

LYUBOSHITS, I.L., kandidat tekhnicheskikh nauk.

Approximate calculation of the kinetics of drying materials in
suspension. Trudy Inst.energ.AN BSSR no.1:99-125 '54.(MLBA 9:8)
(Drying)

Lyuboshits, I.L.

METHOD OF UTILIZATION OF FUEL FOR POWER AND CHEMICAL PURPOSES.

Lyuboshits, I.L. (Inst. Inst. Energ. Akad. Nauk Belorussk. SSR (Trans. Inst. for White Russ. S.S.R.), 1954, (1), 161-179; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1956, (2), 7656). In the scheme described milled peat is separated into fine (< 5 mm) and coarse (> 5 mm) fractions. The fine fraction, which comprises 80% of the total quantity, is subjected to low temperature carbonization in suspension and extraction of liquid and gaseous products, while the coarse fraction is dried and fed to steam boilers, in which it is burned with the low temperature coals. The peculiarity of the scheme is the division of the heating in low temperature carbonization into two stages: (1) to 200-225°C by fine gases at 800-900°C, and (2) to 500°C by external heating in a heat exchanger by fine gases at 900-800°C. Drying of the peat is effected by exhaust steam from the turbines and boiler fine gases. Thermal calculations are made and the scheme's advantages over that of Chukhanov and Nikolaev (Fuel Abstr., 1951, vol. 10, 2506) are pointed out.

LYUBOSHYTS, I. L.

Drying grain with a hot-air dryer. Vestsi AN BSSR no. 4:91-112
Jl-Ag '54. (MLBA 8:9)

(Grain--Drying)

124-57-1-661

Translation from Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 84 (USSR)

AUTHOR. Lyuboshits, I. L.

TITLE Investigation of a New Grain-drying Method (Issledovaniye novogo metoda sushki zerna)

PERIODICAL: Tr. In-ta energetiki AN BSSR, 1955, Nr 2, pp 114-161

ABSTRACT: Results are adduced of a shop investigation of a new suspension-type grain-drying method proposed by the author, wherein the principal novelty lies in the intermittent character of the desiccation process. Test results of a prototype of a grain-drying machine based on the proposed drying method have indicated a number of advantages over existing grain driers.

V D Sokolov

1 Grains--Drying--Equipment 2. Grain drying machines--Test results

Card 1/1

LYUBOSHITS I.L.

LYUBOSHITS, I.L., kand.tekhn.nauk; NIKITSINA, L.M., kand.tekhn.nauk.

Drying and heating corn in pneumatic gas dryers before sowing.
Vestsi AN BSSR. Ser. fiz.-tekhn. nav. no.2:137-143 '57.(MIRA 11:1)
(Corn (Maize)--Drying)

LYUBOSHITS, I.L., kand. tekhn. nauk

Method for decreasing the entrainment of milled peat during its
open drying. Trudy Inst.energ.AM BSSR no.3:85-93 '57.

(MIRA 12:1)

(Peat)

LYUBOSHITS, I.L., kand. tekhn. nauk

Testing results of industrial models of intermittent pneumatic
grain dryers. Trudy Inst.energ.AN BSSR no.3:136-147 '57.
(MIRA 12:1)

(Grain--Drying)

06565
3CV/76-59-9-6/18

28(5)

AUTHOR:

Lyuboshits, I.L.

TITLE:

Contact Mass Exchange in a Layer of Granular Material

PERIODICAL:

Inzhenerno-fizicheskiy zhurnal, 1959, Nr 9, pp 47 - 51 (USSR)

ABSTRACT:

The paper describes a method of calculating contact mass exchange in a layer which consists of particles having different values of the potential of substance transfer. The dessiccation of materials by the method of contact mass exchange can find a wide application, in particular in drying granular materials. Making use of the analogy between the processes of heat and mass transfer, employed by A.V. Lykov [Ref 2], the author derives a system of equations, Formulae 8, 14, 15 and 16 in the text, which enables one to solve the problems of determining the kinetics of contact mass exchange for the cases when the values of the following quantities are known: c_1 and c_2 , specific mass capacities of both granular materials participating in the contact mass exchange, and R_1 and R_2 , coefficients of their resistance

Card 1/2

Contact Mass Exchange in a Layer of Granular Material

06565

307/170-39-3-5/10

to mass transfer. When these values are unknown, a method can be used for their experimental determination, which is described in the article. There are 2 Soviet references.

ASSOCIATION: Institut energetiki AN BSSR (Institute of Power Engineering of the AN BSSR), Minsk.

Card 2/2

LYUBOSHITS, I.L.

Investigation of the kinetics of drying in a gas-operated
oscillation-type grain dryer. Inzh.-fiz.zhur. no.8:69-73 Ag
'60. (MIRA 13:8)

1. Institut energetiki AN BSSR, g. Minsk.
(Grain--Drying)

LYUBOSHITS, I.L.

Determination of the optimum conditions for a pneumatic gas dryer operating in an oscillating (alternating) regime. Inzh.-fiz.zhur. no.9:91-98 S '60. (MIRA 13:9)

1. Institut energetiki AN BSSR, Minsk.
(Grain--Drying) (Drying apparatus)

LYUBOSHITS, I.L.

Method for increasing the efficiency of steam boilers operating on
milled peat. Trudy Inst. energ. AN BSSR no.11:85-93 '60.
(MIRA 14:9)

(Boilers)

LYUBOSHITS, I.L.

Heating of a disperse material in a radiation heat exchanger.
Inzh.-fiz. zhur. 4 no.1:76-81 Ja '61. (MIRA 1A:4)

1. Institut energetiki AN BSSR, Minsk.
(Heat exchangers)

LYUBOSHITS, I.L.

"Deep Drying of Milling Peat at External Heating and its Low-temperature Carbonization in a Falling Bed."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

LYUBOSHITS, I. L.

"Drying of grain in a Pneumo-gas Dryer with Oscillating
Regime."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

LYUBOSHITS, I.L.; MURASHKO, M.G.; SMOL'SKIY, B.I.; SHUL'MAN, Z.P.

Il'ia Isaakovich Paleev; on his 60th birthday. Inzh.-fiz. zhur.
4 no. 5:125-126 My '61. (MIRA 14:5)
(Paleev, Il'ia Isaakovich, 1901--)

POLYAKOV, I. M.; LYUBOSHITS, I. L.; KLAPTSOVA, N. K.

New method for drying grain in controlling loose smuts. Zashch.
rast. ot vred. i bol. 5 no.6:16-18 Je '60.

(MIRA 16:1)

(Seeds--Disinfection) (Smuts)

LYBOSHITS, I.L.; KUTS, P.G.

Effect of the drying method chosen for peat insulating slabs on
the drying efficiency. Inzh.-fiz. zhur. 7 no. 3:17-20. Mr 1964.
(MIRA 17:5.

1. Institut teplo- i massochennaya Ah BSSR, Minsk.

LYUBOSHITS, I. L.; SHEYMAN, V. A.

"The drying of potassium salts in suspension."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk,
4-12 May 1964.

Inst of Heat & Mass Transfer, AS BSSR.

IYUBOSHITS, L. (Voronezh)

"Revisionism and reformism in the theory of impoverishment" by L.
IA. Bregel'. Reviewed by I. Iyuboshits. Vop. ekon. no. 11: 137-141
N '61. (MIRA 14:11)
(Labor and laboring classes) (Communist revisionism)

Lyuboshits, M. I.

124-1957-10-12281

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 149 (USSR)

AUTHOR: Lyuboshits, M. I.

TITLE: The Effect of the Time Rate of Stepwise Load Incrementation on the Mechanical Strength Characteristics of Oak (Vliyaniye skorosti stupenchatogo nagruzheniya na mekhanicheskiye kharakteristiki prochnosti duba)

PERIODICAL: Sb. nauch. rabot. Belorus. politekhn. in-t, 1956, Nr 54, pp 156-166

ABSTRACT: Radial flexure tests were conducted on air-dried oak specimens (10.7-11.3 percent moisture content), having a 26x20-mm cross-section and a 400-mm span, by applying a load in equal increments and maintaining the load on the specimen for some time after each loading step. The limit of plasticity σ_{plast} was determined. When the duration of the test was increased from 8.6-9.5 minutes to 21.9 days, the tensile strength σ_t decreased from 904-922 kg/cm² to 752 kg/cm² and σ_{plast} decreased from 486-488 kg/cm² to 382 kg/cm². It is readily apparent that σ_{plast} decreases faster than σ_t . With slower

Card 1/2

124-1957-10-12281

The Effect of the Time Rate of Stepwise Load (cont.)

load incrementation the deformation beyond σ_{plast} increased considerably.

