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12-4-58

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KUKIN, G. N.

AUTHOR: ROGOVIN, Z.A. and KUKIN, G.N., Professors 28-3-24/33

TITLE: To the Problem of Classification of Artificial Filaments
(Concerning the suggestion of V.A. Usenko) (K vprosu o klas-
sifikatsii iskusstvennykh volokon. (Po povodu predlozheniya
V.A. Usenko))

PERIODICAL: Standartizatsiya, 1957, No 3, May-June, pp 82-83 (USSR)

ABSTRACT: Z.A. Rogovin and G.N. Kukin, professors of the Moscow Tex-
tile Institute, write to the editors of this journal concern-
ing V.A. Usenko's suggestion (Standartizatsiya, 1956, No 1).
Professor Rogovin does not object to Usenko's suggestions
but thinks that only a special commission of the Chemical
Society imeni D.I. Mendeleev should consider such suggestions.
Professor Kukin does not agree with the term "chemical fila-
ments" or "filament thread" and sees no reason why the old
term "artificial filaments" should be abolished, though he
agrees that research organizations ought to study the problem
of classification and proper terminology for artificial
filaments.

ASSOCIATION: Moscow Textile Institute (Moskovskiy tekstil'nyy institute)
AVAILABLE: Library of Congress

Card 1/1

KUKIN, G.N., prof.; RUSAKOVA-MOROZOVSKAYA, I.S., inzh.

Tensile strength test of textile fabrics in maintaining the rate of deformation of samples. Izv. vys.ucheb.zav.; tekhn.leg. prom. no.1: 90-96 '58. (MIRA 11:6)

1.Moskovskiy tekstil'nyy institut.
(Textile fabrics--Testing)

BARDIN, I.P., akademik; DYMOV, A.M., prof., doktor khim.nauk; DIKUSHIN, V.I.; akademik; TSELIKOV, A.I.; OTLEV, I.A., inzh. (g. Khimki, Moskovskoy oblasti).; DEM'YANYUK, F.S., prof., doktor tekhn.nauk; RYBKIN, A.P., prof., doktor tekhn.nauk; YAKUSHEV, A.I., prof., dokt. tekhn.nauk; KIDIN, I.M., prof. doktor tekhn.nauk; KOROTKOV, V.P., dots., kand. tekhn.nauk; SHUKHGAL'TER, L.Ya., dots., kand.tekhn.nauk; KUKIN, G.H., prof., doktor tekhn.nauk.

Every specialist should know the principles of of standardization.
Standartizatsiia 22 no.4:34-40 JI-Ag '58. (MIRA 11:10)

1.Chlen-korrespondent AN SSSR (for Tselikov). 2.Predsedatel' tekhniko-ekonomicheskogo soveta Mosoblsovnarkhoza (for Rybkin). 3.Direktor Moskovskogo instituta stali imeni I.V. Stalina (for Kidin). 4.Direktor Moskovskogo vechernego mashinostroitel'nogo instituta (for Korotkov).
(Standardization--Study and teaching)

KUKIN, Georgiy Nikolayevich, prof.; NOSOV, Mikhail Pavlovich, inzh.;
ORLOVA, L.A., red.; MEDVEDEV, L.Ya., tekhn. i.

[Fatigue testing machines for textile fabrics] Pribory dlia
ispytaniia tekstil'nykh materialov na ustalost'. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 107 p.
(MIRA 13:1)

(Textile fabrics--Testing)

KUKIN, G.N.

Training of textile engineers in the Polish People's Republic.
Izv. vys. ucheb. zav.; tekhn. tekst. prom. no.5:139-147 '59
(MIRA 13:3)

1. Moskovskiy tekstil'nyy institut,
(Poland--Textile industry)

KUKIN, G.N., prof.;USENKO, V.A., prof.

Conference on yarn twisting. Izv. vys. ucheb. zav.; tekhn. tekst.
prom. no.5:153-155 '59 (MIRA 13:3)
(Yarn--Congresses)

KUKLIN, G.V. (Irkutsk)

Elements of YY Cancri. Astron. tsir. no.202:16-17 Jo '59.

(MIRA 13:4)

(Stars, Variable)

ZOTIKOV, V.Ye.; KUKIN, G.N.; USENKO, V.A.

Scientific research in the special departments of the Faculty of
Technology of the Moscow Textile Institute. Izv.vys.ucheb.sav.;
tekh.tekst.prom. no.2:138-141 '69. (MIRA 13:11)
(Moscow--Textile research)

KUKIN, Georgiy Nikolayevich, prof.; SOLOV'YEV, Aleksey Nikolayevich, prof.; KISELEV, A.K., dotsent, retsenzent; PAKSHVER, A.B., prof., retsenzent; BUDNIKOV, V.I., dotsent, retsenzent; LAZAREVA, S.Ye., kand.tekhn.nauk, retsenzent; LUVISHIS, L.A., kand.tekhn.nauk, retsenzent; TUMAYAN, S.A., kand.tekhn.nauk, retsenzent; SHTEYNGART, M.D., red.; SHVETSOV, S.V., tekhn.red.

[Guide to textile materials] Tekstil'noe materialovedenie.
Pod obshchei red. G.N.Kukina. Moskva, Izd-vo nauchno-tekhn.lit-ry.
Pt.1. 1961. 303 p. (MIRA 15:4)

1. Ivanovskiy tekstil'nyy institut (for Kiselev). 2. Vsesoyuznyy zaochnyy institut legkoy i tekstil'noy promyshlennosti (for Pakshver). 3. Tashkentskiy tekstil'nyy institut (for Budnikov). 4. Vsesoyuznyy institut promyshlennosti lubyanykh volokon (for Lazareva). 5. Tsentral'nyy nauchno-issledovatel'skiy institut sherstyanyoy promyshlennosti (for Luvishis). 6. Tsentral'nyy nauchno-issledovatel'skiy institut shelkovoy promyshlennosti (for Tumayan).

(Textile fibers)

KUKIN, G.N.; NAYMARK, N.I.

Using the electrical analogies method for studying the deformations of textile fibers. Report No.1. Izv.vys.ucheb. zav.; tekhn.tekst.prom. no.5:12-19 '61. (MIRA 14:11)

1. Moskovskiy tekstil'nyy institut.
(Deformations (Mechanics)—Electromechanical analogies)
(Textile fibers, Synthetic)

KOBYAKOV, A.I., ~~kand.~~tekhn.nauk, dotsent; KUKIN, G.N., doktor tekhn.nauk, prof.

Instruments for determining the components of the stretch deformation of textile fabrics. Izv.vys.ucheb.zav.; tekhn.prom. no.5:26-33 '61. (MIRA 14:12)

1. Moskovskiy tekstil'nyy institut. Rekomendovana kafedroy tekstil'nogo ~~materialovedeniya.~~
(Textile fabrics—Testing)

KOBYLAKOV, A.I., kand.tekhn.nauk; KUKIN, G.N., doktor tekhn.nauk, prof.

Determining the components of the stretch deformation of fabrics.
Izv.vys.ucheb.zav.; tekhn.leg.prom. no.6:23-34 '61. (MIRA 14:12)

1. Moskovskiy tekstil'nyy institut. Rekomendovana kafedroy
tekstil'nogo materialovedeniya.

(Textile fabrics--Testing)
(Strains and stresses)

BOGATOV, A.V.; KUKIN, G.N.

Using the "tex" system in determining the fineness of fibers and
yarn. Standartizatsiia 25 no.9:32-35 S '61. (MIRA 14:9)
(Textile fibers--Testing)
(Yarn--Testing)

KUKIN, G.N.

Strain characteristics of the yarn in tension under various conditions. Report No.1. Izv.vys.ucheb.zav.; tekhn.tekst.prom. no.1: 18-25 '62. (MIRA 15:3)

1. Moskovskiy tekstil'nyy institut.
(Yarn--Testing)

KUKIN, G.N., prof., doktor tekhn.nauk

Study of the properties of textiles in France. Tekst.prom. 22
no.2:76-80 F '62. (MIRA 15:3)

1. Moskovskiy tekstil'nyy institut.
(France---Textile research)

KUKIN, G.N.

