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#416

PEREHAZY, Karoly

Our living historical monuments. Elet tud 17 no.43:1347-1351
28 0 '62.

Perel V.I.

637.525 2/
1955. ON THE THEORY OF A SPHERICAL PROBE IN
PLASMA. Yu. M. Kagan and V. I. Perel.
Dokl. Akad. Nauk BSSR, Vol. VI, No. 4, 765-8 (1954). In
Russian.

Theory of a spherical probe in low pressure plasma dis-
charges with the probe acting as a sink for charged particles.
Plasma is assumed to be infinite i.e. in practice the probe is
small compared with the dimensions of the discharge tube and
the mean free path of the particles. Comparison with the
Langmuir theory is made.

phys

PEREK, L.

"A conference on variable stars in Brno." p. 116. (Rise Hvezd. Vol. 34, no. 5, June 1953.
Praha.)

SO: Monthly List of East European Accessions, Vol. 3, No. 2, Library of Congress, Feb. 1954,
Uncl.

PEREK, L.

Conference on the coordination of galactic research in Stockholm,
June 16-23, 1957. p. 77.

(Astronomical Institute - Czechoslovak Academy of Science) Vol. 7, No. 6, 1957

SO: Monthly Index of East European Accessions (MEEA) SO, Vol. 7, No. 5 May 1958

PEREKI

PLANS I BOOK EXPLOITATION CZECH/3216

Budil, Ivo, ed.

Do blízkého i vzdáleného vesmíru (Into the Near and Distant Universe) Prague, Orbis, 1960. 10,000 copies printed.

Authors: Milan Blaha, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Ondřej Buzicha, Engineer, Jan Bukovsky, Professor, D.C. A. J. Václav Bumba, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Zdeněk Čepička, Candidate of Physics and Mathematics, Josef Dvořák, Doctor of Medicine, Ladislav Čech, Doctor of Natural Sciences, Corresponding Member of the Slovak Academy of Sciences, Doctor of Physics and Mathematics, Štěpán Klecsek, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Milošlav Kopáček, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Luboš Čermák, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Miroslav Flajšar, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Jaroslav Ruprecht, Candidate of Physics and Mathematics, Josef Šedl, Ladislav Šehna, Candidate of Physics and Mathematics.

Card-1/41

and Mathematics. Zdeněk Švestka, Doctor of Natural Sciences, Candidate of Physics and Mathematics, Boris Velhčík, Doctor of Natural Sciences and Vladimir Vanysek, Doctor of Natural Sciences, Candidate of Physics and Mathematics. Resp. Ed.: Josef Šedl.

PURPOSE: This book is intended for the general reader interested in astronomy, celestial mechanics, and astrophysics.

COVERAGE: The book presents in popular language and in summary form the most important achievements of science to date in the field of astronomy, celestial mechanics and astrophysics, and notes the importance of continued progress in these disciplines for space travel to the moon and in our solar system, and ultimately to the nearest stars and galaxies. In the section headed "About the Authors" the degrees and titles, affiliations and scientific contributions of each author are given. The text is accompanied by many diagrams, graphs, and tabular data. There are 37 photographs of various celestial bodies. No personalities

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are mentioned. There are 29 references, all Czech (several translations).

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THE NEAR UNIVERSE

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Card 9/41

PEREK, L.; ~~ROUSOVA, O.~~

SCIENCE

Periodicals: BULLETEN ASTRONOMICHEKIH INSTITUTOV CZEKOSLOVAKII.
BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA.
Vol. 10, no. 2, Mar. 1959

PEREK, L; ROUSOVA, O. Identification charts of selected areas 5, 61, and
68. In English. p. 77.

Monthly List of East European Accessions (REAI) LC, Vol. 8, No. 5,
May 1959, Unclass.

PEREK, L.

Planetary nebulae in the central region of the galaxy.
Riul astr Cz 14 no.6:201-218 '63.

Note on the distribution in space of planetary nebulae.
218-222.

1. Astronomical Institute of the Czechoslovak Academy of
Sciences, Prague.

AUTHOR PEREL V. I. PA - 2966
TITLE The Computation of the Drive Velocity of Ions in an electric field in own Gas. (Vychisleniye skorosti dreyfa ionov v elektricheskoy pole v sobstvennom gaze.- Russian)
PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 32, Nr 3, pp. 526 - 533 (USSR).
ABSTRACT Received: 6/1957 Reviewed: 7/1957
By means of the method of successive approximations suggested by this paper it is possible to solve the second kinetic part of the problem of the drive velocity of ions on the basis of the model of "pure re-charge". This applies in the case of any ratio between the operation of the field along the free length of path of the ion and the average thermal energy of the atoms of the gas. In the course of these computations the concentration of the charged particles is assumed to be so low that their interaction among one another and also the influence exercised by the function of velocity distribution of the atoms can be disregarded. Computation is carried out on the assumption that the cross section of the re-charges does not depend on velocity. However the method of successive approximations suggested here applies also if the cross section is not constant. First the kinetic equation for

CARD 1/3

PA - 2966

The Computation of the Drive Velocity of Ions in an electric field in own Gas

the velocity distributions of the ions, which applies on the aforementioned conditions, is written down.

The Method of Successive Approximations for the Solution of the kinetic equation: The differential equation derived is solved by means of quadrature formulae of the Gauss type. This method is, above all, recommended by the fact that a clear physical model corresponds to each mathematical approximation. The case of low field strength is the most unfavorable in the case of this method.

The Approximation $N = 2, M = 1$. Comparison with the Experiment: (Here N denotes the degree of the HERMITE polynomials occurring in the Gauss quadrature formulae and M denotes the degree of the Laguerre polynomials). The approximation mentioned in the title is here closely investigated. In the case of all gases investigated, with the exception of He, good agreement between computed and experimental results is found. The model of "pure re-charge" with a cross section that does not depend on velocity is a good approximation for the description of the interaction between an ion and the atoms of the same Gas.

CARD 2/3

PA - 2966

The Computation of the Drive Velocity of Ions in an
electric field in own Gas.

(With 3 illustrations)

ASSOCIATION: Karelo-Finnish Pedagogical Institute.

PRESENTED BY: -

SUBMITTED: 6. 2. 1956.

AVAILABLE: Library of Congress.

CARD 3/3

PEREIASLOV, A.

Granary made of mylon at the Kustanai elevator. p. 60.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, no. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2,
Feb. 1960.

Uncl.

1. KRASOVITSKIY, B.M.; PEREIASLOVA, D.G.; NOBYAK, N.K.
2. USSR (600)
4. Diphenic Acid
7. Investigation of the reduction product of 6-nitro- diphenic acid, B.M. Krasovitskiy, D.G. Pereyaslova, N.K. Kobiak, Ukr.khim.zhur. 18 no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

FEREK, J.

For new forms of activities of the meat industry after the 11th Plenum of the Central Committee of the Polish United Workers Party. p. 1. (Czytelnia Miesna, Vol. 8, No. 11, Nov 1956, Warsaw, Poland)

SO: Monthly List of East European Admissions (LBAI, 10, Vol. 6, No. 2, Aug 1957, Cont.

