CH-COCH_3 \\ | \\ CH_3 \end{array}\right] \xrightarrow{-CH_3COOH} C_6H_5-CH=\underset{\displaystyle CH_3}{\overset{\displaystyle |}{C}}-COCH_3$$

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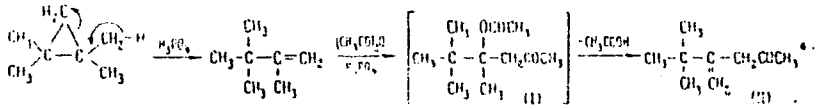
All other cyclopropanes behave similarly. The structure of the prepared 2-benzylidenbutanone was confirmed by parallel synthesis.

$$C_6H_5CHO + CH_2(CH_3)-COCH_3 \xrightarrow{(HCl)} C_6H_5CH=C(CH_3)-COCH_3$$

Isomerization of phenylcyclopropane and 1,1,2,2-tetramethylcyclopropane in acetic anhydride in the presence of phosphoric acid yields propenylbenzene and 2,2,3-trimethylbutene, bp 162° (745 mm), n_D^{20} 1.4530, respectively. This constitutes a heterolytic cleavage of the cyclopropane ring.



Card 2/4

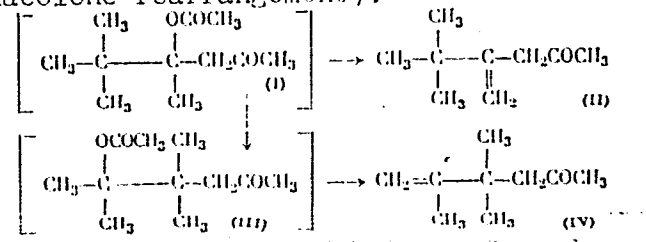
APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

Cyclopropanes and Cyclobutanes. X. Acylation of Cyclopropanes

SOV/79-30-3-27/69

Acylation of 1,1,2,2-tetramethylcyclopropane or 2,2,3-trimethylbutene yields a β,γ-unsaturated ketone, 2,2-dimethyl-3-methylenehexan-5-one, which is formed from the intermediate acetoxyketone by elimination of an acetic acid molecule (without retropinacolone rearrangement).



The structure of unsaturated ketones formed on acylation of phenylcyclopropane and 1,1,2,2-tetramethylcyclopropane was confirmed by absorption spectra of their 2,4-dinitrophenylhydrazones, and by comparison of their properties with those of authentic samples. There are 12 references, 6

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Cyclopropanes and Cyclobutanes. X. Acylation of Cyclopropanes

SOV/79-30-3-27/69

Soviet, 2 U.S., 2 U.K., 1 French, 1 German. The U.S. and U.K. references are: Hart, H., Curtis, O. E., Jr., J. Am. Chem. Soc., 79, 931 (1957); Sukh, Dev, Chem. and Ind., 1071 (1954); Hartough, H., Kosak, A., J. Am. Chem. Soc., 69, 3093 (1947); Perkin, W. H., J. Chem. Soc., 69, 1028 (1896).

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: March 31, 1959

Card 4/4

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; SHOSTAKOVSKIY, S.M.; TRESHCHOVA, Ye.G.

Cyclopropylmesitylene and p-cyclopropylcumene. Zhur.ob. khim. 30 no.7:2435-2436 Jl '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet.
(Mesitylene) (Cumene)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

84886

5.3300 only 2209, 1236

S/079/60/030/010/029/030
B001/B066

AUTHORS: Levina, R. Ya., Kostin, V. N., Gembitskiy, P. A., and Shostakovskiy, S. M.

TITLE: New Hydrocarbons of the Cyclopropane Series

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 10, pp. 3502 - 3503

TEXT: The authors continued their investigations on cyclopropanes (Refs. 1 and 2) by synthesizing some new compounds of this series. By partial reduction of phenyl- and p-tolyl cyclopropane with sodium (in liquid ammonia) and methyl alcohol, 1-cyclopropyl-cyclohexadiene-1,4 and 1-methyl-4-cyclopropyl-cyclohexadiene-1,4 were synthesized. The subsequent catalytic hydrogenation of the double bonds in 1-cyclopropyl-cyclohexadiene-1,4 (on a copper-chromium catalyst at a pressure of 100 atm) at 95° and 125° gave cyclopropyl-cyclohexene-1 and, later, cyclopropyl-cyclohexane; the latter was also obtained by methylenation (Ref.3) of vinyl cyclohexane. p-cyclopropyl styrene and p-cyclopropyl-isopropenyl benzene were, accordingly, synthesized by dehydration of

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84886

New Hydrocarbons of the Cyclopropane Series S/079/60/030/010/029/030
B001/B066

methyl- and dimethyl-p-cyclopropyl-phenyl carbinols (both carbinols were obtained from p-cyclopropyl-acetophenone). p-dicyclopropyl benzene resulted both from p-cyclopropyl acetophenone, according to the stepwise reactions of Mannich and Kizhner ($R_ef.4$), and from p-cyclopropyl styrene by methylenation (Ref.3). The constants of the resultant hydrocarbons are tabulated. There are 1 table and 4 references: 3 Soviet and 1 US.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: June 13, 1960

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; VINOGRADOV, A.D.