Survey on the mechanical properties of textile fibers.

Report presented at the 13th Conference on high-molecular compounds
Moscow, 8-11 Oct 62

KUKIN, G. N., Prof. Dr.

"Work by Soviet research workers in the study of the mechanical properties of textile materials"

Report to be submitted at A General Textile Engineering Conference,
Leipzig, East Germany, 14-16 Nov '63

TUMANOV, A.T., glav. red.; VYATKIN, A.Ye., red.; GARBAN, M.I., kand. tekhn. nauk, red.; ZAYMOVSKIY, A.S., red.; KARGIN, V.A., red.; KISHKIN, S.T., red.; KISHKINA-RATNER, S.I., doktor tekhn. nauk, red.; PANSHEV, B.I., kand. tekhn. nauk, red.; ROGOVIN, Z.A., doktor khoz. nauk, red.; SAZHIN, N.P., red.; SKLYAROV, N.M., doktor tekhn.nauk, red.; FRIDL'YANDER, I.N., doktor tekhn. nauk, red.; SHUBNIKOV, A.V., red.; SHCHERBINA, V.V., doktor geol.-miner. nauk, red.; SHRAYBER, D.S., kadn. tekhn.nauk, red.; GENEL', S.V., kand. tekhn.nauk, red.; NOVIKOV, A.S., doktor khoz. nauk, red.; KITAYGORODSKIY, I.I., doktor tekhn. nauk, red.; ZHEREBKOV, S.K., kand. tekhn. nauk, red.; BOGATYREV, P.M., kand. tekhn. nauk, red.; EUROV, S.V., kand. tekhn. nauk, red.; POTAK, Ya.M., doktor tekhn. nauk, red.; KUKIN, G.N., doktor tekhn. nauk, red.; KOVALEV, A.I., kand. tekhn. nauk, red.; ZENTSEL'SKAYA, Ch.A., tekhn. red.

[Building materials; an encyclopedia of modern technology]
Konstruktsionnye materialy; entsiklopediia sovremennoi tekhniki. Glav. red. Tumanov, A.A. Moskva, Sovetskaia entsiklopediia. Vol.1. Abliatsiia - Korroziia. 1963. 416 p.
(MIRA 17:2)

1. Chlen-korrespondent AN SSSR (for Kishkin).

NOSOV, Mikhail Pavlovich; KUKIN, G.N., doktor tekhn. nauk, prof.,
retsensent; BULGAROVA, N.D., inzh., red.

[Dynamic fatigue of polymer threads] Dinamicheskaya usta-
lost' polimernykh nitel. Kiev, Gostekhnizdat USSR, 1963. 195 p.
(MIRA 17:5)

LANDYSHEVA, V.A.; KALININA, N.G.; RADCHENKO, G.O.; KUKIN, G.N.; CHERNOV, Ye.N.

Surface acetylated cotton. Report No.1. V.A.Landysheva and others.
Izv.vys.uchob.zav.; tekhn.tekst.prom. no.3:50-56 '63. (MIRA 16:9)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh
smol (for Landysheva, Kalinina, Radchenko). 2. Moskovskiy tekstil'-
nyy institut (for Kukin, Chernov).
(Cotton)
(Acetylation)

KUKIN, G.N., prof.; SARDIKOVA, F.M., dozent

Optimum dimensions of the fabric strip in the determination of the breaking load and elongation. Tekst. prom. 24 no.3:72-75 Nr 164.

(MIRA 17:9)

1. Kafedra tekstil'nogo materialovedeniya Moskovskogo tekstil'nogo instituta.

ZUBOV, Val'ter Afanas'yevich; KUKIN, G.N., doktor tekhn. nauk,
prof., retsenzent; KISELEV, A.K., doktor tekhn. nauk
prof., spets. red.; CHUGREYEVA, V.N., red.

[Collection of problems on the study of textile materials]
Sbornik zadach po tekstil'nomu materialovedeniju. Moskva,
Legkaja industrija, 1961. 113 p. (MIRA 13-7)

BUZOV, Boris Aleksandrovich; POZHIDAYEV, Nikolay Nikolayevich;
MODESTOVA, Tat'yana Alekseyevna; PAVLOV, Anatoliy
Ivanovich; FLEROVA, Lyudmila Nikolayevna; ZORUK,
Vladimir Luk'yanovich; SADYKOVA, F.Kh., dots., retsenzent;
KUKIN, G.N., prof., red. ; GRACHEVA, A.V., red.

[Practical laboratory work on the study of materials for
the clothing industry] Laboratornyi praktikum po materialo-
vedeniiu shveinogo proizvodstva. [By] B.A.Buzov i dr. Mo-
skva, Legkaia industriia, 1964. 439 p. (MIRA 18:2)

KOZYREVA, Zoya Mikhaylovna; NAGDASEVA, Inna Pavlovna; PISKAREV,
Ivan Vasil'yevich; CHARUKHIN, Ivan Gavrilovich;
YAMINSKAYA, Yelizaveta Yakovlevna; KUKIN, G.M., doktor
tekhn. nauk, prof., retsenzent; AGADZHANOVA, I.A., red.

[Industrial fabrics and their use] Tekhnicheskie tkani i
ikh primeneniye. Moskva, Legkaya industriia, 1965. 251 p.
(MIRA 18:9)

DRUZHININA, T.V., nauchnyy sotrudnik; ANDRICHENKO, Yu.D., nauchnyy sotrudnik;
KONKIN, A.A., prof.; MONASTYRSKIY, A.G.; KUKIN, G.N., prof.

Mechanical properties of fibers made from polyethylene and
copolymer of ethylene with propylene. Tekst. prom. 25
no.5:19-24, My '65. (MIRA 18:5)

KASHPAREK, Ya. [Kasperek, J.]; KUKIN, G.N., prof., rukovoditel' raboty;
Prinimali uchastiye: STEYSKAL, A. [Stey'skal, A.], inzh.; SHKARKOVA, M.
[Skarkova, M.]; MARESHOVA, I. [Mare'ova, I.]

Spatial distribution of fibers in cotton yarn. Izv.vys.ucheb.zav.;
tekh.tekst.prom. no.3:37-42 '65.

(MIRA 18:8)

1. Nauchno-issledovatel'skiy institut khlopchatobumazhnoy
promyshlennosti v gorode Usti nad Orlicy, Chekhoslovatskoy
Sotsialisticheskoy Respubliki.

APR 1965

538.4 : 532.542

30
13

Smolin, I. K.; Smolin, G. G.

Some problems of two-dimensional channel flow of incompressible fluid in
magnetic and magnetic fields

Magnitnaya gidrodinamika, no. 1, 1965, 43-54

magnetohydrodynamics, laminar flow, conductive fluid, boundary layer

two-dimensional steady laminar flow of an electrically conducting in-

compressible fluid in a channel with a magnetic field

special cases of flow in a channel with a magnetic field

APR 01 1975

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OTHER: 002

ACC NR: AP7001210 SOURCE CODE: UR/0141/66/009/006/1078/1084

AUTHOR: Dryagin, Yu. A.; Kislyakov, A. G.; Kukin, L. M.; Naumov, A. I.; Fedoseyev, L. I.