PEREK, J.

Initial conclusions on the evaluation of works on the 5-year
Plan. p. 1. GOSPODARKA MIESNA. Warszawa Vol. 8, no. 4, Apr. 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

PEREK, Marian

POLAND

PEREK, Marian

Department of Geological Engineering of the Geological
Institute (Zakład Geologii Inżynierskiej Instytutu Geo-
logicznego)

Warsaw, Kwartalnik geologiczny, No 6, 1966, pp 52-57.

"Geological and Engineering Conditions of the Area
of the "Dobę" Water Degree".

20021001 and 20021001) most

CC

The oxidation of dilute solutions of cyanides and thiocyanates by atmospheric oxygen: P. A. Furukawa, *Verh. Internat. Verein. Chem. Technol. Forsch.*, No. 3, 79-81(1959); *Chem. Zvest.*, 1959, 1, 1904.—The rate of oxidation of solutions of KCN and KSCN by air was studied with solutions of varying pH such as are encountered in the waste waters from cyanide works. The rate of oxidation was also detd. in the presence of ferric and ferric ions and Mn⁺⁺ ion. Practically no oxidation occurred in KCN solutions of low concn. (10 mg./l.) at a pH of 4-10 and room temp., not even in the presence of catalysts. Under the same conditions the passage of air through KCN solutions for 30 min. caused the volatilization of 75% of the substance without essential oxidation. In slightly alk. solutions (pH about 10) a noticeable adsorption of KCN on the glass was observed.

M. G. Moore

2

ASS-11A METALLURGICAL LITERATURE CLASSIFICATION

FROM BOWLING

RELEASING OFFICE

CLASSIFICATION

RELEASING OFFICE

PEREKALICH, MIKHAIL ALEKSANDROVICH

(born 1892)

DECEASED

1961/I

61960

SEE ILC

ELECTRICAL ENGINEERING

PEREKALIN, M.M.

Complex momenta and potentials with a repulsive core. Vest. LGU
18 no.10:37-44 '63. (MIRA 16:8)
(Angular momentum (Nuclear physics)) (Matrix mechanics)

PEREKALIN, S.

~~_____~~
Decisive link. Voen.znan. 31 no.7:22 J1 '56.
(Military education)

(MLP. 1018.)

PEREKALIN, S. (g. Serpukhov, Moskovskoy oblasti).

In accordance with Lenin's legacy. Voen. znan. 33 no. 12 p. 57.
(Military education) (MIRA 1991)

PEREKALIN, S.

If you like the work, everything is easy! Kryl.rod. 11 no.3:6
Mr '60. (MIRA 13:5)
(Parachuting)

PEREKALIN, S.

85-10-20/35

AUTHOR: Perekalin, S.

TITLE: For the Power of the Soviets! (Za vlast' sovetov!)

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 10, pp. 20-21 (USSR)

ABSTRACT: The author of this article describes the meeting of the members of the Moskva aeroclub with the old communist A.D. Blokhin, who related his participation in the October revolution forty years ago. After giving his brief eye-witness account of the events, which then took place in Moskva, he took a bus ride with the aeroclub members and showed them the places where the street and house fighting occurred. The article is illustrated by four photographs, showing some participants of this meeting.

AVAILABLE: Library of Congress

Card 1/1

SOPOVA, A.S.; PEREKALIN, V.V.; LEBEDNOVA, V.M.

Interaction of 1-bromo-1-nitro-1-pentene and β -bromo- β -nitrostyrene
with active cyclic methylene components. Zhur.ob.khim. 33 no.7:
2143-2145 J1 '63. (MIRA 16:8)

1. Leningradskiy pedagogicheskiy institut imeni A.I.Gertsena.
(Pentene) (Styrene) (Methylene group)

SOPOVA, A.S.; PEREKALIN, V.V.; YURCHENKO, O.I.

Interaction of 1-bromo-1-nitro-1-pentene and -bromo -nitrostyrene
with some compounds containing active methylene groups. Zhur.ob.khim.
33 no.7:2140-2143 J1 '63. (MIRA 16:8)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni
A.I.Gertsena.
(Pentene) (Styrene) (Methylene group)

82565

s/080/60/033/06/06/006

5.3610

AUTHORS: Zonis, E. S., Perekalin, V. V.

TITLE: Synthesis of Dinitrodienes 7

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 6, pp. 1427-1428

TEXT: The synthesis of non-conjugated dinitrodienes, in which the nitrovinyl radicals are separated by methylene groups, was carried out by the authors for the first time. The condensation of 1,4-dinitrobutane with aromatic aldehydes in the presence of ethylenediamine or ammonium acetate in glacial acetic acid led to the formation of various 1,6-diaryl-2,5-dinitrohexadienes-1,5. To one of them sodiumdimethylmalonate was added with the formation of the methyl ester of the pertaining dinitrotetracarboxylic acid. In the condensation of the disodium salt of 1,4-dinitrobutane with paraform, 2,5-dinitrohexadiol-1,6 was separated which was converted by acetylation and subsequent deacetylation into 2,5-dinitrohexadiene-1,5 with a m. p. of 79-81 (heptane). The structural formulae of the substances synthesized, their melting points, yields and chemical compositions are given. There is 1 table and 3 Soviet references. 4

SUBMITTED: February 10, 1960

Card 1/1

PEREKALINA, T.V.

Characteristics of the distribution of Hercynian granitic intrusions in central Kazakhstan. Dokl. AN SSSR 133 no.1: 202-204 J1 '60. (MIRA 13:7)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova. Predstavleno akademikom A.A. Polkanovym. (Kazakhstan--Geology, Structural)

PEREL', T.S.; SOLOV, D.F.

Quantitative evaluation of the participation of earthworms, *Lumbricus terrestris* Linne (Lumbricidae, Oligochaeta), in the transformation of forest litter. Zool. zhur. 43 no.11:1644-1625 '64. (MIRA 1811)

1. Laboratoriya lesovedeniya, selo Uspenskoye Moskovskoy oblasti.

L 10671-66 EWT(1)/EPF(n)-2/EWA(m)-2 IJP(c) WW/AT

ACC NR: AP502B923

SSOURCE CODE: UR/0057/65/035/011/2069/2075

AUTHOR: ^{44,55} Kagan, Yu. M.; ^{44,55} Perel', V.I.