Yu. M. Ivanov

Card 2/2

14(10)

PHASE I BOOK EXPLOTTATION

SOV/2045

Ruditsyn, M. N., P. Ya. Artemov, and M. I. Lyuboshits

Spravochnoye posobiye po soprotivleniyu materialov (Handbook on the Strength of Materials) Minsk, Gos. Izd-vo BSSR, 1958. 508 p. Errata slip inserted. 20,000 copies printed.

Ed. (Title page): M. N. Ruditsyn; Ed. (Inside book): I. Chernyak; Tech. Ed.: N. Stepanova.

PURPOSE: The handbook is intended for design and manufacturing departments of machine-building plants and for students of technical schools.

COVERAGE: The book presents basic principles, working formulas, charts, and tables. It includes information on deformations and stresses in tension, compression, bending, torsion, and shearing, as well as on designs of beams, thick-walled cylinders, and thin-walled columns with open cross sections. The stability of elastic systems, the design of statically indeterminate systems, and elasto-plastic bending and torsion are discussed. Cyclical stresses and dynamic loading are explained. Data on the mechanical

Card 1/9

Handbook on the Strength of Materials

SOV/2045

properties of materials are presented. The use of formulas and tables is illustrated by examples. The author thanks A. F. Anishchenko, Candidate of Technical Sciences. There are 38 Soviet references.

TABLE OF CONTENTS:

| | |
|---|----|
| Foreword | 7 |
| Introduction(M. N. Ruditsyn) | 9 |
| 1. Basic premises and concepts | 11 |
| 2. Concept of displacements and deformations | 13 |
| 3. Internal and external forces | 15 |
| 4. Stresses | |
| Ch. I. Axial Tension and Compression (M. N. Ruditsyn) | 18 |
| 1. General information | 22 |
| 2. Mechanical characteristics | 35 |
| 3. Design for tension and compression | 40 |
| 4. Consideration of [a part's] weight | 41 |
| 5. Flexible ropes | |

Card ~~2/9~~

PHASE I BOOK EXPLOITATION

SOV/3744

Lyuboshits, M.I.

Raschety na prochnost' pri peremennykh napryazheniyakh (Strength Calculations for Variable Stresses) Minsk, Redaktsionno-izdatel'skiy otdel BPI, 1959.
103 p. 3,000 copies printed.

Sponsoring Agencies: Minsk. Belorusskiy politekhnicheskiy institut, and BSSR. Ministerstvo vysshego, srednego, spetsial'nogo i professional'nogo obrazovaniya.

Reviewer: G.K. Tatur, Doctor of Technical Sciences, Professor; Ed.: A.G. Blyum; Tech. Ed.: P.T. Kuz'menok.

PURPOSE: The booklet is intended for students and workers studying the strength of materials.

COVERAGE: The author describes the phenomena of variable stresses and shows several calculation examples for strength characteristics of machine parts.

Card 1/2

Strength Calculations for Variable Stresses

SOV/3744

The analysis is based on elementary mathematics. No personalities are mentioned. There are 39 references, all Soviet.

TABLE OF CONTENTS:

| | |
|--|-----|
| Introduction | 5 |
| 1. Basic Concepts | 7 |
| 2. Basic Laws of the Strength of Materials Under the Action of Variable Stresses. The Endurance Limit and Its Experimental Determination | 14 |
| 3. Concept of the Physical Nature of the Process of Fatigue Failure | 20 |
| 4. Effect of Various Factors on the Value of the Endurance Limit | 26 |
| 5. Strength Calculations for the Uniaxial State of Stress in Pure Shear (Torsion) | 58 |
| 6. Determination of the Safety Factor for Materials Under the Action of Combined Stresses | 71 |
| 7. Practical Measures for Increasing the Fatigue Strength of Materials | 77 |
| 8. Appendixes | 83 |
| 9. Bibliography | 102 |

AVAILABLE: Library of Congress

Card 2/2

AC/pw/mas
7-25-60

14(10)

PHASE O BOOK EXPLOITATION

SOV/3042

Artemov, P. Ya., M.I. Lyuboshits, and M.N. Ruditsyn

Raschet tonkostennykh sterzhney otkrytogo profilya (Analysis of Thin-Walled Bars With Open Cross Section) Minsk, Red.-izd-vo otdel BPI imeni I.V. Stalina, 1959. 138 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Belorusskiy politekhnicheskii institut. Kafedra "Soprotivleniye materialov."

Ed. (Title page): M.N. Ruditsyn; Ed.: G.A. Kuz'michenko; Tech. Ed.: Ye.I.Yarish.

PURPOSE: This textbook is intended for students in advanced courses on the strength of materials.

COVERAGE: This book presents in concise form the theory of stresses in thin-walled bars with open cross sections as well as the procedures used in stress and stability analysis. Included are cases of constrained torsion, bending torsion, and the eccentric application of longitudinal forces. A

Card 1/4

Analysis of Thin-Walled Bars (Cont.)

SOV.3042

number of calculation examples are presented to illustrate the application of the theory to particular problems. The authors thank Professor A.A. Kravtsov and Docents V.M. Shirshov and A.A. Cheche. There are 12 Soviet references.

TABLE OF CONTENTS:

| | |
|--|----|
| Foreword | 3 |
| Introduction. Concept of free and constrained torsion | 5 |
| Ch. I. Sectorial Characteristics of a Cross Section | 10 |
| 1. Concept of sectorial area | 10 |
| 2. Relationship between sectorial areas for different poles | 13 |
| 3. Sectorial static moments of the cross-sectional area | 14 |
| 4. Sectorially linear static moments of a cross section | 16 |
| 5. Center of bending | 17 |
| 6. Sectorial moments of inertia of a cross section | 26 |
| 7. Geometric stability characteristics | 29 |
| Ch. II. Stresses in the Case of Constrained Torsion and Corresponding Stress Factors | 32 |

Card 2/4

Analysis of Thin-Walled Bars (Cont.)

SOV/3042

| | |
|--|----|
| 8. Fundamental hypotheses | 32 |
| 9. Stresses in the case of constrained torsion | 33 |
| 10. Derivation of the formula for normal stresses in the case of constrained torsion | 35 |
| 11. Derivation of the formula for sectorial tangential stresses | 41 |
| 12. Differential equations of deformation in the case of constrained torsion | 44 |
| 13. Analogy between the theory of bending-torsion and the theory of plane bending | 59 |
| 14. Examples of stress calculations for thin-walled bars | 61 |
| Ch. III. Analysis of Solid Thin-Walled Bars | 75 |
| 15. Equation of three bimoments | 75 |
| 16. Analysis examples for solid bars | 81 |
| Ch. IV. Stresses in a Thin-Walled Bar for Eccentric Action of Longitudinal Forces | |
| 17. Various cases of eccentric application of longitudinal forces | 87 |

Card, 3/4

| | | |
|---|----------|------|
| Analysis of Thin-Walled Bars (Cont.) | SOV/3042 | |
| 18. Examples of the determination of stresses in the case of eccentric action of forces | | 93 |
| Ch. V. Stability of Thin-Walled Bars | | 97 |
| 19. Stability of a compressed thin-walled bar. Determination of the critical force | | 97 |
| 20. Examples of stability analysis for thin-walled bars with open cross section | | 114 |
| Appendix (4 Tables) | | 121. |
| Bibliography | | 137 |
| AVAILABLE: Library of Congress | | |

Card 4/4

AC/gmp
2-26-60

RUDITSYN, Mikhail Nikolayevich, dots.; LAPTEV, Vladimir Pavlovich, starshiy prepodavatel'; RUD', Boris Viktorovich, assistent; KUROVSKIY, Ivan Frantsevich, starshiy prepodavatel'; LYUBOSHITS', Moisey Il'ich, dotsent; PETROVICH, Aleksandr Grigor'yeovich, starshiy prepodavatel'; BALKIN, Mikhail Kirillovich, assistent; PEN'KEVICH, Vladimir Aleksandrovich, assistent; OSHEROVICH, Lyubov' Il'inichna, dotsent; CHULITSKIY, Vyachoslav Ivanovich, assistent; Prinimal ucha-stiye SIKOLOVSKIY, A.V., KAPRANOVA, N.V., red.; PESINA, S.A., tekhn.red.