ORG: Scientific Research Institute of Radiophysics at Gor'kiy State University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Measurement of atmospheric radio wave absorption in the 1.36—3.0-mm range

SOURCE: IVUZ. Radiofizika, v. 9, no. 6, 1966, 1078-1084

TOPIC TAGS: millimeter wave, radio wave propagation, radio wave absorption

ABSTRACT: Results of an experimental investigation of atmospheric absorption of radio waves in the 1.36—3.0-mm range are reported. Coefficients of atmospheric absorption were measured using special transmitting and receiving equipment. Detector-type modulated radiometers and parabolic antennas with diameters of 300 mm formed the receiving system. The transmitting system consisted of a parabolic mirror 920 mm in diameter, a plane reflector (diameter, 130 mm), and a backward-wave tube serving as a power generator. Antennas equipped for

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UDC: 621.371.166

ACC NR: AP7001210

orientation purposes with optical sighting devices were installed on rotary systems of the vertical-azimuth type. Methods of varying humidity and of measuring the distance between transmitting and receiving points were used while determining the absorption coefficient. The absorption coefficients of water vapor (over the entire wave range indicated), and molecular oxygen (near the 2.53-mm line) were measured. It was found that the absorption coefficient of water vapor in the frequencies far from resonance is 1.5—2 times larger than the theoretical value calculated for it by S. A. Zhevakin and A. P. Naumov (Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika, no. 6, 1963, 674). The resonance absorption coefficient ($\lambda = 1.63$ mm) is equal to 26.8 ± 1 db·km⁻¹ as compared to 31.6 db·km⁻¹ given in the same calculation. The great discrepancy between measured and calculated values of the absorption coefficient of water vapor at frequencies far from resonance cannot be explained by an incorrect choice of line half-width. The measured value in air of the line half-width is 0.1025 ± 0.0035 cm⁻¹; the calculated value is 0.087 cm⁻¹. The absorption coefficient of oxygen at the 2.53-mm wavelength closely agrees with the calculated one. For wavelengths other than 2.53 mm the measured absorption coefficient exceeds the calculated one by a factor of 5—10. Orig. art. has: 2 figures and 6 formulas. [WA-3]

SUB CODE: 17,09 SUBM DATE: 26Jan66/ ORIG REF: 007/ OTH REF: 014
ATD PRESS: 5111
Card 2/2

L 32842-66 EWP(m)/EWT(1)/EWT(m)/T DJ

ACC NR: AP6008831

SOURCE CODE: UR/0294/66/004/001/0073/0079

AUTHOR: Kukin, I. K. (Moscow); Smolin, G. G. (Moscow)

83
82
B

ORG: None

TITLE: Two-dimensional isothermal flow of an electroconducting fluid and gas in a channel in the presence of an electrical and a magnetic fields

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 1, 1966, 73-79

TOPIC TAGS: fluid flow, conducting fluid, gas flow, isothermal flow, plane flow, electroconductive fluid, electric field, magnetic field

ABSTRACT: The authors investigate two-dimensional, stabilized, isothermal flow of an electroconducting compressible fluid in a plane channel in the presence of crossed electrical and magnetic fields. Use is made of an approximate equation system, analogous in form to boundary-layer equations. Self-similar solutions are derived and presented by means of the Jacobi elliptical functions. The existence conditions for these solutions are examined. As a particular case, the authors obtain relationships for the velocity profile and pressure variations along the axis of the channel applicable to the flow of an incom-

Card 1/2

UDC: 532.542:538.6:537.29

L 32842-66

ACC NR: AP6008831

pressible fluid. Orig. art. has: 24 formulas and 4 figures.

SUB CODE: 20 / SUBM DATE: 13Jan65 / OTH REF: 003

LS

Card 2/2

KUKIN, I.P., zootekhnik.

One woman milks 190 cows. Nauka i pered.op. v sel'khoz.no.9:42-
44 S '56. (Milking) (MLRA 9:10)

KUKIN, N. N., Prof.

Director, Departmental surgical clinic, Kishinev state medical institute.

"Case of acute cholecystitis in a two-year-old child," by S. D. Goligorskiy and I. A. Kapitskaya, Vest. khir. 72 no. 4 J1-Ag 1952.

KOLYADITSKAYA, Ye. A.; KUKIN, N. N.

Cellular content of secretion and its diagnostic significance in bleeding breast. *Khirurgia*, Moskva no.10:48-52 Oct 1953. (CJML 25:5)

1. Candidate Medical Sciences for Kolyaditskaya; Doctor Medical Sciences, Professor for Kukin. 2. Of the Institute of Surgery imeni A. V. Vishnevskiy (Director -- Prof. A. A. Vishnevskiy, Corresponding Member AMS USSR; Head of the Clinical Diagnosis Laboratory -- Candidate Medical Sciences Ye. A. Khrushcheva), Academy of Medical Sciences USSR.

GOLIGORSKIY, S.D.; ANESTIADE, N.Kh.; KUKIN, N.N., professor, direktor.

Empyema of the stump of the ureter. Klin.med. 31 no.3:87 Mr '53.
(MLRA 6:5)

1. Fakul'tetskaya khirurgicheskaya klinika Kishinevskogo meditsinskogo in-
stituta na baze Respublikanskoy klinicheskoy bol'nitsy.
(Ureters--Diseases) (Empyema)

КУКИН, Н. Н.

GOLIGORSKIY, S.D. (Kishinev); TSEBYRNE, K.A. (Kishinev); SHOYKHET, R.W.
(Kishinev)

Treatment of acute nonspecific cystitis with presacral novocaine-
penicillin blocks. Klin.med. 32 no.1:84 Ja '54. (MLRA 7:4)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (direktor - professor
N.N.Kukin) Kishinevskogo meditsinskogo instituta i Respublikanskoy
klinicheskoy bol'nitsy.

(Bladder--Inflammation) (Penicillin)
(Novocaine)

KUKIN, Nikolay Nikolayevich; GEEKHTMAN, Mikhail Yakovlevich; LOPUSHANSKIY, V.K.

[Sketch of the development of the public health service in Moldavia]
Ocherk razvitiia zdavookhraneniia v Moldavii. Kishinev, Gos. izd-vo
Moldavii, 1956. 76 p. (MLRA 10:3)
(MOLDAVIA—PUBLIC HEALTH)

KUKIN, Nikolay Nikolayevich, doktor med. nauk; PAPKO, Grigoriy Fedoseyevich, kand. med. nauk; SOROKO, Ya.I., red.;
RAKITIN, I.T., tekhn. red.

[Ways of surgery] Puti khirurgii. Moskva, Izd-vo "Znanie,"
1964. 47 p. (Novoe v zhizni, nauke, tekhnike. VIII Seriya:
Biologiya i meditsina, no.3) (MIRA 17:2)



KUKIN, N.P.

REMEZ, G.A.,

LITVIN, V.M.,

KUKIN, N.P.,

CHAPLINSKIY, A.B.

"Radio" (Radiodelo), edited by G.A. Remez. Voennoye Imdatel'stvo, 327 pp., 1947.

KUKIN, P.A.

207/582
307/7-64

TABLE I BOOK EXPLANATION

Abdaliya nauk USSR. Laboratoriya aerostatsoboy
Bredy, tom 81. Materialy VII Vsesoyuznogo mezhdunarodnogo aereostatsoboy
Po aereostatsoboy 25 soboryaya - 1 dekabrya 1958 g. (Materials of the
7th All-Union Interdepartmental Conference on Aerial Surveying, 25
December 1958) Moscow, Gosgostekhnizdat, 1959. 300 p.
3,000 copies printed.

Ed. of Publishing House: V. G. Pilyatov. Tech. Ed.: O. A. Gurva;
Editorial Commission: E. G. Malin. Corresponding Member, Academy of
Sciences USSR; A. A. Logochay, V. P. Mironovitchenko (Resp. Ed.),
and E. E. Sobolov.

PURPOSE: This publication is intended for photogrammetrists, geologists,
geographers, and other scientific and technical personnel concerned
with aerial photography.

CONTENTS: This issue of the transactions of the Laboratory of Aerial
Survey Methods contains the second year of materials presented at
the 7th All-Union Interdepartmental Conference on Aerial Surveying,
which took place in Leningrad, Novykh Zemel, from December 1, 1958.
Articles treat problems dealing with the execution and application
of aerial survey methods in geodesical, geomorphological, and geo-
physical investigations. Particular attention is directed to aerial
survey methods in geodesical and geomorphological mapping and to
physical work in geodesical and geomorphological mapping. Aerial
aerostatsoboy prospecting and aerial photography are described.
References accompany individual articles.