79
B

ORG: ^{44,55} Leningrad State University im. A.A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: on the theory of a spherical probe at medium and high pressure

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 11, 1965, 2069-2075

TOPIC TAGS: plasma diagnostics, plasma probe, pressure effect, electron temperature, spheric geometry

^{21,44,55}
ABSTRACT: The electron current to a spherical probe at a negative potential is calculated directly from the kinetic equation by methods previously employed by the authors (ZhTF 21, 889, 1954) to calculate the electron current to a spherical probe held at the space potential. The result reduces to the usual formula when the pressure is low, but the kinetic treatment is necessary at high pressures because the diffusion equations are invalid, owing to the low energy transfer in collisions between electrons and atoms. To facilitate the approximate solution of the kinetic equation, the distribution function is expressed as the sum of two terms representing electrons moving in different directions. This procedure is shown to give the correct result in the limiting case of low pressures and to provide a very good approximation in the limiting case of high pressures; it is assumed, therefore, that

Card 1/2

JDC 533.9.07

L 10671-66

ACC NR: AP5028323

the procedure will give a good approximation also at intermediate pressures. It is found that the electron current to the probe increases less rapidly than exponentially as the probe potential approaches the space potential and that the deviation from exponential rise is the greater, the higher the pressure. The usual method of determining the electron temperature from the slope of the upper part of the logarithmic probe characteristic, therefore, overestimates the temperature. The expression derived for the probe current can be evaluated only when the velocity dependence of the electron mean free path is known. Probe characteristics were calculated with the assumption that the electron mean free path is proportional to v^s (v is the electron velocity) for four different values of the constant s between 1 and -2, and the characteristics are presented graphically. When the electron temperature is determined from the derivative of the probe characteristic in the manner proposed by Yu.M.Kagan, V.I.Perel', and P.O.Pipattl (Vestnik LGU, No.8,129,1955), the relative error is $(s + 2)kT_e/2eV$ at high pressures, where k is Boltzmann's constant, T_e is the electron temperature, e is the electron charge, and V is the probe potential. At lower pressures the error is smaller. Orig. art. has: 31 formulas and 1 figure

SUB CODE: 20

SUBM DATE: 13Apr65/

ORIG. REF: 006

OTH REF:004

Card

M
2/8

TO: SUYEV, N.A., prof.; FEBELNIK, N.B., V. KONF. V. I.S., doc.

[Dispensary service for patients with chronic recurrent
dermatoses] Dispensariatsiia tsil'nykh khronicheskikh re-
tsidiviruiushchimi dermatozami. Kiev, Ukraïna, 1961. 61 p.
(MIF 57)

PEREL'MAN, A.I., doktor geol.-mineral.nauk (Moskva)

Samples of the popularization of science. Priroda 49 no.5:
118-119 My '60. (MIRA 13:5)
(Geophysics)

FEREL'MAN, F.M.; ZVORYKIN, A.Ya.; GAMZA, L.B.

Degree of polymerization of sodium metaphosphate at various temperatures. Izv. AN SSSR. Neorg. mat. 1 no.5:725-729 My '65. (MIRA 18:10)

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

PEREL'MAN, F.M.

Properties of components and the nature of their interaction.
Zhur.neorg.khim. 10 no.11:2522-2526 N '65.

(MIRA 18:12)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR. Submitted September 28, 1963.

PEREL'MAN, I.M.

Near-wall "slippage" of blood in capillaries. Koll.zhur. 27
no.3:422-424 My-Je '65. (MIRA 18:12)

1. Respublikanskaya bol'nitsa Kabardino-Balkarskiy ASSR,
Nevrologicheskoye otdeleniye, Nal'chik. Submitted June 30,
1963.

PEREL'MAN, L.M., prof.

Construction of roadbeds for railroads across forest swamps.
Transp. stroi. 15 no.3:7-10 Mr '65. (MIRA 18:11)

PERELMAN, Ya.M.

Potentiometric titration of platyphylline hydrotartrate in
aqueous and nonaqueous solutions. Apt. delo 14 no.144-49
Ja-F '65. (MJRA 18:10)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

1 11910-66 ENT(m)/T/EWA(m)-2

ACC NR: AP6001161 SOURCE CODE: UR/0387/65/002/003/0533/0542

AUTHOR: ^{44,55} Perelomov, A. M.; ^{44,55} Popov, V. S.; ^{44,55} Malkin, I. A. 38

ORG: Institute of Theoretical and Experimental Physics, GKIAE (institut teoreticheskoj i eksperimental'noj fiziki) 14B

TITLE: Unitary and spin content of SU(6) supermultiplets ^{19,44,55}

SOURCE: Yadernaya fizika, v. 2, no. 3, 1965, 533-542

TOPIC TAGS: particle interaction, elementary particle

ABSTRACT: A method has been developed which makes it possible to find the content of unitary multiplets of a given spin in the supermultiplet of group SU(6). An expansion table has been compiled for all the representations of SU(6) given by Young's schemes with a total number of cells $f = 3, 6,$ and 9 . The supermultiplet of SU(6) has been expanded into Wigner supermultiplets with a fixed value of the hypercharge and spin of quarks: $SU(6) \rightarrow SU(3) \otimes SU(2) \otimes U(1)$. Also given is a table for the expansion of the Kronecker product of the simplest representations of group SU(6). Orig. art. has: 1 figure, 2 tables, and 18 formulas.

SUB CODE: 20 / SUBM DATE: 26Feb65 / OTH REF: 012

Card 1/3 HW

A L 10214-66

ACC NR: AP5028542

SOURCE CODE: UR/0286/65/000/020/0152/0152

AUTHORS: Stranous, M. F.; Savotin, G. I.; Porokhnya, G. A.; Perelyayev, Yu. N.; Lysov, N. I. 23
uu uu uu uu uu B

ORG: none

TITLE: A machine for building levees along alluvial plains and for forming land slopes
Class 84, No. 175897 /announced by Design and Construction Bureau of
Glavstroymekhanizatsiya of the State Production Committee on the Transport Construction
SSSR (Proyektno-konstruktorskoye byuro glavstroymekhnizatsii gosudarstvennogo
proizvodstvennogo komiteta po transportnomu stroitel'stvu SSSR)] 48

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 152

TOPIC TAGS: excavating machinery, construction machinery

ABSTRACT: This Author Certificate presents a machine for building levees on alluvial plains and for forming land slopes. The machine contains a working member with numerous buckets for transverse excavations (see Fig. 1). This member is supported by a bearing-turning platform. To assure the possibility of levee building and slope forming, as well as trench excavating, the working member is placed on the turning platform eccentrically in respect to its axis of rotation. The rear part of the machine contains a transverse carrier and a demountable stopping baffle fixed to the frame of the working member. The body of each bucket may be open at the bottom, while

Cord 1/2

UDC: 621.879.443.6

2

L 10214-66

ACC NR: AP5028542

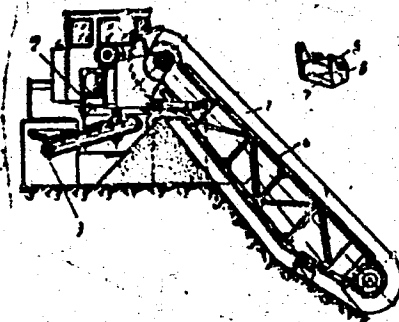


Fig. 1. 1 - Working member with numerous buckets, for transverse excavation; 2 - supporting-turning platform; 3 - carrier; 4 - frame of the working member; 5 - bucket; 6 - open body; 7 - blade.

a blade is fixed in its foremost part. Orig. art. has: 1 figure.