[Laboratory work on the strength of materials]Laboratornyye raboty po soprotivleniiu materialov. Minsk, Izd-vo M-va vysshego, srednego spetsial'nogo i professional'nogo obrazovaniya BSSR, 1961. 272 F (Strength of materials- Testing) (MIRA 15:8)

RUDITSYN, M.N.; ARTEMOV, P.Ya.; LYUBOSHITS, M.I.; CHERNYAK, I., red.;
STEPANOVA, N., tekhn. red.

[Reference manual on the strength of materials] Spravochnoe
posobie po soprotivleniiu materialov. Pod obshchei red. M.N.
Ruditsyna. 2. ispr. izd. Minsk, Gos.izd-vo BSSR. Red.
nauchno-tekhn.lit-ry, 1961. 515 p. (MIRA 15:1)
(Strength of materials)

LYUBOSHITS, Moisey Il'ich; TATUR, G.K., prof., retsenezent; RUDITSYN, M.N., retsenezent; TETERINA, L.N., red.; MORGUNOVA, G.M., tekhn. red.

[Geometrical characteristics of a cross section] Geometricheskie kharakteristiki sechenia. Minsk, Izd-vo M-va vysshego, srednego spetsial'nogo i professional'nogo obrazovaniia BSSR, 1962. 132 p. (MIRA 16:2)

1. Zaveduyushchiy kafedroy soprotivleniya materialov Beloruskogo politekhnicheskogo instituta (for Ruditsyn). (Geometry)

LYUBOSHITS, Moisey Il'ich; ITSKOVICH, Georgiy Mikhaylovich;
TATUR, G.K., doktor tekhn.nauk, retsenzent; BARANOVSKIY,
N.V., kand. tekhn. nauk, nauchn. red.; LEVINA, S.G., red.

[Manual on the strength of materials] Spravochnik po
soprotivleniiu materialov. Minsk, Vysshaya shkola, 1965.
343 p. (MIRA 18:5)

LYUBOSHITS, N. A.

Isolated closed rupture of the pancreas. Khirurgia 37 no.7:
142-143 J1 '61. (MIRA 15:4)

1. Iz khirurgicheskogo otdeleniya 'zav. - B. A. Melkumov)
bol'nitsy No. 2 (glavnyy vrach A. L. Ganshin), Babushkin.

(PANCREAS--WOUNDS AND INJURIES)

LYUBOSHITS, N.A.

Morteggia's lesions in children. Ortop., travm. i protez.
no.8:14-18 '62. (MIRA 17:10)

1. Iz otdeleniya detskoy travmy Tsentral'nogo instituta
travmatologii i ortopedii (dir.- doktor med. nauk M.V.
Volkov) na baze gorodskoy bol'nitsy No.20 imeni Timiryazeva
(nauchnyy rukovoditesl' bazy - kand. med. nauk N.G. Dam'ye),
Moskva.

LYUBOSHITS, N.A. (Moskva I-337, Bol'shaya Mytishchinskaya ul., d.26/11, kv.3)

Clinical aspects, treatment and late results in pelvic bone fractures associated with hip fractures in children. Ortop., travm. i protez. 24 no.8:13-18 Ag '63. (MIRA 17:1)

1. Iz kliniki detskoy travmatologii (zav. - kand. med. nauk N.G. Dam'ye) Tsentral'nogo instituta travmatologii i ortopedii (dir. - prof. M.V. Volkov) na baze Detskoy gorodskoy bol'nitsy No.20 imeni Timiryazeva, Moskva.

LYUBOSHITS, N.A. (Moskva - I-307, Bol'shaya Mytishchinskaya ul., f.
26/11, kv.3)

Traumatic hip dislocation in children associated with pelvic
fracture. Vest. khir. 91 no.8:94-97 Ag'63 (MIRA 17:3)

1. Iz kliniki detskoj travmatologii (zav. - kand. med. nauk
N.G. Dam'ye) Tsentral'nogo instituta travmatologii i ortopedii
(dir. - doktor med. nauk M.V. Volkov) Ministerstva zdрав-
okhraneniya SSSR na baze Detskoj gorodskoy bol'nitsy No.2)
imeni Timiryazeva (glavnyy vrach - S.T. Yesayan), Moskva.

LYUBOSHITS, N.A.

Case of Galeazzi's fracture in a child. Ortop., travm. i
protez. no.1263-64:63. (MIRA 16:10)

1. Iz kliniki detskoy travmatologii (zav. - kand. med. nauk
N.G.Dam'ye) Tsentral'nogo instituta travmatologii i orto-
pedii (dir. - prof. M.V.Volkov).

*

LYUBOSHITS, N.A. (Moskva I-337, B.Mytishchinskaya ul. d.26/11, kv.3);
NEMSADZE, V.P.; ALYAB'YEV, V.N.

Traumatic hip dislocation in children. Ortop., travm. i protez.
25 no.5:9-13 My '64. (MIRA 18:4)

1. Iz Tsentral'nogo instituta travmatologii i ortopedii (dir. -
chlen-korrespondent AMN SSSR prof. M.V.Volkov) i Detskoy
gorodskoy bol'nitsy No.20 imeni Timiryazeva (nauchnyy rukovoditel' -
N.G.Dam'ye).

LYUBOSHITS, N.A.; NEMSAPOFF, V.P.

Traumatic dislocation of both hips in association with a fracture
of one hip in a 13-year-old child. Khirurgiya 49 no. 1:136-143
My '64. (MIRA 18:1)

1. Klinika detskoy travmatologii izv. i kard. med. nauk N.I. Den'ya.
TSentral'nogo instituta travmatologii i ortopedii (dir. prof.
M.V. Volkov, 1. Bol'shaya Gruzinskaya ulitsa No. 20 imeni
Timiryazeva (1A nyy etazh S.I. Vesnyan, Moskva.

LYUBOSHITS, N.A.

Late X-ray symptom of a lesion of the trochanteric fossa in children.
Vest. rent. i rad. 39 no.4:73-74 J1-Ag '64. (MIRA 18:7)

1. Tsentral'nyy institut travmatologii i ortopedii i travmatologicheskoye
otdeleniye Detskoy gorodskoy bol'nitsy No.20 imeni Timiryazeva (zav. -
kand. med. nauk N.G.Dam'ye), Moskva.

SERPINSKIY, V.V.; VOYTKEVICH, S.A.; LYUBOSHITS, N.Yu.

Determination of the pressure of saturated vapors of certain aromatic
principles. Zhur.fiz.khim. 27 no.7:1032-1038 J1 '53. (MLBA 6:9)

1. Institut sinteticheskikh i natural'nykh dushistykh veshchestv, Moscow.
(Vapor pressure) (Essences and essential oils)

SERFINSKIY, V.V.; VOYTKEVICH, S.A.; LYUBOSHITS, N.Yu.

Determination of the saturated vapor pressure of several fragrant
substances. Trudy VNIISNDV no.2:103-113 '54. (MIRA 10:7)
(Odorous substances) (Vapor pressure)

LYUBOSHITS, N. Yu.

USSR/Chemistry

Card 1/1

Authors : Serpinskiy, V. V., Voytkovich, S. A., and Lyuboshits, N. Yu.

Title : The pressure of saturated vapor of certain odoriferous substances. Part 2. -

Periodical : Zhur. Fiz. Khim., 28, Ed. 5, 810 - 813, May 1954

Abstract : The pressures of saturated vapor of benzyl acetate, cinnamic alcohol, phenylethyl alcohol, alpha-terpineol and indole were investigated by the effusion method at 10 - 55°. It was shown that the values obtained at the investigated temperatures could be quite accurately expressed by the Clausius-Clapeyron equation and integrated under the assumption of a constant concealed heat of evaporation (sublimation). Nine references: 4-USSR, 2-German since 1923 - 1928, 2-English, 1-USA. Table, graphs.

Institution : All-Union Scient. - Res. Institute of Synthetic and Natural Odiferous Substances, Moscow.

Submitted : July 13, 1953

Lyuboshits, N. Yu.

USSR/ Chemistry - Physical chemistry

Card 1/1 : Pub. 147 - 14/22

Authors : Serpinskiy, V. V.; Voytkovich, S. A.; and Lyuboshits, N. Yu.