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Prospecting Methods]. Results of Applying Large Scale Aerogeophysical
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Krasov, V. M. [All-Union Scientific Research Institute of Geophysical
Prospecting Methods]. Techniques and Results of a Regional Aerial
magnetic survey of the Southeastern Russian Platform by the Study
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Krasov, V. M. [Kazakhskiy geofizicheskiy trust - Kazakh Geophysical
Prospecting Trust]. Results of Integrated Aerogeophysical Exploration
in Certain Regions of Kazakhstan 277

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Geophysical-Prospecting Methods]. Results From the Aeromagnetic
Survey of Caspian Region 280

Nurobayev, K. G. [Zapadnyy geofizicheskiy trust - Western Geophysical-
Prospecting Trust]. Preliminary Results of the Aeromagnetic Survey
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Paliyev, E. B., G. M. Zhurav, and A. A. Shturba [Laboratory of Aerial-
Survey Methods, Academy of Sciences, USSR]. An Integrated [Combined]
Use of Aerial Photography and Aerogeophysical Prospecting in Geological
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KUKEN, S. F.

"Mechanical Properties of fibers," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Textile Research Inst.

B-3,004,395

KUKIN, V.

How we work. Stroitel' no.4:7 Ap '58.

(MIRA 11:5)

1. Starshiy mashinist krana-ekskavatora Upravleniya mekhanizatsii
No. 4 tresta Stroymekhanizatsiya - 2.
(Cranes, derricks, etc.)

KUKIN, V.D.; FRENKIN, A.R.

Approximate equations for the scattering of pions on nucleons.

Nauch. dokl. vys. skoly; fiz.-mat. nauki no.1:71-79 '58.

(MIRA 12:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Mesons--Scattering) (Nucleons)

21(1), 24(7)

AUTHORS:

Kukin, V.D., Solov'yev, L.D., and Frenkin, A.R. SOV/155-58-3-31/37

TITLE:

Approximate Equations for Virtual Photoproduction (Priblizhennyye uravneniya dlya virtual'nogo foto-rozhdeniya)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 3, pp 169-177 (USSR)

ABSTRACT:

In the paper of Logunov and Solov'yev [Ref 1] the dispersion of an electron at a nucleon with the production of a π -meson ($N+e \rightarrow N+e+\pi$) is considered. In the lowest approximation (with respect to e) it concerns the emission of a virtual photon the interaction of which with the nucleon leads to the production of the meson. In [Ref 1] this kind of interaction is denoted as a virtual photoproduction. Dispersion relations for the amplitude of the process are obtained in [Ref 1]. In the present paper, by phase investigations the authors obtain approximate equations from these relations. At first the dispersion relations in the system of the center of mass are written. Here especially the region of small energies and the S- and P-meson waves are considered ($m \rightarrow \infty$ in the dispersion relations). The restriction to finitely many waves permits (as in the case of real photoproduction) partially to overcome the difficulties combined with

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Approximate Equations for Virtual Photoproduction SOV/155-58-3-31/37

the non-observable region $\cos \theta < -1$. In the obtained equations for S- and P-waves there appear additional terms (in comparison with the analogous equations for real photoproduction) which make allowance for the considered meson production. Finally it is shown that the amplitude of the virtual photoproduction is combined with the phases of the meson-nucleon-dispersion just so as the amplitude of the real photoproduction. The authors thank A.A.Logunov.

There are 5 references, 2 of which are Soviet, and 3 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova
(Moscow State University imeni M.V.Lomonosov)

SUBMITTED: April 1, 1958

Card 2/2

KUKIN, V.D.; FRENKIN, A.R.

Spurious states and the crossing symmetry condition. Dokl.
AN SSSR 133 no.1:49-51 J1 '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.
Lomonosova. Predstavleno akademikom N.N. Bogolyubovym.
(Particles (Nuclear physics)).
(Mathematical physics)

S/020/61/139/005/008/021
B104/B201

AUTHORS: Kukin, V.D., and Frenklin, A.R.
TITLE: Construction of the scattering matrix in nonlocal theories
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 5, 1961,
1089 - 1092

TEXT: The authors have studied certain possibilities of introducing a change of a "nonlocal" character into the scheme of the S-matrix as it is found in the local theory. For this purpose, the authors used the graph technique, and the present study therefore proceeds from the representation $S = T \left(\exp \left\{ i \int \mathcal{L}(x) dx \right\} \right)$ of the S-matrix. In the theory with an indefinite metric there exists a unitary "total" S-matrix which associates both physical and nonphysical states. It is necessary to set up a physical scattering matrix that associates the physical states only. This physical scattering matrix S' which is obtained by projecting S onto the subspace of the physical states, is nonunitary. When the S-matrix is set up in the natural manner in the theory of nonlocal interactions, a discontinuity arises between the definition of T products and the definition of ordinary products of field operators. Following a detailed discussion of these

Card 1/3

Construction of the scattering ...

S/020/61/139/005/008/021
B104/B201

examples the possibility is inferred of constructing a scattering matrix of the nonlocal theory, to be based upon a difference between the definition of chronological coupling and that of ordinary coupling. A new nonlocal definition of chronological coupling is introduced, without changing the definition of ordinary coupling. In other words, the nonlocal causal function $\tilde{D}^c(x)$ is no more coupled in the usual manner with $D^{(-)}(x)$ $\tilde{D}^c(x) \neq \theta(x^0)D^{(-)}(x) + \theta(-x^0)D^{(-)}(-x) = D^0(x)$. The nonlocal matrix S' is represented in the form $S' = T(\exp\{i\int \mathcal{L}(x)dx\})$, where the operation of a nonlocal T product is defined with the aid of Wick's decomposition. The T product is represented as the sum of all possible normal products with all possible nonlocal chronological couplings. The disagreement between the definitions of a chronological and an ordinary coupling immediately leads to non-unitariness of S' . In general, the perturbations of unitariness of the scattering matrix constitute great difficulties, and the lost unitariness must be restored. Making the scattering matrix unitary is discussed on the strength of an example from quantum electrodynamics, and, finally, the construction of a nonlocal scattering matrix is illustrated by an example of the neutral pseudoscalar meson

Card 2/3

Construction of the scattering...

S/020/61/139/005/008/021
B104/B201

theory with Lagrangian interaction. Problems of causality are discussed. N. N. Bogolyubov is thanked for valuable advice, B. V. Medvedev, M. K. Polivanov, D. A. Slavnov, and A. D. Sukhanov for useful discussions. There are 4 references: 3 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: R. Glauber, Phys. Rev. 84, 395 (1951).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: April 8, 1961, by N. N. Bogolyubov, Academician

SUBMITTED: April 7, 1961



Card 3/3

41673

S/020/62/146/005/007/011
B125/B186

24.4400

AUTHORS: Kukin, V. D., Frenkin, A. R.

TITLE: A model in quantum field theory

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 5, 1962, 1054-1057

TEXT: The critical value of the coupling constant for the occurrence of "phantom conditions" is shown to be $g_{crit} = .1/I(M) > 0$. Systems with the Hamiltonian

$$\mathcal{H} = \sum_{(k)} \omega_k (b_k^\dagger b_k + \bar{b}_k^\dagger \bar{b}_k) + \sum_{(k)} (E_k - \delta M) a_k^\dagger a_k +$$

$$+ g_0 \sum_{(k, p)} \sqrt{\frac{M}{E_{k+p}}} \frac{1}{\sqrt{4\omega_k \omega_p}} (a_{k+p}^\dagger b_k \bar{b}_p + b_k^\dagger \bar{b}_p^\dagger a_{k+p}) + \quad (1),$$

$$+ \lambda_0 \sum_{(k, p, q)} \frac{1}{\sqrt{16\omega_k \omega_p \omega_q \omega_{k+p-q}}} b_k^\dagger \bar{b}_p^\dagger b_q \bar{b}_{k+p-q}. \quad (2)$$

$$E_k = \sqrt{k^2 + M^2}, \quad \omega_k = \sqrt{k^2 + \mu^2}, \quad M < 2\mu.$$

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A model in quantum field theory