SUB CODE: 12/ SUBM DATE: 02Mar64

Card 2/2

KHARIN, S.Ya.; FERBYGIN, V.H.

... equilibrium vapor-liquid in the system water-ethanol-
... at boiling temperatures under atmospheric
... Izv. vys. ucheb. zav.; khim. khim. tekhn. 8 nov. 1965.
... 18

... V. V. Voznesenskiy tekhnologicheskoy institut. kafedra fizicheskoy
... 1965

PEREMYKIN, V.I., kand.sel'skokhos.nauk

Economic effectiveness in the cultivation of essential oil-bearing plants in the Krasnodar Territory. Masl.-zhir.prom. 25 no.12:4-5 '59. (MIRA 13:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut maslichnykh i efiromaslichnykh kul'tur.
(Krasnodar Territory--Oilseeds)

PEREPLETCHIKOVA, Ye.M.; ETLIS, V.S.; KALUGIN, A.A.

Quantitative determination of ethyl cellosolve and of water,
ethanol, and ethylene glycol present in it. Zav.lab. 26 no.2:
154-156 '60. (MIRA 13:5)
(Ethanol) (Ethylene Glycol)

ANTIPOV, K.F., inzh.; BALAKSHIN, B.S., prof., doktor tekhn.nauk; BARYLOV, G.I., inzh.; BEYZEL'MAN, R.D., inzh.; BERDICHEVSKIY, Ya.G., inzh.; BOBKOV, A.A., inzh.; KALININ, M.A., kand.tekhn.nauk; KOVAH, V.M., prof., doktor tekhn.nauk; KORSAKOV, V.S., doktor tekhn.nauk; KOSILOVA, A.G., kand.tekhn.nauk; KUDRYAVTSEV, N.T., prof., doktor khim.nauk; KURYSHEVA, Ye.S., inzh.; LAKHTIN, Yu.M., prof., doktor tekhn.nauk; HAYKMAN, M.S., inzh.; NOVIKOV, M.P., kand.tekhn.nauk; PARIYSKIY, M.S., inzh.; PEREPONOV, M.N., inzh.; POPILOV, L.Ya., inzh.; POPOV, V.A., kand.tekhn.nauk; SAVERIN, M.M., prof., doktor tekhn.nauk; SASOV, V.V., kand.tekhn.nauk; SATEL', E.A., prof., doktor tekhn.nauk; SOKOLOVSKIY, A.P., prof., doktor tekhn.nauk [deceased]; STANKOVICH, V.G., inzh.; FRUMIN, Yu.L., inzh.; KHRAMOY, M.I., inzh.; TSEYTLIN, L.B., inzh.; SHUKHOV, Yu.V., kand.tekhn.nauk; MARKUS, M.Ye., inzh., red. [deceased]; GRANOVSKIY, G.I., red.; DEM'YANYUK, F.S., red.; ZUBOK, V.N., red.; MALOV, A.N., red.; NOVIKOV, M.P., red.; CHARNKO, D.V., red.; KARGANOV, V.G., inzh., red. graficheskikh rabot; SOKOLOVA, T.F., tekhn.red.

[Manual of a machinery designer and constructor; in two volumes] Spravochnik tekhnologa-mashinostroitelia; v dvukh tomakh. Glav. red. V.M.Kovan. Chleny red.soveta B.S.Balakshin i dr. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.1. Pod red. A.G.Kosilevoi. 1958. 660 p. (MIRA 13:1)
(Mechanical engineering--Handbooks, manuals, etc.)

PERESUN'KO, D.I., inzh.

Peculiarities of draining certain sulfur deposits in Central
Asia. Izv.vys.ucheb.sav.: gor.shur. no.10:18-23 '59.
(MIRA 13:5)

1. Moskovskiy gornyy institut.
(Asia, Central--Sulfur mines and mining)
(Mine drainage)

PERETS, V.B.

Performance of electric drives on SE-3 excavators with 5 cu.m.
buckets. Trudy Gor.-geol.inst.UFAN SSSR no.41:189-198 '59.
(MIRA 13:5)

(Excavating machinery--Electric driving)

PAVLOV, V.A.; GAYDUKOV, M.G.; DATSKO, O.I.; NOSKOVA, N.I.; PERETURINA,
I.A.

Effect of structural characteristics on metal behavior at
high temperatures. *Izsl. po sharopr. splav.* 4:26-35 '59.
(MIRA 13:5)

(Nickel-copper alloys--Metallography)

PEREKALIN, M.A., prof.; TATUR, T.A., kand.tekhn.nauk, dots.

Heating of steel beams in the field of powerful current con-
ductors in power plants. Izv. vys. ucheb. zav.; energ. no.3:40-45
Mr '58. (MIRA 11:5)

1.Moskovskiy ordena Lenina energeticheskiy institut.
(Electric power plants)
(Induction heating)

8(3)

SOV/112-59-1-553

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 1, p 72 (USSR)

AUTHOR: Perekalin, M. A., and Tatur, T. A.

TITLE: Heating of Steel Beams in the Field of Heavy-Current Conductors at Electric Stations

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Energetika, 1958, Nr 3, pp 40-45

ABSTRACT: Temperature rise of steel beams due to eddy currents in them has been investigated depending on two parameters: distance to the current-carrying conductors and the phase-to-phase spacing. A heat-balance differential equation has been set up and solved. From the expressions obtained, the beam maximum-temperature Θ_{max} curves have been plotted as a function of the ratio of beam perimeter to its cross-section F/S for different values of parameters and a current of 11,000 amp. Θ_{max} increases with increasing F/S , with decreasing the beam-conductor distance "a," and with increasing the phase-to-phase spacing τ . For a 3-phase line with the wires

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SOV/112-59-1-553

Heating of Steel Beams in the Field of Heavy-Current Conductors at Electric
in one plane and with $F/S = 4$, $a = 30$ cm, and $\tau = 100$ cm, the temperature
 $\Theta_{\max} = 420^{\circ}\text{C}$.

V.V.M.

Card 2/2

PEREKALIN, N.A., professor, doktor tekhn.nauk

Active resistance of conductors in the presence of skin effect.
Izv. vys. ucheb. zav.; elektromekh. no.1:135-141 '58. (MIRA 11:6)

1. Moskovskiy energeticheskiy institut.
(Electric resistance)

PEREKALIN, M.A., prof.; TATUR, T.A., kand. tekhn. nauk, dots.

Heating of concrete reinforcement in the field of electric
conductors. Izv. vys. ucheb. zav.; energ. no. 4:54-60 Ap '58.
(MIRA 11:6)

1. Moskovskiy ordena Lenina energeticheskiy institut.
(Induction heating)

PEREKALIN, M A

PHASE I BOOK EXPLOITATION 805

Kasatkin, Aleksandr Sergeevich and Perekalin, Mikhail Aleksandrovich

Elektrotehnika (Electrical Engineering) 7th ed., rev. Moscow, Gosenergoizdat, 1958. 464 p. 50,000 copies printed.

Ed.: Denkov, Ye.D.; Tech. Ed.: Fridkin, A.M.