Title : Determination of pressure of saturated vapor of certain odoriferous substances

Periodical : Zhur. fiz. khim. 28/11, 1969-1974, November 1954

Abstract : The pressures of saturated vapor of phenylacetic aldehyde, methyl ether of anthranilic acid, citronellol, cyclamen-aldehyde, p-acetylanisole and tibetolide was measured by the effusion method at 10 - 60° C. The results obtained are tabulated. A saturated vapor pressure table, compiled for seventeen odoriferous substances, is included. Twenty references: 7-USSR; 1-USA; 2-German; 2-French; 1-English and 1-Swiss (1899-1954). Tables; graphs.

Institution : All-Union Institute of Synthetic and Natural Odoriferous Compounds, Moscow

Submitted : March 16, 1954

SERPIISKIY, V.V.; VOYTKEVICH, S.A.; LYUBOSHITS, N.Yu.

Determination of saturated vapor pressure for certain aromatic principles.
Part 4. Zhur.fiz.khim. 29 no.4:653-657 Ap '55. (MLRA 8:8)

1. Institut sinteticheskikh i natural'nykh dushistykh veshchestv, Moskva.
(Vapor pressure) (Essences and essential oils)

Lyuboshits, N. Yu.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 21/35

Authors : Serpinskiy, V. V.; Voytkovich, S. A.; and Lyuboshits, N. Yu.

Title : Determination of the saturated vapor pressure of certain aromatic principles

Periodical : Zhur. fiz. khim. 30/1, 177-183, Jan 1956

Abstract : The saturated vapor pressures of p-methylacetophenone, gamma-phenylpropyl alcohol, citral, d- and l-linalyl acetate, musk-xylene and benzophenone were measured at close to room temperatures. All aromatic principles but benzophenone were investigated in liquid state only. Benzophenone was studied in liquid and crystalline states. It was found that the vapor pressures of d- and l-linalylacetate, obtained from different raw materials, were practically identical. The results obtained from the other aromatic principles are shown in tables. Twenty-seven references: 11 USSR, 5 Germ., 1 Eng., 1 Swiss, 1 USA, 1 Danish (1925-1955). Tables; graphs.

Institution : Inst. of Synthetic and Natural Aromatic Principles, Moscow

Submitted : June 16, 1955

VOYTKEVICH, S.A., kandidat khimicheskikh nauk.; LYUBOSHITS, N.Yu.

Effect of the saturated vapor pressure on the rate of evaporation
of aromatic substances. Masl.-zhir. prom. 23 no.4:20-27 '57.

(MIRA 10:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh
i natural'nykh dushistykh veshchestv.
(Essences and essential oils)

SERPINSKIY, V.V.; VOYTKEVICH, S.A.; LYUBOSHITS, N.Yu.

Results of determining the saturated vapor pressures of 36
odorous substances. Trudy VNIISNDV no.4:125-130 '58.
(MIRA 12:5)

(Essences and essential oils)
(Vapor pressure)

LYUBOSHITS, S.I.

Vital activity of leucocytes in preserved blood. Med. zhur. Uzb.
no.3:6-10 Mr '60. (MIRA 15:2)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta gematologii
i perelivaniya krovi (nauchnyy rukovoditel' - doktor meditsinskikh
nauk G.S.Suleymanova).
(LEUCOCYTES) (BLOOD PLASMA)

LYUBOSHITS, S.Ye.; SALIKHOVA, L.M.

Studies on the adaptation of transfused erythrocytes using high-titer anti-A and anti-B sera. Probl. gemat. i perel. krovi 5 no. 11:48-49 '60. (MIRA 14:1)
(BLOOD—TRANSFUSION) (ERYTHROCYTES) (SERUM)

LYUBCHITS, S.Ye.

Glycolytic action of the erythrocytes in conserved blood. Med.
zhur. Uzb. no.5:49-52 My '61. (MIRA 14:6)

1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta gematologii
i perelivaniya krovi (nauchnyy rukovoditel' doktor meditsinskikh
nauk G.S.Suleymanova).
(ERYTHROCYTES) (BLOOD—COLLECTION AND PRESERVATION)
(GLYCOLYSIS)

88272

S, 170/61, 004/001, 011, 020
B019/B056

11.9300

AUTHOR: Lyuboshits, T. I.

TITLE: Heating of Disperse Materials in a Radiation Heat Exchanger

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1961. Vol. 4, No. 1,
pp. 76-81

TEXT: The author investigates the radiation heating of disperse material, which was used by him for the thermal decomposition of peat. By means of this method, a high efficiency is attained at temperatures of 550-600°C owing to the high heat exchange coefficient in the radiation heat exchanger. In this studies, the author proceeds from the heat exchange equation

$$G c_m d\theta = \left(\frac{t_w + 273}{100} \right)^4 - \left(\frac{\theta + 273}{100} \right)^4 c_{em} dF \quad (1)$$

Here G denotes the quantity of the material passing through the heat exchanger, c_m is the specific heat, and θ the temperature of the material,

Card 1/3

.....

88272

Heating of Disperse Materials in a Radiation Heat Exchanger

S/17C/61/004/001/010/020
B019/B05C

t_w is the wall temperature, F the area of heat exchange, and c_{em} the radiation coefficient of the burning flow. With reference to A. M. Gurvich, A. G. Blokh, and A. I. Nosovitskiy (Ref. 2), the author, proceeding from (1) develops the following differential equation:

X

$$\frac{d\psi}{dF} \neq \frac{c_{em}}{c_m G} \left\{ \left(\frac{(t_{in} + 273) - \frac{Gc_m}{Lc} (\psi_2 - \psi_1) - \frac{Gc_m}{Lc} \frac{d\psi}{dF}}{100} \right)^4 - \frac{(t_{in} + 273)^4}{100} \right\}$$

t_{in} is the initial temperature of the gas to be heated, c and L the specific heat of the gas to be heated and its quantity respectively. Solving this differential equation is difficult and is mostly approximated by dividing the heat exchanger according to its height into a number of sections. Here, a solution is suggested by using the balance equation $\alpha'(t_w - \psi) \neq k(t_g - \psi)$, where t_g is the gas temperature, α' a heat exchange coefficient between wall and material. The determination of α' for the upper and the lower end of the heat exchanger is discussed, and finally a formula is derived for the surface of the heat exchanger

Card 2/3

88272

Heating of Disperse Materials in a Radiation
Heat Exchanger

S/170/61/004/001/012/020
B019/B056

$F = c_m G (t_2 - t_1) / k_{\text{mean}} (t_g - \theta)_{\text{mean}}$, where k_{mean} is the mean value of the heat transfer coefficient from gas to material. Further, a formula is given for the height of the heat exchanger, and finally an example is discussed. There are 1 table and 3 Soviet references. ✓

ASSOCIATION: Institut energetiki AN BSSR, g. Minsk (Institute of Power Engineering of the AS BSSR, Minsk)

SUBMITTED: August 5, 1960

Card 3/3

24.6600, 24.6800, 24.2000

76989

SOV/56-37-6-29/55

AUTHOR: Lyuboshits, V. L.

TITLE: Polarization Phenomena in Radiative Collisions of Two Electrons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 6, pp 1727-1740 (USSR)

ABSTRACT: The two-row matrix formalism was used in describing the polarization phenomena in the collision of two Dirac particles of arbitrary energy. The radiative collision of two polarized electrons was considered. The structure of the general formulas for the polarization parameters after the collision was investigated, and concrete calculations were carried out in the ultrarelativistic and nonrelativistic limits with compensation for the polarization of the target electrons. There are 45 equations; and 15 references, 5 Soviet, 1 Italian, 1 U.K., 8 U.S. The 5 most recent U.S. and U.K. references are: J. Jhoseph, F. Rohrlich, Rev. Mod. Phys., 30, 354, 1958; H. Tolchoek, Rev. Mod. Phys., 28, 277, 1956; L. Michel,

Card 1/2

Polarization Phenomena in Radiative Collisions
of Two Electrons

76989

SOV/56-37-6-29/55

A. S. Wightman, Phys. Rev., 98, 1190, 1955; H. Banerjee,
Phys. Rev., 111, 532, 1958; K. W. McVoy, Phys. Rev,
111, 1933, 1958.

ASSOCIATION: Voronezh State Univ., USSR (Voronezhskiy gosudarstvennyy
universitet, SSSR)

SUBMITTED: July 7, 1959

Card 2/2

24 2000

35574
S/056/62/042/003/033/049
B102/B138

AUTHORS: Lyuboshits, V. L., Smorodinskiy, Ya. A.