S/020/62/146/005/007/011
B125/B186

show no cross symmetry either in the terms proportional to g_0 or in the λ_0 terms. $a_{\vec{k}}^+$, $b_{\vec{k}}^+$, and $\bar{b}_{\vec{k}}^+$ are the production operators, $a_{\vec{k}}$, $b_{\vec{k}}$, and $\bar{b}_{\vec{k}}$ are the annihilation operators of the particles of types a, b, and \bar{b} with the momentum \vec{k} . M and δM are the observable mass and the renormalization of the mass of the a-particle, μ is the observable mass of the b- and \bar{b} -particles. The operators N_1 and N_2 ,

$$N_1 = \sum_{(k)} a_k^+ a_k + \sum_{(k)} b_k^+ b_k \quad (3)$$

$$N_2 = \sum_{(k)} a_k^+ a_k + \sum_{(k)} \bar{b}_k^+ \bar{b}_k$$

are constants of motion. The scattering amplitude

$$T_{(E)} = \frac{\frac{g^2}{E-M} + \lambda}{1 + (E-M) \sum_{(k)} \frac{i}{(2\omega_k)^2} \frac{i}{(2\omega_k - M)(2\omega_k - E)} \left[\frac{g^2}{2\omega_k - M} + \lambda \right]} \quad (16)$$

with $B = 1 - g^2 I_{(iA)}$, the mass renormalization $\delta M = -g_0 L_{(M)} / (1 + \lambda_0 L_{(M)})$, and
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S/020/62/146/005/007/011
 B125/B186

A model in quantum field theory.

the renormalized charges $1/g^2 = (\Lambda^2/g_0^2) + I(M)$ and $\lambda = B\lambda_0/A$ are found for the sector $N_1 = 1, N_2 = 1$. For $E \rightarrow -\infty, T(E)$ goes to the finite limit λ_0 . The point $E_0 = M - (g^2/\lambda)$ corresponds to the bare mass of the α -particle. The disappearance of the charges g and λ corresponds to the double disturbance of the cross symmetry. The Hamiltonian (1) with $\lambda_0 = 0$ (Lee model of bosons) gives the scattering amplitude

$$T(E) = \frac{g_0^2}{E - M + \delta M + g_0^2 L(E)} \quad (18).$$

The logarithmic divergence of this scattering amplitude is compensated by a proper choice of the mass renormalization. The scattering amplitude expressed by the renormalized charge,

$$T(E) = \frac{g^2}{(E - M) \left\{ 1 + g^2 (E - M) \sum_{(k)} \frac{1}{(2\omega_k)^2} \frac{1}{(2\omega_k - M)^2 (2\omega_k - E)} \right\}} \quad (22),$$

determines the phase of the S-wave for any g^2 . The present model differs
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A model in quantum field theory.

S/020/62/146/005/007/011
B125/B186

essentially from the Lee model with a fixed source.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 28, 1962, by N. N. Bogolyubov, Academician

SUBMITTED: May 23, 1962

Card 4/4

KUKIN, V.D.

Quasi-optical method in the meson theory with a fixed source.
Vest. Mosk. un. Ser. 3:Fiz., astron. 18 no.5:80-89 S-O '63.

1. Kafedra statisticheskoy fiziki i mekhaniki Moskovskogo
gosudarstvennogo universiteta. (MIRA 16:10)

KUKIN, V. F.

KUKIN, V. F. "The Formation of the Peritheca Under Ground in *Venturia inaequalis* Aderh.," Vestnik Zashchity Rastenii, no. 1, 1941, pp. 109-111. 421 P942.

So: SIRA SI-90-53, 15 Dec. 1953

COUNTRY : USSR
CATEGORY : Weeds and Weed Control. N
BS. JOUR. : RZhBiol., No. 3, 1959, No. 11212
AUTHOR : Kukin, V. F., Shimanovich, Z. M.
LIST. : -
TITLE : The Duration of the Effect of the Toxic Properties of
the Herbicide 2,4-D in Soil.
SIG. PUB. : Zemledeliye, 1958, No. 5, 66.
ABSTRACT : No abstract.

IRD: 1/1

KUKIN, V.F.

Method of selecting broomrape-resistant sunflowers. Zashch. rast. ot
vred. i bol. 7 no.8:28-29 Ag '62. (MIRA 15:12)

1. Vsesoyuznyy selektsionno-geneticheskiy institut im. T.D.Lysenko.
(Sunflowers--Diseases and pest resistance) (Broomrape)

KUKIN, V.F., kand.sel'skokhoz.nauk

Method for testing sunflowers for their resistance to broomrape.
Zashch.rast.ot vred.i bol. 5 no.7:39 J1 '60. (MIRA 16:1)

1. Vsesoyuznyy selektsionno-geneticheskiy institut imeni T.D.
Lysenko.
(Broomrape) (Sunflowers—Disease and pest resistance)

KODKIN, A. I., inzh.; KUKIN, V. I., mashinist ekskavatora; BURGER, I. A.;
AFANAS'YEV, B. P., inzh., red.; KODABASHEVA, R. S., red.

[Machinery for carrying out preparatory operations] Mekhanizmy
dlya vypolneniya rabot nulevogo tsikla. Moskva, Gos. izd-vo
lit-ry po stroit., arkh. i stroit. materialam, 1961. 18 p.
(MIRA 14:11)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut orga-
nizatsii, mekhanizatsii i tekhnicheskoi pomoshchi stroitel'stvu,
Byuro tekhnicheskoy informatsii. 2. Glavnyy konstruktor proyekta
Spetsial'nogo konstruktorskogo byuro "SKB-Mosstroy" Glavmosstroya
(for Kodkin). 3. Trest "Stroymekhanizatsiya-2" Glavleningradstroya
(for Kukin). 4. Glavnyy inzh. Upravleniya mekhanizatsii No. 4
Glavleningradstroya (for Burger).
(Building machinery)

KUPCH, V.I., assistant

Labor following previous cesarean section and pathomorphological changes in the cicatrix of the uterus. Sbor. nauch. truzh. gos. med. inst. no. 28:352-356 ' 63. (MIRA 19:1)

1. Iz kafedry akusherstva i ginekologii (ispolnyayushchiy obyazannosti zav. - dotsent M.A. Timokhina) Ivanovskogo gosudarstvennogo meditsinskogo instituta (rektor - dotsent Ya.M. Romanov).

ANTONOV, A.; YELINSON, A.; MYAGI, Kh.Ya. [Magi, H.]; KORROVITS, Kh.Kh.,
red.; KUKIN, V.N., red.; EINBERG, K., tekhn. red.

[Catalog of standard estimates for building operations for the
construction in the Estonian S.S.R.] Ehitustoode uksushinnete
kataloog Eesti NSV ehitustele. Katalog edinichnykh rastsenok na
stroitel'nye raboty dlia stroitel'stva v Estenskoj SSR. Izd.2.
Tallinn, Eesti Riiklik Kirjastus. Vol.1. 1960. 754 p.

(MIRA 15:2)

1. Estonian S.S.R. Riiklik Ehituse ja Arhitektuuri Komitee.
(Estonia--Building--Estimates)

L 53736-65 EPF(c)/EPR/EPA(s)-2/EWT(m)/EWP(1)/EWP(2)/EWP(3) Fq-4/Tr-4/Ps-4/Pt-7
WW/VH

ACCESSION NR: AP5015562

UR/0286/65/000/008/0119/0119
666.189.211

AUTHOR: Shkol'nikov, Ya. A.; Polik, B. M.; Karakhanidi, N. G.; Ivanov, P. K.; Baber,
E. I.; Ulybyshev, V. V.; Alen'kin, A. T.; Rugrova, N. N.; Simakov, D. P.; Shchipin,
I. Ye.; Gur'yeva, Yu. N.; Yefimova, M. I.; Nechayeva, Ye. S.; Yesilkina, K. M.;
Ivanova, A. I.; Dayn, E. P.; Nabatov, V. G.; Novoyevskaya, Ye. A.; Kukin, Ye. B.;
Balashov, V. N.; Gunza, L. B.