PURPOSE: This book has been approved by the Ministry of Higher Education of the USSR as a textbook in electrical engineering for students of vtuzes.

COVERAGE: The book contains basic information on d-c circuit design, magnetic circuits, inductance, capacitance and the insulation of electrical installations. It treats the theory of alternating current and discusses electrical measuring instruments, transformers, d-c and a-c electric machines, electronic and ionic devices and equipment, semiconductor devices and equipment, electric devices, electrical apparatus, lighting, electric power

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stations, substations and networks. For this seventh edition of the book, the course material has been substantially revised and brought up to date. In conformity with the desire of Gosenergoizdat, descriptions of pertinent laboratory work have been given at the end of certain chapters. These descriptions are far from including all the laboratory course material. For example, there are no descriptions of laboratory work in magnetic circuits, transient processes, electrical measuring instruments, synchronous machines, electronics, etc. In their present form, the descriptions of laboratory work are only intended as a guide to laboratory practice for 50 class hours in a modestly equipped laboratory. With the exceptions of sections 1-3, 2-8, 3-4, 7-12, 7-25, 7-26, 7-27, 7-28, 8-9, 9-5 and 10-12, Chapters one to eleven were written by M.A. Perekalin. The introduction and the rest of the book were written by A.S. Kasatkin. No personalities are mentioned. There are no references.

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AVAILABLE: Library of Congress

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JP/jmr
11/27/58

ANDREYEV, Georgiy Pavlovich; ANDREYEV, Sergey Nikolayevich;
BOGOLYUBOV, Valentin Yevgen'yevich; BURDAK, Nadezhda
Mironovna; ZHUKHOVITSKIY, Boris Yakovlevich; ZEVEKE,
Georgiy Vasil'yevich; KARAYEV, Ruben Iosifovich; LEVITAN
Semen Arkad'yevich; MUKHIN, Aleksandr Andreyevich;
NEGNEVITSKIY, Iosif Borisovich; PEREKALIN, Mikhail
Aleksandrovich; POLIVANOV, Konstantin Mikhaylovich, prof.,
doktor tekhn.nauk; FRIDKIN, L.M., tekhn. red.

[Problems of theoretical principles of electrical engineering;
theory of networks]Zadachnik po teoreticheskim osnovam elektro-
tekhnik; teoriia tsepei. [By]G.P.Andreev i dr. Moskva, Gos-
energoizdat, 1962. 159 p. (MIRA 15:12)
(Electric engineering) (Electric networks)

KASATKIN, Aleksandr Sergeevich; PEREKALIN, Mikhail Aleksandrovich
[deceased]; BULGAKOV, V.A., red.; BORUNOV, N.I., tekhn. red.

[Electric engineering] Elektrotehnika. Izd.8., perer. Moskva,
Gos. energ. izd-vo 1961. 459 p. (MIRA 14:9)
(Electric engineering)

Pere Kalin, M.A

KASATKIN, Aleksandr Sergeyevich; PEREKALIN, Mikhail Aleksandrovich;
DEMCOV, Ye.D., red.; FRIDKIN, A.M., tekhn.red.

[Electric engineering] Elektrotexnika. Izd. 7., perer. Moskva,
Gos.energ.izd-vo, 1958. 464 p. (MIRA 11:7)
(Electric engineering)

S/054/61/000/001/002/008
B117/B203

AUTHORS: Mityureva, I. A., Perekalin, M. M., Terent'yev, I. A.

TITLE: Two-nucleon problems with semiphenomenological meson potential

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, no. 1, 1961, 19-24

TEXT: In the present paper, the authors discussed the two-nucleon potential obtained by Yu. V. Novozhilov and I. A. Terent'yev (Ref. 3: ZhETF, 36, 129, 1959). This potential was modified by using the Lorentz transformation instead of the Galilean transformation. The authors attempted to compare the theoretical conclusions with the experimental data. The potential was tabulated, and the proton-proton scattering as well as corrections with respect to the magnetic moment of the deuteron were calculated. The calculated values were compared with experimental data. A consideration of the formulas for the potential showed that they were very extensive. The integration in finite form cannot be made. Numerical computations are necessary. Such computations were made with a

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Two-nucleon problems with...

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"СТРЕЛА" (Strela) computer, and potential tables were compiled. The formula for the δ_{33} phase written down by Anderson (Ref. 6: H. Anderson. Proc. of the Sixth Annual Rochester Conference, Intersci. Publ. N. Y. 1956) was used for computations. On the basis of these computations, it is possible to compare the relative potential contribution due to the exchange of a meson with the potential contribution due to the exchange of two mesons. The minimum value for R in the tables was 0.4. In most cases, the main contribution to the potential is supplied in the initial region by the terms dependent on the cross section of the NN scattering (usually, W_{00} is particularly large). For spin orbit forces, for instance, W_{00}^L (isotopic triplet) and W_{00}^L (isotopic singlet) are particularly large. The spin orbit potential is the fastest-dropping part; for $R > 2.5$, it plays the role of a very slight correction. It had been shown earlier that an asymptotic integration was possible in the formula for the LS potential. This may also be applied to the static part. Calculations showed that an asymptotic expansion for $R > 2.5$ was justified. The proton-proton scattering was chosen for checking the theory, since a great number of accurate

Card 2/3

Two-nucleon problems with...

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B117/B203

experimental data were available for this case. A comparison of calculated and experimental data showed good agreement with the theory for energies of 18 and 40 Mev. As was expected, the agreement deteriorated at higher energies. Finally, the authors investigated the LS forces and the magnetic moment of the deuteron. When calculating $(\Delta\mu)_{LS}$, they neglected the contribution of the wave function of the D state; a phenomenological wave function with the following parameters was taken for the S state: probability of the D state, 4%; effective deuteron radius, $1.704 \cdot 10^{-13}$ cm; radius of the nuclear core, $0.5610 \cdot 10^{-13}$ cm. This gives a minor positive correction $(\Delta\mu)_{LS} = 0.00207$ nuclear magnetons. Thus, the probability of the D state increases by 36%. The authors thank Yu. V. Novozhilov for conducting the work, and I. V. Mukhina for making a number of computations. There are 1 table and 16 references: 2 Soviet-bloc and 14 non-Soviet-bloc.

Card 3/3

MITYUREVA, I.A.; PEREKALIN, M.M.; TERE^YEV, I.A.

Two-nucleon problems with a semiempirical meson potential.
Vest LGU 16 no.4:19-24 '61. (MIRA 14:3)
(Nucleons) (Protons—Scattering)

85-58-7-8/45

AUTHOR: Perekalin, S. (Kiyev)

TITLE: His Komsomol Duty (Yego Komsomol'skiy doig)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 7, pp 8-9 (USSR)

ABSTRACT: The author reports on the record established by Komsomol member Anatoliy Chernyashov as public instructor in parachute jumping and gliding, who also works in the fitting shop at the Darnitskiy vagonoremontnyy zavod (Darnitsa Locomotive Repair Plant). Personalities mentioned include: the members of the DOSAAF plant committee: Mikhail Mazover, public instructor in radio operating; and N. Bogodel'nik, M. Pasvuk, G. Zazenkov, and I. Lyakhovskiy. There are 5 photographs.