TITLE: Covariant expansion of the electromagnetic field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
no. 3, 1962, 846 - 856

TEXT: Two problems of covariant expansion of a free electromagnetic field are considered: a) expansion of a photon field with respect to electric and magnetic multipoles, b) expansion of field sources (current) with respect to multipole moments. The formulas are derived by using the irreducible tensors of the Lorentz group and the conception of the "little group" L_q of the four-vector q which is assumed to be time-like or lying on the light cone. In the first case L_q is anisomorphous subgroup of spherical symmetry. For the momentum k lying on the light cone, the little group L_k is an isomorphous space group for the biatomic molecule considered. After defining the covariant Stokes parameters, expressions for the covariant expansion of the photon field with respect to the

Card 1/5

†

S/056/62/042/003/033/049
B102/B138

Covariant expansion of the...

multipoles
$$\begin{aligned} E_{LM}(k) &= L^{-1/2}(L+1)^{-1/2} |k| \nabla_k Y_{LM}(n), \\ M_{LM}(k) &= L^{-1/2}(L+1)^{-1/2} i [k \nabla_k] Y_{LM}(n). \end{aligned} \quad (15)$$

where

$$\begin{aligned} k E_{LM}(k) &= 0, & k M_{LM}(k) &= 0, & \nabla_k M_{LM}(k) &= 0, \\ E_{LM}(k) M_{LM}(k) &= 0 \end{aligned} \quad (16)$$

are derived.

$$E_{mLM}^{(l)}(k) = L^{-1/2}(L+1)^{-1/2} \frac{1}{\sqrt{-p^2}} \left[k_m \left(P_n \frac{\partial}{\partial k_n} \right) - (kP) \frac{\partial}{\partial k_m} \right] Y_{LM}^{(l)}(n), \quad (25)$$

$$M_{mLM}^{(l)}(k) = \frac{1}{i \sqrt{-p^2}} L^{-1/2}(L+1)^{-1/2} e_{mlst} k_t \left(\frac{\partial}{\partial k_s} Y_{LM}^{(l)}(n) \right) P_t. \quad (26)$$

are obtained, which, if $\vec{P} = 0$, go over to (15) again. The expansion with respect to multipoles of the Fourier components of the electromagnetic field reads

$$A_m(k) = \sum_{LMl} e_{LM}^{(l)} E_{mLM}^{(l)}(k) + \sum_{LMl} m_{LM}^{(l)} M_{mLM}^{(l)}(k) \quad (27)$$

Card 2/5

Covariant expansion of the...

S/056/62/042/003/033/049
B102/B138

The functions $Y_{L\dot{M}}^{(i)}(n)$ are tabulated for $M = 0, \pm 1, \pm 2$ and $L=0,1,2$. $e_{\dot{L}}$ and $m_{\dot{L}}$ are spinors with L dotted and L non-dotted indices. The covariant expansion of a charged-particle current with respect to multipole moments is achieved by a power expansion of

$$j_k(x, t) = \sum_i e_{(i)} v_{(i)k} \delta^3(x - x_{(i)}(t)), \quad (29)$$

$$\partial j_k(x, t) / \partial x_k = 0. \quad (29a)$$

and separation into current and charge density component:

$$j_k(x, t) = \sum_i e_{(i)} \dot{\xi}_{(i)k} \exp\{-i(\xi_{(i)} \nabla)\} \delta^3(x) \quad (31)$$

$$(\dot{\xi}_{(i)} = \partial \xi_{(i)} / \partial t)$$

$$j = \sum_i \left\{ + e_{(i)} \dot{\xi}_{(i)} - e_{(i)} \dot{\xi}_{(i)} (\xi_{(i)} \nabla) + \dots \right\} \delta^3(x), \quad (32)$$

$$\rho = \sum_i \left\{ e_{(i)} - e_{(i)} (\xi_{(i)} \nabla) + \frac{1}{2} e_{(i)} (\xi_{(i)} \nabla)^2 - \dots \right\} \delta^3(x). \quad (33)$$

Card 3/5

7

S/056/62/042/003/033/049
B102/B138

Covariant expansion of the...

For the particle trajectories $\vec{x}_{(i)}(t) = \vec{x}_c + \vec{\xi}_{(i)}(t)$ is valid. with

$$\sum_i \frac{1}{L!} \xi_{(i)\alpha} \xi_{(i)\beta} \dots \xi_{(i)\gamma} = Q_{\alpha\beta\dots\gamma}^{(L)}(t). \quad (34)$$

for the charge density expansion with respect to multipole moments

$$\rho = \sum_L (-1)^L Q^{(L)} \nabla^L \delta^3(\mathbf{x}), \quad (35)$$

is obtained; ∇^L stands for the L-fold product $\nabla_\alpha \nabla_\beta \dots$. For the current

$$(\alpha, \beta, \gamma = 1, 2, 3)$$

$$j_\alpha = \left\{ \sum_{L=1}^{\infty} (-1)^{L-1} \frac{\partial}{\partial t} Q_{\alpha\beta\dots\gamma}^{(L)} \frac{\nabla_\beta \nabla_\gamma \dots}{L-1} + \sum_{L=2}^{\infty} \sum_i \frac{L-1}{L!} e_{(i)} (\xi_{(i)} \nabla)^{L-2} (-1)^L [|\xi_{(i)} \xi_{(i)}| \nabla]_\alpha \right\} \delta^3(\mathbf{x}). \quad (42)$$

Card 4/5

Covariant expansion of the...

S/056/62/C42/003/033/049
B102/B138

results. If the four-vector of current density is divided into an electrical and magnetic part,

$$j_l^{\mu\nu} = \left[ZP_l + \frac{\partial}{\partial x_k} (P_k N_l - P_l N_k) \right] P_0^{-1} \delta^3 [\mathbf{x} - \mathbf{x}_c(t)], \quad (47)$$

$$\mathbf{x}_c(t) = \mathbf{P}t / P_0, \quad j_l^m = -\epsilon_{iklm} M_k P_l \frac{\partial}{\partial x_m} P_0^{-1} \delta^3 [\mathbf{x} - \mathbf{x}_c(t)]. \quad (48)$$

are obtained. Finally, multipole radiation is considered and expressions are derived which relate the multipole expansions (25)(26) with the current density expansion with respect to the multipole moments. There are 1 table and 14 references: 8 Soviet and 6 non-Soviet. The three references to English-language publications read as follows: L. Michel, H. Rouhaninejad. Phys. Rev. 122, 242, 1961; D. M. Fradkin, R. H. Good. Rev. Mod. Phys. 33, 343, 1961; V. Bargmann, E. P. Wigner. Proc. Nat. Acad. Sci. USA, 34, 211, 1948.

SUBMITTED: October 6, 1961

Card 5/5

LYUBOSHITS, V.L.; OKONCV, E.O.

[Possible resonances in K-meson decay] С возможными
резонансами в распадах K-мезонов. Дубна, Об"единен-
ный ин-т ядерных исл., 1963. 8 p. (MIRA 17:7)

S/056/63/044/002/026/C65
B102/B186

AUTHOR: Lyuboshits, V. L.

TITLE: Multipole expansions in decay processes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 2, 1963, 561-572

TEXT: The author, together with Ya. A. Smorodinskiy, has developed a relativistically covariant technique of considering the multipole radiation of classical charge systems. They utilised the irreducible tensors $T(u_{(i)}u)$ of the small Lorentz group L_u ; u is the c.m.s. four-velocity, $u_{(i)}$ the four-velocity of the particles. This method is now applied to study the phenomenological structure of an electromagnetic vertex in the relativistic quantum theory. A covariant expansion of an arbitrary electromagnetic vertex in relativistic multipoles is set up. For this expansion (in terms of irreducible representations of the group L_u) it is of great importance that the velocity of the particles involved in the

Card 1/3

Multipole expansions in ...

S/056/63/044/002/028/065
B102/B166

decay considered are different before and after the decay. The method is demonstrated by the example of the decay $A \rightarrow B + \gamma$, in which the electromagnetic vertex has three free ends. The tensors are set up from the wave amplitudes of the particles involved. This is done by a transformation connected with parallel displacement of vectors and spinors in the Lobachevskiy space (cf. Smorodinskiy, ZhETF, 43, 2217, 1962). The electromagnetic transitions of elementary particles are investigated and the electromagnetic form factors are determined for $k^2 \neq 0$ based on the gauge invariance ($\Gamma_\alpha k_\alpha = 0$) and the fact that $\Gamma_\alpha = M_{\alpha\beta} k_\beta$, where $M_{\alpha\beta}$ is an antisymmetric four-tensor dependent only on the spins of the initial and final nuclei, and k is the four momentum of the quantum emitted in the transition. The results obtained are also used to investigate the structure of the β -decay Hamiltonian $H = G j_\alpha^{\text{nucl}} j_\alpha^{\text{lept}} / \sqrt{2}$ in the theory of universal weak interaction, according to which $j_\alpha^{\text{lept}} = \bar{\psi} \gamma_\alpha (1 + \gamma_5) \psi$ (Phys. Rev. 109, 193, 1958). The number of different types of form factors for β -decay of particles with arbitrary spin is calculated and tabulated. A relativistically covariant classification of the β -transitions is given

Card 2/3

S/056/63/044/002/028/065
B102/B186

Multipole expansions in ...

in terms of degrees of forbiddenness. There is 1 table.