Reactions of cyclopropane hydrocarbons with mercury oxide salts. Part 12: γ-Mercurated alcohols from 1,1-dimethyl-2-alkylcyclopropanes. Vest. Mosk. un. Ser. 2:Khim. 16 no.1:67-68 Ja-F '61. (MIRA 14:4)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.
(Mercury organic compounds)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; SHOSTAKOVSKIY, S.M.

New hydrocarbons of the cyclopropane series. Zhur.ob.khim. 30 no.10:3502-3503 O '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet.
(Cyclopropane)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R. Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; TRESHCHOVA, Ye. G.

Cyclopropanes and cyclobutanes. Part 17: Reduction of arylcyclopropanes by metals and methyl alcohol in liquid ammonia. Zhur. ob. khim. 31 no.3:829-836 Mr '61. (MIRA 14:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Cyclopropane)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R. Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; SHOSTAKOVSKIY, S.M.; TRESHCHOVA, Ye.G.

Cyclopropanes and cyclobutanes. Part 18: ρ-Cyclopropylcumene and ρ-isopropenylcumene. Zhur. ob. khim. 31 no.4:1185-1190 Ap '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet.
(Benzene)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; SHANAZAROV, K.S.; KOSTIN, V.N.

Synthesis of hydrocarbons. Part 77: Stereoisomeric 1, 3, 5-trialkyl-[0, 1, 3]^{1}; ^{3}-bicyclohexanes. Zhur.ob.khim. 31 no.6: 1823-1827 Je '61. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Bicyclohexane)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; KOSTIN, V.N.; GEMBITSKIY, P.A.; SHOSTAKOVSKIY, S.M.; TRESHCHOVA, Ye.G.

Cyclopropanes and cyclobutanes. Part 24: Cyclopropylmesitylene. Zhur.ob.khim. 32 no.5:1377-1382 My '62. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet.
(Mesitylene)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

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ASD(p)-3/ASD(a)-5/BSD/AFWL/ESD(gs)/ESD(dp)/ESD(t)/RAEM(t)/AS(mp)-2 JD/AT
ACCESSION NR: AR4044073 S/0058/63/000/011/H045/H046

SOURCE: Ref. zh. Fizika, Abs. 11Zh363

AUTHOR: Kostin, V. N.; Petrenko, L. A.

TITLE: The influence of ion bombardment on the photoelectric properties of copper

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 127, 1962, Tr. Radiofiz. fak., v. 6, 93-98

TOPIC TAGS: ion bombardment, photelectric property, copper, counter, control cathode

TRANSLATION: Investigates the influence of ion bombardment on the photoelectric properties of Cu in nonself-quenching hydrogen-filled counters. The design of the counters permits investigation of the influence of bombardment on the working Cu-cathode and simultaneous comparison of it with an identical control cathode which is not bombarded. It is shown that the characteristics of both cathodes under ordinary circumstances change little with time, and that these changes are identical for both cathodes. However, ion bombardment (positive corona) of the working

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cathode with gradually increasing current values (23-300 μa) greatly decreased the sensitivity of both cathodes to UV radiation (more sharply for the working cathode than for the control cathod); at a bombardment current of 125 μa the working cathode ceases to be sensitive to UV radiation. With further voltage increase the coronal discharge abruptly became an intermediate discharge (voltage 1300 v, current 3 ma), and bombardment under these conditions for 2 minutes resulted in a sharp increase of cathode sensitivity to UV radiation. The sensitivity of the control cathode in this case remained as before. The threshold of spectral sensitivity of the control cathode also remained unchanged, while for the working cathode it was displaced by approximately ~25 mμ toward higher wavelengths and the work function decreased by 0.4 ev. Thus it was shown that bombardment of a cathode with positive ions decreases its work function.

SUB CODE: IC, NP ENCL: 00

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; SHANAZAROV, K.S.; KOSTIN, V.N.; TRESHCHOVA, Ye.G.

Synthesis of hydrocarbons. Part 78: New synthesis of 1,1,3,3,4-pentamethylcyclopentane. Zhur.ob.khim. 32 no.8:2637-2640 Ag '62. (MIRA 15:9)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Cyclopentane)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R. Ya.; SHANAZAROV, K. S.; TRESHCHOVA, Ye. G.; KOSTIN, V. N.

Synthesis of hydrocarbons. Part 79: Synthesis of stereoisomeric 1,3-dimethyl-5-alkylbicyclo(0,1,3)hexanes and their Raman spectra. Zhur. ob. khim. 32 no.12:3935-3941 D '62.
(MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.

(Bicyclohexane—Spectra)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; GEMBITSKIY, P.A.; KOSTIN, V.N.; TRESHCHOVA, Ye.G.