TITLE: Glass for glass fibers. Class 32, No. 170369 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 119

TOPIC TAGS: glass, glass fiber

ABSTRACT: An Author Certificate has been issued for a glass suitable for making glass fibers. To increase chemical durability, to prevent corrosion of alloys of aluminum and other light metals, and to improve processability, the glass is formulated to contain: 58-63% SiO₂, 2-4% B₂O₃, 6-8% Al₂O₃, 0.5-1.5% F₂O₃, 4-6% ZrO₂, 6-8% CaO, 12-13% Na₂O, and 1.5-2% K₂O. [SM]

ASSOCIATION: non:

Card 1/2

KUKIN, Ye.I., starshty prepodavatel'

Active control of the diameters of large workpieces. Izv. vys. ucheb.
zav.; mashinostr. no.6:167-175 '64. (MIRA 17:12)

1. L'vovskiy politekhnicheskii institut.

KUKINA, A. I. - Cand. Chem. Sci.

Dissertation: "The Influence of Preparation Procedures on the Specific Activity of Chromium Oxide as a Dehydrogenation and Dehydration Catalyst."
Moscow Order of Lenin State U imeni M. V. Lomonosov, 25 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

KUKINA, A. I.

Verbatim: - "The kinetic, thermographic, and x-ray structural study of chromic oxide as a catalyst in dehydrogenation and dehydration," Vestnik Mosk. un-ta, 1948 No. 12, p. 91-100, - Bibliog: 12 items

SO; U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

KUKINA, A. I.

PL 26/49T10

USSR/Chemistry - Catalysis
Chemistry - Catalysts

Jan 49

"Influence of the Method of Origin on the Specificity of Catalytic Agents," Acad A. A. Balandin, A. I. Kukina, Moscow State U imeni M. V. Lomonosov, 4 pp

"Dok Ak Nauk SSSR" Vol LXIV, No 1

For the case of chromic oxide, investigates effect of methods of preparation on activity and selectivity of catalyzers' action, using methods of chemical kinetics, thermographs, and Roentgen structural analysis. Submitted 9 Nov 48.

26/49T10

AUTHORS:

Balandin, A. A., Kukina, A. I., Shishova, D. P.

76-32-4-25/43

TITLE:

Investigation of the Iron-Chromium Catalysts in the Dehydrogenation and Dehydration of Isopropyl Alcohol (Issledovaniye zhelezo-khromovykh katalizatorov v reaktsiyakh degidrogenizatsii i degidratatsii izopropilovogo spirta)

PERIODICAL:

Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4, pp. 882 - 893 (USSR)

ABSTRACT:

In order to be able to investigate the iron catalysts the energetic equations of the multiplet theory were used in this paper, the adsorption potential and the binding energy of the molecules being determined by the catalyst just as well as activity and selectivity. From the experimental part can be seen that the pretreated catalysts were investigated polarographically, that the kinetic experiments were carried out on a flow apparatus, and that the activity, and the selectivity of the measurements of the reaction products were determined. Granular sizes of catalysts of from 1 - 3 mm were used

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76-32-4-25/43

Investigation of the Iron-Chromium Catalysts in the Dehydrogenation and Dehydration of Isopropyl Alcohol

and within the temperature interval of from 320 - 500°C it was observed that the activity of iron oxide is essentially greater than that of chromium oxide, the dehydrogenation exceeding dehydration. A cracking of the alcohol into saturated hydrocarbons takes place on iron oxide, a change of the reaction on the addition of chromium oxide having been observed. A ratio of iron oxide-chromium oxide of 1 : 1 effects a predominant splitting-off of hydrogen; x-ray structural analyses showed that also here the components retained their proper structure. With a rise of temperature the composition of the reaction products changes, namely, the content of hydrogen decreases and that of saturated and unsaturated hydrocarbons increases. The most active catalyst proved to be that with an addition of 50% Fe₂O₃; 50% Cr₂O₃, a little less with 75% Fe₂O₃ and with a minimum of the dehydration reaction that with 5% Fe₂O₃. From the results obtained the magnitude of the energetic barrier was

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76-32-4-25/43

Investigation of the Iron-Chromium Catalysts in the Dehydrogenation and Dehydration of Isopropyl Alcohol

calculated for both reactions just as well as the activation energies and the adsorption potentials. An explanation in connection with multiplet theory is given, just as well as graphical data and tables mentioning results. Finally the authors thank Yu. P. Simanov and N. V. Nikolayev for the lent apparatus as well as for their advice. There are 9 figures, 3 tables and 10 references, all of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University im. M.V. Lomonosov)

SUBMITTED: December 30, 1956

AVAILABLE: Library of Congress

Card 3/3

1. Iron-chromium catalysts--Effectiveness 2. Isopropyl alcohol--Dehydrogenation 3. Isopropyl alcohol--Dehydration

KUKINA, A.I.; YEVDOKIMOV, V.B.; BARSOVA, D.I.

Contact transformation of n-butane and dehydrogenation of
isopropyl alcohol on α -iron. Vest.Mosk.un.Ser.mat., mekh., astron.,
fiz., khim. 14 no.1:171-185 '59. (MIRA 13:8)

1. Kafedra organicheskogo kataliza i laboratoriya kataliza i
gazovoy elektrokhemii Moskovskogo universiteta.
(Butane) (Isopropyl alcohol) (Iron)

S/076/60/034/009/030/041XX
B020/B056

AUTHORS:

Balandin, A. A., Kukina, A. I., and Malakhova, E. A.

TITLE:

Catalytic Decomposition of Di-n-butyl Sulfide on α -Fe

PERIODICAL:

Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 9,
pp. 2030 - 2040

TEXT: It was the purpose of the present work to carry out a multi-purpose investigation of the process of decomposition by means of kinetic, thermo-magnetographic, radiographical and chemical analyses for the purpose of explaining the mechanism of the desulfurization on contacts containing reduced iron by the example of the catalytic model reaction. The catalytic and thermal conversion of Di-n-butyl sulfide and n-butyl mercaptan was studied with the help of a flowing-through method in a device used in the authors' laboratory. It was found that the sulfide decomposes thermally at temperatures of more than 400°C. The kinetics of the catalytic decomposition of the sulfide was studied at 300 - 400°C, where 8 ml reduced α -iron in a 6.5 cm thick layer was used at a feed rate of the substance of 0.18 ml/min. The experiments took 45 - 50 minutes. The mean gas evolu-

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Catalytic Decomposition of Di-n-butyl
Sulfide on α -FeS/076/60/034/009/030/041XX
B020/B056

tion rate per minute with a duration of the experiments of 15 to 30 minutes was taken for the calculations. For the purpose of displacing the initial material and the decomposition products from the reaction zone, nitrogen was blown through, and the catalyst was regenerated with hydrogen at a temperature that was 500C above the experimental temperature, with the result that H₂S was evolved. The composition of the gaseous decomposition products is given in Table 1, from which it may be seen that unsaturated and saturated hydrocarbons (up to 17 %) as well as H₂ were liberated. H₂S is formed after a longer time of contact, if the activity of the catalyst is highly, and the decomposition of the sulfide is little reduced. Other sulfur-organic compounds are not formed. Fig. 1 shows $\log v$ as a function of $1/T:10^4$, from which the apparent activation energy t is calculated as amounting to 12.7 kcal/mole. The results of the hydrogenation of Di-n-butyl sulfide on α -Fe are given in Table 2, and the composition of the gases, determined by the low-temperature rectifying apparatus ЧИАТИМ-51 (TsIATIM-51) are given in form of a summary. The results obtained by means of a catalyst poisoned with sulfur at a hydrogenolysis of the Di-n-butyl sulfide at 430 - 480° are given in Table 3, where it was found that