SUBMITTED: December 3, 1962

10

11

12

ACCESSION NR: AP4042587

S/0056/64/046/006/2221/2226

AUTHORS: Lyuboshits, V. L.; Podgoretskiy, M. I.

TITLE: On a possible method of determining the magnetic moment of the Σ^+ hyperon

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2221-2226

TOPIC TAGS: sigma particle, hyperon, magnetic moment, depolarization, meson reaction

ABSTRACT: In view of the great difficulties entailed in the determination of the magnetic moment of the Σ^+ hyperon by standard methods using spin precession in an external magnetic field, the authors propose a new method, which does not call for a magnetic field stronger than several thousand Gauss. The gist of the method is to replace the external field by the intra-atomic field, making use of the phenomenon of depolarization of positively charged parti-

Card

1/2

ACCESSION NR: AP4042587

cles in condensed media, a depolarization which is due essentially to the electron magnetic field, which acts in turn on the magnetic moment of the given particle. It is shown that in principle the magnetic moment of the Σ^+ hyperon can be determined in principle from an analysis of experimental data on the asymmetry of the $\Sigma^+ \rightarrow p + \pi^0$ decay in flight and upon stopping. It is also pointed out that an analogous method can be used to measure the magnetic moments of light hyperfragments. "The authors thank S. S. Gershteyn, I. I. Gurevich, V. G. Nosov, and I. V. Yakovleva for interesting remarks." Orig. art. has: 18 formulas.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: 19Jan64

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 003

Card 2/2

16099-65 ETT(m) DIAAP
ACCESSION NR: AP5000345

S/0056/64/047/005/1868/1873

AUTHORS: Lyuboshits, V. L.; Okonov, E. O.; Podgoretskiy, M. I.

TITLE: Effect of medium on properties of neutral kaon⁰ antikaon⁰
pairs

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,
no. 5, 1964, 1868-1873

TOPIC TAGS: K meson, K particle, pair theory, particle interference

ABSTRACT: The purpose of the investigation was to ascertain the influence of the medium on the interference phenomena occurring in $K^0\bar{K}^0$ systems and to estimate the accuracy of the usual approximation, within the framework of which the K^0 mesons are regarded as free. In estimating the influence of the coherent interaction of the K^0 and \bar{K}^0 mesons with the medium on the properties of the $K^0\bar{K}^0$ pairs

Card 1/2

L 16099-65

ACCESSION NR: AP5000345

the authors obtain a system of basic functions for such pairs in the medium, and note the specific features of the interference phenomena in the systems $K^0\bar{K}^0$, $K_1^0 K_2^0$, $K_1^0(K_2^0)$, and $K^0(\bar{K}^0)$. It is shown that the equations for $K\bar{K}$ pairs previously derived by one of the authors (Okonov et al., ZhETF v. 43, 720 and 1362, 1962), with the K^0 mesons regarded as free, are subject to an error which can reach 10% and which must be taken into account. Orig. art. has: 18 formulas.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
 (Joint Institute of Nuclear Research)

SUBMITTED: 13May64

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 003

Card 2/2

L 41009-65 EWT(m)/EWA(h)
ACCESSION NR: AP5007701

S/0367/65/001/001/0027/0031

12
B

AUTHOR: Baryshevskiy, V. G.; Lyuboshits, V. L.; Podgoretskiy, M. I.

TITLE: Resonance transitions of waves in the presence of splitting

SOURCE: Yadernaya fizika, v.1, no. 1, 1965, 27-31

TOPIC TAGS: resonant spin flip, wave nucleus interaction, polarized target interaction, rotating nuclear field, level splitting, resonance transition, neutron spin, neutron bombardment 19

ABSTRACT: The authors previously introduced (ZhETF, 47, 1050, 1964) the concept of a nuclear field connected with a polarized target and showed that such a rotating nuclear field acts on neutrons passing through the constant magnetic field in a manner similar to the action of a rotating magnetic field. Consequently, if the frequency of rotation of a nuclear field is equal to the level splitting of the neutron within the total nuclear and magnetic field, there occurs a resonant re-orientation of the spin of the neutrons. The present paper studies the case when the target consists of nuclei with spins larger than 1/2. Such nuclei may exhibit quadrupole level splitting within the intracrystalline electric field, and during

Card 1/2

E 41009-65

ACCESSION NR: AP5007701

2

the passage of neutrons through such a target one may observe several resonant frequencies. The problem is treated theoretically and the results show a complete analogy with the case of ordinary paramagnetic resonance. The same type of reasoning is also applied to photons (changes in polarization) and K-mesons, and the authors conclude by pointing out that the resonant transition effects may be utilized for the design of directional monochromators (see G. M. Drabkin, ZhETF, 43, 1107, 1962). The extraction of particles with the desired energy may be achieved either by changes in the frequency of the applied field (nuclear, magnetic, electric) or by the changes in the period of the periodic interaction (produced by consecutive layers of appropriate material). "The authors thank S. S. Gershteyn and F. A. Shapiro for interesting discussions." Orig. art. has: 12 formulas.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Studies)

SUBMITTED: 19 Jun 64

ENCL: 00

SUB CODE: NP

NO REF SOV: 003

OTHER: 000

Card 2/2

LYUBOSHITS, V.L.; OKONOV, E.O.; PODGORETSKIY, M.I.; U Tszun-fan' [Wu TSung-fan]

Disturbance of CP-invariance and interference phenomena in the disintegration of a neutral K-meson into two π -mesons. IAd. fiz. 1 no.3: 497-506 Mr '65. (MIRA 18:5)

1. Ob'yedinennyy institut yadernykh issledovaniy.

BARYSHEVSKIY, V.G.; LYUBOSHITS, V.L.; PODGORETSKIY, M.I.

Neutron scattering on a polarized target. Izv. Akad. Nauk SSSR Ser. Fiz. (1965) 9:1819-1824

1. Ob'yedinennyy institut yadernykh issledovaniy.

I 48126-65 EWT(1)/EWT(m)/EWG(v)/EDC(t)/T/EWA(m)-2 Pe-5/Pae-2 GW
ACCESSION NR: AP5011219 UR/0367/65/001/003/0490/0496

AUTHOR: Lyuboshits, V. L.; Okonov, E. O.; Podgoretskiy, M. I.

TITLE: The galactic hypercharge field and decay of long lived neutral mesons into two pi mesons

SOURCE: Yadernaya fizika, v. 1, no. 3, 1965, 490-496

TOPIC TAGS: galactic structure, galactic radiation, radioactivity, meson, meson reaction, physics, mass energy relation, relativity, elementary particle, field theory

ABSTRACT: The authors give a general analysis of the basic properties of classical fields generated by nonconserved charges, basing their work on the "action by contact" principle. By this principle they mean spatial localization of energy, and finiteness of the speed of propagation of energy. It is shown that while introduction of the above fields does not imply violation of energy conservation, these fields cannot quantitatively explain the experimental results of Christenson et al. (*Phys. Rev. Lett.*, 13, 138, 1964). The authors also disagree with Ball, J. S. et al. (*Phys. Rev. Lett.*, 13, 348, 1964) and Bernstein, J. et al. (*Phys. Lett.*, 12, 146,