Card 1/1 1. Parachute jumping--USSR 2. Gliders--Performance

PEREKALIN, S. (Kiyev)

Honorable title. Kryl.rod. 13 no.7:2 J1 '62.
(Kiev—Aeronautics—Societies, etc.)

(MIRA 16:2)

PEREKALIN, S.

They are meeting the requirements for the medal "Ready for
antiaircraft defense." Voen.znan. 35 no.1:30-31 Ja '59.
(MIRA 12:5)

(Air defenses)

PEREKALIN, S.

For the rule of the Soviets! Visiting sites of the October
battles in Moscow. Kryl.rod. 8 no.10:20-21 0 '57. (MIRA 10:10)
(Moscow--Revolution, 1917-1921)

PEREKALIN, S.

Rural defense groups need practical help. Voen.znan. 34 no.11:25
N '58. (MIRA 12:1)

(Air defenses)

PEREKALIN, S.

Tireless propagator of aviation. Kryl.rod. 8 no.1:8 Ja '57.
(MLRA 10:5)

(Aeronautical societies)

PEREKALIN, S. (Leningrad).

The glory of those days will not cease. Kryl.rod.7 no.11:3-4 N '56.
(MIRA 10:1)

(Russia--Revolution, 1917-1921)

PARKALIN, S.

Parachute tower instructor. Kryl.rod. 7 no.4:14 Ap '56. (MIRA 9:7)
(Parachutists)

AID P - 5546

Subject : USSR/Propaganda
Card 1/1 Pub. 58 - 5/20
Author : Perekalin, S.
Title : An untiring propagandist of aviation
Periodical : Kryl. rod., 1, 8, Ja 1957
Abstract : The article extolls the role of the Central Home of Aviation and Anti-Aircraft Defense im. Frunze, Moscow, in stimulating the interest of the Soviet people in aviation sports. 1 photo.
Institution : None
Submitted : No date

AID P - 4682

Subject : USSR/Aeronautics - Parachutism
Card 1/1 Pub. 58 - 8/14
Author : Perekalin, S.
Title : Parachute tower instructor
Periodical : Kryl. rod., 4, 14, Ap 1956
Abstract : The article describes the propaganda effects of properly operating parachute tower located in a public park at Dnepropetrovsk (Dnepropetrovskaya Oblast', RSFSR). No factual data of interest. 1 photo.
Institution : None
Submitted : No date

PEREKALIN, S., (Lt Col)

Perekalin, S., (Lt Col) - Author of article, "On Innovators and Conservers from Glavvostenstroy," criticizing the Main Administration for Military Construction (Glavvostenstroy) for shortcomings in its program for exploiting inventions and innovations. (Krasnaya Zvezda, Moscow, 18 Apr 54).

[See also section on complaints, "Behind the Paper Wall."]

SO: SUM 182, 13 August 1954

PROCESSING AND PRIORITY INDEX

Preparation and tinctorial properties of the condensation products in the fluorene series of the type of Naphthol AS. B. A. Peral-Koshits and V. V. Perekhalin (*Org. Chem. Ind. (U. S. S. R.)* 4, 165 70(1937).—A modified method of Ger. pats. 264,527 and 263,497 was used in the prepn. of 5 new condensation products in the fluorene series of the general type R1N.C6H3.C6H3.C6H3.N1R (R = 2,3-naphthionic acid (I), salicylic acid (II) and AcCH₂COEt (III)). To this end, 0.01 mol. of 2,7-diaminofluorene (IV), 2,7-diaminofluorenone (V) and 2,7-diaminofluoreneol (VI) were refluxed with 0.02 mol. of the acid and 50% excess PCl₅ in 25 g. p-Cl₂C₆H₄ as solvent. For the condensation of IV with III 65 cc. xylene as solvent was used. Of these compds. IV and I, m. approx. 280° (75-80% yield), IV and II, m. approx. 280° (80%), IV and III, m. 167° (44-6%), V and I, m. approx. 310° (40-50%), and VI and I, m. approx. 310° (20-30%). Cotton saten impregnated with these compds. and then treated with the usual diazotized amines (up to 17 azo components were tested) gave various shades of colors ranging from yellow through red to dark blue. These compds. excel in substantivity and their dyes in the intensity, fastness to light and other desirable properties. Naphthol AS and its deriva. The tinctorial properties of these compds. decline from the IV to VI with the V deriva. occupying the intermediate position. Approx. 15 references.

Chas. Blanc

METALLURGICAL LITERATURE CLASSIFICATION

PEREKALIN, V. V.

"On Azo-Dyes from 1,5-Aminonaphthal and some of its Derivatives. I. Mono-Azo-Dyes from 1,5-Aminonaphthal." Poraiy-Koschitz, A. E., Poraiy-Koschitz, B. A. and Perekalin, V. V. (p. 446)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1945, Volume 15, no. 6.

Lab. Byestulpa, Leningrad Chem-Tech Inst.

CA

Investigation of absorption spectra of some intermediate products and azo dyes of the naphthalene group. V. V. Ferekaïn and M. V. Savost'yanova. *Izvest. Akad. Nauk. S.S.S.R., Ser. Fiz.* 12, 583-94 (1948).—Absorption spectra of 23 naphthalene compds. (of which 16 azo dyes are new synthetic products) were measured with a Beckman spectrophotometer. The dyes indicated in the paper are: 4-phenylazo-1-naphthylamine; 2- and 4-phenylazo-1-naphthol; 2-, 6-, and 8-phenylazo-1,5-aminonaphthol; 2- and 6-phenylazo-1,5-aminonaphthol-4-sulfonic acid; 2- and 8-phenylazo-1,5-aminonaphthol-6-sulfonic acid; 2,8-diphenyl-1,5-aminonaphthol-6-sulfonic acid. All the products show the short-wave maxima of the naphthalene mol. One short-wave max. is const.; another shifts as a function of substitution groups. There is a "main" max. in the visible region in the dyes, shifting its position with the group. The position of this max. is independent of pH in orthohydroxy compds. This "main" max. is not characteristic for the azo group but is due to an interaction of the azo group with the naphthalene nucleus and side groups. In the above azo dyes a H bond may exist. S. Pakwer

PEREKALIN, V. V.