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Catalytic Decomposition of Di-n-butyl
Sulfide on α -FeS/076/60/034/009/030/041XX
B020/B056

sulfidized α -Fe hydrogenizes sulfides more slowly at higher temperatures, which may be seen from the values of the activation energy. Fig. 2 shows the thermomagnetogram of α -Fe, upon which Di-n-butyl sulfide was decomposed at 300 - 400°, whereas Fig. 3 shows the change in magnetization with the temperature for a catalyst, which had been poisoned with mercaptan at 270° and did not decompose the sulfide. When this catalyst was brought into contact with Di-n-butyl sulfide at 430 - 480°, a further accumulation of sulfur was found to occur (Fig. 4, curve 1), where a maximum occurs at 200°, and at 280° magnetization vanishes. When cooling the specimen, a sharp rise of magnetization is found (Fig. 4, curve 2). Table 4 shows the results obtained by X-ray structural analysis. By the catalytic decomposition of the sulfide and mercaptan, also compounds FeS_{1+x} are formed, where $x < 1$. The effect produced by these compounds upon the desulfurization is investigated on α -Fe by means of carbidization and sulfidization tests, where the apparent activation energy of the sulfidized catalyst equals 19.7 kcal/mole. On the basis of the multiplet theory, schemes (index groups) for the decomposition of sulfur-organic compounds and hydrogenolysis were suggested, which are confirmed by data from publications and the results obtained here. Mention is made of I. N. Tits, F. P. Ivanovskiy, and

Card 3/4

Catalytic Decomposition of Di-n-butyl
Sulfide on α -Fe

S/076/60/034/009/030/041XX
B020/B056

V. N. Kondrat'yev, Yu. P. Simanov and V. B. Yevdokimov are thanked. There are 4 figures, 4 tables, and 34 references: 18 Soviet, 7 US, 1 British, 2 French, 1 Dutch, and 5 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: March 26, 1958

Card 4/4

KUKINA, A.I.

Mechanism of the contact conversions of some organic substances in the presence of α -iron. Izv.AN SSSR Otd.khim.nauk no.4:571-577 Ap '61. (MIRA 14:4)

1. Moskovskiy gosudarstvenny universitet im. M.V.Lomonosova.
(Iron) (Dehydrogenation)

BALANDIN, A.A.; KUKINA, A.I.; MALENBERG, N.Ye.

Catalytic properties of iron phosphate. Report No.1: Dehydration
of alcohols. Izv.AN SSSR Otd.khim.nauk no.4:574-581 Ap '62.
(MIRA 15:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Alcohols) (Dehydration (Chemistry)) (Iron phosphate)

BALANDIN, A.A.; KUKINA, A.I.; TOPTYGINA, E.V.

Hydrogenation of aldehydes and ketones in the presence of iron catalysts. Izv.AN SSSR. Otd.khim.nauk no.11:1925-1932 N '62.

(MIRA 15:12)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Aldehydes) (Ketones) (Hydrogenation)
(Iron catalysts)

BALANDIN, A.A.; KUKINA, A.I.; CHZHAN KHOU-SHEN [Chang Hou-shêng];
KOSINSKAYA, I.Ya.

Contact conversion of cyclohexene and 1,2-cyclohexadiene in the
presence of α -iron. Zhur. fiz. khim. 37 no.11:2504-2512 N°63.
(MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BALANDIN, A.A., akademik; KUKINA, A.I.; MALENBERG, N.Ye.; YERMILOVA,
M.M.

Catalytic properties of zirconium phosphate. Dokl. AN SSSR 161
no.4:851-852 Ap '65. (MIRA 18:5)

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

MALENERG, N.Ye.; ANKINA, A.I.; YERMILOVA, M.M.

Catalytic dehydrogenation in the presence of zirconium phosphate.
Vest.Mosk.un.Ser.2:Khim. 20 no.2:31-35 My-Je '65.

(MIRA 18:3)

1. Kafedra organicheskogo kataliza Moskovskogo universiteta.

L 5063-66 EWT(m)/EPF(c)/EWP(j) RM
ACCESSION NR: AP5025508

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541.128

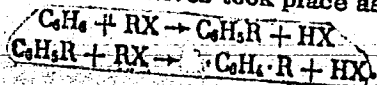
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B

AUTHOR: Malenberg, N. Ye.; Balandin, A. A.; Kukina, A. I.
TITLE: Catalytic properties of iron orthophosphate. Report No. 2. Alkylation of benzene and its homologs and derivatives

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1965, 1565-1570

TOPIC TAGS: iron compound, alkylation, alkyl benzene

ABSTRACT: The catalytic properties of iron orthophosphate FePO₄ were studied in the alkylation of benzene and its homologs with haloalkyls of various structures. Benzene, toluene, ethylbenzene, cumene, chlorobenzene, and phenol were alkylated with sec-propyl chloride and bromide, and with tert-butyl chloride. The condensation of benzene and its derivatives with aliphatic monohalo derivatives took place as follows:



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FeP04 was shown to be active and specific in the liquid-phase alkylation of benzene and its homologs. The amounts of monoalkylated products obtained, ranging from 38 to 73%, are comparable to the yields obtained in the presence of such widely employed catalysts as AlCl₃ and FeCl₃. In contrast to the latter, the formation of dialkyl derivatives and of considerable amounts of tars is not observed in the presence of FeP0₄. However, reactions of acylation and of alkylation of benzene and its homologs by haloalkyls of normal structure were not detected. "The authors take this opportunity to thank Ye. N. Rossolovskiy and L. D. Ashkinadze for his comments and assistance." Orig. art. has: 2 tables. ^{44,55}

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University) ^{44,55}

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Card 2/2 *md*

BOKIY, G.B.; KUKINA, G.A.; PORAY-KOSHITS, M.A.

X-ray study of platinum cis-tetrachlorodiammine. Izv. Sect.
plat.i blag.met. no.29:5-18 '55. (MIRA 8:8)
(Crystallochemistry) (Platinum compounds)

KHEIMINA, G. A. and BOKIY, G. B.

Institute of General and Inorganic Chemistry, Moscow. "Crystal Chemistry of Complex Divalent Platinum Compounds" (Section 16-2) a paper submitted at General Assembly and International Congress of Crystallography, 10-19 Jul 57, Montreal, Canada.

C-3,800,189

KUKINA, G.A.

AUTHOR: Boki, G.E. and Kukina, G.A.

70-3-13/20

TITLE: Crystal chemistry of complex divalent platinum compounds.
(Kristallokhimiya kompleksnykh soyedineniy d.vukhvalentnoy platiny (effekt transvliyaniya v kristallicheskikh veshchestvakh)

PERIODICAL: "Kristallografiya" (Crystallography), 1957,
Vol.2, No.3, pp. 400 - 407 (U.S.S.R.)

ABSTRACT : During recent years at the Laboratory of Crystal Chemistry, Institute of General and Inorganic Chemistry named after N.S. Kurnakov, Academy of Sciences, USSR, an X-ray structure investigation was carried out on a number of complex compounds which belong to the chloramine series of quadrivalent and divalent platinum. A review of the crystal chemistry of platinum chloramine was made by G.B. Boki in his works devoted to the final results of the research.

X-ray structure investigations confirmed the types of geometrical isomers, which were attributed to them owing to classic stereochemic methods. The formulation of the stereochemistry of inorganic compounds was the result of investigations on complex cobalt and platinum compounds.

It is in complex platinum compounds that I.I. Chernyáev found 'trans-directing influence' (1926).

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Crystal chemistry of complex divalent platinum compounds. 70-3-13/20
(Cont.)

In 1951, Bekiy G.B. et al. made the first attempt to obtain the quantitative characteristics of trans-influence by employing the electronographic method in investigating the structure of potassium trichloroamminoplatinates $K[PtNH_3Cl_3]$.

The distance obtained along $NH_3 - Pt - Cl_I$ ($Pt - Cl_I = 2.32$ kX.) proved to be somewhat smaller than the distance along $Cl_{II} - Pt - Cl_{II}$ ($Pt - Cl_{II} = 2.35$ kX.), which we attributed to the result of the trans-influence existing in the molecule. Further, quadrivalent platinum compounds $cis-[Pt(NH_3)_2Cl_4]$ and the face isomer of $K_2[Pt(NO_2)_3Cl_3]$ were investigated. We failed, however, to obtain the quantitative characteristics of trans-influence; but we succeeded in proving that the nitro group in the quadrivalent platinum compounds possesses a weaker trans-influence than chloride and bromine. This was clearly shown by optical methods.