Card 1/4

40
36
B

19

L 48126-65
ACCESSION NR: AP5011219

1964). These papers are said to contradict the principle of action by contact, which is basic to modern physics. In these papers, the decay $K^0 \rightarrow 2\pi$ at large distance from the generation point is interpreted as the result of regeneration of K_1^0 mesons in the specific field of our galaxy. A general outline of some basic properties of the system consisting of hypercharges and the galactic field is given. The difference in the structure of such a system is the nonconservation of hypercharge in weak interaction processes. A similar situation is noted in the case of antigravitation problems, for here the hypercharge is responsible for mass attraction, positive for particles, negative for antiparticles. The authors confine their work to classical fields with nonconservation of charge g . The possibility of creation and annihilation of charge in g -fields leads automatically to breakdown of the equation of continuity and the nonconservation of g -current. Motion in this field will violate energy conservation only if certain poorly defined postulates are made. It appears that in making certain assumptions about the field, the assumption of violation of conservation is put in. Under certain conditions, certain cyclic processes appear nonconservative. The authors formulate basic postulates common for all classical fields, which hold for g -fields. Then they analyze energy relations for charge change in an external static g -field. Many other authors have used the assumption that in change of charge of particles found in a

Card 2/4

L 48126-65

ACCESSION NR: AP5011219

point A , their potential energy instantaneously changes by a value $\Delta g\phi(A)$ where Δg is the change in charge and ϕ is the field potential. This contradicts short-range action. Instantaneous change is possible only for finite speed of propagation of the reaction. The decay $\Lambda^0 \rightarrow N + \pi$ in the galactic g -field is analyzed from the point of view of short-range action. It is found that the energy of interaction of charges that are not conserved is not a single valued function of their interaction or of their mutual distribution in space. The problem of $K_2^0 \rightarrow 2\pi$ decay is considered. It is shown that the scheme for K meson formation in the galactic field that is assumed in the papers referred to and also the formation scheme for K_1^0 mesons in the gravitational field is inconsistent from the viewpoint of the principle of short-range action. If short-range action is valid, the regeneration of K_1^0 mesons cannot be affected by the potential created by charges which are a great distance from the neutral K meson. The actual effect of the g -field on the properties of the neutral K mesons is considered. It is concluded that the parameter of nonconservation of CP cited by Christenson cannot be generally applied to the system proposed in this article. Experiments done at different times at different points should lead to different results. Meanwhile, only a single experiment, that of Christenson, exists. Thus, in spite of the possibility of existence of a g -field with nonconserved charge, the $K_2^0 \rightarrow 2\pi$ decay which was experimentally observed by

Card 3/4

L 48126-65

ACCESSION NR: AP5011219

Christenson cannot be explained within the "action by contact" theory as an effect of the regeneration in this field of K_1^0 mesons. "We are glad to thank V. G. Baryshevskiy, V. I. Ogiyevetskiy and A. V. Tarasov for participating in our discussions and for their valuable comments."

ASSOCIATION: Ob"yedinneniy institut yadernykh issledovaniy (Joint Institute for Nuclear Research)

SUBMITTED: 02Jan65

ENCL: 00

SUB CODE: NP, GP

NO REF SOV: 003

OTHER: 013

Card 4/4

L 52951-65 ENT(1)/EPF(c)/EEC(t) P1-4 IJP(c) WW/GG

ACCESSION NR: AP5010510

UR/0056/65/048/004/1146/1149

AUTHOR: Baryshevskiy, V. G.; Lyuboshits, V. L.; Podgoretskiy, M. I.

30
29
B

TITLE: Effect of interaction between neutrons and nuclei on the paramagnetic resonance width in a neutron beam

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965, 1146-1149

TOPIC TAGS: paramagnetic resonance, neutron beam, neutron interaction, polarization, resonance line width

ABSTRACT: This is a continuation of earlier work on resonance phenomena that occur in beams of slow neutrons (ZhETF v. 47, 1050, 1964 and Yadernaya fizika v. 1, No. 1, 1965). The present paper deals with paramagnetic resonance in a neutron beam with account of interaction between the neutrons and the target nuclei. The effect of polarization of the target on the width of the resonance line is investigated and it is shown that the width of the resonance line is determined by incoherent processes resulting in the escape of neutrons from the beam. The results are analyzed under the assumption that paramagnetic resonance can be regarded as

Card 1/2

L 52951-65

ACCESSION NR: AP5010510

photon absorption and emission processes during transitions between levels of finite width. Orig. art. has: 8 formulas.

ASSOCIATION: Ob"edinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 23Oct64

ENCL: 00

SUB CODE: SS, NP

NR REF NOY: 003

OTHER: 002

646
Card 2/2

L 11952-66 EWT(m)/EPF(n)-2/EWA(h)

ACC NR: AP6001150

SOURCE CODE: UR/0367/65/002/003/0441/0444

AUTHOR: ^{44,55} Baryshevskiy, V.G.; ^{44,55} Lyuboghiits, V.L.; ^{44,55} Podgoretskiy, M.I.

39
B

ORG: ^{44,55} Joint Institute for Nuclear Research (Ob"yedinennyy Institut yadernykh issledovaniy)

TITLE: On the scattering of neutrons on a polarized target

SOURCE: ^{19,44,55} Yadernaya fizika, v. 2, no. 3, 1965, 441-444

TOPIC TAGS: nuclear magnetic moment, neutron scattering, quadrupole moment, neutron polarization

ABSTRACT: Neutron scattering on a polarized target placed in an external magnetic field is considered in the presence of quadrupole splitting of the levels of the target nuclei in an inhomogeneous intracrystalline electric field. It is shown that in both the scattered and the passing beam, a periodic variation of the intensity and polarization of the particles with time is observed. The phenomena arising during the crossing of the levels of the target nuclei are discussed. The results can be used to measure the magnetic and quadrupole moments of nuclei and to develop pulsating neutron sources. Orig. art. has: 4 formulas.

SUB CODE: 20 / SUBM DATE: 17Jan65 / ORIG REF: 004 / OTH REF: 004

HW
Card 1/1

BARYSHEVSKIY, V.G.; LYUBOSHITS, V.L.

Rotation of the plane of polarization of gamma quanta passing
through a polarized electron target. IAd. fiz. 2 no.4:666-669
0 '65. (MIRA 18:11)

1. Ob'yedinennyy institut yadernykh issledovaniy.

L 15663-66 EWT(1) IJP(c) WW/GG

ACC NR: AP6000214 SOURCE CODE: UR/0056/65/049/005/1556/1557

AUTHORS: Baryshevskiy, V. G.; Lyuboshits, V. L.; Podgoretskiy, M.I.

ORG: Joint Institute of Nuclear Research (Ob'yedinennyy institut yadernykh issledovaniy) 61

TITLE: Spontaneous transitions upon passage of light through anisotropic media B

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1556-1557

TOPIC TAGS: light polarization, ~~refractive index~~, light transmission, double refraction, magnetic field, electric field, anisotropic medium

ABSTRACT: This is a continuation of an earlier paper by the authors (Yadernaya fizika v. 1, 27, 1965) dealing with resonance variations induced in the polarization of light passing through an anisotropic medium by a high frequency electric or magnetic field. It is shown in the present paper that passage of light of frequency ω through a doubly refracting medium gives rise to radiation of electromagnetic

Card 1/2

L 15663-66

ACC NR: AP6000214

waves with a frequency $\Omega = \omega \Delta n / n_0$ (n is the refractive index and n_0 its isotropic part). The probability of the spontaneous transitions produced in the light is determined by calculating the matrix element of the operator of interaction between the transmitted light and the medium in the electric field. The relative magnitude of this effect is quite small, 10^{-15} -- 10^{-16} for guaiacol [$C_6H_4(OCH_3)OH$] at $\Omega \sim 10^{14}$ sec^{-1} and visible light, is barely at the threshold of detection if a laser light beam is used. Orig. art. has: 5 formulas.

SUB CODE: 20/ SUBM DATE: 03Jul65/ ORIG REF: 002/

PC
Card 2/2

L 18771-66 EWT(1)

ACC NR: AP6002739

SOURCE CODE: UR/0056/65/049/006/1938/1941

AUTHORS: Lyuboshits, V. L.; Onishchuk, V. A.; Podgoretskiy, M.I. ²⁷

ORG: Joint Institute of Nuclear Research (Ob'yedinenny institut yadernykh issledovaniy)

TITLE: Anisotropy of radiation of the hydrogen atom in an electric field.