"Certain Anomalous Cases of the Reaction Between Amino Naphthol Sulfoacids and Diazo Compounds." Thesis for degree of Dr. Chemical Sci. Sub. 24 Feb 1949, Inst of Organic Chemistry, Acad Sci USSR.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949

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CA

Relation between molecular structure and absorption bands of some compounds in the di- and triphenylmethane series. V. V. Perekhin, M. V. Savost'yanova, and R. I. Morozova. *Izv. Akad. Nauk S.S.S.R., Ser. Fiz. Khim.* 1960, 33(1960). -- In the absorption spectra of diphenylmethane, triphenylmethane, diphenylcarbinol, and triphenylcarbinol in Et alc. soln. the fine structure of the band at 280 m μ , comprising the max. ϵ = 40,900, 40,100, 39,300, 38,570, 38,100, 37,700, and 37,150 is practically identical. In dimethylamine, dimethylaminodiphenylmethane; di- and trimethylaminotriphenylmethane; dimethylaminodiphenyl and triphenylcarbinol and in trimethylaminotriphenylcarbinol a new weak band at 300 m μ appears next to the 280-m μ band. The fine structure of the 280-m μ band is more or less pronounced. In tetramethyldiaminodiphenylmethane 2 new bands appear at 340 and 598 m μ . In malachite green and in crystal violet the 2 short-wave bands are conserved (with λ_{max} at 249 m μ and at 316.5, 303 m μ , resp.). There is no fine structure in the 249-m μ band; the relative intensities are modified, 2 new bands (one very intense) appear at 425 and 620 m μ and at 360 and 586 m μ , resp. S. P.

1961

CA

Determination of intramolecular hydrogen bond. V. V. Perchalin (Leningrad Technol. Inst., Leningrad). *Zhur. Obshch. Khim. (J. Gen. Chem.)* 21, 129-32 (1951). Literature review of lake formation in aromatic compds. contg. actual or potential OH groups (15 references). It is concluded that ability to form metallic lakes in the family of HO (or more rarely amino) compds. having in the ortho or peri positions some electrophilic group (CO, N:N, etc.) or in aliphatic compds. having such groups in the 1,3-position proves that the free compds. in these families have a H bond within the mol.; the lake formation thus is a qual. test for H bonds. G. M. Kosolapoff

1951

PEREKALIN, V. V.

Azo dyes from 2,8-aminonaphthol and some of its derivatives. 1. Azo dyes from 2,8-aminonaphthol. V. V. Perekalin and N. M. Slavachevskaya, *Leusovet. Technol. Inst., Leningrad, Zhur. Obshchei Khim. (I. Gen. Khim.)* 21, 897-908 (1951); *J. C. I.* 42, 968c. Addn. of 12.25 g. powd. 2-amino-8-sulfonaphthalene as the Na salt to 38 g. KOH at 210-50° and fusion for 7-9 min. at 270-80° yields after usual treatment 40% 2,8-aminonaphthol, m. 155-6° (from H₂O) (I). I (1.59 g.) in 100 ml. AcOH treated at pH 1 over 15 min. at 10-15° with 100 ml. 0.1 N PhN₂Cl; no ppt. formed in 1 hr., but after 24 hrs. 0.1 g. dye ppt. was formed identical with that isolated from the AcOH soln. by diln. with H₂O and neutralization with 10% NaOH; this, after trituration with 10% NaOH, soln. in 10% alc. NaOH, and acidification, m. 176° (from 50% EtOH); the dye forms in 39% yield and its structure is 1-benzeneazo-2,8-aminonaphthol (II) insol. in 10% aq. NaOH, gives red-brown soln. in alc. NaOH and deep blue in concd. H₂SO₄. Reduction of the dye with Zn-AcOH and treatment of the product with phenanthrenequinone and NaHSO₃ soln. gave 8-hydroxy-1,2-naphthoquinone, yellow, m. 300° (from PhCl). The dye could not be diazotized nor did it react with phthalic anhydride on conealing. When I was coupled with PhN₂Cl at pH 5 (10% HCl) and the products were treated as above, there was obtained 56% II, while the alkaline filtrate on acidification with 10% AcOH gave 44% 5-benzeneazo-2,8-aminonaphthol, m. 174° (from C₆H₆), (III). When coupling was run at pH 5.5 in NaOAc-10% HCl soln., 73% I was isolated. At pH 11 in 10% NaOH, the coupling led to 81% dye, isolated by acidification with 10% AcOH, which after purification gave 50% pure III, while the insol. fraction, after reprecip., gave a small amount of

5,7-bis(benzeneazo)-2,8-aminonaphthol, m. 232° (from PhCl), (IV). Treatment of III in EtOH with H₂SO₄, then with NaNO₂, gave 4-benzeneazo-1-naphthol, m. 203°. Diazotization of III in HCl and coupling with 1-naphthol after neutralization with NaOAc, gave 1-(4'-naphtholazo)-5-benzeneazo-2,8-aminonaphthol, decomp. 110° (red in 10% NaOH, red-green in concd. H₂SO₄, red-violet in hot concd. HCl, red-brown in AcOH). Fusion of III with equimolar amount of phthalic anhydride gave 5-benzeneazo-8-hydroxy-2-naphthyl-phthalic acid, brown-red, m. 197°. When III was coupled with PhN₂Cl at pH 11 in NaOH (addn. over 2 hrs. at 6-5°, and 4 hrs. stirring) there was formed similarly with 2 moles PhN₂Cl, acidification of the filtrate gave only a trace of III, while 28.5% IV was isolated. Attempted coupling of II with PhN₂Cl in EtOH in the presence of EtONa gave no reaction and II was recovered; the same result was obtained in 50% aq. pyridine. The unusual properties of II are caused by 2 H bonds, utilizing the H atoms of OH and NH₂ and N atoms of the azo group. Abs. spectrum of II is the same in EtOH or 1% alc. NaOH with a large max. at about 500 mμ. III shows abs. max. at 605 mμ in EtOH, and 620 mμ in EtOH-NaOH; IV gives max. at 630 mμ in EtOH and 640 mμ in EtOH-NaOH. G. M. K.

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CA

Also dyes from 2,3-aminonaphthal and its derivatives.
1. Also dyes from 2,3-aminonaphthal V. K. Betschalin
and N. M. Slavarbevkaya (Leningrad Inst. Technol., Len-
ingrad). *J. Gen. Chem. U.S.S.R.* 21, 1045 (1951)
(Engl. translation).—See *C.A.* 45, 8774f. II. Reaction
of sulfonic acids of 2,3-aminonaphthal with diazo com-
pounds. V. V. Betschalin and L. N. Kozmova. *Ibid.*
1235-07. —See *C.A.* 45, 10350f.