After establishing this fact we returned to the investigation on divalent platinum compounds of the series of chloroamine. We also made a study of compounds in which chlorine

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Crystal chemistry of complex divalent platinum compounds.
(Cont.)

atoms were substituted by bromine and an addendum, possessing the strongest trans-influence, namely the ethylene group.

An X-ray structure investigation on $K[PtNH_3Cl_3] \cdot H_2O$ and $K[PtNH_3Br_3] \cdot H_2O$ was carried out. The results of goniometric and optical investigations showed that the compounds are isomorphous and orthorhombic.

The dimensions of the unit cell were determined from oscillation photographs and X-ray goniometric diagrams. For $K[PtNH_3Cl_3] \cdot H_2O$, $a = 20.88 \pm 0.04$, $b = 8.10 \pm 0.02$, $c = 13.55 \pm 0.02$ kX.; $N = 12$; for $K[PtNH_3Br_3] \cdot H_2O$, $a = 21.75 \pm 0.04$, $b = 8.37 \pm 0.02$, $c = 14.42 \pm 0.02$ kX.; $N = 12$, space group $D_{2h}^{14} - Pbn_a$.

The co-ordinates of Pt, Br, K and NH_3 were found by the calculation of projections of inter-atomic functions on plane XY and XZ, and of electron-density projections on corresponding planes. (All of the data were obtained from the reciprocal-lattice photographs with Mo K α radiation.)

In contra-distinction to the structure of the anhydrous

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Crystal chemistry of complex divalent platinum compounds. 70-3-13/20
(Cont.)

salt, all the $K[PtNH_3Cl_3] \cdot H_2O$ complexes are inclined to α at approximately 26° .

The threefold period (for $K[PtNH_3Cl_3]$, $a = 17.6$, $b = 8.84$, $c = 4.19$ kX., $N = 4$) is caused by the presence of water molecules, which displace potassium atoms from the inversion centre. This accounts for the increase of the period along X by approximately 3 kX. Potassium atoms are arranged in trigonal prisms and their co-ordination number is 6. The presence of water molecules in the outer region also influences the inter-molecular inter-atomic distances.

At the beginning of 1954, we undertook an investigation on Zeise salts, $K[PtC_2H_4Cl_3] \cdot H_2O$ and $K[PtC_2H_4Br_3] \cdot H_2O$, to determine Pt - Cl and Pt - Br distances in case ethylene labilizes the chlorine and bromine, and also to find how carbon atoms are arranged in relation to the group $[PtCl_3]$ and $[PtBr_3]$.

The crystals belong to the monoclinic system, as was found by Jorgensen in 1900. Goniometric and optical investigations have shown that $K[PtC_2H_4Cl_3] \cdot H_2O$ and $K[PtC_2H_4Br_3] \cdot H_2O$ are isomorphous. The unit cells are determined by oscillation

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Crystal chemistry of complex divalent platinum compounds.
(Cont.)

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photographs.

For $K[PtC_2H_4Cl_3] \cdot H_2O$, $a = 10.85 \pm 0.02$, $b = 8.53 \pm 0.02$,
 $c = 4.81 \pm 0.01$ kX., $\beta = 97^\circ$, $N = 2$, for $K[PtC_2H_4Br_3] \cdot H_2O$,
 $a = 11.38 \pm 0.02$, $b = 8.78 \pm 0.02$, $c = 5.01 \pm 0.01$ kX., $\beta = 97^\circ$,
 $N = 2$, space groups $C_2 - P2_1$. The atomic co-ordinates are

obtained from projections of inter-atomic functions on XY and XZ and from the projection of electron-density on XZ. At the end of 1954 there was published an article by Wunderlich and Meller on the crystal structure of Zeise salts. The atomic co-ordinates in this article were definitely at odds with the authors' article, but in 1955 Wunderlich and Meller published a paragraph with corrected co-ordinates, the latter being in agreement with the authors' results.

To determine with greater precision the distance in case of an addendum with a strong trans-influence - the ethylene group - the authors investigated an isomorphous compound with bromine and obtained good results. The analysis of the electron-density projection on plane XZ made it possible to determine the carbon atomic co-ordinates and to find that the plane of the ethylene molecule itself is perpendicular to the plane of the

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Crystal chemistry of complex divalent platinum compounds.
(Cont.)

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group $[PtBr_3]$, whereas carbon atoms are almost symmetrical to platinum atoms.

In this way co-ordinates of all the atoms were obtained and inter-atomic distances were calculated. Two of the bond lengths $Pt - Cl_{II}$ and $Pt - Br_{II}$ are normal (2.26 and 2.42 kX.); the third bond length $Pt - Cl_I$ and $Pt - Br_I$, which is in the trans position to the ethylene molecule, is 2.40 and 2.50 kX. respectively.

As the strong trans-influence of the ethylene molecule is well known, the increase of bond lengths $Pt - Cl_I$ and $Pt - Br_I$ seems quite natural.

Proceeding from crystal chemistry data it is possible to determine the position of hydrogen atoms. There are two variants of the arrangement of the flat group C_2H_4 in the molecule

$[PtC_2H_4Cl_3]$. In the first variant this plane, when continued, passes through the line $Pt - Br_I$; in the second it is perpendicular to the line. The difference between the inter-atomic distances obtained for these two variants speaks definitely in

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Crystal chemistry of complex divalent platinum compounds.
(Cont.)

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favour of the second variant.

There are 2 figures and 19 references, 16 of which are Slavic.

ASSOCIATION: Institute of General and Inorganic Chemistry imeni
N.S. Kurnakov (Institut Obshchey i Neorganicheskoy
Khimii im. N.S. Kurnakova)

SUBMITTED: March 6, 1957

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КУКИНА, ГАЛИНА АЛЕКСАНДРОВА

КУКИН, Г.Б.; АИТОВИАН, Л.О.; АН, ПУ, ВАН; КУКИНА ГАЛИНА АЛЕКСАНДРОВА;
КУДИШОВА, А.Т.Б.

"New Data on the Crystal Chemistry of Complex Compounds of
Ruthenium, Osmium and Platin"

a report presented at Symposium of the International Union of
Crystallography Leningrad 21-27 May 1959

BO: B 3,135, 471

80 July 1959

BOKIY, G.B.; KUKINA, G.A.

Structure of platinum cis-ethylenediamine dibromide crystals. Dokl.
AN SSSR 135 no.4:840-842 '60. (MIRA 13:11)

1. Institut obshchey i neorganicheskoy khimii AN SSSR.
2. Chlen-korrespondent AN SSSR (for Bokiya).
(Platinum compounds)

PORAY-KOSHITS, M.A.; BOKIY, G.B.; KUKINA, G.A.

Distorted octahedral complexes of bivalent platinum, palladium,
and nickel. Zhur.strukt.khim. 2 no.3:327-329 My-Je '61.
(MLRA 15:1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN
SSSR.

(Platinum compounds) (Palladium compounds) (Nickel compounds)
(Crystallography)

KUKINA, G.A.

Crystal chemistry of complex platinum compounds. Part 1:
Compounds of quadrivalent platinum. Zhur.strukt.khim. 3
no.1:108-117 Ja-F '62. (MIRA 15:3)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR.

(Platinum compounds) (Crystallography)

KUKINA, G.A.; BOKTY, G.B.; BRUSENTSEV, F.A.

X-ray diffraction study of platinum cis-ethylene ammine dibromide.
Zhur. strukt. khim. 5 no.5:730-736 S-0 '64 (MIRA 18:1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR i Institut neorganicheskoy khimii Sibirskogo otdeleniya
AN SSSR.

KURINA, G.A.; BOKIY, G.B.

X-ray structural analysis of potassium trichloroamminoplatinate and
tribromoamminoplatinate monohydrates. Zhur. strukt. khim. 6 no.2:233-
243 Mr-Ap '65. (MIRA 18:7)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN
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