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 6, 1965, 1938-1941

TOPIC TAGS: hydrogen atom reaction, quantum field theory, transition radiation

ABSTRACT: This is a continuation of an earlier investigation by the authors (Preprint, OIYaI, R-2248, Dubna, 1965) of the effect of mixing quantum levels by means of external fields on radiative transitions of atoms, and the interference effects which arise in the transitions of atoms located in a homogeneous electric fields. In the present paper the authors discuss interference effect in the radiative transi-
21,441,45

Card 1/3

L 18771-66

ACC NR: AP6002739

tions of atomic hydrogen in an external electric field, where noticeable interference effects can be expected even with weak fields, owing to the smallness of the separation between levels having the same j but different l , and also between levels with different j . The transition between the first excited state and the ground state of hydrogen is studied by way of an example for which the actual calculations are made. It is shown that whereas in a homogeneous electric field mixing will occur between all the three levels $2P_{1/2}$, $2S_{1/2}$, and $2P_{3/2}$, and interference will occur for the E1 transitions because of the mixing, in the case when the Stark shift of these levels is much less than the separation between them (fields weaker than 500 v/cm), the $2P_{3/2}$ level mixes with the $2P_{1/2}$ level and noticeable anisotropy and partial linear polarization appear. Similar effects can occur for transitions between levels with larger quantum numbers. However, these come into play at considerably weaker fields. For an anisotropy in the angular distribution of radiation of about 0.1, the field required for the $2P_{1/2} \rightarrow 1S_{1/2}$ transition is 500 v/cm, but for the

Card

2/3 mgs

L 18771-66

ACC NR: AP6002739

$3S_{1/2} \rightarrow 2P_{1/2}$ transition it is only about 50 v/cm. Orig. art. has:
1 figure and 12 formulas.

SUB CODE: 20/ SUBM DATE: 23Jul65/ ORIG REF: 002/

Card

3/3 mg 5

I. 44042-66 EWT(m)/T

ACC NR: AP6032234

SOURCE CODE: UR/0367/66/003/005/0895/0902

AUTHOR: Lyuboshits, V. I.

ORG: Joint Institute for Nuclear Research (Ob'yedinenny institut yadernykh issledovaniy)

22
B

TITLE: Decays in a mixed ensemble of neutral K-mesons

14

SOURCE: Yadernaya fizika, v. 3, no. 5, 1966, 895-902

TOPIC TAGS: K meson, pi meson, radioactive decay

ABSTRACT: A description is given of the decay properties of a mixed ensemble of neutral K-mesons with the help of the two-row density matrix method. The case in which the neutral K-meson is contained in a $K^0\bar{K}^0$ system is considered in detail. Interference effects in the decay of neutral K-mesons into two \bar{K} -mesons, when CP-invariance is violated, are discussed from a new point of view. Orig. art. has: 42 formulas. [JPRS: 36,712]

SUB CODE: 20 / SUBM DATE: 25Jul65 / ORIG REF: 007 / OTH REF: 003

Card 1/1 blg

0919 1259

ACC NR: AP7011837

SOURCE CODE: UR/0367/66/004/006/1194/1201

AUTHOR: Lyuboshits, V. L.; Okonov, E. O.

ORG: Joint Institute for Nuclear Research (Ob'yedinennyy institut yadernykh issledovaniy)

TITLE: Interference of K sub L approaches pi sup + pi sup minus and K sub S approaches pi sup + pi sup minus decays in correlation experiments with K sup 0 K sup 0 pairs

SOURCE: Yadernaya fizika, v. 4, no. 6, 1966, 1194-1201

TOPIC TAGS: K meson, radioactive decay

SUB CODE: 20,18

ABSTRACT: It is shown that an investigation of interference effects in correlation experiments with $K^0\bar{K}^0$ pairs makes it possible to determine the magnitude and relative phase of a small admixture of states with even (or odd) orbital moments in the $K^0\bar{K}^0$ system. The authors thank M. I. Podgoretskoy for his valuable discussion. Orig. art. has: 23 formulas. [Based on authors' Eng. Abst.] [JPRS: 40,423]

Card 1/1

0192

0435

1975-1980, N. J.; 1981-1982, N. J.

The 1981-82 report for the 1981-82 period is
Gos. nachr.-issl. inst. nauch. i. inzh. inform.
Ag 164.

RYUBOSLAVSKIY, V.D., inzh.

New techniques for mortising holes in wood. Nauch. trudy Len. lesotekh.
akad. no.76:28-34 '57. (MIRA 11:4)

(Carpentry)

LYUBOSLAVSKIY, V.D., inzh.

Automatic mortising of holes. Nauch. trudy Len. lesotekh. akad.
no. 76:35-42 '57. (MIRA 11:4)
(Carpentry) (Automatic control)

MODIN, Nikolay Alekseyevich; LYUBOSLAVSKIY, Vadim Dmitriyevich;
GOL'DENBERG, Sh.A., red.; LEBEDEVA, I.D., red.izd-va;
SHIBKOVA, R.Ye., tekhn. red.

[Boring holes and cutting sockets in wood] Sverlenie otver-
stii i frezerovanie gnezd v drevesine. Moskva, Goslesbum-
izdat, 1962. 131 p. (MIRA 16:3)

(Woodworking)

L 15387-66 EWT(d)/EWT(1)/EWP(v)/T/EWP(k)/EWP(h)/EWP(1) LJP(c) GG
ACC NR: AP5026985 SOURCE CODE: UR/0020/65/164/005/1037/1040

AUTHOR: Lyuhov, B. Ya.; Chernizer, G. M.

ORG: Institute of Metallurgy and the Physics of Metals Central Scientific-Research
Institute of Ferrous Metallurgy, Im. I. P. Bardin (Institut metallovedeniya i fiziki metalloy
Tsentral' nogo nauchno-issledovatel' skogo instituta chernoy metallurgii); Moscow Institute
of Steels and Alloys (Moskovskiy Institut stali i splavov)

TITLE: The interaction between a uniformly moving boundary dislocation and admixture
atoms in anisotropic face-centered cubic crystals

SOURCE: AN SSSR. Doklady, v. 164, no. 5, 1965, 1037-1040

TOPIC TAGS: crystal lattice dislocation, single crystal, crystal defect, crystal lattice
energy

ABSTRACT: Starting from the atomistic approximation of the discontinuum, the authors
investigate theoretically an infinite single crystal containing a single unit linear dislocation
and a foreign atom. The principle of superposition for displacements is valid in the entire
volume, except for the region of the nucleus with the singularity around the dislocation axis.

Card 1/2

UDC: 539.2.214

L 15387-66
ACC NR: AP5026985

The establishment of a general expression for the energy contribution is followed by a discussion of certain special cases (which reduce to cases known from scientific literature), and by the application of the theory to the particular case of an infinite single crystal with face-centered cubic lattice representing a solid substitution solution of noninteracting admixture atoms of low concentration. Results are not compared with the existing data. The paper was presented by Academician G. V. Kurdyumov, 27 May 65. Orig. art. has: 18 formulas.

SUB CODE: 11, 20 / SUBM DATE: 19May65 / ORIG REF: 005 / OTH REF: 005

15
Card 2/2

LYUBOV, B. Ya.

"Computation of Non-Stationary Temperature Fields in Bodies of Simplest
Forms. III," Zhur. tekhn. fiz., 14, No.s, 1-2, 1944

Dnepropetrovsk Physico-Technological Inst.

LYUBOV, B. Ya.

"Theoretical Determination of the Residual Stresses in an Isotropic Sphere,
Sharply Cooled from the Surface," Zhur. tekhn. fiz., 16, No.8, 1946

Sect. Theoretical Physics, Inst. Physics of Metals
Central Sci. Res. Inst. Ferrous Metallurgy

Lyubov, B. Ya. Solution of a nonstationary distribution
 problem of heat conduction for a region with uniform
 transmission at the boundary. Doklady Akad. Nauk
 SSSR (N.S.) 57, 551-554 (1947). (Russian)

The physical problem reduces to the solution of $T_{xx} = a^{-2}T_t$,
 subject to $T(x, t) = \phi(t)$ for $x=0, t \geq 0, T(x, t) = \psi(t)$ for
 $x=ct, t \geq 0, \phi(0) = \psi(0) = 0$. A solution of the form

$$T(x, t) = (\pi a)^{-1/2} \int_0^t \left[a(y) e^{-\beta(t-y)} (t-y)^{-1/2} \right. \\ \left. + b(y) e^{-\alpha(t-y)} (t-y)^{-1/2} \right] dy,$$

$\alpha = \frac{1}{2}ca^{-1}, \beta = \frac{1}{2}ca^{-1}$, is tried. Using the Laplace transform
 on the equations resulting from the substitution of the
 boundary conditions, $a(y)$ and $b(y)$ are obtained.

R. Bellman (Princeton, N. J.)

Handwritten initials/signature

Source: Mathematical Reviews, 1948, Vol 9, No. 5

MEMO, R. Ye. Zhukov

1. The...
atom...
...
...
...
Mask...