Cyclopropanes and cyclobutanes. Part 27: Cyclopropylalkylbenzenes. Zhur.ob.khim. 33 no.2:359-365 F '63. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Benzene) (Cyclopropyl group)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

LEVINA, R.Ya.; GEMBITSKIY, P.A.; KOSTIN, V.N.; SHOSTAKOVSKIY, S.M.; TRESHCHOVA, Ye.G.

Cyclopropanes and cycloputanes. Part 28: p-Acetylphenylcyclopropane in the synthesis of para-substituted cyclopropylbenzenes. Zhur.ob.khim. 33 no.2:365-371 F '63. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Acetophenone) (Benzene derivatives)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.N.

Widely expand the use of oxygen in nonferrous metallurgy. TSvet. met. 36 no.5:1-4 My '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.N., kand. tekhn. nauk; RYCHKOV, A.I., doktor tekhn. nauk, prof. [deceased]

1. Heat emission of corrugated heating surfaces when boiling water. Khim. i neft. mashinostr. no.2:30-32 Ag '64 (MIRA 18:1)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN,V.N.; TKACHENKO, V.M.

Effect of a constant magnetic field on a stationary corona discharge. Zhur. tekh. fiz. 34 no.5:883-887 My'64 (MIRA 17:8)

1. Khar'kovskiy gosudarstvennyy universitet imeni Gor'kogo.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

KOSTIN, V.N.; TKACHENKO, V.M.

Effect of a constant magnetic field on a stationary corona discharge. Zhur. tekh. fiz. 34 no.7:1252-1258 Jl '64 (MIRA 17:8)

1. Khar'kovskiy gosudarstvenny universitet imeni Gor'kogo.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

S/120/62/000/001/043/061
E192/E382

27.4120

AUTHORS: Kostin, V.N. and Tkachenko, V.M.

TITLE: Operation of photo-cells under pulsed conditions

PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1962, 173 - 176

TEXT: The operation of gas-filled photo-cells under pulsed conditions offers new possibilities in photo-electronic automation systems. The pulsed operating regime has therefore been investigated in detail by employing argon-filled photo-cells, type ЦГ-4 (TsG-4), with O-Cs cathodes and vacuum photo-cells, СЦБ-4 (STsV-4), with Sb-Cs cathodes (manufactured at Moskovskiy elektrozavod (Moscow Electrical Works)). The spectral characteristics of these cells extend over the visible range so that a 6 V battery-fed lamp was used as the illumination source. The intensity of the illumination was controlled by varying the current. The cell and the lamp were enclosed in a special envelope to eliminate the outside radiation of the cell. The cell was connected to an amplifier head (type БГС(BGS)) through

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a spark gap consisting of a plate and a point. The width of the spark gap could be varied and measured with an error of ± 0.005 mm since the point was mounted on a micrometer screw. The plate was in the form of a solid metal slab. The basic circuit for the investigation is illustrated in Fig. 2, where [illegible] is the spark gap. The positive terminal of a high-voltage stabilized supply source was connected to the cell through the spark gap and a quenching resistor of 2 MΩ. The negative terminal of the supply source and the cathode of the photo-cell were grounded. The pulses produced in the circuit were applied to the first amplifier tube through a coupling condenser of 47 pF. The amplifier head was connected to a counter by means of a screened cable. The operation of the photo-cells was investigated by measuring their electrical and photometric characteristics. It is concluded from the investigation that: 1) the number-of-pulses versus voltage characteristics of the photo-cells under pulsed conditions are qualitatively comparable with the voltage-current characteristics under normal DC

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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

conditions;
2) the photo-cells can be used photometrically under pulsed conditions since the number of output pulses is linearly dependent on the illumination;
3) the absolute sensitivity under pulsed conditions is comparable with that of the DC operation but the threshold sensitivity is at least 20 times higher;
4) the pulsed operation has the advantage of the absence of dark currents, a high pulsed voltage, possibility of a direct telemetry transmission and a high breakdown voltage.
There are 7 figures.

4

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet
(Khar'kov State University)

SUBMITTED: June 30, 1961

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825220006-6

ACCESSION NR: AP4017599 S/0109/64/009/002/0293/0299

AUTHOR: Tkachenko, V. M.; Kostin, V. N.; Belous, V. V.

TITLE: Effect of a high-frequency electric field on the glow discharge

SOURCE: Radiotekhnika i elektronika, v. 9, no. 2, 1964, 293-299

TOPIC TAGS: glow discharge, glow discharge column, glow discharge column compression, hf glow discharge column compression, glow discharge in air, glow discharge in hydrogen, glow discharge in deuterium

ABSTRACT: A theoretico-experimental investigation of the effect of an axially-symmetric h-f field produced by a set of rings on the glow discharge for various field frequencies, discharge currents, gases, and gas pressures is reported. A formula is developed for the diameter of the compressed-discharge column which depends on the field frequency, electron temperature, discharge-tube radius, and the frequency of collisions between ions and gas molecules (i.e., ion temperature

Card 1/2

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