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CA

Also dyes from 1,5-aminonaphthal and some of its deriva-
 tives. VII. Potentiometric titration of some intermediate
 products and azo dyes of the naphthalene series. V. V.
 Pavlovskii (Leningrad Technol. Inst., Leningrad). *Zh. Obshch. Khim.* (J. Gen. Chem.) 21, 1057-59 (1951); cf.
 C.A. 43, 2886; 43, 4657a; 43, 8774f, 10049g. -Glass-
 electrode potentiometric titration is satisfactory for estn. of
 the relative effects of substituents on the mobility of the H
 atom of the HO group and the basicity of NH, in this series.
 The SO₂ group para to the HO group destroys the H bond
 in o-hydroxyazo dyes of the naphthalene family. The
 titration curves of 28 substances are reproduced, and the
 following values of K_{a1} and K_{a2} shown. constants are found:
 1,5-aminonaphthal 5 x 10⁻¹¹ and 1.4 x 10⁻¹⁰; 1-naphthal
 2, x 10⁻¹⁰ and —; 1-naphthal-4-sulfonic acid 3 x 10⁻⁹
 and —; 1,5-aminonaphthal-2-sulfonic acid 2.5 x 10⁻¹⁰
 and 3.1 x 10⁻¹¹; 4-sulfonic acid analog 2 x 10⁻¹¹ and 2.3 x
 10⁻¹²; 7-sulfonic acid analog 10⁻⁹ and 2 x 10⁻¹⁰; 6-sulfonic
 acid analog 10⁻⁹ and 7.4 x 10⁻¹¹; 8-sulfonic acid analog 2 x
 10⁻⁹ and 6 x 10⁻¹⁰; 2,8-aminonaphthal-6-sulfonic acid 2 x

10⁻⁹ and 4.7 x 10⁻¹¹; 2,5-aminonaphthal-7-sulfonic acid 2
 x 10⁻⁹ and 9 x 10⁻¹¹; 4-phenylazo-1,5-aminonaphthal-2-
 sulfonic acid 4 x 10⁻¹¹ and 3.3 x 10⁻¹⁰; 8-phenylazo-1,5-
 aminonaphthal-3-sulfonic acid 2 x 10⁻¹⁰ and 1.2 x 10⁻¹⁰;
 aminonaphthal-1,5-aminonaphthal-4-sulfonic acid 2.5 x 10⁻¹¹
 2-phenylazo-1,5-aminonaphthal-4-sulfonic acid 2.5 x 10⁻¹¹
 and 7.4 x 10⁻¹¹; 8-phenylazo-1,5-aminonaphthal-4-sulfonic
 acid 1.6 x 10⁻¹¹ and 4 x 10⁻¹¹; 2-phenylazo-1,5-aminonaphthal-7-sulfonic acid 2.5 x 10⁻¹⁰ and 7.4 x 10⁻¹¹; 6-
 naphthal-7-sulfonic acid 4 x 10⁻¹¹
 phenylazo-1,5-aminonaphthal-7-sulfonic acid 4 x 10⁻¹¹
 and 3 x 10⁻⁹; 2-phenylazo-1,5-aminonaphthal-8-sulfonic
 acid 1.6 x 10⁻⁹ and 1.4 x 10⁻¹⁰; 8-phenylazo-1,5-aminonaphthal-6-sulfonic acid 1.3 x 10⁻⁹ and 2 x 10⁻¹⁰; 2,8-
 naphthal-6-sulfonic acid 1.3 x 10⁻⁹ and 2 x 10⁻¹⁰; 2,8-
 bis(phenylazo)-1,5-aminonaphthal-4-sulfonic acid 5 x 10⁻¹⁰
 and 7 x 10⁻¹¹; 2-phenylazo-1,5-aminonaphthal-3-sulfonic
 acid 10⁻⁹ and 4.6 x 10⁻¹¹; 6-phenylazo-1,5-aminonaphthal-
 8-sulfonic acid 1.6 x 10⁻⁹ and 7.3 x 10⁻¹⁰; and 2-phenylazo-
 1-naphthal-4-sulfonic acid 1.6 x 10⁻⁹ and —. Electronic
 interpretations of the effects are conventionally presented.
 G. M. Kowaloff

CA

Also dyes from 2,8-aminonaphthal and some of its derivatives. II. Reaction of such the acids of 2,8-aminonaphthal with diazo compounds. V. V. Perekhin and L. N. Konovalova (Leningrad Technol. Inst., Leningrad). *Zhur. Obshch. Khim. (J. Gen. Chem.)* 21, 1150-63 (1951); cf. C.A. 45, 877f. — Addn. of 7.95 g. 2,8-aminonaphthal (I) at 0-3° to 16 ml. 10% H₂SO₄ and stirring 4 hrs. gave 65% 2,8-aminonaphthal-7-sulfonic acid, which is poorly sol. in H₂O, and 10% of the 5-sulfonic acid analog, isolated as the Na salt, by boiling out of the mother liquor. Sublimation at 20-30° gives 50% and 35%, resp. Heating the 5-isomer with 20% SnCl₄ on a steam bath 24 hrs. gave 2,8-aminonaphthal, thus confirming the structure; the 7-isomer is stable under similar conditions. Coupling of the 5-, 6-, and 7-sulfonic acids I was done at various pH levels: 2.5-3.0, 4.8-5.0, 5.2-5.4, 11.5-12.0, and in pyridine. Coupling of PhN₂Cl at pH 2.5-3.0 with 1-6-sulfonic acid gave 9% 1-(benzenazo)-2,8-aminonaphthal-6-sulfonic acid, the same forming in 85% yield on coupling at pH 4.8-5.0; the product, a dark bronze powder with abs. max. at 800 mμ, in the latter case forms along with a less sol. 7-(benzenazo)-2,8-aminonaphthal-6-sulfonic acid, obtained in 81% yield in coupling at pH 12; this material has the abs. max. at 610 mμ. Neither could be converted to a diazo dye. The 1-benzenazo deriv. after reduction with Zn dust and treatment with phenanthroquinone and NaHSO₃ in aq. suspension gave 55% yellow-brown 8-hydroxy-1,2-naphthophenanthrazine-7-sulfonic acid. Coupling 1-6-sulfonic acid with PhN₂Cl at pH 5 gave 21% product, readily sol. in alkali, which is the 1-benzenazo deriv. (II), with abs. max. at 680 mμ, and 11% less sol. 7-benzenazo deriv. (III), with abs. max. at 800 mμ. Reduction of the former with SnCl₄ gave 1,2-diamino-8-naphthal-6-sulfonic acid, which with phenanthroquinone gave 28% 8-hydroxy-1,2-naphthophenanthrazine-7-sulfonic acid, olive-green.

Addn. of PhN₂Cl to II at pH 12 gave 1,7-bis(benzenazo)2,8-aminonaphthal-5-sulfonic acid in 45% yield; abs. max. not detd. owing to poor soly. III also forms on coupling of 1-5-sulfonic acid with PhN₂Cl at pH 12 in 87% yield and does not couple with a second mole of PhN₂Cl. Coupling 1-7-sulfonic acid with PhN₂Cl at pH 5 gave 45% 1-benzenazo deriv., more sol. in alkali, with abs. max. 490 mμ, and 13% 5-benzenazo deriv., with abs. max. 800 mμ. The latter forms in 75-80% yield on coupling at pH 12, while reduction of the former followed by treatment with phenanthroquinone gave 8-hydroxy-1,2-naphthophenanthrazine-7-sulfonic acid in 25% yield. Coupling of the 1-benzenazo deriv. with PhN₂Cl at pH 12 gave 1,5-bis(benzenazo)2,8-aminonaphthal-7-sulfonic acid, in 71% yield, while the 5-benzenazo deriv. failed to couple again. Titration of 1-5-sulfonic acid gives breaks at pH 3.4, 7.3, and 10.9; the 7-isomer gives breaks at 5.7 and 9.7. G. M. Kosolapoff